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Thickness to be defined

In consideration of modifications to Standards and materials, the characteristics and overall dimensions indicated in this catalogue may be considered binding only following confirmation by ABB SACE

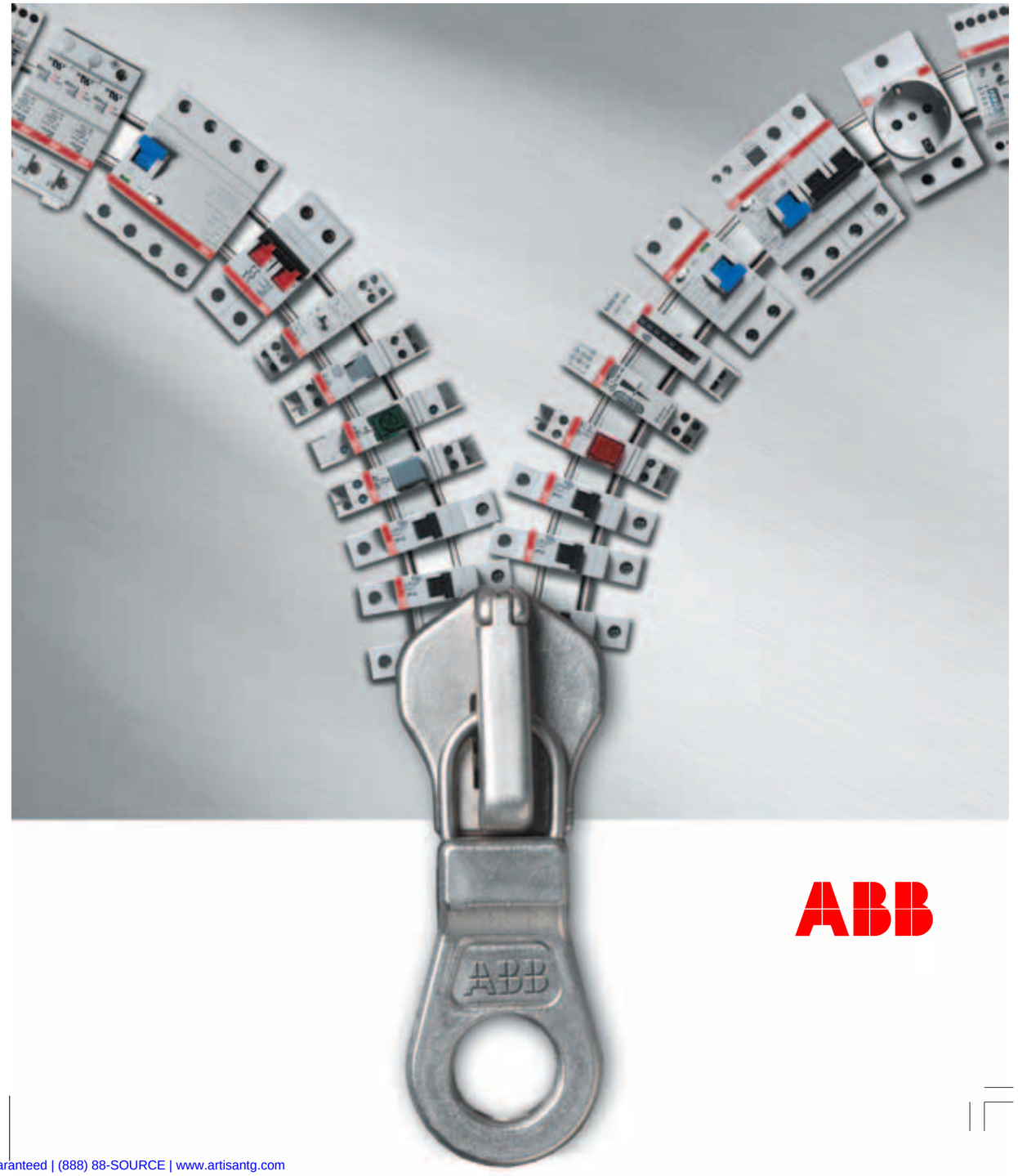
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ABB SACE S.p.A.
ABB STOTZ-KONTAKT GmbH

Technical catalogue

System pro *M* compact®

2CSC400002D0203



System pro *M* compact®

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Prior to connection of aluminium conductors (≥ 4 mm²) ensure that their contact points are cleaned, brushed and coated with grease.

Standard Terms for Delivery and Sale
For domestic business, the Standard Terms for Delivery of Products and Services of the Electrical Industry (ABB Form 2292) shall apply in connection with the Standard Sales Terms (ABB Form 2327) in their then applicable version. For foreign business, the Standard Terms for Delivery of Products and Services of the Electrical Industry (ABB Form 2293 German-English, or ABB Form 2294 German-French) shall apply in connection with the Standard Sales Terms (ABB-Form 2381 English) in their then applicable version.

Warranty
We assume warranty in accordance with the standard sales and delivery terms. Complaints shall be made in writing within eight days following receipt of the goods.

Technical information and illustrations are not binding and subject to change without notice.

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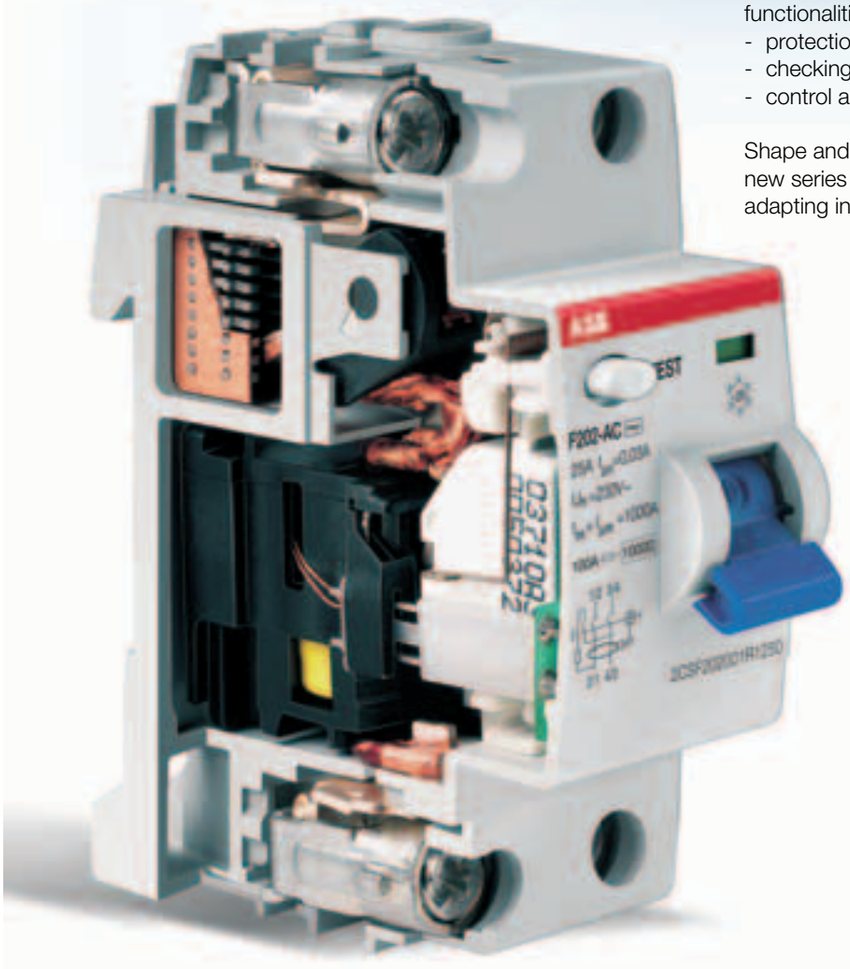
Worldwide marks and approvals 13

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System pro M

1





A wide product range suitable for all applications in residential, industrial and commercial installations

Thanks to the compatibility between the new System pro *M* compact range and the System pro *M* range ABB offers many additional functionalities like:
- protection and switching
- checking and monitoring
- control and programming

Shape and dimensions of the new series allow both precise adapting in already existing installations and continuity in terms of profile and appearance

Time saving in cross-wiring within groups and combi-nations of devices

The technologically innovative bidirectional cylinder-lift terminal enables synchronous closing of the front and rear wiring input

Highest safety standard for the installer thanks to protection against electric shock accor-ding to EN 41140

Reliable and clear marking of devices

Both supply and connection with busbars from top or bottom

The System pro *M* compact range

■ **MCBs:**
- new circuit-breakers

■ **RCDs:**
- new residual current circuit-breakers (RCCBs)
- new RCD-blocks
- new residual current circuit-breakers with overcurrent protection (RCBOs)

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M compact



■ **Auxiliary elements:**
- new universal signal contact switch/auxiliary switch
- new auxiliary switch for circuit-breaker extensions
- new shunt release
- new undervoltage release

■ **Overvoltage protection devices**

■ **MDRCs-Protection devices**
In addition to MCBs and RCDs, ABB supplies other modular devices for protection such as residual current relays and fuse holders.

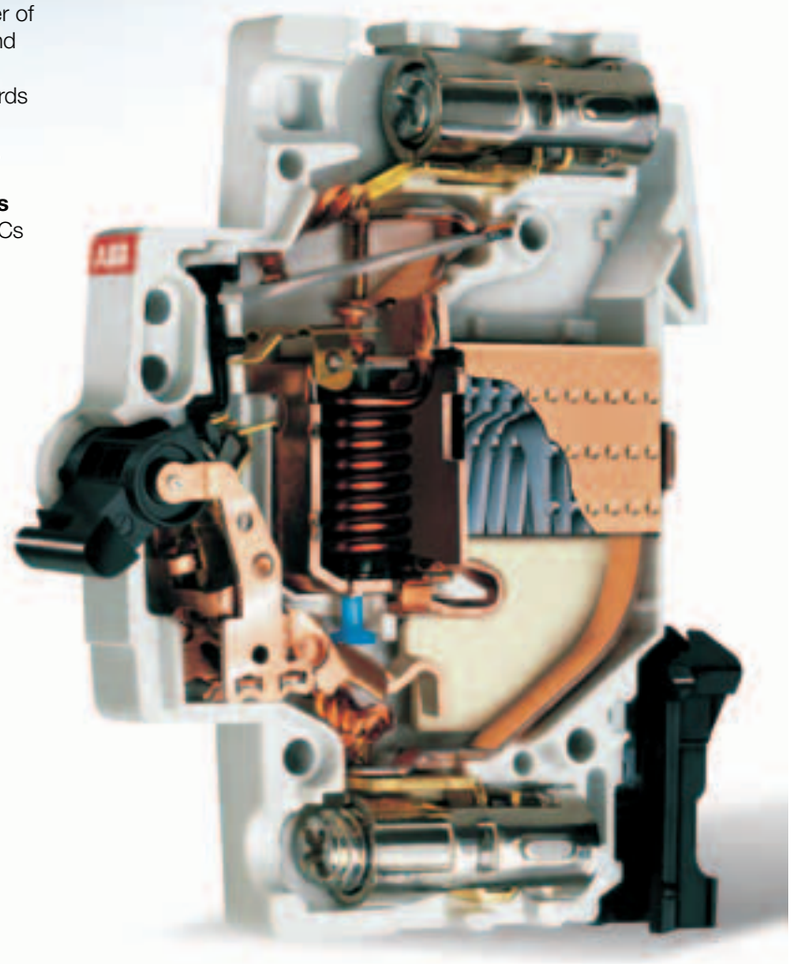
■ **MDRCs-Command devices**
This category includes devices that are operated manually to command the electric system: contactors, latching relays, switch-isolators, switches, pushbuttons etc. Typically they are installed to control lights from severeal points of the same circuit or to pilot user devices with a high number of operations.

■ **MDRCs-Load management devices**
Overload relays, load management switches, anti black-out lamps, time switches and the other modular devices in this category react automatically to variations of parameters and other events in the system to allow for plant optimisation.

■ **MDRCs-Measuring devices**
The range of devices in this category is very wide, including a great number of auxiliary components and accessories that make installation in switchboards and consumer units practical and economic.

■ **MDRCs-Other devices**
The range of ABB MDRCs also includes bells, transformers etc.

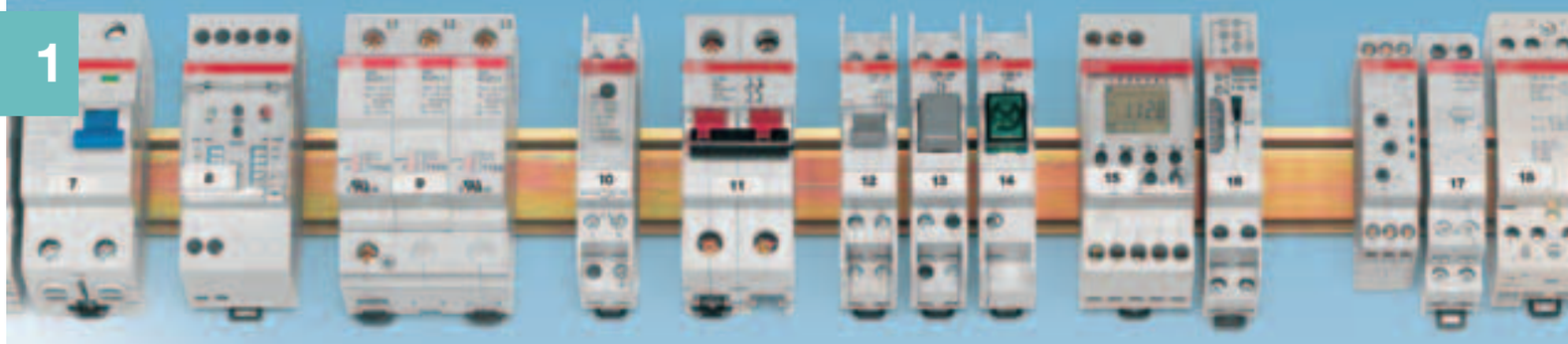
■ **Various accessories**



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System pro/

1

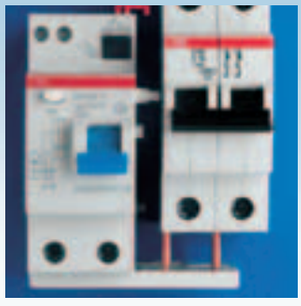




MCBs are also available with an integrated auxiliary contact (1 NO or 1 NC). Existing installa-tions can be easily upgraded to include auxiliary switch functionality.



Availability of a quite wide range of factory fitted RCBOs.



RCD-blocks DDA 200 2P, 3P, 4P up to 40 A fit into two modules. Versions in 63 A sizes are supplied with two additional terminals for remote tripping.



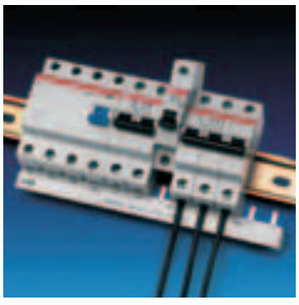
Universal signal/auxiliary and auxiliary contacts fit on S 200, F 200 and DS 200.



Without busbars two terminal spaces can be used for cables with different cross sections: incoming supply with supplementary terminal up to 50 mm^2 from the front side.



Safe connection between DDA 200 and S 200 thanks to not losable coupling elements, opportunely shaped pins and plastic clamps.



Special quick fastening for an easy removal of the devices from the assembly pressing upwards, both for MCBs S 200 and RCCBs F 200: the only in the market that can be removed without a screwdriver.

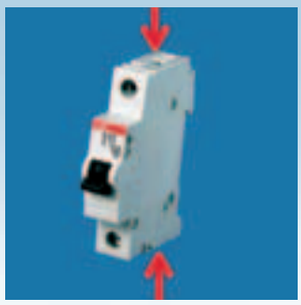


More working space between component rows.

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oM compact®





Supply from top or bottom either with cables or busbars.



Safe terminal technology: the terminals offer protection from misconnection.

New System pro *M* compact range is compatible with the System pro *M* range, thanks to the configuration of new vs old terminals.



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MCBs protect installations against overload and short-circuit, warranting reliability and safety for operations.

New System pro *M* compact S 200 series satisfies most common requirements in terms of MCBs, allowing the usage of them for domestic, industrial and commercial applications.

Three series – **S 200, S 200 M and S 200 P** – with three different breaking capacities up to 25 kA are available, in all characteristics (B, C, D, K and Z) and configurations (1P, 1P+N, 2P, 3P, 3P+N and 4P), in all the sizes up to 63 A.

It is also available a version with the new integrated auxiliary contact on the bottom side which permits to save 50% space.

All these MCBs comply to IEC/EN 60898 and IEC/EN 60947-2 Standards.

Thought to be advanced, MCBs range also offers all the “plus” advantages which characterized the whole new System pro *M* compact range.

S 200 series devices obtained a lot of marks and approvals, so they can be used in all world’s markets.

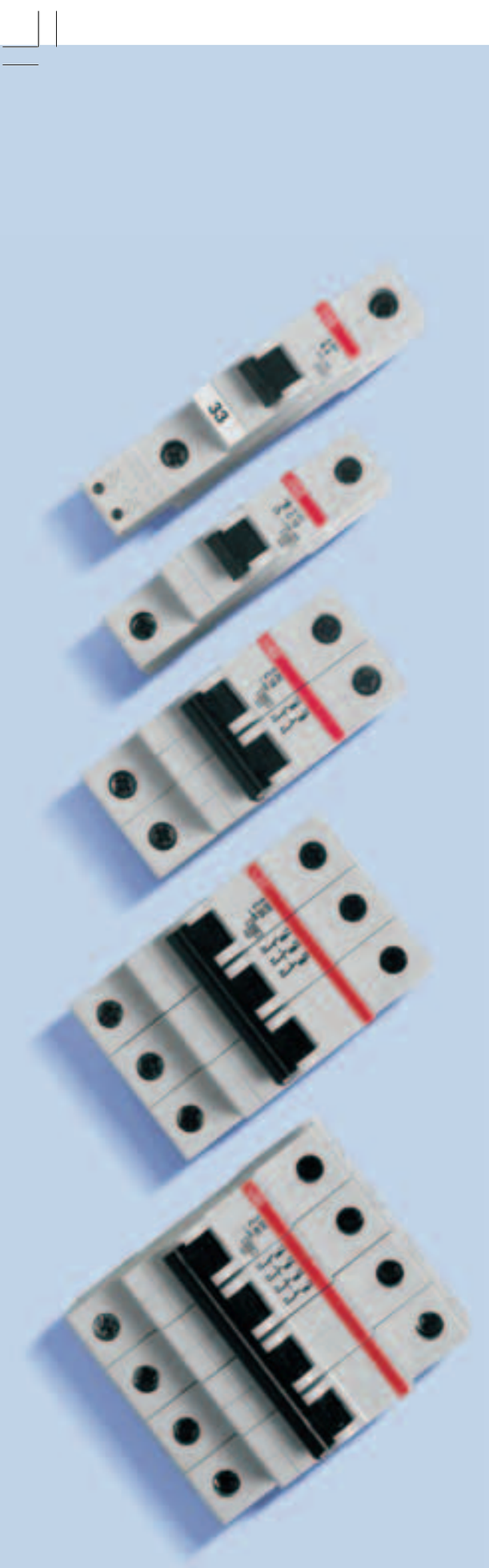








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Miniature circuit-breakers S 200 series

2

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2

	TECHNICAL FEATURES		
Electrical features	**Standards**		
	Rated current In		A
	Poles		
	Rated voltage Ue	1P, 1P+N	V
		2P, 3P, 3P+N, 4P	V
	Insulation voltage Ui		V
	Max. operating voltage Ub max.	AC	V
		DC 1P	V
		DC 2P	V
	Min. operating voltage Ub min.		V
	Rated frequency		Hz
	Rated breaking capacity acc. to IEC/EN 60898 (VDE 0660 Part 101 for K and Z)	ultimate Icn (Icu for K and Z)	A
	Rated breaking capacity acc. to IEC/EN 60947-2	ultimate Icu	kA
	1P, 1P+N @ 230 VAC 2P, 3P, 3P+N, 4P@ 400 VAC	service Ics	kA
	Energy limitation class		
	Rated impulse withstand voltage (1.2/50) Uimp		kV
	Power-frequency voltage dielectric strength		kV
	Overvoltage category		
	Thermomagnetic release characteristic	B: 3 In ≤ Im ≤ 5 In	
		C: 5 In ≤ Im ≤ 10 In	
		D: 10 In ≤ Im ≤ 20 In	
		K: 8 In ≤ Im ≤ 14 In	
		Z: 2 In ≤ Im ≤ 3 In	
Mechanical features	**Toggle**		
	Electrical life		
	Mechanical life		
	Protection degree	housing	
		terminals	
	Mechanical shock resistance		
	Resistance to vibrations acc. to IEC/EN 60068-2-6		
	Tropicalization	humid heat	°C/RH
	acc. to IEC/EN 60068-2	constant climatic conditions	°C/RH
		variable climatic conditions	°C/RH
	Reference temperature for setting of thermal element		°C
	Ambient temperature (with daily average≤+35°C)		°C
	Storage temperature		°C
Installation	**Terminal type**		
	Terminal size top/bottom per cable		mm^2
	Tightening torque		N*m
	Mounting		
	Connection		
Dimensions and weight	**Pole dimensions (H x D x W)**		mm
	Pole weight		g
Combination with auxiliary elements	**Combinable with:**	auxiliary contact	
		signal contact/auxiliary switch	
		shunt trip	
		undervoltage release	
	TECHNICAL FEATURES OF THE INTEGRATED AUXILIARY CONTACT		
Electrical features	**Contact complement**		
	Contact load		
	Min. rated voltage		V
	Short-circuit withstand capacity		
	Electrical serviceable life		
	Standard		
Installation	**Connection cross-section**		mm^2
	Tightening torque		N*m

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	S 200-S 200 H□□	S 200 M	S 200 P-S 200 P H□□		
	IEC/EN 60898, IEC/EN 60947-2, VDE 0641 Part 11				
	0.5 ≤ In ≤ 63	0.5 ≤ In ≤ 63	0.5 ≤ In ≤ 25	32 ≤ In ≤ 40	50 ≤ In ≤ 63
	1P, 1P+N, 2P, 3P, 3P+N, 4P				
	230 - 240				
	230/400 - 240/415				
	500				
	440				
	60				
	125				
	12VAC - 12VDC				
	50…60				
	6000	10000	25000	15000	15000
	10 7.5	15 11.2	25 12.5	15 10	15 7.5
	3				
	4 (test voltage 6.2 at sl; 5 at 2000 m)				
	2.5				
	III				
	■ ■ ■ ■ ■	■ ■	■ ■ ■ ■ ■	■ ■ ■ ■ ■	■ ■ ■ ■ ■
	black sealable in ON-OFF position				
	10000				
	20000				
	IP4X				
	IP2X				
	minimum 30 g - 2 shocks - duration 13 ms				
	5 g - 20 cycles at frequency 5…150…5 Hz with load 0.8 In				
	28 cycles with 55/95…100				
	23/83 - 40/93 - 55/20				
	25/95 - 40/95				
	30 (20 for characteristics K, Z)				
	-25…+55				
	-40…+70				
	failsafe bidirectional cylinder-lift terminal (shock protected)				
	25/25				
	2.8				
	on DIN rail EN 60715 (35 mm) by means of fast clip device				
	from top and bottom				
	85 x 68 x 17.5				
	125		140		
	yes				
	yes				
	yes				
	yes				

	1NO (1make contact), 1NC (1 normally closed contact), leading make contact, late closing
	AC14 2A/230 V - DC 12 identical DC13/DC13 1A/50 V, 2A/30 V
	12 AC/DC at 0.1 VA
	230 VAC 1000A, fault protection with S201-k2 or z2
	>4000 switchover cycles
	VDE 0106 Part 101
	0.75 to 25
	0.5

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B

2

















S 200 B characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for people and big length cables in TN and IT systems.

Applications: domestic, commercial and industrial.

Standard: IEC/EN 60898, IEC/EN 60947-2

Icn=6 kA

Number of poles	Rated current	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code	**EAN**			kg	pc.
1	6	**S 201-B 6**	2CDS 251 001 R0065	**46490 1**			0.125	10
	10	**S 201-B 10**	2CDS 251 001 R0105	**46380 5**			0.125	10
	13	**S 201-B 13**	2CDS 251 001 R0135	**46500 7**			0.125	10
	16	**S 201-B 16**	2CDS 251 001 R1165	**57863 9**			0.125	10
	20 ①	**S 201-B 20**	2CDS 251 001 R0205	**46510 6**			0.125	10
	25	**S 201-B 25**	2CDS 251 001 R0255	**46520 5**			0.125	10
	32 ②	**S 201-B 32**	2CDS 251 001 R0325	**46530 4**			0.125	10
	40 ③	**S 201-B 40**	2CDS 251 001 R0405	**46540 3**			0.125	10
U_{Bmax} 440 V ~ 60 V ⎓	50	**S 201-B 50**	2CDS 251 001 R0505	**55092 5**			0.125	10
	63	**S 201-B 63**	2CDS 251 001 R0635	**55093 2**			0.125	10
2	6	**S 202-B 6**	2CDS 252 001 R0065	**46640 0**			0.250	5
	10	**S 202-B 10**	2CDS 252 001 R0105	**46660 8**			0.250	5
	13	**S 202-B 13**	2CDS 252 001 R0135	**46670 7**			0.250	5
	16	**S 202-B 16**	2CDS 252 001 R0165	**46690 5**			0.250	5
	20	**S 202-B 20**	2CDS 252 001 R0205	**46700 1**			0.250	5
	25	**S 202-B 25**	2CDS 252 001 R0255	**46710 0**			0.250	5
	32	**S 202-B 32**	2CDS 252 001 R0325	**46720 9**			0.250	5
U_{Bmax} 440 V ~ 125 V ⎓ ④	40	**S 202-B 40**	2CDS 252 001 R0405	**46740 7**			0.250	5
	50	**S 202-B 50**	2CDS 252 001 R0505	**55094 9**			0.250	5
	63	**S 202-B 63**	2CDS 252 001 R0635	**55095 6**			0.250	5
3	6	**S 203-B 6**	2CDS 253 001 R0065	**46860 2**			0.375	1
	10	**S 203-B 10**	2CDS 253 001 R0105	**46870 1**			0.375	1
	13	**S 203-B 13**	2CDS 253 001 R0135	**46890 9**			0.375	1
	16	**S 203-B 16**	2CDS 253 001 R0165	**46900 5**			0.375	1
	20 ①	**S 203-B 20**	2CDS 253 001 R0205	**46910 4**			0.375	1
	25	**S 203-B 25**	2CDS 253 001 R0255	**46920 3**			0.375	1
	32 ②	**S 203-B 32**	2CDS 253 001 R0325	**46930 2**			0.375	1
	40 ③	**S 203-B 40**	2CDS 253 001 R0405	**46940 1**			0.375	1
	50	**S 203-B 50**	2CDS 253 001 R0505	**55096 3**			0.375	1
U_{Bmax} 440 V ~	63	**S 203-B 63**	2CDS 253 001 R0635	**55097 0**			0.375	1
4	6	**S 204-B 6**	2CDS 254 001 R0065	**52895 5**			0.500	1
	10	**S 204-B 10**	2CDS 254 001 R0105	**52896 2**			0.500	1
	13	**S 204-B 13**	2CDS 254 001 R0135	**52897 9**			0.500	1
	16	**S 204-B 16**	2CDS 254 001 R0165	**52898 6**			0.500	1
	20	**S 204-B 20**	2CDS 254 001 R0205	**52899 3**			0.500	1
	25	**S 204-B 25**	2CDS 254 001 R0255	**52900 6**			0.500	1
	32	**S 204-B 32**	2CDS 254 001 R0325	**52901 3**			0.500	1
U_{Bmax} 440 V ~ 125 V ⎓ ④	40	**S 204-B 40**	2CDS 254 001 R0405	**52902 0**			0.500	1
	50	**S 204-B 50**	2CDS 254 001 R0505	**55098 7**			0.500	1
	63	**S 204-B 63**	2CDS 254 001 R0635	**55099 4**			0.500	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW
④ U_{Bmax} 125 V ⎓ with 2 poles connected in series

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B





With disconnecting neutral NA

Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	6	**S 201-B 6 NA**	2CDS 251 103 R0065	**53158 0**			0.250	5
+	10	**S 201-B 10 NA**	2CDS 251 103 R0105	**53159 7**			0.250	5
NA	13	**S 201-B 13 NA**	2CDS 251 103 R0135	**53160 3**			0.250	5
	16	**S 201-B 16 NA**	2CDS 251 103 R0165	**53161 0**			0.250	5
	20 ①	**S 201-B 20 NA**	2CDS 251 103 R0205	**53162 7**			0.250	5
	25	**S 201-B 25 NA**	2CDS 251 103 R0255	**53163 4**			0.250	5
	32 ②	**S 201-B 32 NA**	2CDS 251 103 R0325	**53164 1**			0.250	5
	40 ③	**S 201-B 40 NA**	2CDS 251 103 R0405	**53165 8**			0.250	5
U_{Bmax} 440 V ~	50	**S 201-B 50 NA**	2CDS 251 103 R0505	**53615 8**			0.250	5
60 V ⎓	63	**S 201-B 63 NA**	2CDS 251 103 R0635	**53614 1**			0.250	5
3	6	**S 203-B 6 NA**	2CDS 253 103 R0065	**53228 0**			0.500	1
+	10	**S 203-B 10 NA**	2CDS 253 103 R0105	**53229 7**			0.500	1
NA	13	**S 203-B 13 NA**	2CDS 253 103 R0135	**53230 3**			0.500	1
	16	**S 203-B 16 NA**	2CDS 253 103 R0165	**53231 0**			0.500	1
	20 ①	**S 203-B 20 NA**	2CDS 253 103 R0205	**53232 7**			0.500	1
	25	**S 203-B 25 NA**	2CDS 253 103 R0255	**53233 4**			0.500	1
	32 ②	**S 203-B 32 NA**	2CDS 253 103 R0325	**53234 1**			0.500	1
	40 ③	**S 203-B 40 NA**	2CDS 253 103 R0405	**53235 8**			0.500	1
U_{Bmax} 440 V ~	50	**S 203-B 50 NA**	2CDS 253 103 R0505	**53616 5**			0.580	1
	63	**S 203-B 63 NA**	2CDS 253 103 R0635	**53617 2**			0.580	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW

2

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2

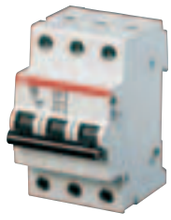
C


SK 018 B 01




SK 019 B 01




SK 020 B 01



S 200 C characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.

Applications: domestic, commercial and industrial.

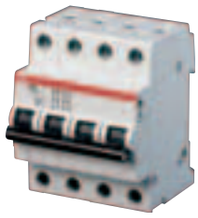
Standard: IEC/EN 60898, IEC/EN 60947-2

Icn=6 kA

Number of poles	Rated current	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code	**EAN**			kg	pc.
1	0.5	**S 201-C 0.5**	2CDS 251 001 R0984	**52329 5**			0.125	10
	1	**S 201-C 1**	2CDS 251 001 R0014	**52331 8**			0.125	10
	1.6	**S 201-C 1.6**	2CDS 251 001 R0974	**52330 1**			0.125	10
	2	**S 201-C 2**	2CDS 251 001 R0024	**52332 5**			0.125	10
	3	**S 201-C 3**	2CDS 251 001 R0034	**52333 2**			0.125	10
	4	**S 201-C 4**	2CDS 251 001 R0044	**52334 9**			0.125	10
	6	**S 201-C 6**	2CDS 251 001 R0064	**46400 0**			0.125	10
	8	**S 201-C 8**	2CDS 251 001 R0084	**46410 9**			0.125	10
	10	**S 201-C 10**	2CDS 251 001 R0104	**46420 8**			0.125	10
	13	**S 201-C 13**	2CDS 251 001 R0134	**46430 7**			0.125	10
	16	**S 201-C 16**	2CDS 251 001 R0164	**46440 6**			0.125	10
	20 ①	**S 201-C 20**	2CDS 251 001 R0204	**46450 5**			0.125	10
	25	**S 201-C 25**	2CDS 251 001 R0254	**46460 4**			0.125	10
	32 ②	**S 201-C 32**	2CDS 251 001 R0324	**46470 3**			0.125	10
	40 ③	**S 201-C 40**	2CDS 251 001 R0404	**46480 2**			0.125	10
U_{Bmax} 440 V ~ 60 V ⎓	50	**S 201-C 50**	2CDS 251 001 R0504	**55100 7**			0.125	10
	63	**S 201-C 63**	2CDS 251 001 R0634	**55101 4**			0.125	10
2	0.5	**S 202-C 0.5**	2CDS 252 001 R0984	**52335 6**			0.250	5
	1	**S 202-C 1**	2CDS 252 001 R0014	**52336 3**			0.250	5
	1.6	**S 202-C 1.6**	2CDS 252 001 R0974	**52337 0**			0.250	5
	2	**S 202-C 2**	2CDS 252 001 R0024	**52338 7**			0.250	5
	3	**S 202-C 3**	2CDS 252 001 R0034	**52339 4**			0.250	5
	4	**S 202-C 4**	2CDS 252 001 R0044	**52340 0**			0.250	5
	6	**S 202-C 6**	2CDS 252 001 R0064	**46550 2**			0.250	5
	8	**S 202-C 8**	2CDS 252 001 R0084	**46560 1**			0.250	5
	10	**S 202-C 10**	2CDS 252 001 R0104	**46570 0**			0.250	5
	13	**S 202-C 13**	2CDS 252 001 R0134	**46580 9**			0.250	5
	16	**S 202-C 16**	2CDS 252 001 R0164	**46590 8**			0.250	5
	20	**S 202-C 20**	2CDS 252 001 R0204	**46600 4**			0.250	5
	25	**S 202-C 25**	2CDS 252 001 R0254	**46610 3**			0.250	5
	32	**S 202-C 32**	2CDS 252 001 R0324	**46620 2**			0.250	5
U_{Bmax} 440 V ~ 125 V ⎓ ④	40	**S 202-C 40**	2CDS 252 001 R0404	**46630 1**			0.250	5
	50	**S 202-C 50**	2CDS 252 001 R0504	**55104 5**			0.250	5
	63	**S 202-C 63**	2CDS 252 001 R0634	**55105 2**			0.250	5
3	0.5	**S 203-C 0.5**	2CDS 253 001 R0984	**52341 7**			0.375	1
	1	**S 203-C 1**	2CDS 253 001 R0014	**52342 4**			0.375	1
	1.6	**S 203-C 1.6**	2CDS 253 001 R0974	**52343 1**			0.375	1
	2	**S 203-C 2**	2CDS 253 001 R0024	**52344 8**			0.375	1
	3	**S 203-C 3**	2CDS 253 001 R0034	**52345 5**			0.375	1
	4	**S 203-C 4**	2CDS 253 001 R0044	**52346 2**			0.375	1
	6	**S 203-C 6**	2CDS 253 001 R0064	**46750 6**			0.375	1
	8	**S 203-C 8**	2CDS 253 001 R0084	**46760 5**			0.375	1
	10	**S 203-C 10**	2CDS 253 001 R0104	**46780 3**			0.375	1
	13	**S 203-C 13**	2CDS 253 001 R0134	**46790 2**			0.375	1
	16	**S 203-C 16**	2CDS 253 001 R0164	**46800 8**			0.375	1
	20 ①	**S 203-C 20**	2CDS 253 001 R0204	**46810 7**			0.375	1
	25	**S 203-C 25**	2CDS 253 001 R0254	**46820 6**			0.375	1
	32 ②	**S 203-C 32**	2CDS 253 001 R0324	**46830 5**			0.375	1
	40 ③	**S 203-C 40**	2CDS 253 001 R0404	**46840 4**			0.375	1
	50	**S 203-C 50**	2CDS 253 001 R0504	**55106 9**			0.375	1
U_{Bmax} 440 V ~	63	**S 203-C 63**	2CDS 253 001 R0634	**55107 6**			0.375	1

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C





4	0.5	**S 204-C 0.5**	2CDS 254 001 R0984	**52911 2**	0.500	1
	1	**S 204-C 1**	2CDS 254 001 R0014	**52912 9**	0.500	1
	1.6	**S 204-C 1.6**	2CDS 254 001 R0974	**52913 6**	0.500	1
	2	**S 204-C 2**	2CDS 254 001 R0024	**52914 3**	0.500	1
	3	**S 204-C 3**	2CDS 254 001 R0034	**52915 0**	0.500	1
	4	**S 204-C 4**	2CDS 254 001 R0044	**52916 7**	0.500	1
	6	**S 204-C 6**	2CDS 254 001 R0064	**52917 4**	0.500	1
	8	**S 204-C 8**	2CDS 254 001 R0084	**52918 1**	0.500	1
	10	**S 204-C 10**	2CDS 254 001 R0104	**52919 8**	0.500	1
	13	**S 204-C 13**	2CDS 254 001 R0134	**52920 4**	0.500	1
	16	**S 204-C 16**	2CDS 254 001 R0164	**52921 1**	0.500	1
	20	**S 204-C 20**	2CDS 254 001 R0204	**52922 8**	0.500	1
	25	**S 204-C 25**	2CDS 254 001 R0254	**52923 5**	0.500	1
	32	**S 204-C 32**	2CDS 254 001 R0324	**52924 2**	0.500	1
U_{Bmax} 440 V ~ 125 V ⎓ ④	40	**S 204-C 40**	2CDS 254 001 R0404	**52925 9**	0.500	1
	50	**S 204-C 50**	2CDS 254 001 R0504	**55110 6**	0.500	1
	63	**S 204-C 63**	2CDS 254 001 R0634	**55111 3**	0.500	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW
④ U_{Bmax} 125 V ⎓ with 2 poles connected in series

With disconnecting neutral NA





Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	0.5	**S 201-C 0.5 NA**	2CDS 251 103 R0984	**53166 5**			0.250	5
+	1	**S 201-C 1 NA**	2CDS 251 103 R0014	**53167 2**			0.250	5
NA	1.6	**S 201-C 1.6 NA**	2CDS 251 103 R0974	**53168 9**			0.250	5
	2	**S 201-C 2 NA**	2CDS 251 103 R0024	**53169 6**			0.250	5
	3	**S 201-C 3 NA**	2CDS 251 103 R0034	**53170 2**			0.250	5
	4	**S 201-C 4 NA**	2CDS 251 103 R0044	**53172 6**			0.250	5
	6	**S 201-C 6 NA**	2CDS 251 103 R0064	**53173 3**			0.250	5
	8	**S 201-C 8 NA**	2CDS 251 103 R0084	**53174 0**			0.250	5
	10	**S 201-C 10 NA**	2CDS 251 103 R0104	**53175 7**			0.250	5
	13	**S 201-C 13 NA**	2CDS 251 103 R0134	**53176 4**			0.250	5
	16	**S 201-C 16 NA**	2CDS 251 103 R0164	**53177 1**			0.250	5
	20 ①	**S 201-C 20 NA**	2CDS 251 103 R0204	**53178 8**			0.250	5
	25	**S 201-C 25 NA**	2CDS 251 103 R0254	**53179 5**			0.250	5
	32 ②	**S 201-C 32 NA**	2CDS 251 103 R0324	**53180 1**			0.250	5
U_{Bmax} 440 V ~ 60 V ⎓	40 ③	**S 201-C 40 NA**	2CDS 251 103 R0404	**53181 8**			0.250	5
	50	**S 201-C 50 NA**	2CDS 251 103 R0504	**55102 1**			0.290	5
	63	**S 201-C 63 NA**	2CDS 251 103 R0634	**55103 8**			0.290	5





3	0.5	**S 203-C 0.5 NA**	2CDS 253 103 R0984	**53236 5**	0.500	1
+	1	**S 203-C 1 NA**	2CDS 253 103 R0014	**53237 2**	0.500	1
NA	1.6	**S 203-C 1.6 NA**	2CDS 253 103 R0974	**53238 9**	0.500	1
	2	**S 203-C 2 NA**	2CDS 253 103 R0024	**53240 2**	0.500	1
	3	**S 203-C 3 NA**	2CDS 253 103 R0034	**53241 9**	0.500	1
	4	**S 203-C 4 NA**	2CDS 253 103 R0044	**53242 6**	0.500	1
	6	**S 203-C 6 NA**	2CDS 253 103 R0064	**53243 3**	0.500	1
	8	**S 203-C 8 NA**	2CDS 253 103 R0084	**53244 0**	0.500	1
	10	**S 203-C 10 NA**	2CDS 253 103 R0104	**53245 7**	0.500	1
	13	**S 203-C 13 NA**	2CDS 253 103 R0134	**53246 4**	0.500	1
	16	**S 203-C 16 NA**	2CDS 253 103 R0164	**53247 1**	0.500	1
	20 ①	**S 203-C 20 NA**	2CDS 253 103 R0204	**53248 8**	0.500	1
	25	**S 203-C 25 NA**	2CDS 253 103 R0254	**53249 5**	0.500	1
	32 ②	**S 203-C 32 NA**	2CDS 253 103 R0324	**53250 1**	0.500	1
	40 ③	**S 203-C 40 NA**	2CDS 253 103 R0404	**53251 8**	0.500	1
U_{Bmax} 440 V ~	50	**S 203-C 50 NA**	2CDS 253 103 R0504	**55108 3**	0.580	1
	63	**S 203-C 63 NA**	2CDS 253 103 R0634	**55109 0**	0.580	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW

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D

2

S 200 D characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for circuits which supply loads with high inrush current at the circuit closing (LV/LV transformers, breakdown lamps).

Applications: domestic, commercial and industrial.

Standard: IEC/EN 60898, IEC/EN 60947-2

Icn=6 kA









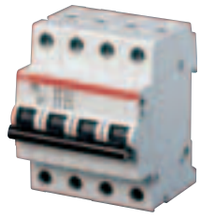




Number of poles	Rated current In A	Order details Type code	Order code	Bbn 4016779 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
1	0.5	**S 201-D 0.5**	2CDS 251 001 R0981	**52993 8**			0.125	10
	1	**S 201-D 1**	2CDS 251 001 R0011	**52994 5**			0.125	10
	1.6	**S 201-D 1.6**	2CDS 251 001 R0971	**52995 2**			0.125	10
	2	**S 201-D 2**	2CDS 251 001 R0021	**52996 9**			0.125	10
	3	**S 201-D 3**	2CDS 251 001 R0031	**52997 6**			0.125	10
	4	**S 201-D 4**	2CDS 251 001 R0041	**52998 3**			0.125	10
	6	**S 201-D 6**	2CDS 251 001 R0061	**52999 0**			0.125	10
	8	**S 201-D 8**	2CDS 251 001 R0081	**53000 2**			0.125	10
	10	**S 201-D 10**	2CDS 251 001 R0101	**53001 9**			0.125	10
	13	**S 201-D 13**	2CDS 251 001 R0131	**53002 6**			0.125	10
	16	**S 201-D 16**	2CDS 251 001 R0161	**53003 3**			0.125	10
	20 ①	**S 201-D 20**	2CDS 251 001 R0201	**53004 0**			0.125	10
	25	**S 201-D 25**	2CDS 251 001 R0251	**53005 7**			0.125	10
	32 ②	**S 201-D 32**	2CDS 251 001 R0321	**53006 4**			0.125	10
	40 ③	**S 201-D 40**	2CDS 251 001 R0401	**53007 1**			0.125	10
U_{Bmax} 440 V ~ 60 V ⎓	50	**S 201-D 50**	2CDS 251 001 R0501	**55199 1**			0.125	10
	63	**S 201-D 63**	2CDS 251 001 R0631	**55200 4**			0.125	10
2	0.5	**S 202-D 0.5**	2CDS 252 001 R0981	**53048 4**			0.250	5
	1	**S 202-D 1**	2CDS 252 001 R0011	**53049 1**			0.250	5
	1.6	**S 202-D 1.6**	2CDS 252 001 R0971	**53050 7**			0.250	5
	2	**S 202-D 2**	2CDS 252 001 R0021	**53051 4**			0.250	5
	3	**S 202-D 3**	2CDS 252 001 R0031	**53052 1**			0.250	5
	4	**S 202-D 4**	2CDS 252 001 R0041	**53053 8**			0.250	5
	6	**S 202-D 6**	2CDS 252 001 R0061	**53054 5**			0.250	5
	8	**S 202-D 8**	2CDS 252 001 R0081	**53055 2**			0.250	5
	10	**S 202-D 10**	2CDS 252 001 R0101	**53058 3**			0.250	5
	13	**S 202-D 13**	2CDS 252 001 R0131	**53060 6**			0.250	5
	16	**S 202-D 16**	2CDS 252 001 R0161	**53061 3**			0.250	5
	20	**S 202-D 20**	2CDS 252 001 R0201	**53063 7**			0.250	5
	25	**S 202-D 25**	2CDS 252 001 R0251	**53064 4**			0.250	5
	32	**S 202-D 32**	2CDS 252 001 R0321	**53065 1**			0.250	5
U_{Bmax} 440 V ~ 125 V ⎓ ④	40	**S 202-D 40**	2CDS 252 001 R0401	**53066 8**			0.250	5
	50	**S 202-D 50**	2CDS 252 001 R0501	**55203 5**			0.250	5
	63	**S 202-D 63**	2CDS 252 001 R0631	**55204 2**			0.250	5
3	0.5	**S 203-D 0.5**	2CDS 253 001 R0981	**53081 1**			0.375	1
	1	**S 203-D 1**	2CDS 253 001 R0011	**53082 8**			0.375	1
	1.6	**S 203-D 1.6**	2CDS 253 001 R0971	**53083 5**			0.375	1
	2	**S 203-D 2**	2CDS 253 001 R0021	**53084 2**			0.375	1
	3	**S 203-D 3**	2CDS 253 001 R0031	**53085 9**			0.375	1
	4	**S 203-D 4**	2CDS 253 001 R0041	**53086 6**			0.375	1
	6	**S 203-D 6**	2CDS 253 001 R0061	**53088 0**			0.375	1
	8	**S 203-D 8**	2CDS 253 001 R0081	**53089 7**			0.375	1
	10	**S 203-D 10**	2CDS 253 001 R0101	**53090 3**			0.375	1
	13	**S 203-D 13**	2CDS 253 001 R0131	**53091 0**			0.375	1
	16	**S 203-D 16**	2CDS 253 001 R0161	**53092 7**			0.375	1
	20 ①	**S 203-D 20**	2CDS 253 001 R0201	**53093 4**			0.375	1
	25	**S 203-D 25**	2CDS 253 001 R0251	**53094 1**			0.375	1
	32 ②	**S 203-D 32**	2CDS 253 001 R0321	**53095 8**			0.375	1
	40 ③	**S 203-D 40**	2CDS 253 001 R0401	**53096 5**			0.375	1
U_{Bmax} 440 V ~	50	**S 203-D 50**	2CDS 253 001 R0501	**55205 9**			0.375	1
	63	**S 203-D 63**	2CDS 253 001 R0631	**55206 6**			0.375	1

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D





Number of poles	Rated current In A	Order details Type code	Order code	Bbn 4016779 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
4	0.5	**S 204-D 0.5**	2CDS 254 001 R0981	**53112 2**			0.500	1
	1	**S 204-D 1**	2CDS 254 001 R0011	**53113 9**			0.500	1
	1.6	**S 204-D 1.6**	2CDS 254 001 R0971	**53114 6**			0.500	1
	2	**S 204-D 2**	2CDS 254 001 R0021	**53115 3**			0.500	1
	3	**S 204-D 3**	2CDS 254 001 R0031	**53116 0**			0.500	1
	4	**S 204-D 4**	2CDS 254 001 R0041	**53117 7**			0.500	1
	6	**S 204-D 6**	2CDS 254 001 R0061	**53118 4**			0.500	1
	8	**S 204-D 8**	2CDS 254 001 R0081	**53119 1**			0.500	1
	10	**S 204-D 10**	2CDS 254 001 R0101	**53120 7**			0.500	1
	13	**S 204-D 13**	2CDS 254 001 R0131	**53121 4**			0.500	1
	16	**S 204-D 16**	2CDS 254 001 R0161	**53122 1**			0.500	1
	20	**S 204-D 20**	2CDS 254 001 R0201	**53123 8**			0.500	1
	25	**S 204-D 25**	2CDS 254 001 R0251	**53129 0**			0.500	1
	32	**S 204-D 32**	2CDS 254 001 R0321	**53130 6**			0.500	1
U_{Bmax} 440 V ~ 125 V ⎓ ④	40	**S 204-D 40**	2CDS 254 001 R0401	**53131 3**			0.500	1
	50	**S 204-D 50**	2CDS 254 001 R0501	**55209 7**			0.500	1
	63	**S 204-D 63**	2CDS 254 001 R0631	**55210 3**			0.500	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW
④ U_{Bmax} 125 V ⎓ with 2 poles connected in series

With disconnecting neutral NA





Number of poles	Rated current In A	Order details Type code	Order code	Bbn 4016779 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
1 + NA	0.5	**S 201-D 0.5 NA**	2CDS 251 103 R0981	**53197 9**			0.250	5
	1	**S 201-D 1 NA**	2CDS 251 103 R0011	**53199 3**			0.250	5
	1.6	**S 201-D 1.6 NA**	2CDS 251 103 R0971	**53198 6**			0.250	5
	2	**S 201-D 2 NA**	2CDS 251 103 R0021	**53200 6**			0.250	5
	3	**S 201-D 3 NA**	2CDS 251 103 R0031	**53201 3**			0.250	5
	4	**S 201-D 4 NA**	2CDS 251 103 R0041	**53202 0**			0.250	5
	6	**S 201-D 6 NA**	2CDS 251 103 R0061	**53203 7**			0.250	5
	8	**S 201-D 8 NA**	2CDS 251 103 R0081	**53204 4**			0.250	5
	10	**S 201-D 10 NA**	2CDS 251 103 R0101	**53205 1**			0.250	5
	13	**S 201-D 13 NA**	2CDS 251 103 R0131	**53206 8**			0.250	5
	16	**S 201-D 16 NA**	2CDS 251 103 R0161	**53209 9**			0.250	5
	20 ①	**S 201-D 20 NA**	2CDS 251 103 R0201	**53210 5**			0.250	5
	25	**S 201-D 25 NA**	2CDS 251 103 R0251	**53211 2**			0.250	5
	32 ②	**S 201-D 32 NA**	2CDS 251 103 R0321	**53212 9**			0.250	5
	40 ③	**S 201-D 40 NA**	2CDS 251 103 R0401	**53213 6**			0.250	5
U_{Bmax} 440 V ~ 60 V ⎓	50	**S 201-D 50 NA**	2CDS 251 103 R0501	**55201 1**			0.290	5
	63	**S 201-D 63 NA**	2CDS 251 103 R0631	**55202 8**			0.290	5





Number of poles	Rated current In A	Order details Type code	Order code	Bbn 4016779 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
3 + NA	0.5	**S 203-D 0.5 NA**	2CDS 253 103 R0981	**53276 1**			0.500	2
	1	**S 203-D 1 NA**	2CDS 253 103 R0011	**53278 5**			0.500	2
	1.6	**S 203-D 1.6 NA**	2CDS 253 103 R0971	**53277 8**			0.500	2
	2	**S 203-D 2 NA**	2CDS 253 103 R0021	**53279 2**			0.500	2
	3	**S 203-D 3 NA**	2CDS 253 103 R0031	**53280 8**			0.500	2
	4	**S 203-D 4 NA**	2CDS 253 103 R0041	**53281 5**			0.500	2
	6	**S 203-D 6 NA**	2CDS 253 103 R0061	**53282 2**			0.500	2
	8	**S 203-D 8 NA**	2CDS 253 103 R0081	**53283 9**			0.500	2
	10	**S 203-D 10 NA**	2CDS 253 103 R0101	**53284 6**			0.500	2
	13	**S 203-D 13 NA**	2CDS 253 103 R0131	**53286 0**			0.500	2
	16	**S 203-D 16 NA**	2CDS 253 103 R0161	**53287 7**			0.500	2
	20 ①	**S 203-D 20 NA**	2CDS 253 103 R0201	**53288 4**			0.500	2
	25	**S 203-D 25 NA**	2CDS 253 103 R0251	**53289 1**			0.500	2
	32 ②	**S 203-D 32 NA**	2CDS 253 103 R0321	**53290 7**			0.500	2
	40 ③	**S 203-D 40 NA**	2CDS 253 103 R0401	**53291 4**			0.500	2
U_{Bmax} 440 V ~	50	**S 203-D 50 NA**	2CDS 253 103 R0501	**55207 3**			0.580	2
	63	**S 203-D 63 NA**	2CDS 253 103 R0631	**55208 0**			0.580	2

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW

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K

2

S 200 K (power) characteristic

Function: protection and control of the circuits like motors, transformer and auxiliary circuits, against overloads and short-circuits.
Advantages: no nuisance tripping in the case of functional peak currents up to 8xIn, depending on the series; through its highly sensitive thermostatic bimetal trip, the K-type characteristic offers protection to damageable elements in the overcurrent range; it also provides the best protection to cables and lines.

Applications: commercial and industrial.

Standard: IEC/EN 60947-2, VDE 0660 Part 101

Icu=6 kA (acc. to VDE 0660 Part 101)


SK 021 B 01

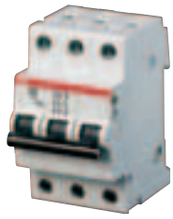


Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	0.5	**S 201-K 0.5**	2CDS 251 001 R0157	**50719 6**			0.125	10
	1	**S 201-K 1**	2CDS 251 001 R0217	**50720 2**			0.125	10
	1.6	**S 201-K 1.6**	2CDS 251 001 R0257	**50721 9**			0.125	10
	2	**S 201-K 2**	2CDS 251 001 R0277	**50722 6**			0.125	10
	3	**S 201-K 3**	2CDS 251 001 R0317	**50723 3**			0.125	10
	4	**S 201-K 4**	2CDS 251 001 R0337	**50724 0**			0.125	10
	6	**S 201-K 6**	2CDS 251 001 R0377	**50725 7**			0.125	10
	8	**S 201-K 8**	2CDS 251 001 R0407	**50726 4**			0.125	10
	10	**S 201-K 10**	2CDS 251 001 R0427	**49611 7**			0.125	10
	13	**S 201-K 13**	2CDS 251 001 R0447	**50727 1**			0.125	10
	16	**S 201-K 16**	2CDS 251 001 R0467	**49612 4**			0.125	10
	20	**S 201-K 20**	2CDS 251 001 R0487	**50728 8**			0.125	10
	25	**S 201-K 25**	2CDS 251 001 R0517	**50729 5**			0.125	10
	32	**S 201-K 32**	2CDS 251 001 R0537	**49613 1**			0.125	10
U_{Bmax} 440 V ~ 60 V ⎓	40	**S 201-K 40**	2CDS 251 001 R0557	**50730 1**			0.125	10
	50	**S 201-K 50**	2CDS 251 001 R0577	**55112 0**			0.125	10
	63	**S 201-K 63**	2CDS 251 001 R0607	**55113 7**			0.125	10


SK 022 B 01



2	0.5	**S 202-K 0.5**	2CDS 252 001 R0157	**50731 8**			0.250	5
	1	**S 202-K 1**	2CDS 252 001 R0217	**50732 5**			0.250	5
	1.6	**S 202-K 1.6**	2CDS 252 001 R0257	**50733 2**			0.250	5
	2	**S 202-K 2**	2CDS 252 001 R0277	**50734 9**			0.250	5
	3	**S 202-K 3**	2CDS 252 001 R0317	**50735 6**			0.250	5
	4	**S 202-K 4**	2CDS 252 001 R0337	**50736 3**			0.250	5
	6	**S 202-K 6**	2CDS 252 001 R0377	**50737 0**			0.250	5
	8	**S 202-K 8**	2CDS 252 001 R0407	**50738 7**			0.250	5
	10	**S 202-K 10**	2CDS 252 001 R0427	**50739 4**			0.250	5
	13	**S 202-K 13**	2CDS 252 001 R0447	**50740 0**			0.250	5
	16	**S 202-K 16**	2CDS 252 001 R0467	**50741 7**			0.250	5
	20	**S 202-K 20**	2CDS 252 001 R0487	**50742 4**			0.250	5
	25	**S 202-K 25**	2CDS 252 001 R0517	**50743 1**			0.250	5
U_{Bmax} 440 V ~ 125 V ⎓ ①	32	**S 202-K 32**	2CDS 252 001 R0537	**50744 8**			0.250	5
	40	**S 202-K 40**	2CDS 252 001 R0557	**50745 5**			0.250	5
	50	**S 202-K 50**	2CDS 252 001 R0577	**55116 8**			0.250	5
	63	**S 202-K 63**	2CDS 252 001 R0607	**55117 5**			0.250	5

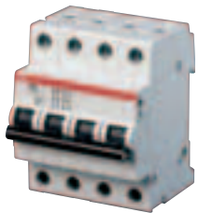

SK 023 B 01



3	0.5	**S 203-K 0.5**	2CDS 253 001 R0157	**50746 2**			0.375	1
	1	**S 203-K 1**	2CDS 253 001 R0217	**50747 9**			0.375	1
	1.6	**S 203-K 1.6**	2CDS 253 001 R0257	**50748 6**			0.375	1
	2	**S 203-K 2**	2CDS 253 001 R0277	**50749 3**			0.375	1
	3	**S 203-K 3**	2CDS 253 001 R0317	**50750 9**			0.375	1
	4	**S 203-K 4**	2CDS 253 001 R0337	**50751 6**			0.375	1
	6	**S 203-K 6**	2CDS 253 001 R0377	**50752 3**			0.375	1
	8	**S 203-K 8**	2CDS 253 001 R0407	**50753 0**			0.375	1
	10	**S 203-K 10**	2CDS 253 001 R0427	**49614 8**			0.375	1
	13	**S 203-K 13**	2CDS 253 001 R0447	**50754 7**			0.375	1
	16	**S 203-K 16**	2CDS 253 001 R0467	**49615 5**			0.375	1
	20	**S 203-K 20**	2CDS 253 001 R0487	**50755 4**			0.375	1
	25	**S 203-K 25**	2CDS 253 001 R0517	**50756 1**			0.375	1
	32	**S 203-K 32**	2CDS 253 001 R0537	**49616 2**			0.375	1
	40	**S 203-K 40**	2CDS 253 001 R0557	**50757 8**			0.375	1
U_{Bmax} 440 V ~	50	**S 203-K 50**	2CDS 253 001 R0577	**55118 2**			0.375	1
	63	**S 203-K 63**	2CDS 253 001 R0607	**55119 9**			0.375	1

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K





4	0.5	**S 204-K 0.5**	2CDS 254 001 R0157	**52926 6**	0.500	1
	1	**S 204-K 1**	2CDS 254 001 R0217	**52927 3**	0.500	1
	1.6	**S 204-K 1.6**	2CDS 254 001 R0257	**52928 0**	0.500	1
	2	**S 204-K 2**	2CDS 254 001 R0277	**52929 7**	0.500	1
	3	**S 204-K 3**	2CDS 254 001 R0317	**52930 3**	0.500	1
	4	**S 204-K 4**	2CDS 254 001 R0337	**52931 0**	0.500	1
	6	**S 204-K 6**	2CDS 254 001 R0377	**52932 7**	0.500	1
	8	**S 204-K 8**	2CDS 254 001 R0407	**52933 4**	0.500	1
	10	**S 204-K 10**	2CDS 254 001 R0427	**52934 1**	0.500	1
	13	**S 204-K 13**	2CDS 254 001 R0447	**52935 8**	0.500	1
	16	**S 204-K 16**	2CDS 254 001 R0467	**52936 5**	0.500	1
	20	**S 204-K 20**	2CDS 254 001 R0487	**52937 2**	0.500	1
	25	**S 204-K 25**	2CDS 254 001 R0517	**52938 9**	0.500	1
	32	**S 204-K 32**	2CDS 254 001 R0537	**52939 6**	0.500	1
U_{Bmax}	40	**S 204-K 40**	2CDS 254 001 R0557	**52940 2**	0.500	1
440 V ~	50	**S 204-K 50**	2CDS 254 001 R0577	**55122 9**	0.500	1
60 V ⎓	63	**S 204-K 63**	2CDS 254 001 R0607	**55123 6**	0.500	1

① U_{Bmax} 125 V ⎓ with 2 poles connected in series

With disconnecting neutral NA





Number of poles	Rated current	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code	**EAN**			kg	pc.
1	0.5	**S 201-K 0.5 NA**	2CDS 251 103 R0157	**53182 5**			0.250	5
+	1	**S 201-K 1 NA**	2CDS 251 103 R0217	**53183 2**			0.250	5
NA	1.6	**S 201-K 1.6 NA**	2CDS 251 103 R0257	**53184 9**			0.250	5
	2	**S 201-K 2 NA**	2CDS 251 103 R0277	**53185 6**			0.250	5
	3	**S 201-K 3 NA**	2CDS 251 103 R0317	**53186 3**			0.250	5
	4	**S 201-K 4 NA**	2CDS 251 103 R0337	**53187 0**			0.250	5
	6	**S 201-K 6 NA**	2CDS 251 103 R0377	**53188 7**			0.250	5
	8	**S 201-K 8 NA**	2CDS 251 103 R0407	**53189 4**			0.250	5
	10	**S 201-K 10 NA**	2CDS 251 103 R0427	**53190 0**			0.250	5
	13	**S 201-K 13 NA**	2CDS 251 103 R0447	**53191 7**			0.250	5
	16	**S 201-K 16 NA**	2CDS 251 103 R0467	**53192 4**			0.250	5
	20	**S 201-K 20 NA**	2CDS 251 103 R0487	**53193 1**			0.250	5
	25	**S 201-K 25 NA**	2CDS 251 103 R0517	**53194 8**			0.250	5
	32	**S 201-K 32 NA**	2CDS 251 103 R0537	**53195 5**			0.250	5
	40	**S 201-K 40 NA**	2CDS 251 103 R0557	**53196 2**			0.250	5
U_{Bmax}	50	**S 201-K 50 NA**	2CDS 251 103 R0577	**55114 4**			0.250	5
440 V ~	63	**S 201-K 63 NA**	2CDS 251 103 R0607	**55115 1**			0.250	5





3	0.5	**S 203-K 0.5 NA**	2CDS 253 103 R0157	**53261 7**	0.500	1
+	1	**S 203-K 1 NA**	2CDS 253 103 R0217	**53262 4**	0.500	1
NA	1.6	**S 203-K 1.6 NA**	2CDS 253 103 R0257	**53263 1**	0.500	1
	2	**S 203-K 2 NA**	2CDS 253 103 R0277	**53264 8**	0.500	1
	3	**S 203-K 3 NA**	2CDS 253 103 R0317	**53265 5**	0.500	1
	4	**S 203-K 4 NA**	2CDS 253 103 R0337	**53266 2**	0.500	1
	6	**S 203-K 6 NA**	2CDS 253 103 R0377	**53267 9**	0.500	1
	8	**S 203-K 8 NA**	2CDS 253 103 R0407	**53268 6**	0.500	1
	10	**S 203-K 10 NA**	2CDS 253 103 R0427	**53269 3**	0.500	1
	13	**S 203-K 13 NA**	2CDS 253 103 R0447	**53270 9**	0.500	1
	16	**S 203-K 16 NA**	2CDS 253 103 R0467	**53271 6**	0.500	1
	20	**S 203-K 20 NA**	2CDS 253 103 R0487	**53272 3**	0.500	1
	25	**S 203-K 25 NA**	2CDS 253 103 R0517	**53273 0**	0.500	1
	32	**S 203-K 32 NA**	2CDS 253 103 R0537	**53274 7**	0.500	1
	40	**S 203-K 40 NA**	2CDS 253 103 R0557	**53275 4**	0.500	1
U_{Bmax}	50	**S 203-K 50 NA**	2CDS 253 103 R0577	**55120 5**	0.500	1
440 V ~	63	**S 203-K 63 NA**	2CDS 253 103 R0607	**55121 2**	0.500	1

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Z

2

S 200 Z characteristic

Function: protection and control of the electronic circuits against weak and long duration overloads and short-circuits.

Applications: commercial and industrial.

Standard: IEC/EN 60947-2, VDE 0660 Part 101

Icu=6 kA (acc. to VDE 0660 Part 101)













Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	0.5	**S 201-Z 0.5**	2CDS 251 001 R0158	**53030 9**			0.125	10
	1	**S 201-Z 1**	2CDS 251 001 R0218	**53033 0**			0.125	10
	1.6	**S 201-Z 1.6**	2CDS 251 001 R0258	**53034 7**			0.125	10
	2	**S 201-Z 2**	2CDS 251 001 R0278	**53035 4**			0.125	10
	3	**S 201-Z 3**	2CDS 251 001 R0318	**53036 1**			0.125	10
	4	**S 201-Z 4**	2CDS 251 001 R0338	**53037 8**			0.125	10
	6	**S 201-Z 6**	2CDS 251 001 R0378	**53040 8**			0.125	10
	8	**S 201-Z 8**	2CDS 251 001 R0408	**53041 5**			0.125	10
	10	**S 201-Z 10**	2CDS 251 001 R0428	**53042 2**			0.125	10
	16	**S 201-Z 16**	2CDS 251 001 R0468	**53043 9**			0.125	10
	20	**S 201-Z 20**	2CDS 251 001 R0488	**53044 6**			0.125	10
	25	**S 201-Z 25**	2CDS 251 001 R0518	**53045 3**			0.125	10
	32	**S 201-Z 32**	2CDS 251 001 R0538	**53046 0**			0.125	10
	40	**S 201-Z 40**	2CDS 251 001 R0558	**53047 7**			0.125	10
U_{Bmax} 440 V ~	50	**S 201-Z 50**	2CDS 251 001 R0578	**55191 5**			0.125	10
60 V ⎓	63	**S 201-Z 63**	2CDS 251 001 R0608	**55192 2**			0.125	10
2	0.5	**S 202-Z 0.5**	2CDS 252 001 R0158	**53068 2**			0.250	5
	1	**S 202-Z 1**	2CDS 252 001 R0218	**53067 5**			0.250	5
	1.6	**S 202-Z 1.6**	2CDS 252 001 R0258	**53069 9**			0.250	5
	2	**S 202-Z 2**	2CDS 252 001 R0278	**53070 5**			0.250	5
	3	**S 202-Z 3**	2CDS 252 001 R0318	**53071 2**			0.250	5
	4	**S 202-Z 4**	2CDS 252 001 R0338	**53072 9**			0.250	5
	6	**S 202-Z 6**	2CDS 252 001 R0378	**53073 6**			0.250	5
	8	**S 202-Z 8**	2CDS 252 001 R0408	**53074 3**			0.250	5
	10	**S 202-Z 10**	2CDS 252 001 R0428	**53075 0**			0.250	5
	16	**S 202-Z 16**	2CDS 252 001 R0468	**53076 7**			0.250	5
	20	**S 202-Z 20**	2CDS 252 001 R0488	**53077 4**			0.250	5
	25	**S 202-Z 25**	2CDS 252 001 R0518	**53078 1**			0.250	5
	32	**S 202-Z 32**	2CDS 252 001 R0538	**53079 8**			0.250	5
U_{Bmax} 440 V ~	40	**S 202-Z 40**	2CDS 252 001 R0558	**53080 4**			0.250	5
125 V ⎓	50	**S 202-Z 50**	2CDS 252 001 R0578	**55193 9**			0.250	5
①	63	**S 202-Z 63**	2CDS 252 001 R0608	**55194 6**			0.250	5
3	0.5	**S 203-Z 0.5**	2CDS 253 001 R0158	**53097 2**			0.375	1
	1	**S 203-Z 1**	2CDS 253 001 R0218	**53098 9**			0.375	1
	1.6	**S 203-Z 1.6**	2CDS 253 001 R0258	**53099 6**			0.375	1
	2	**S 203-Z 2**	2CDS 253 001 R0278	**53100 9**			0.375	1
	3	**S 203-Z 3**	2CDS 253 001 R0318	**53101 6**			0.375	1
	4	**S 203-Z 4**	2CDS 253 001 R0338	**53102 3**			0.375	1
	6	**S 203-Z 6**	2CDS 253 001 R0378	**53103 0**			0.375	1
	8	**S 203-Z 8**	2CDS 253 001 R0408	**53104 7**			0.375	1
	10	**S 203-Z 10**	2CDS 253 001 R0428	**53105 4**			0.375	1
	16	**S 203-Z 16**	2CDS 253 001 R0468	**53106 1**			0.375	1
	20	**S 203-Z 20**	2CDS 253 001 R0488	**53107 8**			0.375	1
	25	**S 203-Z 25**	2CDS 253 001 R0518	**53108 5**			0.375	1
	32	**S 203-Z 32**	2CDS 253 001 R0538	**53109 2**			0.375	1
	40	**S 203-Z 40**	2CDS 253 001 R0558	**53110 8**			0.375	1
U_{Bmax} 440 V ~	50	**S 203-Z 50**	2CDS 253 001 R0578	**55195 3**			0.375	1
	63	**S 203-Z 63**	2CDS 253 001 R0608	**55196 0**			0.375	1

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Z





4	0.5	**S 204-Z 0.5**	2CDS 254 001 R0158	**53024 8**	0.500	1
	1	**S 204-Z 1**	2CDS 254 001 R0218	**53132 0**	0.500	1
	1.6	**S 204-Z 1.6**	2CDS 254 001 R0258	**53144 3**	0.500	1
	2	**S 204-Z 2**	2CDS 254 001 R0278	**53143 6**	0.500	1
	3	**S 204-Z 3**	2CDS 254 001 R0318	**53133 7**	0.500	1
	4	**S 204-Z 4**	2CDS 254 001 R0338	**53134 4**	0.500	1
	6	**S 204-Z 6**	2CDS 254 001 R0378	**53135 1**	0.500	1
	8	**S 204-Z 8**	2CDS 254 001 R0408	**53136 8**	0.500	1
	10	**S 204-Z 10**	2CDS 254 001 R0428	**53137 5**	0.500	1
	16	**S 204-Z 16**	2CDS 254 001 R0468	**53138 2**	0.500	1
	20	**S 204-Z 20**	2CDS 254 001 R0488	**53139 9**	0.500	1
	25	**S 204-Z 25**	2CDS 254 001 R0518	**53140 5**	0.500	1
	32	**S 204-Z 32**	2CDS 254 001 R0538	**53141 2**	0.500	1
U_{Bmax}	40	**S 204-Z 40**	2CDS 254 001 R0558	**53142 9**	0.500	1
440 V ~	50	**S 204-Z 50**	2CDS 254 001 R0578	**55197 7**	0.500	1
125 V ⎓ ①	63	**S 204-Z 63**	2CDS 254 001 R0608	**55198 4**	0.500	1

① U_{Bmax} 125 V ⎓ with 2 poles connected in series

With disconnecting neutral NA





Number of poles	Rated current	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code	**EAN**			kg	pc.
1	0.5	**S 201-Z 0.5 NA**	2CDS 251 103 R0158	**53214 3**			0.260	5
+	1	**S 201-Z 1 NA**	2CDS 251 103 R0218	**53215 0**			0.260	5
NA	1.6	**S 201-Z 1.6 NA**	2CDS 251 103 R0258	**53216 7**			0.260	5
	2	**S 201-Z 2 NA**	2CDS 251 103 R0278	**53217 4**			0.260	5
	3	**S 201-Z 3 NA**	2CDS 251 103 R0318	**53218 1**			0.260	5
	4	**S 201-Z 4 NA**	2CDS 251 103 R0338	**53219 8**			0.260	5
	6	**S 201-Z 6 NA**	2CDS 251 103 R0378	**53220 4**			0.260	5
	8	**S 201-Z 8 NA**	2CDS 251 103 R0408	**53221 1**			0.260	5
	10	**S 201-Z 10 NA**	2CDS 251 103 R0428	**53222 8**			0.260	5
	16	**S 201-Z 16 NA**	2CDS 251 103 R0468	**53223 5**			0.260	5
	20	**S 201-Z 20 NA**	2CDS 251 103 R0488	**53224 2**			0.260	5
	25	**S 201-Z 25 NA**	2CDS 251 103 R0518	**53225 9**			0.260	5
	32	**S 201-Z 32 NA**	2CDS 251 103 R0538	**53226 6**			0.260	5
	40	**S 201-Z 40 NA**	2CDS 251 103 R0558	**53227 3**			0.260	5
U_{Bmax} 440 V ~	50	**S 201-Z 50 NA**	2CDS 251 103 R0578	**55212 7**			0.320	5
60 V ⎓	63	**S 201-Z 63 NA**	2CDS 251 103 R0608	**55213 4**			0.320	5





3	0.5	**S 203-Z 0.5 NA**	2CDS 253 103 R0158	**53292 1**	0.520	1
+	1	**S 203-Z 1 NA**	2CDS 253 103 R0218	**53293 8**	0.520	1
NA	1.6	**S 203-Z 1.6 NA**	2CDS 253 103 R0258	**53294 5**	0.520	1
	2	**S 203-Z 2 NA**	2CDS 253 103 R0278	**53295 2**	0.520	1
	3	**S 203-Z 3 NA**	2CDS 253 103 R0318	**53297 6**	0.520	1
	4	**S 203-Z 4 NA**	2CDS 253 103 R0338	**53298 3**	0.520	1
	6	**S 203-Z 6 NA**	2CDS 253 103 R0378	**53299 0**	0.520	1
	8	**S 203-Z 8 NA**	2CDS 253 103 R0408	**53300 3**	0.520	1
	10	**S 203-Z 10 NA**	2CDS 253 103 R0428	**53301 0**	0.520	1
	16	**S 203-Z 16 NA**	2CDS 253 103 R0468	**53302 7**	0.520	1
	20	**S 203-Z 20 NA**	2CDS 253 103 R0488	**53305 8**	0.520	1
	25	**S 203-Z 25 NA**	2CDS 253 103 R0518	**53306 5**	0.520	1
	32	**S 203-Z 32 NA**	2CDS 253 103 R0538	**53307 2**	0.520	1
	40	**S 203-Z 40 NA**	2CDS 253 103 R0558	**53308 9**	0.520	1
	50	**S 203-Z 50 NA**	2CDS 253 103 R0578	**55214 1**	0.640	1
U_{Bmax} 440 V ~	63	**S 203-Z 63 NA**	2CDS 253 103 R0608	**55216 5**	0.640	1

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K

2

S 200 K characteristic H□□

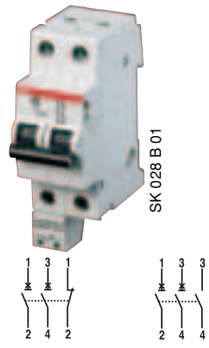
Function: protection and control of the circuits like motors, transformer and auxiliary circuits, against overloads and short-circuits.
New version with integrated auxiliary contact, factory fitted on the bottom side, 1NO or 1NC.
Advantages: no nuisance tripping in the case of functional peak currents up to 8xIn, depending on the series; through its highly sensitive thermostatic bimetal trip, the K-type characteristic offers protection to damageable elements in the overcurrent range; it also provides the best protection to cables and lines.

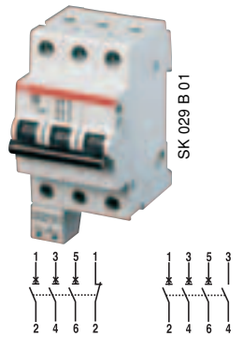
Applications: commercial and industrial.

Standard: IEC/EN 60947-2, VDE 0660 Part 101

Icu=6 kA (acc. to VDE 0660 Part 101)





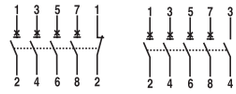


Number of poles	Rated current	Order details			Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code		Order code	EAN			kg	pc.
1	0.5	**S 201-K 0.5 H** □ □		2CD□ 251 001 R0157				0.125	6
	1	**S 201-K 1 H** □ □		2CD□ 251 001 R0217				0.125	6
	1.6	**S 201-K 1.6 H** □ □		2CD□ 251 001 R0257				0.125	6
	2	**S 201-K 2 H** □ □		2CD□ 251 001 R0277				0.125	6
	3	**S 201-K 3 H** □ □		2CD□ 251 001 R0317				0.125	6
	4	**S 201-K 4 H** □ □		2CD□ 251 001 R0337				0.125	6
	6	**S 201-K 6 H** □ □		2CD□ 251 001 R0377				0.125	6
	8	**S 201-K 8 H** □ □		2CD□ 251 001 R0407				0.125	6
	10	**S 201-K 10 H** □ □		2CD□ 251 001 R0427				0.125	6
	13	**S 201-K 13 H** □ □		2CD□ 251 001 R0447				0.125	6
	16	**S 201-K 16 H** □ □		2CD□ 251 001 R0467				0.125	6
	20	**S 201-K 20 H** □ □		2CD□ 251 001 R0487				0.125	6
	25	**S 201-K 25 H** □ □		2CD□ 251 001 R0517				0.125	6
	32	**S 201-K 32 H** □ □		2CD□ 251 001 R0537				0.125	6
	40	**S 201-K 40 H** □ □		2CD□ 251 001 R0557				0.125	6
U_{Bmax} 440 V ~ 60 V ⎓	50	**S 201-K 50 H** □ □		2CD□ 251 001 R0577				0.125	6
	63	**S 201-K 63 H** □ □		2CD□ 251 001 R0607				0.125	6
2	0.5	**S 202-K 0.5 H** □ □		2CD□ 252 001 R0157				0.250	3
	1	**S 202-K 1 H** □ □		2CD□ 252 001 R0217				0.250	3
	1.6	**S 202-K 1.6 H** □ □		2CD□ 252 001 R0257				0.250	3
	2	**S 202-K 2 H** □ □		2CD□ 252 001 R0277				0.250	3
	3	**S 202-K 3 H** □ □		2CD□ 252 001 R0317				0.250	3
	4	**S 202-K 4 H** □ □		2CD□ 252 001 R0337				0.250	3
	6	**S 202-K 6 H** □ □		2CD□ 252 001 R0377				0.250	3
	8	**S 202-K 8 H** □ □		2CD□ 252 001 R0407				0.250	3
	10	**S 202-K 10 H** □ □		2CD□ 252 001 R0427				0.250	3
	13	**S 202-K 13 H** □ □		2CD□ 252 001 R0447				0.250	3
	16	**S 202-K 16 H** □ □		2CD□ 252 001 R0467				0.250	3
	20	**S 202-K 20 H** □ □		2CD□ 252 001 R0487				0.250	3
	25	**S 202-K 25 H** □ □		2CD□ 252 001 R0517				0.250	3
	32	**S 202-K 32 H** □ □		2CD□ 252 001 R0537				0.250	3
U_{Bmax} 440 V ~ 125 V ⎓ ①	40	**S 202-K 40 H** □ □		2CD□ 252 001 R0557				0.250	3
	50	**S 202-K 50 H** □ □		2CD□ 252 001 R0577				0.250	3
	63	**S 202-K 63 H** □ □		2CD□ 252 001 R0607				0.250	3
3	0.5	**S 203-K 0.5 H** □ □		2CD□ 253 001 R0157				0.375	2
	1	**S 203-K 1 H** □ □		2CD□ 253 001 R0217				0.375	2
	1.6	**S 203-K 1.6 H** □ □		2CD□ 253 001 R0257				0.375	2
	2	**S 203-K 2 H** □ □		2CD□ 253 001 R0277				0.375	2
	3	**S 203-K 3 H** □ □		2CD□ 253 001 R0317				0.375	2
	4	**S 203-K 4 H** □ □		2CD□ 253 001 R0337				0.375	2
	6	**S 203-K 6 H** □ □		2CD□ 253 001 R0377				0.375	2
U_{Bmax} 440 V ~	8	**S 203-K 8 H** □ □		2CD□ 253 001 R0407				0.375	2
	10	**S 203-K 10 H** □ □		2CD□ 253 001 R0427				0.375	2
	13	**S 203-K 13 H** □ □		2CD□ 253 001 R0447				0.375	2
	16	**S 203-K 16 H** □ □		2CD□ 253 001 R0467				0.375	2
	20	**S 203-K 20 H** □ □		2CD□ 253 001 R0487				0.375	2
	25	**S 203-K 25 H** □ □		2CD□ 253 001 R0517				0.375	2
	32	**S 203-K 32 H** □ □		2CD□ 253 001 R0537				0.375	2
	40	**S 203-K 40 H** □ □		2CD□ 253 001 R0557				0.375	2
	50	**S 203-K 50 H** □ □		2CD□ 253 001 R0577				0.375	2
	63	**S 203-K 63 H** □ □		2CD□ 253 001 R0607				0.375	2

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K



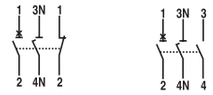


4	0.5	**S 204-K 0.5 H**	□	□	2CD□ 254 001 R0157		0.500	1
	1	**S 204-K 1 H**	□	□	2CD□ 254 001 R0217		0.500	1
	1.6	**S 204-K 1.6 H**	□	□	2CD□ 254 001 R0257		0.500	1
	2	**S 204-K 2 H**	□	□	2CD□ 254 001 R0277		0.500	1
	3	**S 204-K 3 H**	□	□	2CD□ 254 001 R0317		0.500	1
	4	**S 204-K 4 H**	□	□	2CD□ 254 001 R0337		0.500	1
	6	**S 204-K 6 H**	□	□	2CD□ 254 001 R0377		0.500	1
	8	**S 204-K 8 H**	□	□	2CD□ 254 001 R0407		0.500	1
	10	**S 204-K 10 H**	□	□	2CD□ 254 001 R0427		0.500	1
	13	**S 204-K 13 H**	□	□	2CD□ 254 001 R0447		0.500	1
	16	**S 204-K 16 H**	□	□	2CD□ 254 001 R0467		0.500	1
	20	**S 204-K 20 H**	□	□	2CD□ 254 001 R0487		0.500	1
	25	**S 204-K 25 H**	□	□	2CD□ 254 001 R0517		0.500	1
	32	**S 204-K 32 H**	□	□	2CD□ 254 001 R0537		0.500	1
U_{Bmax} 440 V ~	40	**S 204-K 40 H**	□	□	2CD□ 254 001 R0557		0.500	1
125 V ⎓	50	**S 204-K 50 H**	□	□	2CD□ 254 001 R0577		0.500	1
①	63	**S 204-K 63 H**	□	□	2CD□ 254 001 R0607		0.500	1

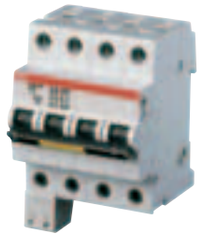
① U_{Bmax} 125 V ⎓ with 2 poles connected in series

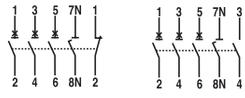
With disconnecting neutral NA





Number of poles	Rated current In A	**Order details** **Type code**			Order code	**Bbn 4016779** **EAN**	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
1	0.5	**S 201-K 0.5 NA H**	□	□	2CD□ 251 103 R0157				0.260	3
+	1	**S 201-K 1 NA H**	□	□	2CD□ 251 103 R0217				0.260	3
NA	1.6	**S 201-K 1.6 NA H**	□	□	2CD□ 251 103 R0257				0.260	3
	2	**S 201-K 2 NA H**	□	□	2CD□ 251 103 R0277				0.260	3
	3	**S 201-K 3 NA H**	□	□	2CD□ 251 103 R0317				0.260	3
	4	**S 201-K 4 NA H**	□	□	2CD□ 251 103 R0337				0.260	3
	6	**S 201-K 6 NA H**	□	□	2CD□ 251 103 R0377				0.260	3
	8	**S 201-K 8 NA H**	□	□	2CD□ 251 103 R0407				0.260	3
	10	**S 201-K 10 NA H**	□	□	2CD□ 251 103 R0427				0.260	3
	13	**S 201-K 13 NA H**	□	□	2CD□ 251 103 R0447				0.260	3
	16	**S 201-K 16 NA H**	□	□	2CD□ 251 103 R0467				0.260	3
	20	**S 201-K 20 NA H**	□	□	2CD□ 251 103 R0487				0.260	3
	25	**S 201-K 25 NA H**	□	□	2CD□ 251 103 R0517				0.260	3
	32	**S 201-K 32 NA H**	□	□	2CD□ 251 103 R0537				0.260	3
	40	**S 201-K 40 NA H**	□	□	2CD□ 251 103 R0557				0.260	3
U_{Bmax} 440 V ~	50	**S 201-K 50 NA H**	□	□	2CD□ 251 103 R0577				0.260	3
60 V ⎓	63	**S 201-K 63 NA H**	□	□	2CD□ 251 103 R0607				0.260	3





3	0.5	**S 203-K 0.5 NA H**	□	□	2CD□ 253 103 R0157		0.520	1
+	1	**S 203-K 1 NA H**	□	□	2CD□ 253 103 R0217		0.520	1
NA	1.6	**S 203-K 1.6 NA H**	□	□	2CD□ 253 103 R0257		0.520	1
	2	**S 203-K 2 NA H**	□	□	2CD□ 253 103 R0277		0.520	1
	3	**S 203-K 3 NA H**	□	□	2CD□ 253 103 R0317		0.520	1
	4	**S 203-K 4 NA H**	□	□	2CD□ 253 103 R0337		0.520	1
	6	**S 203-K 6 NA H**	□	□	2CD□ 253 103 R0377		0.520	1
	8	**S 203-K 8 NA H**	□	□	2CD□ 253 103 R0407		0.520	1
	10	**S 203-K 10 NA H**	□	□	2CD□ 253 103 R0427		0.520	1
	13	**S 203-K 13 NA H**	□	□	2CD□ 253 103 R0447		0.520	1
	16	**S 203-K 16 NA H**	□	□	2CD□ 253 103 R0467		0.520	1
	20	**S 203-K 20 NA H**	□	□	2CD□ 253 103 R0487		0.520	1
	25	**S 203-K 25 NA H**	□	□	2CD□ 253 103 R0517		0.520	1
	32	**S 203-K 32 NA H**	□	□	2CD□ 253 103 R0537		0.520	1
	40	**S 203-K 40 NA H**	□	□	2CD□ 253 103 R0557		0.520	1
U_{Bmax} 440 V ~	50	**S 203-K 50 NA H**	□	□	2CD□ 253 103 R0577		0.520	1
	63	**S 203-K 63 NA H**	□	□	2CD□ 253 103 R0607		0.520	1

Order code

MCB with NC contact 0 1
MCB with NO contact 1 0
O
V

Attention:
Other characteristics with integrated auxiliary contact on request.

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B

2

S 200 M-B characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for people and big length cables in TN and IT systems.

Applications: domestic, commercial and industrial.

Standard: IEC/EN 60898, IEC/EN 60947-2

Icn=10 kA


SK 019 B 99


SK 020 B99


SK 021 B99


SK 087 B 01

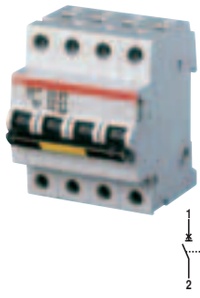
Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	6	**S 201 M-B 6**	2CDS 271 001 R0065	**54942 4**			0.125	10
	10	**S 201 M-B 10**	2CDS 271 001 R0105	**54943 1**			0.125	10
	13	**S 201 M-B 13**	2CDS 271 001 R0135	**54944 8**			0.125	10
	16	**S 201 M-B 16**	2CDS 271 001 R0165	**54945 5**			0.125	10
	20 ①	**S 201 M-B 20**	2CDS 271 001 R0205	**54946 2**			0.125	10
	25	**S 201 M-B 25**	2CDS 271 001 R0255	**54947 9**			0.125	10
	32 ②	**S 201 M-B 32**	2CDS 271 001 R0325	**54948 6**			0.125	10
U_{Bmax}	40 ③	**S 201 M-B 40**	2CDS 271 001 R0405	**54949 3**			0.125	10
440 V ~	50	**S 201 M-B 50**	2CDS 271 001 R0505	**54381 1**			0.125	10
60 V ⎓	63	**S 201 M-B 63**	2CDS 271 001 R0635	**54382 8**			0.125	10
2	6	**S 202 M-B 6**	2CDS 272 001 R0065	**54958 5**			0.250	5
	10	**S 202 M-B 10**	2CDS 272 001 R0105	**54959 2**			0.250	5
	13	**S 202 M-B 13**	2CDS 272 001 R0135	**54960 8**			0.250	5
	16	**S 202 M-B 16**	2CDS 272 001 R0165	**54961 5**			0.250	5
	20	**S 202 M-B 20**	2CDS 272 001 R0205	**54962 2**			0.250	5
	25	**S 202 M-B 25**	2CDS 272 001 R0255	**54963 9**			0.250	5
	32	**S 202 M-B 32**	2CDS 272 001 R0325	**54964 6**			0.250	5
U_{Bmax}	40	**S 202 M-B 40**	2CDS 272 001 R0405	**54965 3**			0.250	5
440 V ~	50	**S 202 M-B 50**	2CDS 272 001 R0505	**54385 9**			0.250	5
125 V ⎓ ④	63	**S 202 M-B 63**	2CDS 272 001 R0635	**54386 6**			0.250	5
3	6	**S 203 M-B 6**	2CDS 273 001 R0065	**54966 0**			0.375	1
	10	**S 203 M-B 10**	2CDS 273 001 R0105	**54967 7**			0.375	1
	13	**S 203 M-B 13**	2CDS 273 001 R0135	**54968 4**			0.375	1
	16	**S 203 M-B 16**	2CDS 273 001 R0165	**54969 1**			0.375	1
	20 ①	**S 203 M-B 20**	2CDS 273 001 R0205	**54970 7**			0.375	1
	25	**S 203 M-B 25**	2CDS 273 001 R0255	**54971 4**			0.375	1
	32 ②	**S 203 M-B 32**	2CDS 273 001 R0325	**54972 1**			0.375	1
	40 ③	**S 203 M-B 40**	2CDS 273 001 R0405	**54973 8**			0.375	1
U_{Bmax}	50	**S 203 M-B 50**	2CDS 273 001 R0505	**54387 3**			0.375	1
440 V ~	63	**S 203 M-B 63**	2CDS 273 001 R0635	**54388 0**			0.375	1
4	6	**S 204 M-B 6**	2CDS 274 001 R0065	**54982 0**			0.500	1
	10	**S 204 M-B 10**	2CDS 274 001 R0105	**54983 7**			0.500	1
	13	**S 204 M-B 13**	2CDS 274 001 R0135	**54984 4**			0.500	1
	16	**S 204 M-B 16**	2CDS 274 001 R0165	**54985 1**			0.500	1
	20	**S 204 M-B 20**	2CDS 274 001 R0205	**54986 8**			0.500	1
	25	**S 204 M-B 25**	2CDS 274 001 R0255	**54987 5**			0.500	1
	32	**S 204 M-B 32**	2CDS 274 001 R0325	**54988 2**			0.500	1
U_{Bmax}	40	**S 204 M-B 40**	2CDS 274 001 R0405	**54989 9**			0.500	1
440 V ~	50	**S 204 M-B 50**	2CDS 274 001 R0505	**54391 0**			0.500	1
125 V ⎓ ④	63	**S 204 M-B 63**	2CDS 274 001 R0635	**54392 7**			0.500	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW
④ U_{Bmax} 125 V ⎓ with 2 poles connected in series

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B





With disconnecting neutral NA

Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	6	**S 201 M-B 6 NA**	2CDS 271 103 R0065	**54950 9**			0.250	5
+	10	**S 201 M-B 10 NA**	2CDS 271 103 R0105	**54951 6**			0.250	5
NA	13	**S 201 M-B 13 NA**	2CDS 271 103 R0135	**54952 3**			0.250	5
	16	**S 201 M-B 16 NA**	2CDS 271 103 R0165	**54953 0**			0.250	5
	20 ①	**S 201 M-B 20 NA**	2CDS 271 103 R0205	**54954 7**			0.250	5
	25	**S 201 M-B 25 NA**	2CDS 271 103 R0255	**54955 4**			0.250	5
	32 ②	**S 201 M-B 32 NA**	2CDS 271 103 R0325	**54956 1**			0.250	5
U_{Bmax}	40 ③	**S 201 M-B 40 NA**	2CDS 271 103 R0405	**54957 8**			0.250	5
440 V ~	50	**S 201 M-B 50 NA**	2CDS 271 103 R0505	**54383 5**			0.250	5
60 V ⎓	63	**S 201 M-B 63 NA**	2CDS 271 103 R0635	**54384 2**			0.250	5
3	6	**S 203 M-B 6 NA**	2CDS 273 103 R0065	**54974 5**			0.500	1
+	10	**S 203 M-B 10 NA**	2CDS 273 103 R0105	**54975 2**			0.500	1
NA	13	**S 203 M-B 13 NA**	2CDS 273 103 R0135	**54976 9**			0.500	1
	16	**S 203 M-B 16 NA**	2CDS 273 103 R0165	**54977 6**			0.500	1
	20 ①	**S 203 M-B 20 NA**	2CDS 273 103 R0205	**54978 3**			0.500	1
	25	**S 203 M-B 25 NA**	2CDS 273 103 R0255	**54979 0**			0.500	1
	32 ②	**S 203 M-B 32 NA**	2CDS 273 103 R0325	**54980 6**			0.500	1
	40 ③	**S 203 M-B 40 NA**	2CDS 273 103 R0405	**54981 3**			0.500	1
U_{Bmax}	50	**S 203 M-B 50 NA**	2CDS 273 103 R0505	**54389 7**			0.500	1
440 V ~	63	**S 203 M-B 63 NA**	2CDS 273 103 R0635	**54390 3**			0.580	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW

2

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C

2













S 200 M-C characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.

Applications: domestic, commercial and industrial.

Standard: IEC/EN 60898, IEC/EN 60947-2

Icn=10 kA

Number of poles	Rated current	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code	**EAN**			kg	pc.
1	0.5	**S 201 M-C 0.5**	2CDS 271 001 R0984	**54990 5**			0.125	10
	1	**S 201 M-C 1**	2CDS 271 001 R0014	**54992 9**			0.125	10
	1.6	**S 201 M-C 1.6**	2CDS 271 001 R0974	**54991 2**			0.125	10
	2	**S 201 M-C 2**	2CDS 271 001 R0024	**54993 6**			0.125	10
	3	**S 201 M-C 3**	2CDS 271 001 R0034	**54994 3**			0.125	10
	4	**S 201 M-C 4**	2CDS 271 001 R0044	**54995 0**			0.125	10
	6	**S 201 M-C 6**	2CDS 271 001 R0064	**54996 7**			0.125	10
	8	**S 201 M-C 8**	2CDS 271 001 R0084	**54997 4**			0.125	10
	10	**S 201 M-C 10**	2CDS 271 001 R0104	**54998 1**			0.125	10
	13	**S 201 M-C 13**	2CDS 271 001 R0134	**54999 8**			0.125	10
	16	**S 201 M-C 16**	2CDS 271 001 R0164	**55000 0**			0.125	10
	20 ①	**S 201 M-C 20**	2CDS 271 001 R0204	**55001 7**			0.125	10
	25	**S 201 M-C 25**	2CDS 271 001 R0254	**55002 4**			0.125	10
	32 ②	**S 201 M-C 32**	2CDS 271 001 R0324	**55003 1**			0.125	10
	40 ③	**S 201 M-C 40**	2CDS 271 001 R0404	**55004 8**			0.125	10
U_{Bmax} 440 V ~	50	**S 201 M-C 50**	2CDS 271 001 R0504	**54393 4**			0.125	10
60 V ⎓	63	**S 201 M-C 63**	2CDS 271 001 R0634	**54394 1**			0.125	10
2	0.5	**S 202 M-C 0.5**	2CDS 272 001 R0984	**55020 8**			0.250	5
	1	**S 202 M-C 1**	2CDS 272 001 R0014	**55022 2**			0.250	5
	1.6	**S 202 M-C 1.6**	2CDS 272 001 R0974	**55021 5**			0.250	5
	2	**S 202 M-C 2**	2CDS 272 001 R0024	**55023 9**			0.250	5
	3	**S 202 M-C 3**	2CDS 272 001 R0034	**55024 6**			0.250	5
	4	**S 202 M-C 4**	2CDS 272 001 R0044	**55025 3**			0.250	5
	6	**S 202 M-C 6**	2CDS 272 001 R0064	**55026 0**			0.250	5
	8	**S 202 M-C 8**	2CDS 272 001 R0084	**55027 7**			0.250	5
	10	**S 202 M-C 10**	2CDS 272 001 R0104	**55028 4**			0.250	5
	13	**S 202 M-C 13**	2CDS 272 001 R0134	**55029 1**			0.250	5
	16	**S 202 M-C 16**	2CDS 272 001 R0164	**55030 7**			0.250	5
	20	**S 202 M-C 20**	2CDS 272 001 R0204	**55031 4**			0.250	5
	25	**S 202 M-C 25**	2CDS 272 001 R0254	**55032 1**			0.250	5
	32	**S 202 M-C 32**	2CDS 272 001 R0324	**55033 8**			0.250	5
U_{Bmax} 440 V ~	40	**S 202 M-C 40**	2CDS 272 001 R0404	**55034 5**			0.250	5
125 V ⎓	50	**S 202 M-C 50**	2CDS 272 001 R0504	**54397 2**			0.250	5
④	63	**S 202 M-C 63**	2CDS 272 001 R0634	**54398 9**			0.250	5
3	0.5	**S 203 M-C 0.5**	2CDS 273 001 R0984	**55035 2**			0.375	1
	1	**S 203 M-C 1**	2CDS 273 001 R0014	**55037 6**			0.375	1
	1.6	**S 203 M-C 1.6**	2CDS 273 001 R0974	**55036 9**			0.375	1
	2	**S 203 M-C 2**	2CDS 273 001 R0024	**55038 3**			0.375	1
	3	**S 203 M-C 3**	2CDS 273 001 R0034	**55039 0**			0.375	1
	4	**S 203 M-C 4**	2CDS 273 001 R0044	**55040 6**			0.375	1
	6	**S 203 M-C 6**	2CDS 273 001 R0064	**55041 3**			0.375	1
	8	**S 203 M-C 8**	2CDS 273 001 R0084	**55042 0**			0.375	1
	10	**S 203 M-C 10**	2CDS 273 001 R0104	**55043 7**			0.375	1
	13	**S 203 M-C 13**	2CDS 273 001 R0134	**55044 4**			0.375	1
	16	**S 203 M-C 16**	2CDS 273 001 R0164	**55045 1**			0.375	1
	20 ①	**S 203 M-C 20**	2CDS 273 001 R0204	**55046 8**			0.375	1
	25	**S 203 M-C 25**	2CDS 273 001 R0254	**55047 5**			0.375	1
	32 ②	**S 203 M-C 32**	2CDS 273 001 R0324	**55048 2**			0.375	1
	40 ③	**S 203 M-C 40**	2CDS 273 001 R0404	**55049 9**			0.375	1
U_{Bmax}	50	**S 203 M-C 50**	2CDS 273 001 R0504	**54399 6**			0.375	1
440 V ~	63	**S 203 M-C 63**	2CDS 273 001 R0634	**54400 9**			0.375	1

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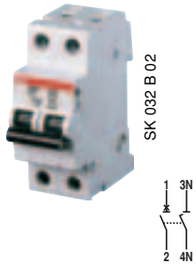
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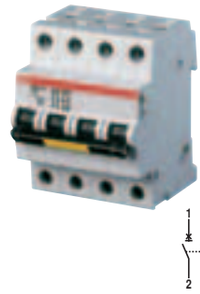
4	0.5	**S 204 M-C 0.5**	2CDS 274 001 R0984	**55065 9**		0.500	1
	1	**S 204 M-C 1**	2CDS 274 001 R0014	**55067 3**		0.500	1
	1.6	**S 204 M-C 1.6**	2CDS 274 001 R0974	**55066 6**		0.500	1
	2	**S 204 M-C 2**	2CDS 274 001 R0024	**55068 0**		0.500	1
	3	**S 204 M-C 3**	2CDS 274 001 R0034	**55069 7**		0.500	1
	4	**S 204 M-C 4**	2CDS 274 001 R0044	**55070 3**		0.500	1
	6	**S 204 M-C 6**	2CDS 274 001 R0064	**55071 0**		0.500	1
	8	**S 204 M-C 8**	2CDS 274 001 R0084	**55072 7**		0.500	1
	10	**S 204 M-C 10**	2CDS 274 001 R0104	**55073 4**		0.500	1
	13	**S 204 M-C 13**	2CDS 274 001 R0134	**55074 1**		0.500	1
	16	**S 204 M-C 16**	2CDS 274 001 R0164	**55075 8**		0.500	1
	20	**S 204 M-C 20**	2CDS 274 001 R0204	**55076 5**		0.500	1
	25	**S 204 M-C 25**	2CDS 274 001 R0254	**55077 2**		0.500	1
	32	**S 204 M-C 32**	2CDS 274 001 R0324	**55078 9**		0.500	1
U_{Bmax}	40	**S 204 M-C 40**	2CDS 274 001 R0404	**55079 6**		0.500	1
440 V ~	50	**S 204 M-C 50**	2CDS 274 001 R0504	**54403 0**		0.500	1
125 V ⎓ ④	63	**S 204 M-C 63**	2CDS 274 001 R0634	**54404 7**		0.500	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW
④ U_{Bmax} 125 V ⎓ with 2 poles connected in series

With disconnecting neutral NA



Number of poles	Rated current	**Order details**			**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code		**EAN**			kg	pc.
1	0.5	**S 201 M-C 0.5 NA**	2CDS 271 103 R0984		**55005 5**			0.250	5
+	1	**S 201 M-C 1 NA**	2CDS 271 103 R0014		**55007 9**			0.250	5
NA	1.6	**S 201 M-C 1.6 NA**	2CDS 271 103 R0974		**55006 2**			0.250	5
	2	**S 201 M-C 2 NA**	2CDS 271 103 R0024		**55008 6**			0.250	5
	3	**S 201 M-C 3 NA**	2CDS 271 103 R0034		**55009 3**			0.250	5
	4	**S 201 M-C 4 NA**	2CDS 271 103 R0044		**55010 9**			0.250	5
	6	**S 201 M-C 6 NA**	2CDS 271 103 R0064		**55011 6**			0.250	5
	8	**S 201 M-C 8 NA**	2CDS 271 103 R0084		**55012 3**			0.250	5
	10	**S 201 M-C 10 NA**	2CDS 271 103 R0104		**55013 0**			0.250	5
	13	**S 201 M-C 13 NA**	2CDS 271 103 R0134		**55014 7**			0.250	5
	16	**S 201 M-C 16 NA**	2CDS 271 103 R0164		**55015 4**			0.250	5
	20 ①	**S 201 M-C 20 NA**	2CDS 271 103 R0204		**55016 1**			0.250	5
	25	**S 201 M-C 25 NA**	2CDS 271 103 R0254		**55017 8**			0.250	5
	32 ②	**S 201 M-C 32 NA**	2CDS 271 103 R0324		**55018 5**			0.250	5
	40 ③	**S 201 M-C 40 NA**	2CDS 271 103 R0404		**55019 2**			0.250	5
U_{Bmax} 440 V ~	50	**S 201 M-C 50 NA**	2CDS 271 103 R0504		**54395 8**			0.250	5
60 V ⎓	63	**S 201 M-C 63 NA**	2CDS 271 103 R0634		**54396 5**			0.250	5



3	0.5	**S 203 M-C 0.5 NA**	2CDS 273 103 R0984	**55051 2**		0.500	1
+	1	**S 203 M-C 1 NA**	2CDS 273 103 R0014	**55052 9**		0.500	1
NA	1.6	**S 203 M-C 1.6 NA**	2CDS 273 103 R0974	**55050 5**		0.500	1
	2	**S 203 M-C 2 NA**	2CDS 273 103 R0024	**55053 6**		0.500	1
	3	**S 203 M-C 3 NA**	2CDS 273 103 R0034	**55054 3**		0.500	1
	4	**S 203 M-C 4 NA**	2CDS 273 103 R0044	**55055 0**		0.500	1
	6	**S 203 M-C 6 NA**	2CDS 273 103 R0064	**55056 7**		0.500	1
	8	**S 203 M-C 8 NA**	2CDS 273 103 R0084	**55057 4**		0.500	1
	10	**S 203 M-C 10 NA**	2CDS 273 103 R0104	**55058 1**		0.500	1
	13	**S 203 M-C 13 NA**	2CDS 273 103 R0134	**55059 8**		0.500	1
	16	**S 203 M-C 16 NA**	2CDS 273 103 R0164	**55060 4**		0.500	1
	20 ①	**S 203 M-C 20 NA**	2CDS 273 103 R0204	**55061 1**		0.500	1
	25	**S 203 M-C 25 NA**	2CDS 273 103 R0254	**55062 8**		0.500	1
	32 ②	**S 203 M-C 32 NA**	2CDS 273 103 R0324	**55063 5**		0.500	1
	40 ③	**S 203 M-C 40 NA**	2CDS 273 103 R0404	**55064 2**		0.500	1
U_{Bmax}	50	**S 203 M-C 50 NA**	2CDS 273 103 R0504	**54401 6**		0.580	1
440 V ~	63	**S 203 M-C 63 NA**	2CDS 273 103 R0634	**54402 3**		0.580	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW

Attention:

S 200 M in both B and C characteristics with integrated auxiliary contact on request.

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B

2

S 200 P-B characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for people and big length cables in TN and IT systems.

Applications: commercial and industrial.

Standard: IEC/EN 60898

Icn=25 kA for 0.5 A≤In≤25 A

Icn=15 kA for 32 A≤In≤63 A

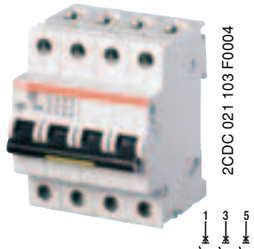












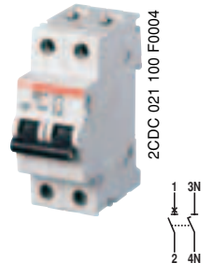


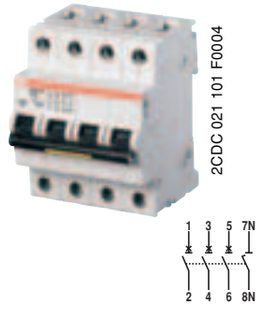
Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	6	**S 201 P-B 6**	2CDS 281 001 R0065	**589574**			0.14	10
	10	**S 201 P-B 10**	2CDS 281 001 R0105	**589581**			0.14	10
	13	**S 201 P-B 13**	2CDS 281 001 R0135	**589598**			0.14	10
	16	**S 201 P-B 16**	2CDS 281 001 R0165	**589260**			0.14	10
	20	**S 201 P-B 20**	2CDS 281 001 R0205	**589604**			0.14	10
	25	**S 201 P-B 25**	2CDS 281 001 R0255	**589611**			0.14	10
	32	**S 201 P-B 32**	2CDS 281 001 R0325	**589628**			0.14	10
	40	**S 201 P-B 40**	2CDS 281 001 R0405	**589635**			0.14	10
U_{Bmax} 440 V ~ 60 V ⎓	50	**S 201 P-B 50**	2CDS 281 001 R0505	**589659**			0.14	10
	63	**S 201 P-B 63**	2CDS 281 001 R0635	**589666**			0.14	10
2	6	**S 202 P-B 6**	2CDS 282 001 R0065	**589673**			0.28	5
	10	**S 202 P-B 10**	2CDS 282 001 R0105	**589680**			0.28	5
	13	**S 202 P-B 13**	2CDS 282 001 R0135	**589697**			0.28	5
	16	**S 202 P-B 16**	2CDS 282 001 R0165	**589703**			0.28	5
	20	**S 202 P-B 20**	2CDS 282 001 R0205	**589710**			0.28	5
	25	**S 202 P-B 25**	2CDS 282 001 R0255	**589727**			0.28	5
	32	**S 202 P-B 32**	2CDS 282 001 R0325	**589734**			0.28	5
U_{Bmax} 440 V ~ 125 V ⎓ ①	40	**S 202 P-B 40**	2CDS 282 001 R0405	**589741**			0.28	5
	50	**S 202 P-B 50**	2CDS 282 001 R0505	**589758**			0.28	5
	63	**S 202 P-B 63**	2CDS 282 001 R0635	**589765**			0.28	5
3	6	**S 203 P-B 6**	2CDS 283 001 R0065	**589772**			0.42	1
	10	**S 203 P-B 10**	2CDS 283 001 R0105	**589789**			0.42	1
	13	**S 203 P-B 13**	2CDS 283 001 R0135	**589796**			0.42	1
	16	**S 203 P-B 16**	2CDS 283 001 R0165	**589802**			0.42	1
	20	**S 203 P-B 20**	2CDS 283 001 R0205	**589819**			0.42	1
	25	**S 203 P-B 25**	2CDS 283 001 R0255	**589826**			0.42	1
	32	**S 203 P-B 32**	2CDS 283 001 R0325	**589833**			0.42	1
	40	**S 203 P-B 40**	2CDS 283 001 R0405	**589840**			0.42	1
U_{Bmax} 440 V ~	50	**S 203 P-B 50**	2CDS 283 001 R0505	**589857**			0.42	1
	63	**S 203 P-B 63**	2CDS 283 001 R0635	**589864**			0.42	1
4	6	**S 204 P-B 6**	2CDS 284 001 R0065	**589871**			0.56	1
	10	**S 204 P-B 10**	2CDS 284 001 R0105	**589888**			0.56	1
	13	**S 204 P-B 13**	2CDS 284 001 R0135	**589895**			0.56	1
	16	**S 204 P-B 16**	2CDS 284 001 R0165	**589901**			0.56	1
	20	**S 204 P-B 20**	2CDS 284 001 R0205	**589918**			0.56	1
	25	**S 204 P-B 25**	2CDS 284 001 R0255	**589925**			0.56	1
	32	**S 204 P-B 32**	2CDS 284 001 R0325	**589932**			0.56	1
U_{Bmax} 440 V ~ 125 V ⎓ ①	40	**S 204 P-B 40**	2CDS 284 001 R0405	**589949**			0.56	1
	50	**S 204 P-B 50**	2CDS 284 001 R0505	**589956**			0.56	1
	63	**S 204 P-B 63**	2CDS 284 001 R0635	**589963**			0.56	1

① U_{Bmax} 125 V ⎓ with 2 poles connected in series

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B





With disconnecting neutral NA

Number of poles	Rated current	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code	**EAN**			kg	pc.
1	6	**S 201 P-B 6 NA**	2CDS 281 103 R0065	**589970**			0.28	5
+	10	**S 201 P-B 10 NA**	2CDS 281 103 R0105	**589987**			0.28	5
NA	13	**S 201 P-B 13 NA**	2CDS 281 103 R0135	**589994**			0.28	5
	16	**S 201 P-B 16 NA**	2CDS 281 103 R0165	**590006**			0.28	5
	20	**S 201 P-B 20 NA**	2CDS 281 103 R0205	**590013**			0.28	5
	25	**S 201 P-B 25 NA**	2CDS 281 103 R0255	**590020**			0.28	5
	32	**S 201 P-B 32 NA**	2CDS 281 103 R0325	**590037**			0.28	5
	40	**S 201 P-B 40 NA**	2CDS 281 103 R0405	**590044**			0.28	5
U_{Bmax} 440 V ~	50	**S 201 P-B 50 NA**	2CDS 281 103 R0505	**590051**			0.28	5
60 V ⎓	63	**S 201 P-B 63 NA**	2CDS 281 103 R0635	**590068**			0.28	5
3	6	**S 203 P-B 6 NA**	2CDS 283 103 R0065	**590075**			0.56	1
+	10	**S 203 P-B 10 NA**	2CDS 283 103 R0105	**590082**			0.56	1
NA	13	**S 203 P-B 13 NA**	2CDS 283 103 R0135	**590099**			0.56	1
	16	**S 203 P-B 16 NA**	2CDS 283 103 R0165	**590105**			0.56	1
	20	**S 203 P-B 20 NA**	2CDS 283 103 R0205	**590112**			0.56	1
	25	**S 203 P-B 25 NA**	2CDS 283 103 R0255	**590129**			0.56	1
	32	**S 203 P-B 32 NA**	2CDS 283 103 R0325	**590136**			0.56	1
	40	**S 203 P-B 40 NA**	2CDS 283 103 R0405	**590143**			0.56	1
	50	**S 203 P-B 50 NA**	2CDS 283 103 R0505	**590150**			0.56	1
U_{Bmax} 440 V ~	63	**S 203 P-B 63 NA**	2CDS 283 103 R0635	**590167**			0.56	1

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C

2

S 200 P-C characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for resistive and inductive loads with low inrush current.

Applications: commercial and industrial.

Standard: IEC/EN 60898

Icn=25 kA for 0.5 A≤In≤25 A

Icn=15 kA for 32 A≤In≤63 A



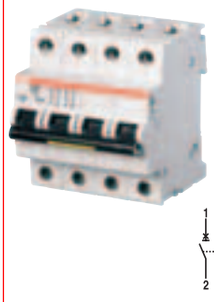




Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	0.5	**S 201 P-C 0.5**	2CDS 281 001 R0984	**590174**			0.14	10
	1	**S 201 P-C 1**	2CDS 281 001 R0014	**590181**			0.14	10
	1.6	**S 201 P-C 1.6**	2CDS 281 001 R0974	**590198**			0.14	10
	2	**S 201 P-C 2**	2CDS 281 001 R0024	**590204**			0.14	10
	3	**S 201 P-C 3**	2CDS 281 001 R0034	**590211**			0.14	10
	4	**S 201 P-C 4**	2CDS 281 001 R0044	**590228**			0.14	10
	6	**S 201 P-C 6**	2CDS 281 001 R0064	**590235**			0.14	10
	8	**S 201 P-C 8**	2CDS 281 001 R0084	**590242**			0.14	10
	10	**S 201 P-C 10**	2CDS 281 001 R0104	**590259**			0.14	10
	13	**S 201 P-C 13**	2CDS 281 001 R0134	**590266**			0.14	10
	16	**S 201 P-C 16**	2CDS 281 001 R0164	**590273**			0.14	10
	20	**S 201 P-C 20**	2CDS 281 001 R0204	**590280**			0.14	10
	25	**S 201 P-C 25**	2CDS 281 001 R0254	**590297**			0.14	10
	32	**S 201 P-C 32**	2CDS 281 001 R0324	**590303**			0.14	10
	40	**S 201 P-C 40**	2CDS 281 001 R0404	**590310**			0.14	10
U_{Bmax} 440 V ~ 60 V ⎓	50	**S 201 P-C 50**	2CDS 281 001 R0504	**590327**			0.14	10
	63	**S 201 P-C 63**	2CDS 281 001 R0634	**590334**			0.14	10
2	0.5	**S 202 P-C 0.5**	2CDS 282 001 R0984	**590341**			0.28	5
	1	**S 202 P-C 1**	2CDS 282 001 R0014	**590358**			0.28	5
	1.6	**S 202 P-C 1.6**	2CDS 282 001 R0974	**590365**			0.28	5
	2	**S 202 P-C 2**	2CDS 282 001 R0024	**590372**			0.28	5
	3	**S 202 P-C 3**	2CDS 282 001 R0034	**590389**			0.28	5
	4	**S 202 P-C 4**	2CDS 282 001 R0044	**590396**			0.28	5
	6	**S 202 P-C 6**	2CDS 282 001 R0064	**590402**			0.28	5
	8	**S 202 P-C 8**	2CDS 282 001 R0084	**590419**			0.28	5
	10	**S 202 P-C 10**	2CDS 282 001 R0104	**590426**			0.28	5
	13	**S 202 P-C 13**	2CDS 282 001 R0134	**590433**			0.28	5
	16	**S 202 P-C 16**	2CDS 282 001 R0164	**590440**			0.28	5
	20	**S 202 P-C 20**	2CDS 282 001 R0204	**590457**			0.28	5
	25	**S 202 P-C 25**	2CDS 282 001 R0254	**590464**			0.28	5
	32	**S 202 P-C 32**	2CDS 282 001 R0324	**590471**			0.28	5
U_{Bmax} 440 V ~ 125 V ⎓ ④	40	**S 202 P-C 40**	2CDS 282 001 R0404	**590488**			0.28	5
	50	**S 202 P-C 50**	2CDS 282 001 R0504	**590495**			0.28	5
	63	**S 202 P-C 63**	2CDS 282 001 R0634	**590501**			0.28	5
3	0.5	**S 203 P-C 0.5**	2CDS 283 001 R0984	**590518**			0.42	1
	1	**S 203 P-C 1**	2CDS 283 001 R0014	**590525**			0.42	1
	1.6	**S 203 P-C 1.6**	2CDS 283 001 R0974	**590532**			0.42	1
	2	**S 203 P-C 2**	2CDS 283 001 R0024	**590549**			0.42	1
	3	**S 203 P-C 3**	2CDS 283 001 R0034	**590556**			0.42	1
	4	**S 203 P-C 4**	2CDS 283 001 R0044	**590563**			0.42	1
	6	**S 203 P-C 6**	2CDS 283 001 R0064	**590570**			0.42	1
	8	**S 203 P-C 8**	2CDS 283 001 R0084	**590587**			0.42	1
	10	**S 203 P-C 10**	2CDS 283 001 R0104	**590594**			0.42	1
	13	**S 203 P-C 13**	2CDS 283 001 R0134	**590600**			0.42	1
	16	**S 203 P-C 16**	2CDS 283 001 R0164	**590617**			0.42	1
	20	**S 203 P-C 20**	2CDS 283 001 R0204	**590624**			0.42	1
	25	**S 203 P-C 25**	2CDS 283 001 R0254	**590631**			0.42	1
	32	**S 203 P-C 32**	2CDS 283 001 R0324	**590648**			0.42	1
	40	**S 203 P-C 40**	2CDS 283 001 R0404	**590655**			0.42	1
U_{Bmax} 440 V ~	50	**S 203 P-C50**	2CDS 283 001 R0504	**590662**			0.42	1
	63	**S 203 P-C63**	2CDS 283 001 R0634	**590679**			0.42	1

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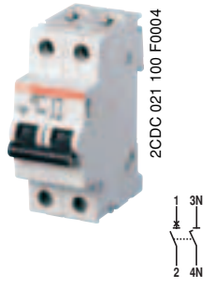
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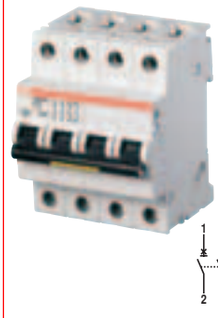
Number of poles	Rated current In A	Order details Type code	Order code	Bbn 4016779 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
4	0.5	**S 204 P-C 0.5**	2CDS 284 001 R0984	**590686**			0.56	1
	1	**S 204 P-C 1**	2CDS 284 001 R0014	**590693**			0.56	1
	1.6	**S 204 P-C 1.6**	2CDS 284 001 R0974	**590709**			0.56	1
	2	**S 204 P-C 2**	2CDS 284 001 R0024	**590716**			0.56	1
	3	**S 204 P-C 3**	2CDS 284 001 R0034	**590723**			0.56	1
	4	**S 204 P-C 4**	2CDS 284 001 R0044	**590730**			0.56	1
	6	**S 204 P-C 6**	2CDS 284 001 R0064	**590747**			0.56	1
	8	**S 204 P-C 8**	2CDS 284 001 R0084	**590754**			0.56	1
	10	**S 204 P-C 10**	2CDS 284 001 R0104	**590761**			0.56	1
	13	**S 204 P-C 13**	2CDS 284 001 R0134	**590778**			0.56	1
	16	**S 204 P-C 16**	2CDS 284 001 R0164	**590785**			0.56	1
	20	**S 204 P-C 20**	2CDS 284 001 R0204	**590792**			0.56	1
	25	**S 204 P-C 25**	2CDS 284 001 R0254	**590808**			0.56	1
U_{Bmax}	32	**S 204 P-C 32**	2CDS 284 001 R0324	**590815**			0.56	1
440 V ~	40	**S 204 P-C 40**	2CDS 284 001 R0404	**590822**			0.56	1
125 V ⎓	50	**S 204 P-C 50**	2CDS 284 001 R0504	**590839**			0.56	1
④	63	**S 204 P-C 63**	2CDS 284 001 R0634	**590846**			0.56	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW
④ U_{Bmax} 125 V ⎓ with 2 poles connected in series

With disconnecting neutral NA



Number of poles	Rated current In A	Order details Type code	Order code	Bbn 4016779 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
1	0.5	**S 201 P-C 0.5 NA**	2CDS 281 103 R0984	**590853**			0.28	5
+	1	**S 201 P-C 1 NA**	2CDS 281 103 R0014	**590860**			0.28	5
NA	1.6	**S 201 P-C 1.6 NA**	2CDS 281 103 R0974	**590877**			0.28	5
	2	**S 201 P-C 2 NA**	2CDS 281 103 R0024	**590884**			0.28	5
	3	**S 201 P-C 3 NA**	2CDS 281 103 R0034	**590891**			0.28	5
	4	**S 201 P-C 4 NA**	2CDS 281 103 R0044	**590907**			0.28	5
	6	**S 201 P-C 6 NA**	2CDS 281 103 R0064	**590914**			0.28	5
	8	**S 201 P-C 8 NA**	2CDS 281 103 R0084	**590921**			0.28	5
	10	**S 201 P-C 10 NA**	2CDS 281 103 R0104	**590938**			0.28	5
	13	**S 201 P-C 13 NA**	2CDS 281 103 R0134	**590945**			0.28	5
	16	**S 201 P-C 16 NA**	2CDS 281 103 R0164	**590952**			0.28	5
	20	**S 201 P-C 20 NA**	2CDS 281 103 R0204	**590969**			0.28	5
	25	**S 201 P-C 25 NA**	2CDS 281 103 R0254	**590976**			0.28	5
	32	**S 201 P-C 32 NA**	2CDS 281 103 R0324	**590983**			0.28	5
U_{Bmax}	40	**S 201 P-C 40 NA**	2CDS 281 103 R0404	**590990**			0.28	5
440 V ~	50	**S 201 P-C 50 NA**	2CDS 281 103 R0504	**591003**			0.28	5
60 V ⎓	63	**S 201 P-C 63 NA**	2CDS 281 103 R0634	**591010**			0.28	5



3	0.5	**S 203 P-C 0.5 NA**	2CDS 283 103 R0984	**591027**			0.56	1
+	1	**S 203 P-C 1 NA**	2CDS 283 103 R0014	**591034**			0.56	1
NA	1.6	**S 203 P-C 1.6 NA**	2CDS 283 103 R0974	**591041**			0.56	1
	2	**S 203 P-C 2 NA**	2CDS 283 103 R0024	**591058**			0.56	1
	3	**S 203 P-C 3 NA**	2CDS 283 103 R0034	**591065**			0.56	1
	4	**S 203 P-C 4 NA**	2CDS 283 103 R0044	**591072**			0.56	1
	6	**S 203 P-C 6 NA**	2CDS 283 103 R0064	**591089**			0.56	1
	8	**S 203 P-C 8 NA**	2CDS 283 103 R0084	**591096**			0.56	1
	10	**S 203 P-C 10 NA**	2CDS 283 103 R0104	**591102**			0.56	1
	13	**S 203 P-C 13 NA**	2CDS 283 103 R0134	**591119**			0.56	1
	16	**S 203 P-C 16 NA**	2CDS 283 103 R0164	**591126**			0.56	1
	20	**S 203 P-C 20 NA**	2CDS 283 103 R0204	**591133**			0.56	1
	25	**S 203 P-C 25 NA**	2CDS 283 103 R0254	**591140**			0.56	1
	32	**S 203 P-C 32 NA**	2CDS 283 103 R0324	**591157**			0.56	1
	40	**S 203 P-C 40 NA**	2CDS 283 103 R0404	**591164**			0.56	1
	50	**S 203 P-C 50 NA**	2CDS 283 103 R0504	**591171**			0.56	1
U_{Bmax} 440 V ~	63	**S 203 P-C 63 NA**	2CDS 283 103 R0634	**591188**			0.56	1

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D

2

S 200 P-D characteristic

Function: protection and control of the circuits against overloads and short-circuits; protection for circuits which supply loads with high inrush current at the circuit closing (LV/LV transformers, breakdown lamps).

Applications: commercial and industrial.

Standard: IEC/EN 60898

Icn=25 kA for 0.5 A≤In≤25 A

Icn=15 kA for 32 A≤In≤63 A









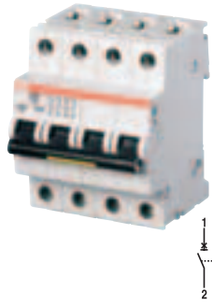




Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	0.5	**S 201 P-D 0.5**	2CDS 281 001 R0981	**591195**			0.14	10
	1	**S 201 P-D 1**	2CDS 281 001 R0011	**591201**			0.14	10
	1.6	**S 201 P-D 1.6**	2CDS 281 001 R0971	**591218**			0.14	10
	2	**S 201 P-D 2**	2CDS 281 001 R0021	**591225**			0.14	10
	3	**S 201 P-D 3**	2CDS 281 001 R0031	**591232**			0.14	10
	4	**S 201 P-D 4**	2CDS 281 001 R0041	**591249**			0.14	10
	6	**S 201 P-D 6**	2CDS 281 001 R0061	**591256**			0.14	10
	8	**S 201 P-D 8**	2CDS 281 001 R0081	**591263**			0.14	10
	10	**S 201 P-D 10**	2CDS 281 001 R0101	**591270**			0.14	10
	13	**S 201 P-D 13**	2CDS 281 001 R0131	**591287**			0.14	10
	16	**S 201 P-D 16**	2CDS 281 001 R0161	**591294**			0.14	10
	20	**S 201 P-D 20**	2CDS 281 001 R0201	**591300**			0.14	10
	25	**S 201 P-D 25**	2CDS 281 001 R0251	**591317**			0.14	10
	32	**S 201 P-D 32**	2CDS 281 001 R0321	**591324**			0.14	10
U_{Bmax}	40	**S 201 P-D 40**	2CDS 281 001 R0401	**591331**			0.14	10
440 V ~	50	**S 201 P-D 50**	2CDS 281 001 R0501	**591348**			0.14	10
60 V ⎓	63	**S 201 P-D 63**	2CDS 281 001 R0631	**591355**			0.14	10
2	0.5	**S 202 P-D 0.5**	2CDS 282 001 R0981	**591362**			0.28	5
	1	**S 202 P-D 1**	2CDS 282 001 R0011	**591379**			0.28	5
	1.6	**S 202 P-D 1.6**	2CDS 282 001 R0971	**591386**			0.28	5
	2	**S 202 P-D 2**	2CDS 282 001 R0021	**591393**			0.28	5
	3	**S 202 P-D 3**	2CDS 282 001 R0031	**591409**			0.28	5
	4	**S 202 P-D 4**	2CDS 282 001 R0041	**591416**			0.28	5
	6	**S 202 P-D 6**	2CDS 282 001 R0061	**591423**			0.28	5
	8	**S 202 P-D 8**	2CDS 282 001 R0081	**591430**			0.28	5
	10	**S 202 P-D 10**	2CDS 282 001 R0101	**591447**			0.28	5
	13	**S 202 P-D 13**	2CDS 282 001 R0131	**591454**			0.28	5
	16	**S 202 P-D 16**	2CDS 282 001 R0161	**591461**			0.28	5
	20	**S 202 P-D 20**	2CDS 282 001 R0201	**591478**			0.28	5
	25	**S 202 P-D 25**	2CDS 282 001 R0251	**591485**			0.28	5
U_{Bmax}	32	**S 202 P-D 32**	2CDS 282 001 R0321	**591492**			0.28	5
440 V ~	40	**S 202 P-D 40**	2CDS 282 001 R0401	**591508**			0.28	5
125 V ⎓	50	**S 202 P-D 50**	2CDS 282 001 R0501	**591515**			0.28	5
④	63	**S 202 P-D 63**	2CDS 282 001 R0631	**591522**			0.28	5
3	0.5	**S 203 P-D 0.5**	2CDS 283 001 R0981	**591539**			0.42	1
	1	**S 203 P-D 1**	2CDS 283 001 R0011	**591546**			0.42	1
	1.6	**S 203 P-D 1.6**	2CDS 283 001 R0971	**591553**			0.42	1
	2	**S 203 P-D 2**	2CDS 283 001 R0021	**591560**			0.42	1
	3	**S 203 P-D 3**	2CDS 283 001 R0031	**591577**			0.42	1
	4	**S 203 P-D 4**	2CDS 283 001 R0041	**591584**			0.42	1
	6	**S 203 P-D 6**	2CDS 283 001 R0061	**591591**			0.42	1
	8	**S 203 P-D 8**	2CDS 283 001 R0081	**591607**			0.42	1
	10	**S 203 P-D 10**	2CDS 283 001 R0101	**591614**			0.42	1
	13	**S 203 P-D 13**	2CDS 283 001 R0131	**591621**			0.42	1
	16	**S 203 P-D 16**	2CDS 283 001 R0161	**591638**			0.42	1
	20	**S 203 P-D 20**	2CDS 283 001 R0201	**591645**			0.42	1
	25	**S 203 P-D 25**	2CDS 283 001 R0251	**591652**			0.42	1
	32	**S 203 P-D 32**	2CDS 283 001 R0321	**591669**			0.42	1
	40	**S 203 P-D 40**	2CDS 283 001 R0401	**591676**			0.42	1
U_{Bmax}	50	**S 203 P-D50**	2CDS 283 001 R0501	**591683**			0.42	1
440 V ~	63	**S 203 P-D63**	2CDS 283 001 R0631	**591690**			0.42	1

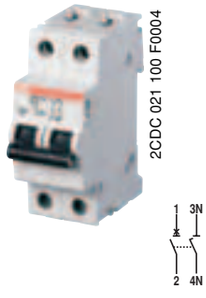
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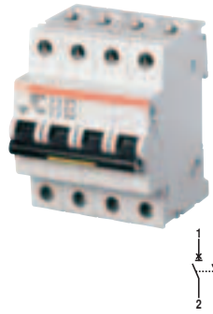
4	0.5	**S 204 P-D 0.5**	2CDS 284 001 R0981	**591706**	0.56	1
	1	**S 204 P-D 1**	2CDS 284 001 R0011	**591713**	0.56	1
	1.6	**S 204 P-D 1.6**	2CDS 284 001 R0971	**591720**	0.56	1
	2	**S 204 P-D 2**	2CDS 284 001 R0021	**591737**	0.56	1
	3	**S 204 P-D 3**	2CDS 284 001 R0031	**591744**	0.56	1
	4	**S 204 P-D 4**	2CDS 284 001 R0041	**591751**	0.56	1
	6	**S 204 P-D 6**	2CDS 284 001 R0061	**591768**	0.56	1
	8	**S 204 P-D 8**	2CDS 284 001 R0081	**591775**	0.56	1
	10	**S 204 P-D 10**	2CDS 284 001 R0101	**591782**	0.56	1
	13	**S 204 P-D 13**	2CDS 284 001 R0131	**591799**	0.56	1
	16	**S 204 P-D 16**	2CDS 284 001 R0161	**591805**	0.56	1
	20	**S 204 P-D 20**	2CDS 284 001 R0201	**591812**	0.56	1
	25	**S 204 P-D 25**	2CDS 284 001 R0251	**591829**	0.56	1
	32	**S 204 P-D 32**	2CDS 284 001 R0321	**591836**	0.56	1
U_{Bmax} 440 V ~	40	**S 204 P-D 40**	2CDS 284 001 R0401	**591843**	0.56	1
125 V ⎓	50	**S 204 P-D 50**	2CDS 284 001 R0501	**591850**	0.56	1
④	63	**S 204 P-D 63**	2CDS 284 001 R0631	**591867**	0.56	1

① suitable for flow-type heaters 12 kW
② suitable for flow-type heaters 18 kW
③ suitable for flow-type heaters 21, 24 and 27 kW
④ U_{Bmax} 125 V ⎓ with 2 poles connected in series



With disconnecting neutral NA

Number of poles	Rated current	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code	**EAN**			kg	pc.
1	0.5	**S 201 P-D 0.5 NA**	2CDS 281 103 R0981	**591874**			0.28	5
+	1	**S 201 P-D 1 NA**	2CDS 281 103 R0011	**591881**			0.28	5
NA	1.6	**S 201 P-D 1.6 NA**	2CDS 281 103 R0971	**591898**			0.28	5
	2	**S 201 P-D 2 NA**	2CDS 281 103 R0021	**591904**			0.28	5
	3	**S 201 P-D 3 NA**	2CDS 281 103 R0031	**591911**			0.28	5
	4	**S 201 P-D 4 NA**	2CDS 281 103 R0041	**591928**			0.28	5
	6	**S 201 P-D 6 NA**	2CDS 281 103 R0061	**591935**			0.28	5
	8	**S 201 P-D 8 NA**	2CDS 281 103 R0081	**591942**			0.28	5
	10	**S 201 P-D 10 NA**	2CDS 281 103 R0101	**591959**			0.28	5
	13	**S 201 P-D 13 NA**	2CDS 281 103 R0131	**591966**			0.28	5
	16	**S 201 P-D 16 NA**	2CDS 281 103 R0161	**591973**			0.28	5
	20	**S 201 P-D 20 NA**	2CDS 281 103 R0201	**591980**			0.28	5
	25	**S 201 P-D 25 NA**	2CDS 281 103 R0251	**591997**			0.28	5
	32	**S 201 P-D 32 NA**	2CDS 281 103 R0321	**592000**			0.28	5
U_{Bmax}	40	**S 201 P-D 40 NA**	2CDS 281 103 R0401	**592017**			0.28	5
440 V ~	50	**S 201 P-D 50 NA**	2CDS 281 103 R0501	**592024**			0.28	5
60 V ⎓	63	**S 201 P-D 63 NA**	2CDS 281 103 R0631	**592031**			0.28	5



3	0.5	**S 203 P-D 0.5 NA**	2CDS 283 103 R0981	**592048**	0.56	1
+	1	**S 203 P-D 1 NA**	2CDS 283 103 R0011	**592055**	0.56	1
NA	1.6	**S 203 P-D 1.6 NA**	2CDS 283 103 R0971	**592062**	0.56	1
	2	**S 203 P-D 2 NA**	2CDS 283 103 R0021	**592079**	0.56	1
	3	**S 203 P-D 3 NA**	2CDS 283 103 R0031	**592086**	0.56	1
	4	**S 203 P-D 4 NA**	2CDS 283 103 R0041	**592093**	0.56	1
	6	**S 203 P-D 6 NA**	2CDS 283 103 R0061	**592109**	0.56	1
	8	**S 203 P-D 8 NA**	2CDS 283 103 R0081	**592116**	0.56	1
	10	**S 203 P-D 10 NA**	2CDS 283 103 R0101	**592123**	0.56	1
	13	**S 203 P-D 13 NA**	2CDS 283 103 R0131	**592130**	0.56	1
	16	**S 203 P-D 16 NA**	2CDS 283 103 R0161	**592147**	0.56	1
	20	**S 203 P-D 20 NA**	2CDS 283 103 R0201	**592154**	0.56	1
	25	**S 203 P-D 25 NA**	2CDS 283 103 R0251	**592161**	0.56	1
	32	**S 203 P-D 32 NA**	2CDS 283 103 R0321	**592178**	0.56	1
	40	**S 203 P-D 40 NA**	2CDS 283 103 R0401	**592185**	0.56	1
U_{Bmax}	50	**S 203 P-D 50 NA**	2CDS 283 103 R0501	**592192**	0.56	1
440 V ~	63	**S 203 P-D 63 NA**	2CDS 283 103 R0631	**592208**	0.56	1

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2

K

S 200 P-K characteristic

Function: protection and control of the circuits like motors, transformers and auxiliary circuits, against overloads and short-circuits.
Advantages: no nuisance tripping in the case of functional peak currents up to 8xIn, depending on the series; through its highly sensitive thermostatic bimetal trip, the K-type characteristic offers protection to damageable elements in the overcurrent range; it also provides the best protection to cables and lines.

Applications: commercial and industrial.

Standard: IEC/EN 60947-2, VDE 0660 Part 101

Icu=25 kA for 0.5 A≤In≤25 A; Icu=15 kA for 32 A≤In≤63 A (acc. to VDE 0660 Part 101)





Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	0.2	**S 201 P-K 0.2**	2CDS 281 001 R0087	**592215**			0.14	10
	0.3	**S 201 P-K 0.3**	2CDS 281 001 R0117	**592222**			0.14	10
	0.5	**S 201 P-K 0.5**	2CDS 281 001 R0157	**592239**			0.14	10
	0.75	**S 201 P-K 0.75**	2CDS 281 001 R0187	**592246**			0.14	10
	1	**S 201 P-K 1**	2CDS 281 001 R0217	**592253**			0.14	10
	1.6	**S 201 P-K 1.6**	2CDS 281 001 R0257	**592260**			0.14	10
	2	**S 201 P-K 2**	2CDS 281 001 R0277	**592277**			0.14	10
	3	**S 201 P-K 3**	2CDS 281 001 R0317	**592284**			0.14	10
	4	**S 201 P-K 4**	2CDS 281 001 R0337	**592291**			0.14	10
	6	**S 201 P-K 6**	2CDS 281 001 R0377	**592307**			0.14	10
	8	**S 201 P-K 8**	2CDS 281 001 R0407	**592314**			0.14	10
	10	**S 201 P-K 10**	2CDS 281 001 R0427	**592321**			0.14	10
	13	**S 201 P-K 13**	2CDS 281 001 R0447	**592338**			0.14	10
	16	**S 201 P-K 16**	2CDS 281 001 R0467	**592345**			0.14	10
	20	**S 201 P-K 20**	2CDS 281 001 R0487	**592352**			0.14	10
	25	**S 201 P-K 25**	2CDS 281 001 R0517	**592369**			0.14	10
	32	**S 201 P-K 32**	2CDS 281 001 R0537	**592376**			0.14	10
	40	**S 201 P-K 40**	2CDS 281 001 R0557	**592383**			0.14	10
U_{Bmax} 440 V ~ 60 V ⎓	50	**S 201 P-K 50**	2CDS 281 001 R0577	**592390**			0.14	10
	63	**S 201 P-K 63**	2CDS 281 001 R0607	**592406**			0.14	10





2	0.2	**S 202 P-K 0.2**	2CDS 282 001 R0087	**592413**			0.28	5
	0.3	**S 202 P-K 0.3**	2CDS 282 001 R0117	**592420**			0.28	5
	0.5	**S 202 P-K 0.5**	2CDS 282 001 R0157	**592437**			0.28	5
	0.75	**S 202 P-K 0.75**	2CDS 282 001 R0187	**592444**			0.28	5
	1	**S 202 P-K 1**	2CDS 282 001 R0217	**592451**			0.28	5
	1.6	**S 202 P-K 1.6**	2CDS 282 001 R0257	**592468**			0.28	5
	2	**S 202 P-K 2**	2CDS 282 001 R0277	**592475**			0.28	5
	3	**S 202 P-K 3**	2CDS 282 001 R0317	**592482**			0.28	5
	4	**S 202 P-K 4**	2CDS 282 001 R0337	**592499**			0.28	5
	6	**S 202 P-K 6**	2CDS 282 001 R0377	**592505**			0.28	5
	8	**S 202 P-K 8**	2CDS 282 001 R0407	**592512**			0.28	5
	10	**S 202 P-K 10**	2CDS 282 001 R0427	**592529**			0.28	5
	13	**S 202 P-K 13**	2CDS 282 001 R0447	**592536**			0.28	5
	16	**S 202 P-K 16**	2CDS 282 001 R0467	**592543**			0.28	5
	20	**S 202 P-K 20**	2CDS 282 001 R0487	**592550**			0.28	5
	25	**S 202 P-K 25**	2CDS 282 001 R0517	**592567**			0.28	5
	32	**S 202 P-K 32**	2CDS 282 001 R0537	**592574**			0.28	5
U_{Bmax} 440 V ~ 125 V ⎓ ①	40	**S 202 P-K 40**	2CDS 282 001 R0557	**592581**			0.28	5
	50	**S 202 P-K 50**	2CDS 282 001 R0577	**592598**			0.28	5
	63	**S 202 P-K 63**	2CDS 282 001 R0607	**592604**			0.28	5





3	0.2	**S 203 P-K 0.2**	2CDS 283 001 R0087	**592611**			0.42	1
	0.3	**S 203 P-K 0.3**	2CDS 283 001 R0117	**592628**			0.42	1
	0.5	**S 203 P-K 0.5**	2CDS 283 001 R0157	**592635**			0.42	1
	0.75	**S 203 P-K 0.75**	2CDS 283 001 R0187	**592642**			0.42	1
	1	**S 203 P-K 1**	2CDS 283 001 R0217	**592659**			0.42	1
	1.6	**S 203 P-K 1.6**	2CDS 283 001 R0257	**592666**			0.42	1
	2	**S 203 P-K 2**	2CDS 283 001 R0277	**592673**			0.42	1
	3	**S 203 P-K 3**	2CDS 283 001 R0317	**592680**			0.42	1
	4	**S 203 P-K 4**	2CDS 283 001 R0337	**592697**			0.42	1
	6	**S 203 P-K 6**	2CDS 283 001 R0377	**592703**			0.42	1
	8	**S 203 P-K 8**	2CDS 283 001 R0407	**592710**			0.42	1
	10	**S 203 P-K 10**	2CDS 283 001 R0427	**592727**			0.42	1
	13	**S 203 P-K 13**	2CDS 283 001 R0447	**592734**			0.42	1
U_{Bmax} 440 V ~	16	**S 203 P-K 16**	2CDS 283 001 R0467	**592741**			0.42	1
	20	**S 203 P-K 20**	2CDS 283 001 R0487	**592758**			0.42	1

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	25	**S 203 P-K 25**	2CDS 283 001 R0517	**592765**		0.42	1
	32	**S 203 P-K 32**	2CDS 283 001 R0537	**592772**		0.42	1
	40	**S 203 P-K 40**	2CDS 283 001 R0557	**592789**		0.42	1
	50	**S 203 P-K 50**	2CDS 283 001 R0577	**592796**		0.42	1
	63	**S 203 P-K 63**	2CDS 283 001 R0607	**592802**		0.42	1
4	0.2	**S 204 P-K 0.2**	2CDS 284 001 R0087	**592819**		0.56	1
	0.3	**S 204 P-K 0.3**	2CDS 284 001 R0117	**592826**		0.56	1
	0.5	**S 204 P-K 0.5**	2CDS 284 001 R0157	**592833**		0.56	1
	0.75	**S 204 P-K 0.75**	2CDS 284 001 R0187	**592840**		0.56	1
	1	**S 204 P-K 1**	2CDS 284 001 R0217	**592857**		0.56	1
	1.6	**S 204 P-K 1.6**	2CDS 284 001 R0257	**592864**		0.56	1
	2	**S 204 P-K 2**	2CDS 284 001 R0277	**592871**		0.56	1
	3	**S 204 P-K 3**	2CDS 284 001 R0317	**592888**		0.56	1
	4	**S 204 P-K 4**	2CDS 284 001 R0337	**592895**		0.56	1
	6	**S 204 P-K 6**	2CDS 284 001 R0377	**592901**		0.56	1
	8	**S 204 P-K 8**	2CDS 284 001 R0407	**592918**		0.56	1
	10	**S 204 P-K 10**	2CDS 284 001 R0427	**592925**		0.56	1
	13	**S 204 P-K 13**	2CDS 284 001 R0447	**592932**		0.56	1
	16	**S 204 P-K 16**	2CDS 284 001 R0467	**592949**		0.56	1
	20	**S 204 P-K 20**	2CDS 284 001 R0487	**592956**		0.56	1
	25	**S 204 P-K 25**	2CDS 284 001 R0517	**592963**		0.56	1
	32	**S 204 P-K 32**	2CDS 284 001 R0537	**592970**		0.56	1
U_{Bmax}	40	**S 204 P-K 40**	2CDS 284 001 R0557	**592987**		0.56	1
440 V ~	50	**S 204 P-K 50**	2CDS 284 001 R0577	**592994**		0.56	1
60 V ⎓	63	**S 204 P-K 63**	2CDS 284 001 R0607	**593007**		0.56	1

① U_{Bmax} 125 V ⎓ with 2 poles connected in series

With disconnecting neutral NA





Number of poles	Rated current	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code	**EAN**			kg	pc.
1	0.2	**S 201 P-K 0.2 NA**	2CDS 281 103 R0087	**593014**			0.28	5
+	0.3	**S 201 P-K 0.3 NA**	2CDS 281 103 R0117	**593021**			0.28	5
NA	0.5	**S 201 P-K 0.5 NA**	2CDS 281 103 R0157	**593038**			0.28	5
	0.75	**S 201 P-K 0.75 NA**	2CDS 281 103 R0187	**593045**			0.28	5
	1	**S 201 P-K 1 NA**	2CDS 281 103 R0217	**593052**			0.28	5
	1.6	**S 201 P-K 1.6 NA**	2CDS 281 103 R0257	**593069**			0.28	5
	2	**S 201 P-K 2 NA**	2CDS 281 103 R0277	**593076**			0.28	5
	3	**S 201 P-K 3 NA**	2CDS 281 103 R0317	**593083**			0.28	5
	4	**S 201 P-K 4 NA**	2CDS 281 103 R0337	**593090**			0.28	5
	6	**S 201 P-K 6 NA**	2CDS 281 103 R0377	**593106**			0.28	5
	8	**S 201 P-K 8 NA**	2CDS 281 103 R0407	**593113**			0.28	5
	10	**S 201 P-K 10 NA**	2CDS 281 103 R0427	**593120**			0.28	5
	13	**S 201 P-K 13 NA**	2CDS 281 103 R0447	**593137**			0.28	5
	16	**S 201 P-K 16 NA**	2CDS 281 103 R0467	**593144**			0.28	5
	20	**S 201 P-K 20 NA**	2CDS 281 103 R0487	**593151**			0.28	5
	25	**S 201 P-K 25 NA**	2CDS 281 103 R0517	**593168**			0.28	5
	32	**S 201 P-K 32 NA**	2CDS 281 103 R0537	**593175**			0.28	5
U_{Bmax}	40	**S 201 P-K 40 NA**	2CDS 281 103 R0557	**593182**			0.28	5
440 V ~	50	**S 201 P-K 50 NA**	2CDS 281 103 R0577	**593199**			0.28	5
60 V ⎓	63	**S 201 P-K 63 NA**	2CDS 281 103 R0607	**593205**			0.28	5





3	0.2	**S 203 P-K 0.2 NA**	2CDS 283 103 R0087	**593212**		0.56	2
+	0.3	**S 203 P-K 0.3 NA**	2CDS 283 103 R0117	**593229**		0.56	2
NA	0.5	**S 203 P-K 0.5 NA**	2CDS 283 103 R0157	**593236**		0.56	2
	0.75	**S 203 P-K 0.75 NA**	2CDS 283 103 R0187	**593243**		0.56	2
	1	**S 203 P-K 1 NA**	2CDS 283 103 R0217	**593250**		0.56	2
	1.6	**S 203 P-K 1.6 NA**	2CDS 283 103 R0257	**593267**		0.56	2
	2	**S 203 P-K 2 NA**	2CDS 283 103 R0277	**593274**		0.56	2
	3	**S 203 P-K 3 NA**	2CDS 283 103 R0317	**593281**		0.56	2
	4	**S 203 P-K 4 NA**	2CDS 283 103 R0337	**593298**		0.56	2
	6	**S 203 P-K 6 NA**	2CDS 283 103 R0377	**593304**		0.56	2
	8	**S 203 P-K 8 NA**	2CDS 283 103 R0407	**593311**		0.56	2
	10	**S 203 P-K 10 NA**	2CDS 283 103 R0427	**593328**		0.56	2
	13	**S 203 P-K 13 NA**	2CDS 283 103 R0447	**593335**		0.56	2
	16	**S 203 P-K 16 NA**	2CDS 283 103 R0467	**593342**		0.56	2
	20	**S 203 P-K 20 NA**	2CDS 283 103 R0487	**593359**		0.56	2
	25	**S 203 P-K 25 NA**	2CDS 283 103 R0517	**593366**		0.56	2
	32	**S 203 P-K 32 NA**	2CDS 283 103 R0537	**593373**		0.56	2
	40	**S 203 P-K 40 NA**	2CDS 283 103 R0557	**593380**		0.56	2
U_{Bmax}	50	**S 203 P-K 50 NA**	2CDS 283 103 R0577	**593397**		0.56	2
440 V ~	63	**S 203 P-K 63 NA**	2CDS 283 103 R0607	**593403**		0.56	2

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S 200 P-Z characteristic

Function: protection and control of the electronic circuits against weak and long duration overloads and short-circuits.

Applications: commercial and industrial.

Standard: IEC/EN 60947-2, VDE 0660 Part 101

Icu=25 kA for 0.5 A≤In≤25 A; Icu=15 kA for 32 A≤In≤63 A (acc. to VDE 0660 Part 101)













Number of poles	Rated current	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code	Order code	EAN			kg	pc.
1	0.5	**S 201 P-Z 0.5**	2CDS 281 001 R0158	**593410**			0.14	10
	1	**S 201 P-Z 1**	2CDS 281 001 R0218	**593427**			0.14	10
	1.6	**S 201 P-Z 1.6**	2CDS 281 001 R0258	**593434**			0.14	10
	2	**S 201 P-Z 2**	2CDS 281 001 R0278	**593441**			0.14	10
	3	**S 201 P-Z 3**	2CDS 281 001 R0318	**593458**			0.14	10
	4	**S 201 P-Z 4**	2CDS 281 001 R0338	**593465**			0.14	10
	6	**S 201 P-Z 6**	2CDS 281 001 R0378	**593472**			0.14	10
	8	**S 201 P-Z 8**	2CDS 281 001 R0408	**593489**			0.14	10
	10	**S 201 P-Z 10**	2CDS 281 001 R0428	**593496**			0.14	10
	16	**S 201 P-Z 16**	2CDS 281 001 R0468	**593502**			0.14	10
	20	**S 201 P-Z 20**	2CDS 281 001 R0488	**593519**			0.14	10
	25	**S 201 P-Z 25**	2CDS 281 001 R0518	**593526**			0.14	10
	32	**S 201 P-Z 32**	2CDS 281 001 R0538	**593533**			0.14	10
	40	**S 201 P-Z 40**	2CDS 281 001 R0558	**593540**			0.14	10
	50	**S 201 P-Z 50**	2CDS 281 001 R0578	**593557**			0.14	10
U_{Bmax} 440 V ~ 60 V ⎓	63	**S 201 P-Z 63**	2CDS 281 001 R0608	**593564**			0.14	10
2	0.5	**S 202 P-Z 0.5**	2CDS 282 001 R0158	**593571**			0.28	5
	1	**S 202 P-Z 1**	2CDS 282 001 R0218	**593588**			0.28	5
	1.6	**S 202 P-Z 1.6**	2CDS 282 001 R0258	**593595**			0.28	5
	2	**S 202 P-Z 2**	2CDS 282 001 R0278	**593601**			0.28	5
	3	**S 202 P-Z 3**	2CDS 282 001 R0318	**593618**			0.28	5
	4	**S 202 P-Z 4**	2CDS 282 001 R0338	**593625**			0.28	5
	6	**S 202 P-Z 6**	2CDS 282 001 R0378	**593632**			0.28	5
	8	**S 202 P-Z 8**	2CDS 282 001 R0408	**593649**			0.28	5
	10	**S 202 P-Z 10**	2CDS 282 001 R0428	**593656**			0.28	5
	16	**S 202 P-Z 16**	2CDS 282 001 R0468	**593663**			0.28	5
	20	**S 202 P-Z 20**	2CDS 282 001 R0488	**593670**			0.28	5
	25	**S 202 P-Z 25**	2CDS 282 001 R0518	**593687**			0.28	5
	32	**S 202 P-Z 32**	2CDS 282 001 R0538	**593694**			0.28	5
	40	**S 202 P-Z 40**	2CDS 282 001 R0558	**593700**			0.28	5
U_{Bmax} 440 V ~ 125 V ⎓ ①	50	**S 202 P-Z 50**	2CDS 282 001 R0578	**593717**			0.28	5
	63	**S 202 P-Z 63**	2CDS 282 001 R0608	**593724**			0.28	5
3	0.5	**S 203 P-Z 0.5**	2CDS 283 001 R0158	**593731**			0.42	1
	1	**S 203 P-Z 1**	2CDS 283 001 R0218	**593748**			0.42	1
	1.6	**S 203 P-Z 1.6**	2CDS 283 001 R0258	**593755**			0.42	1
	2	**S 203 P-Z 2**	2CDS 283 001 R0278	**593762**			0.42	1
	3	**S 203 P-Z 3**	2CDS 283 001 R0318	**593779**			0.42	1
	4	**S 203 P-Z 4**	2CDS 283 001 R0338	**593786**			0.42	1
	6	**S 203 P-Z 6**	2CDS 283 001 R0378	**593793**			0.42	1
	8	**S 203 P-Z 8**	2CDS 283 001 R0408	**593809**			0.42	1
	10	**S 203 P-Z 10**	2CDS 283 001 R0428	**593816**			0.42	1
	16	**S 203 P-Z 16**	2CDS 283 001 R0468	**593823**			0.42	1
	20	**S 203 P-Z 20**	2CDS 283 001 R0488	**593830**			0.42	1
	25	**S 203 P-Z 25**	2CDS 283 001 R0518	**593847**			0.42	1
	32	**S 203 P-Z 32**	2CDS 283 001 R0538	**593854**			0.42	1
	40	**S 203 P-Z 40**	2CDS 283 001 R0558	**593861**			0.42	1
	50	**S 203 P-Z 50**	2CDS 283 001 R0578	**593878**			0.42	1
U_{Bmax} 440 V ~	63	**S 203 P-Z 63**	2CDS 283 001 R0608	**593885**			0.42	1

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4	0.5	**S 204 P-Z 0.5**	2CDS 284 001 R0158	**593892**		0.56	1
	1	**S 204 P-Z 1**	2CDS 284 001 R0218	**593908**		0.56	1
	1.6	**S 204 P-Z 1.6**	2CDS 284 001 R0258	**593915**		0.56	1
	2	**S 204 P-Z 2**	2CDS 284 001 R0278	**593922**		0.56	1
	3	**S 204 P-Z 3**	2CDS 284 001 R0318	**593939**		0.56	1
	4	**S 204 P-Z 4**	2CDS 284 001 R0338	**593946**		0.56	1
	6	**S 204 P-Z 6**	2CDS 284 001 R0378	**593953**		0.56	1
	8	**S 204 P-Z 8**	2CDS 284 001 R0408	**593960**		0.56	1
	10	**S 204 P-Z 10**	2CDS 284 001 R0428	**593977**		0.56	1
	16	**S 204 P-Z 16**	2CDS 284 001 R0468	**593984**		0.56	1
	20	**S 204 P-Z 20**	2CDS 284 001 R0488	**593991**		0.56	1
	25	**S 204 P-Z 25**	2CDS 284 001 R0518	**594004**		0.56	1
	32	**S 204 P-Z 32**	2CDS 284 001 R0538	**594011**		0.56	1
	40	**S 204 P-Z 40**	2CDS 284 001 R0558	**594028**		0.56	1
U_{Bmax} 440 V ~	50	**S 204 P-Z 50**	2CDS 284 001 R0578	**594035**		0.56	1
125 V ⎓ ①	63	**S 204 P-Z 63**	2CDS 284 001 R0608	**594042**		0.56	1

① U_{Bmax} 125 V ⎓ with 2 poles connected in series

With disconnecting neutral NA





Number of poles	Rated current	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	**Type code**	Order code	**EAN**			kg	pc.
1	0.5	**S 201 P-Z 0.5 NA**	2CDS 281 103 R0158	**594059**			0.28	5
+	1	**S 201 P-Z 1 NA**	2CDS 281 103 R0218	**594066**			0.28	5
NA	1.6	**S 201 P-Z 1.6 NA**	2CDS 281 103 R0258	**594073**			0.28	5
	2	**S 201 P-Z 2 NA**	2CDS 281 103 R0278	**594080**			0.28	5
	3	**S 201 P-Z 3 NA**	2CDS 281 103 R0318	**594097**			0.28	5
	4	**S 201 P-Z 4 NA**	2CDS 281 103 R0338	**594103**			0.28	5
	6	**S 201 P-Z 6 NA**	2CDS 281 103 R0378	**594110**			0.28	5
	8	**S 201 P-Z 8 NA**	2CDS 281 103 R0408	**594127**			0.28	5
	10	**S 201 P-Z 10 NA**	2CDS 281 103 R0428	**594134**			0.28	5
	16	**S 201 P-Z 16 NA**	2CDS 281 103 R0468	**594141**			0.28	5
	20	**S 201 P-Z 20 NA**	2CDS 281 103 R0488	**594158**			0.28	5
	25	**S 201 P-Z 25 NA**	2CDS 281 103 R0518	**594165**			0.28	5
	32	**S 201 P-Z 32 NA**	2CDS 281 103 R0538	**594172**			0.28	5
	40	**S 201 P-Z 40 NA**	2CDS 281 103 R0558	**594189**			0.28	5
U_{Bmax} 440 V ~	50	**S 201 P-Z 50 NA**	2CDS 281 103 R0578	**594196**			0.28	5
60 V ⎓	63	**S 201 P-Z 63 NA**	2CDS 281 103 R0608	**594202**			0.28	5





3	0.5	**S 203 P-Z 0.5 NA**	2CDS 283 103 R0158	**594219**		0.56	1
+	1	**S 203 P-Z 1 NA**	2CDS 283 103 R0218	**594226**		0.56	1
NA	1.6	**S 203 P-Z 1.6 NA**	2CDS 283 103 R0258	**594233**		0.56	1
	2	**S 203 P-Z 2 NA**	2CDS 283 103 R0278	**594240**		0.56	1
	3	**S 203 P-Z 3 NA**	2CDS 283 103 R0318	**594257**		0.56	1
	4	**S 203 P-Z 4 NA**	2CDS 283 103 R0338	**594264**		0.56	1
	6	**S 203 P-Z 6 NA**	2CDS 283 103 R0378	**594271**		0.56	1
	8	**S 203 P-Z 8 NA**	2CDS 283 103 R0408	**594288**		0.56	1
	10	**S 203 P-Z 10 NA**	2CDS 283 103 R0428	**594295**		0.56	1
	16	**S 203 P-Z 16 NA**	2CDS 283 103 R0468	**594301**		0.56	1
	20	**S 203 P-Z 20 NA**	2CDS 283 103 R0488	**594318**		0.56	1
	25	**S 203 P-Z 25 NA**	2CDS 283 103 R0518	**594325**		0.56	1
	32	**S 203 P-Z 32 NA**	2CDS 283 103 R0538	**594332**		0.56	1
	40	**S 203 P-Z 40 NA**	2CDS 283 103 R0558	**594349**		0.56	1
	50	**S 203 P-Z 50 NA**	2CDS 283 103 R0578	**594356**		0.56	1
U_{Bmax} 440 V ~	63	**S 203 P-Z 63 NA**	2CDS 283 103 R0608	**594363**		0.56	1

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Selection tables
MCBs S 200 series P
with auxiliary contact 25000 - 15000

K

2

S 200 P-K characteristic H☐☐

Function: protection and control of the circuits like motors, transformer and auxiliary circuits, against overloads and short-circuits.
New version with integrated auxiliary contact, factory fitted on the bottom side, 1NO or 1NC.
Advantages: no nuissance tripping in the case of functional peak currents up to 8xIn, depending on the series; through its highly sensitive thermostatic bimetal trip, the K-type characteristic offers protection to damageable elements in the overcurrent range; it also provides the best protection to cables and lines.

Applications: commercial and industrial.

Standard: IEC/EN 60947-2, VDE 0660 Part 101

Icu=25 kA for 0.5 A≤In≤25 A; Icu=15 kA for 32 A≤In≤63 A (acc. to VDE 0660 Part 101)



Number of poles	Rated current	Order details				Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code			Order code	EAN			kg	pc.
1	0.2	**S 201 P-K 0.2 H**	☐	☐	2CD☐ 281 001 R0087				0.14	6
	0.3	**S 201 P-K 0.3 H**	☐	☐	2CD☐ 281 001 R0117				0.14	6
	0.5	**S 201 P-K 0.5 H**	☐	☐	2CD☐ 281 001 R0157				0.14	6
	0.75	**S 201 P-K 0.75 H**	☐	☐	2CD☐ 281 001 R0187				0.14	6
	1	**S 201 P-K 1 H**	☐	☐	2CD☐ 281 001 R0217				0.14	6
	1.6	**S 201 P-K 1.6 H**	☐	☐	2CD☐ 281 001 R0257				0.14	6
	2	**S 201 P-K 2 H**	☐	☐	2CD☐ 281 001 R0277				0.14	6
	3	**S 201 P-K 3 H**	☐	☐	2CD☐ 281 001 R0317				0.14	6
	4	**S 201 P-K 4 H**	☐	☐	2CD☐ 281 001 R0337				0.14	6
	6	**S 201 P-K 6 H**	☐	☐	2CD☐ 281 001 R0377				0.14	6
	8	**S 201 P-K 8 H**	☐	☐	2CD☐ 281 001 R0407				0.14	6
	10	**S 201 P-K 10 H**	☐	☐	2CD☐ 281 001 R0427				0.14	6
	13	**S 201 P-K 13 H**	☐	☐	2CD☐ 281 001 R0447				0.14	6
	16	**S 201 P-K 16 H**	☐	☐	2CD☐ 281 001 R0467				0.14	6
	20	**S 201 P-K 20 H**	☐	☐	2CD☐ 281 001 R0487				0.14	6
	25	**S 201 P-K 25 H**	☐	☐	2CD☐ 281 001 R0517				0.14	6
	32	**S 201 P-K 32 H**	☐	☐	2CD☐ 281 001 R0537				0.14	6
	40	**S 201 P-K 40 H**	☐	☐	2CD☐ 281 001 R0557				0.14	6
U_{Bmax} 440 V ~ 60 V ⎓	50	**S 201 P-K 50 H**	☐	☐	2CD☐ 281 001 R0577				0.14	6
	63	**S 201 P-K 63 H**	☐	☐	2CD☐ 281 001 R0607				0.14	6

Order code

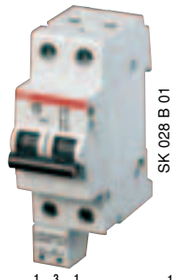
MCB with NC contact ☐1
MCB with NO contact ☐0

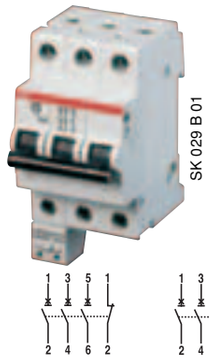
☐O
☐V

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Selection tables
MCBs S 200 series P
with auxiliary contact 25000 - 15000

K





2	0.2	**S 202 P-K 0.2 H**	□	□	2CD□ 282 001 R0087	0.28	3
	0.3	**S 202 P-K 0.3 H**	□	□	2CD□ 282 001 R0117	0.28	3
	0.5	**S 202 P-K 0.5 H**	□	□	2CD□ 282 001 R0157	0.28	3
	0.75	**S 202 P-K 0.75 H**	□	□	2CD□ 282 001 R0187	0.28	3
	1	**S 202 P-K 1 H**	□	□	2CD□ 282 001 R0217	0.28	3
	1.6	**S 202 P-K 1.6 H**	□	□	2CD□ 282 001 R0257	0.28	3
	2	**S 202 P-K 2 H**	□	□	2CD□ 282 001 R0277	0.28	3
	3	**S 202 P-K 3 H**	□	□	2CD□ 282 001 R0317	0.28	3
	4	**S 202 P-K 4 H**	□	□	2CD□ 282 001 R0337	0.28	3
	6	**S 202 P-K 6 H**	□	□	2CD□ 282 001 R0377	0.28	3
	8	**S 202 P-K 8 H**	□	□	2CD□ 282 001 R0407	0.28	3
	10	**S 202 P-K 10 H**	□	□	2CD□ 282 001 R0427	0.28	3
	13	**S 202 P-K 13 H**	□	□	2CD□ 282 001 R0447	0.28	3
	16	**S 202 P-K 16 H**	□	□	2CD□ 282 001 R0467	0.28	3
	20	**S 202 P-K 20 H**	□	□	2CD□ 282 001 R0487	0.28	3
	25	**S 202 P-K 25 H**	□	□	2CD□ 282 001 R0517	0.28	3
	32	**S 202 P-K 32 H**	□	□	2CD□ 282 001 R0537	0.28	3
U_{Bmax} 440 V ~	40	**S 202 P-K 40 H**	□	□	2CD□ 282 001 R0557	0.28	3
125 V ⎓	50	**S 202 P-K 50 H**	□	□	2CD□ 282 001 R0577	0.28	3
①	63	**S 202 P-K 63 H**	□	□	2CD□ 282 001 R0607	0.28	3

3	0.2	**S 203 P-K 0.2 H**	□	□	2CD□ 283 001 R0087	0.42	2
	0.3	**S 203 P-K 0.3 H**	□	□	2CD□ 283 001 R0117	0.42	2
	0.5	**S 203 P-K 0.5 H**	□	□	2CD□ 283 001 R0157	0.42	2
	0.75	**S 203 P-K 0.75 H**	□	□	2CD□ 283 001 R0187	0.42	2
	1	**S 203 P-K 1 H**	□	□	2CD□ 283 001 R0217	0.42	2
	1.6	**S 203 P-K 1.6 H**	□	□	2CD□ 283 001 R0257	0.42	2
	2	**S 203 P-K 2 H**	□	□	2CD□ 283 001 R0277	0.42	2
	3	**S 203 P-K 3 H**	□	□	2CD□ 283 001 R0317	0.42	2
	4	**S 203 P-K 4 H**	□	□	2CD□ 283 001 R0337	0.42	2
	6	**S 203 P-K 6 H**	□	□	2CD□ 283 001 R0377	0.42	2
	8	**S 203 P-K 8 H**	□	□	2CD□ 283 001 R0407	0.42	2
	10	**S 203 P-K 10 H**	□	□	2CD□ 283 001 R0427	0.42	2
	13	**S 203 P-K 13 H**	□	□	2CD□ 283 001 R0447	0.42	2
	16	**S 203 P-K 16 H**	□	□	2CD□ 283 001 R0467	0.42	2
	20	**S 203 P-K 20 H**	□	□	2CD□ 283 001 R0487	0.42	2
	25	**S 203 P-K 25 H**	□	□	2CD□ 283 001 R0517	0.42	2
	32	**S 203 P-K 32 H**	□	□	2CD□ 283 001 R0537	0.42	2
	40	**S 203 P-K 40 H**	□	□	2CD□ 283 001 R0557	0.42	2
U_{Bmax} 440 V ~	50	**S 203 P-K 50 H**	□	□	2CD□ 283 001 R0577	0.42	2
	63	**S 203 P-K 63 H**	□	□	2CD□ 283 001 R0607	0.42	2

Order code

MCB with NC contact 0 1 — O
MCB with NO contact 1 0 — V

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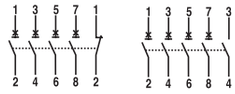
Selection tables
MCBs S 200 series P
with auxiliary contact 25000 - 15000

S 200 P-K H□□

K

2





Number of poles	Rated current	Order details				Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	In A	Type code			Order code	EAN			kg	pc.
4	0.2	**S 204 P-K 0.2 H**	□	□	2CD□ 284 001 R0087				0.56	1
	0.3	**S 204 P-K 0.3 H**	□	□	2CD□ 284 001 R0117				0.56	1
	0.5	**S 204 P-K 0.5 H**	□	□	2CD□ 284 001 R0157				0.56	1
	0.75	**S 204 P-K 0.75 H**	□	□	2CD□ 284 001 R0187				0.56	1
	1	**S 204 P-K 1 H**	□	□	2CD□ 284 001 R0217				0.56	1
	1.6	**S 204 P-K 1.6 H**	□	□	2CD□ 284 001 R0257				0.56	1
	2	**S 204 P-K 2 H**	□	□	2CD□ 284 001 R0277				0.56	1
	3	**S 204 P-K 3 H**	□	□	2CD□ 284 001 R0317				0.56	1
	4	**S 204 P-K 4 H**	□	□	2CD□ 284 001 R0337				0.56	1
	6	**S 204 P-K 6 H**	□	□	2CD□ 284 001 R0377				0.56	1
	8	**S 204 P-K 8 H**	□	□	2CD□ 284 001 R0407				0.56	1
	10	**S 204 P-K 10 H**	□	□	2CD□ 284 001 R0427				0.56	1
	13	**S 204 P-K 13 H**	□	□	2CD□ 284 001 R0447				0.56	1
	16	**S 204 P-K 16 H**	□	□	2CD□ 284 001 R0467				0.56	1
	20	**S 204 P-K 20 H**	□	□	2CD□ 284 001 R0487				0.56	1
	25	**S 204 P-K 25 H**	□	□	2CD□ 284 001 R0517				0.56	1
	32	**S 204 P-K 32 H**	□	□	2CD□ 284 001 R0537				0.56	1
U_{Bmax} 440 V ~	40	**S 204 P-K 40 H**	□	□	2CD□ 284 001 R0557				0.56	1
125 V ⎓	50	**S 204 P-K 50 H**	□	□	2CD□ 284 001 R0577				0.56	1
①	63	**S 204 P-K 63 H**	□	□	2CD□ 284 001 R0607				0.56	1

Order code

MCB with NC contact 0 1 — O
MCB with NO contact 1 0 — V

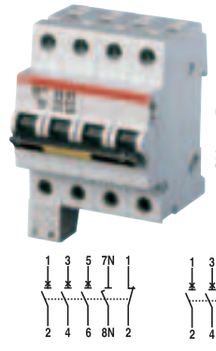
① U_{Bmax} 125 V ⎓ with 2 poles connected in series

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Selection tables
MCBs S 200 series P
with auxiliary contact 25000 - 15000

K





With disconnecting neutral NA

Number of poles	Rated current In A	Order details Type code		Order code	Bbn 4016779 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
1 + NA	0.2	**S 201 P-K 0.2 NA H**☐	☐	2CD☐ 281103R0087				0.28	3
	0.3	**S 201 P-K 0.3 NA H**☐	☐	2CD☐ 281103R0117				0.28	3
	0.5	**S 201 P-K 0.5 NA H**☐	☐	2CD☐ 281103R0157				0.28	3
	0.75	**S 201 P-K 0.75 NA H**☐	☐	2CD☐ 281103R0187				0.28	3
	1	**S 201 P-K 1 NA H** ☐	☐	2CD☐ 281103R0217				0.28	3
	1.6	**S 201 P-K 1.6 NA H**☐	☐	2CD☐ 281103R0257				0.28	3
	2	**S 201 P-K 2 NA H** ☐	☐	2CD☐ 281103R0277				0.28	3
	3	**S 201 P-K 3 NA H** ☐	☐	2CD☐ 281103R0317				0.28	3
	4	**S 201 P-K 4 NA H** ☐	☐	2CD☐ 281103R0337				0.28	3
	6	**S 201 P-K 6 NA H** ☐	☐	2CD☐ 281103R0377				0.28	3
	8	**S 201 P-K 8 NA H** ☐	☐	2CD☐ 281103R0407				0.28	3
	10	**S 201 P-K 10 NA H** ☐	☐	2CD☐ 281103R0427				0.28	3
	13	**S 201 P-K 13 NA H** ☐	☐	2CD☐ 281103R0447				0.28	3
	16	**S 201 P-K 16 NA H** ☐	☐	2CD☐ 281103R0467				0.28	3
U_{Bmax} 440 V ~ 60 V ⎓	20	**S 201 P-K 20 NA H** ☐	☐	2CD☐ 281103R0487				0.28	3
	25	**S 201 P-K 25 NA H** ☐	☐	2CD☐ 281103R0517				0.28	3
	32	**S 201 P-K 32 NA H** ☐	☐	2CD☐ 281103R0537				0.28	3
	40	**S 201 P-K 40 NA H** ☐	☐	2CD☐ 281103R0557				0.28	3
	50	**S 201 P-K 50 NA H** ☐	☐	2CD☐ 281103R0577				0.28	3
	63	**S 201 P-K 63 NA H**☐	☐	2CD☐ 281103R0607				0.28	3
3	0.2	**S 203 P-K 0.2 NA H**☐	☐	2CD☐ 283103R0087				0.56	1
+	0.3	**S 203 P-K 0.3 NA H**☐	☐	2CD☐ 283103R0117				0.56	1
NA	0.5	**S 203 P-K 0.5 NA H**☐	☐	2CD☐ 283103R0157				0.56	1
	0.75	**S 203 P-K 0.75 NA H**☐	☐	2CD☐ 283103R0187				0.56	1
	1	**S 203 P-K 1 NA H** ☐	☐	2CD☐ 283103R0217				0.56	1
	1.6	**S 203 P-K 1.6 NA H** ☐	☐	2CD☐ 283103R0257				0.56	1
	2	**S 203 P-K 2 NA H** ☐	☐	2CD☐ 283103R0277				0.56	1
	3	**S 203 P-K 3 NA H** ☐	☐	2CD☐ 283103R0317				0.56	1
	4	**S 203 P-K 4 NA H** ☐	☐	2CD☐ 283103R0337				0.56	1
	6	**S 203 P-K 6 NA H** ☐	☐	2CD☐ 283103R0377				0.56	1
	8	**S 203 P-K 8 NA H** ☐	☐	2CD☐ 283103R0407				0.56	1
	10	**S 203 P-K 10 NA H** ☐	☐	2CD☐ 283103R0427				0.56	1
U_{Bmax} 440 V ~	13	**S 203 P-K 13 NA H** ☐	☐	2CD☐ 283103R0447				0.56	1
	16	**S 203 P-K 16 NA H** ☐	☐	2CD☐ 283103R0467				0.56	1
	20	**S 203 P-K 20 NA H** ☐	☐	2CD☐ 283103R0487				0.56	1
	25	**S 203 P-K 25 NA H** ☐	☐	2CD☐ 283103R0517				0.56	1
	32	**S 203 P-K 32 NA H** ☐	☐	2CD☐ 283103R0537				0.56	1
	40	**S 203 P-K 40 NA H** ☐	☐	2CD☐ 283103R0557				0.56	1
	50	**S 203 P-K 50 NA H** ☐	☐	2CD☐ 283103R0577				0.56	1
	63	**S 203 P-K 63 NA H** ☐	☐	2CD☐ 283103R0607				0.56	1

Order code

MCB with NC contact ☐0☐1
MCB with NO contact ☐1☐0

☐O
☐V

Attention:
S 200 P in B, C, D and Z characteristics with auxiliary contact on request.

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RCDs assure a protection to people and installations against fault current to earth. They are divided into three families:

- **RCCBs**, which are sensitive only to earth fault current (therefore they have to be connected in series with a MCB or a fuse to protect them against overcurrents and short-circuits)
- **RCD-blocks**, which are devices to be assembled on a MCB with lower or equal rated current to provide protection against both earth-fault currents and overload or short-circuits
- **RCBOs**, which combines in a single device protection against both earth-fault currents and overloads or short-circuits.

New RCDs System pro *M* compact range presents a wide offer for all the three families, respectively **F 200**, **DDA 200** and **DS 200** series.

A large offer for standard instantaneous and selective AC and A types is completed with some configurations for special applications, like AP-R type against perturbations or AE type for emergency stop.

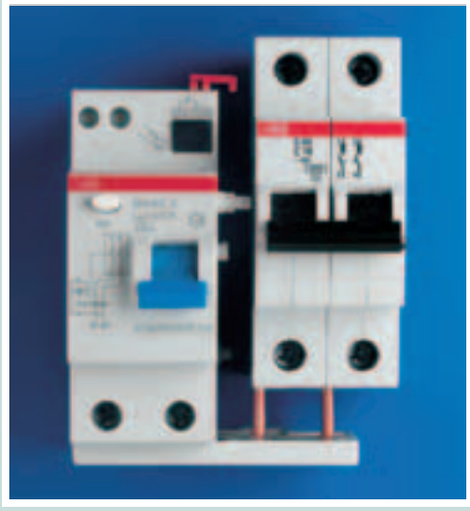
All sizes up to 63 A with all the sensitivity thresholds up to 1 A are offered in all the possible pole configurations.

ABB RCDs obtained a lot of marks and approvals and offer the same “plus” advantages of the other System pro *M* compact devices.

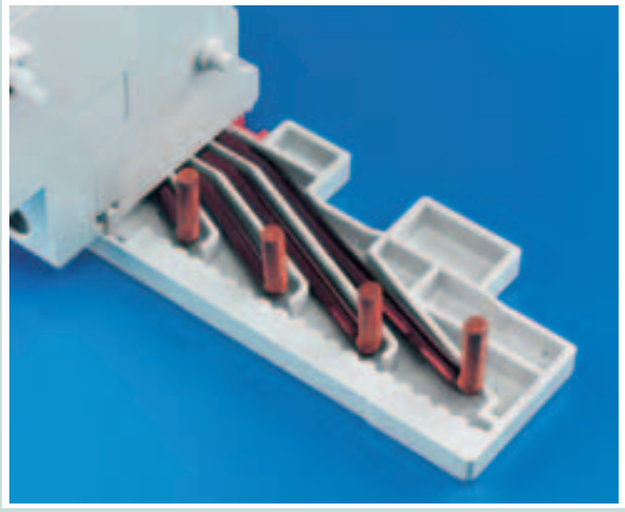
















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Residual current devices F 200, DDA 200, FS 201 and DS 200 series

3

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3

	TECHNICAL FEATURES		
	Standards		
Electrical features	Type (wave form of the earth leakage sensed)		
	Poles		
	Rated current In		A
	Rated voltage Ue		V
	Rated sensitivity		A
	Insulation voltage Ui		V
	Max. operating voltage of circuit test		V
	Min. operating voltage of circuit test		V
	Rated frequency		Hz
	Rated conditional		
	short-circuit current Inc=IΔc	SCPD - fuse gL 100 A	kA
	Rated residual breaking capacity IΔm=Im		kA
	Rated impulse withstand voltage (1.2/50) Uimp		kV
	Power-frequency voltage dielectric strength		kV
	Overvoltage category		
	Surge current resistance acc. to VDE 0432 Part 2 (wave 8/20)		A
Mechanical features	Toggle		
	Contact position indicator (CPI)		
	Electrical life		
	Mechanical life		
	Protection degree	housing terminals	
	Tropicalization acc. to IEC/EN 60068-2	humid heat constant climatic conditions variable climatic conditions	°C/RH °C/RH °C/RH
	Ambient temperature (with daily average≤+35°C)		°C
	Storage temperature		°C
Installation	Terminal type		
	Terminal size top/bottom per cable		mm^2
	Tightening torque		N*m
	Mounting		
	Connection		
	Withdrawal from busbar		
Dimensions and weight	Dimensions (H x D x W)	2P 4P	mm mm
	Weight	2P 4P	g g
Combination with auxiliary elements	Combinable with:	auxiliary contact signal contact/auxiliary switch shunt trip undervoltage release	

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	F 200 AC	F 200 A	F 200 AC AP-R	F 200 A AP-R	F 200 AC S	F 200 A S
	IEC/EN 61008					
	AC	A	AC	A	AC	A
	2P, 4P					
	16, 25, 40, 63		25, 40, 63		40, 63	
	230/400 - 240/415					
	0.01...0.5		0.03		0.1...1	
	500					
	254 (440 for F 200 left neutral)					
	110 (195 for F 200 left neutral)					
	50…60					
	10					
	1					
	6					
	2.5					
	III, disconnector abilities					
	250		3000		5000	
	blue sealable in ON-OFF position					
	yes					
	10000					
	20000					
	IP4X					
	IP2X					
	28 cycles with 55/95…100					
	23/83 - 40/93 - 55/20					
	25/95 - 40/95					
	-25…+55					
	-40…+70					
	failsafe bidirectional cylinder-lift terminal at top and bottom (shock protected)					
	(rigid and flexible) up to 25/25					
	2.8					
	on DIN rail EN 60715 (35 mm) by means of fast clip device					
	from top and bottom					
	it is possible without using any tools					
	85 x 69 x 35					
	85 x 69 x 70					
	200					
	350					
	yes					
	yes					
	yes					
	yes					

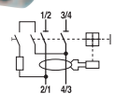
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AC

3

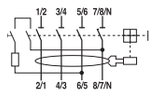


2CSC400690F0001





2CSC400651F0001



F 200 AC type

Function: protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts; command and isolation of resistive and inductive circuits.

Application: residential, commercial, industrial.

Standard: IEC/EN 61008

Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	10	16	**F202 AC-16/0.01**	2CSF202001R0160	**779902**			0.225	1/6
	30	25	**F202 AC-25/0.03**	2CSF202001R1250	**780007**			0.225	1/6
		40	**F202 AC-40/0.03**	2CSF202001R1400	**780106**			0.225	1/6
		63	**F202 AC-63/0.03**	2CSF202001R1630	**780205**			0.225	1/6
	100	25	**F202 AC-25/0.1**	2CSF202001R2250	**780304**			0.225	1/6
		40	**F202 AC-40/0.1**	2CSF202001R2400	**780403**			0.225	1/6
		63	**F202 AC-63/0.1**	2CSF202001R2630	**780502**			0.225	1/6
	300	25	**F202 AC-25/0.3**	2CSF202001R3250	**780601**			0.225	1/6
		40	**F202 AC-40/0.3**	2CSF202001R3400	**780700**			0.225	1/6
		63	**F202 AC-63/0.3**	2CSF202001R3630	**780809**			0.225	1/6
	500	25	**F202 AC-25/0.5**	2CSF202001R4250	**780908**			0.225	1/6
		40	**F202 AC-40/0.5**	2CSF202001R4400	**781004**			0.225	1/6
		63	**F202 AC-63/0.5**	2CSF202001R4630	**781103**			0.225	1/6
4	30	25	**F204 AC-25/0.03**	2CSF204001R1250	**781202**			0.375	1/3
		40	**F204 AC-40/0.03**	2CSF204001R1400	**781301**			0.375	1/3
		63	**F204 AC-63/0.03**	2CSF204001R1630	**781400**			0.375	1/3
	100	25	**F204 AC-25/0.1**	2CSF204001R2250	**781509**			0.375	1/3
		40	**F204 AC-40/0.1**	2CSF204001R2400	**781608**			0.375	1/3
		63	**F204 AC-63/0.1**	2CSF204001R2630	**781707**			0.375	1/3
	300	25	**F204 AC-25/0.3**	2CSF204001R3250	**781806**			0.375	1/3
		40	**F204 AC-40/0.3**	2CSF204001R3400	**781905**			0.375	1/3
		63	**F204 AC-63/0.3**	2CSF204001R3630	**782001**			0.375	1/3
	500	25	**F204 AC-25/0.5**	2CSF204001R4250	**782100**			0.375	1/3
		40	**F204 AC-40/0.5**	2CSF204001R4400	**782209**			0.375	1/3
		63	**F204 AC-63/0.5**	2CSF204001R4630	**782308**			0.375	1/3

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A



2CSC400569F0001



2CSC400551F0001

F 200 A type

Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts; command and isolation of resistive and inductive circuits.

Application: residential, commercial, industrial.

Standard: IEC/EN 61008

Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	10	16	**F202 A-16/0.01**	2CSF202101R0160	**782407**			0.225	1/6
	30	25	**F202 A-25/0.03**	2CSF202101R1250	**782506**			0.225	1/6
		40	**F202 A-40/0.03**	2CSF202101R1400	**782605**			0.225	1/6
		63	**F202 A-63/0.03**	2CSF202101R1630	**782704**			0.225	1/6
	100	25	**F202 A-25/0.1**	2CSF202101R2250	**786900**			0.225	1/6
		40	**F202 A-40/0.1**	2CSF202101R2400	**787006**			0.225	1/6
		63	**F202 A-63/0.1**	2CSF202101R2630	**787105**			0.225	1/6
	300	25	**F202 A-25/0.3**	2CSF202101R3250	**782803**			0.225	1/6
		40	**F202 A-40/0.3**	2CSF202101R3400	**782902**			0.225	1/6
		63	**F202 A-63/0.3**	2CSF202101R3630	**783008**			0.225	1/6
	500	25	**F202 A-25/0.5**	2CSF202101R4250	**783107**			0.225	1/6
		40	**F202 A-40/0.5**	2CSF202101R4400	**783206**			0.225	1/6
		63	**F202 A-63/0.5**	2CSF202101R4630	**783305**			0.225	1/6
4	30	25	**F204 A-25/0.03**	2CSF204101R1250	**783404**			0.375	1/3
		40	**F204 A-40/0.03**	2CSF204101R1400	**783503**			0.375	1/3
		63	**F204 A-63/0.03**	2CSF204101R1630	**783602**			0.375	1/3
	100	25	**F204 A-25/0.1**	2CSF204101R2250	**787204**			0.375	1/3
		40	**F204 A-40/0.1**	2CSF204101R2400	**787303**			0.375	1/3
		63	**F204 A-63/0.1**	2CSF204101R2630	**787402**			0.375	1/3
	300	25	**F204 A-25/0.3**	2CSF204101R3250	**783701**			0.375	1/3
		40	**F204 A-40/0.3**	2CSF204101R3400	**783800**			0.375	1/3
		63	**F204 A-63/0.3**	2CSF204101R3630	**783909**			0.375	1/3
	500	25	**F204 A-25/0.5**	2CSF204101R4250	**784005**			0.375	1/3
		40	**F204 A-40/0.5**	2CSF204101R4400	**784104**			0.375	1/3
		63	**F204 A-63/0.5**	2CSF204101R4630	**784203**			0.375	1/3

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AC

3

F 200 AC type (IEC)

Function: protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts; command and isolation of resistive and inductive circuits.

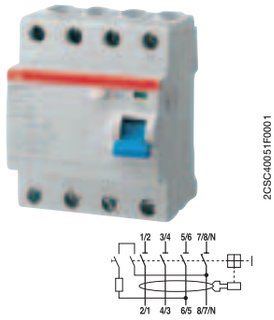
Application: residential, commercial, industrial.

Standard: IEC/EN 61008

Marking: according to IEC 61008



Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	10	16	**F202 AC-16/0,01**	2CSF202005R0160	**814603**			0.225	1/6
	30	25	**F202 AC-25/0,03**	2CSF202005R1250	**814702**			0.225	1/6
		40	**F202 AC-40/0,03**	2CSF202005R1400	**814801**			0.225	1/6
		63	**F202 AC-63/0,03**	2CSF202005R1630	**814900**			0.225	1/6
	100	25	**F202 AC-25/0,1**	2CSF202005R2250	**815006**			0.225	1/6
		40	**F202 AC-40/0,1**	2CSF202005R2400	**815105**			0.225	1/6
		63	**F202 AC-63/0,1**	2CSF202005R2630	**815204**			0.225	1/6
	300	25	**F202 AC-25/0,3**	2CSF202005R3250	**815303**			0.225	1/6
		40	**F202 AC-40/0,3**	2CSF202005R3400	**815402**			0.225	1/6
		63	**F202 AC-63/0,3**	2CSF202005R3630	**815501**			0.225	1/6



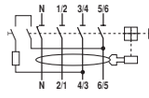
4	30	25	**F204 AC-25/0,03**	2CSF204005R1250	**817109**			0.375	1/3
		40	**F204 AC-40/0,03**	2CSF204005R1400	**817208**			0.375	1/3
		63	**F204 AC-63/0,03**	2CSF204005R1630	**817307**			0.375	1/3
	100	25	**F204 AC-25/0,1**	2CSF204005R2250	**817406**			0.375	1/3
		40	**F204 AC-40/0,1**	2CSF204005R2400	**817505**			0.375	1/3
		63	**F204 AC-63/0,1**	2CSF204005R2630	**817604**			0.375	1/3
	300	25	**F204 AC-25/0,3**	2CSF204005R3250	**817703**			0.375	1/3
		40	**F204 AC-40/0,3**	2CSF204005R3400	**817802**			0.375	1/3
		63	**F204 AC-63/0,3**	2CSF204005R3630	**817901**			0.375	1/3

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AC



2CSC400051F0001



F 200 AC type with neutral pole on the left

Function: protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts; command and isolation of resistive and inductive circuits. Product helpful where for installation habits, for wiring with busbars or cables, for special needs neutral on the left is needed.

Application: residential, commercial, industrial.

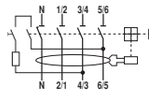
Standard: IEC/EN 61008

Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
4	30	25	**F204 AC-25/0.03**	2CSF204023R1250	**815907**			0.375	1/3
		40	**F204 AC-40/0.03**	2CSF204023R1400	**816003**			0.375	1/3
		63	**F204 AC-63/0.03**	2CSF204023R1630	**816102**			0.375	1/3
	100	25	**F204 AC-25/0.1**	2CSF204023R2250	**816201**			0.375	1/3
		40	**F204 AC-40/0.1**	2CSF204023R2400	**816300**			0.375	1/3
		63	**F204 AC-63/0.1**	2CSF204023R2630	**816409**			0.375	1/3
	300	25	**F204 AC-25/0.3**	2CSF204023R3250	**816508**			0.375	1/3
		40	**F204 AC-40/0.3**	2CSF204023R3400	**816607**			0.375	1/3
		63	**F204 AC-63/0.3**	2CSF204023R3630	**816706**			0.375	1/3
	500	25	**F204 AC-25/0.5**	2CSF204023R4250	**816805**			0.375	1/3
		40	**F204 AC-40/0.5**	2CSF204023R4400	**816904**			0.375	1/3
		63	**F204 AC-63/0.5**	2CSF204023R4630	**817000**			0.375	1/3

A



2CSC410051F0001



F 200 A type with neutral pole on the left

Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts; command and isolation of resistive and inductive circuits. Product helpful where for installation habits, for wiring with busbars or cables, for special needs neutral on the left is needed.

Application: residential, commercial, industrial.

Standard: IEC/EN 61008

Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
4	30	25	**F204 A-25/0.03**	2CSF204123R1250	**820109**			0.375	1/3
		40	**F204 A-40/0.03**	2CSF204123R1400	**820208**			0.375	1/3
		63	**F204 A-63/0.03**	2CSF204123R1630	**820307**			0.375	1/3
	100	25	**F204 A-25/0.1**	2CSF204123R2250	**820406**			0.375	1/3
		40	**F204 A-40/0.1**	2CSF204123R2400	**820505**			0.375	1/3
		63	**F204 A-63/0.1**	2CSF204123R2630	**820604**			0.375	1/3
	300	25	**F204 A-25/0.3**	2CSF204123R3250	**820703**			0.375	1/3
		40	**F204 A-40/0.3**	2CSF204123R3400	**820802**			0.375	1/3
		63	**F204 A-63/0.3**	2CSF204123R3630	**820901**			0.375	1/3
	500	25	**F204 A-25/0.5**	2CSF204123R4250	**821007**			0.375	1/3
		40	**F204 A-40/0.5**	2CSF204123R4400	**821106**			0.375	1/3
		63	**F204 A-63/0.5**	2CSF204123R4630	**821205**			0.375	1/3

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AC





F 200 AP-R, AC type

Function: protection against the effects of sinusoidal alternating earth fault currents, providing the best compromise between safety and continuity in the service thanks to the resistance to unwanted trippings; protection against indirect contacts and additional protection against direct (IΔn=30 mA) contacts; command and isolation of resistive and inductive circuits.

Application: residential, commercial, industrial.

Standard: IEC/EN 61008

Surge current resistance (wave 8/20)=3000 A

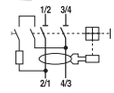
Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	30	25	**F202 AC-25/0.03 AP-R**	2CSF202301R1250	**785705**			0.225	1/6
		40	**F202 AC-40/0.03 AP-R**	2CSF202301R1400	**823704**			0.225	1/6
		63	**F202 AC-63/0.03 AP-R**	2CSF202301R1630	**785804**			0.225	1/6
4	30	25	**F204 AC-25/0.03 AP-R**	2CSF204301R1250	**785903**			0.375	1/3
		40	**F204 AC-40/0.03 AP-R**	2CSF204301R1400	**823803**			0.375	1/3
		63	**F204 AC-63/0.03 AP-R**	2CSF204301R1630	**786009**			0.375	1/3

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A



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F 200 AP-R, A type

Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents, providing the best compromise between safety and continuity in the service thanks to the resistance to unwanted trippings; protection against indirect contacts and additional protection against direct (IΔn=30 mA) contacts; command and isolation of resistive and inductive circuits.

Application: residential, commercial, industrial.

Standard: IEC/EN 61008

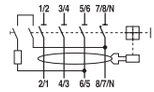
Surge current resistance (wave 8/20)=3000 A

3

Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	30	25	**F202 A-25/0.03 AP-R**	2CSF202401R1250	**785101**			0.225	1/6
		40	**F202 A-40/0.03 AP-R**	2CSF202401R1400	**785200**			0.225	1/6
		63	**F202 A-63/0.03 AP-R**	2CSF202401R1630	**785309**			0.225	1/6



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4	30	25	**F204 A-25/0.03 AP-R**	2CSF204401R1250	**785408**			0.375	1/3
		40	**F204 A-40/0.03 AP-R**	2CSF204401R1400	**785507**			0.375	1/3
		63	**F204 A-63/0.03 AP-R**	2CSF204401R1630	**785606**			0.375	1/3

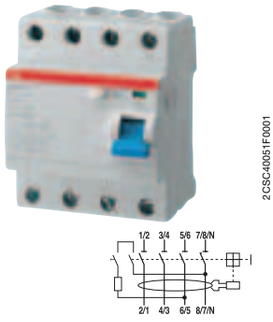
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AC

3



2CSC400050F0001



2CSC400051F0001

F 200 AC selective type

Function: protection against the effects of sinusoidal alternating earth fault currents with an intentional tripping delay, which permits to realize the selectivity with downstream instantaneous devices (for more information about selectivity see the technical guide); protection against indirect contacts; command and isolation of resistive and inductive circuits.

Application: commercial, industrial.

Standard: IEC/EN 61008

Surge current resistance (wave 8/20)=5000 A

Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	100	40	**F202 AC S-40/0.1**	2CSF202901R2400	**821304**			0.225	1/6
		63	**F202 AC S-63/0.1**	2CSF202901R2630	**821403**			0.225	1/6
	300	40	**F202 AC S-40/0.3**	2CSF202901R3400	**821502**			0.225	1/6
		63	**F202 AC S-63/0.3**	2CSF202901R3630	**821601**			0.225	1/6
	500	40	**F202 AC S-40/0.5**	2CSF202901R4400	**821700**			0.225	1/6
		63	**F202 AC S-63/0.5**	2CSF202901R4630	**821809**			0.225	1/6
	1000	40	**F202 AC S-40/1**	2CSF202901R5400	**821908**			0.225	1/6
		63	**F202 AC S-63/1**	2CSF202901R5630	**822004**			0.225	1/6
4	100	40	**F204 AC S-40/0.1**	2CSF204901R2400	**822103**			0.375	1/3
		63	**F204 AC S-63/0.1**	2CSF204901R2630	**822202**			0.375	1/3
	300	40	**F204 AC S-40/0.3**	2CSF204901R3400	**822301**			0.375	1/3
		63	**F204 AC S-63/0.3**	2CSF204901R3630	**822400**			0.375	1/3
	500	40	**F204 AC S-40/0.5**	2CSF204901R4400	**822509**			0.375	1/3
		63	**F204 AC S-63/0.5**	2CSF204901R4630	**822608**			0.375	1/3
	1000	40	**F204 AC S-40/1**	2CSF204901R5400	**822707**			0.375	1/3
		63	**F204 AC S-63/1**	2CSF204901R5630	**822806**			0.375	1/3

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A

F 200 A selective type

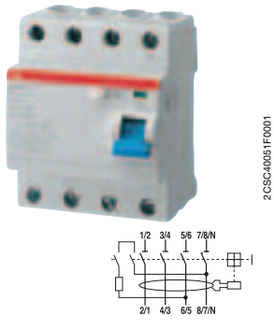
Function: protection against the effects of sinusoidal alternating and direct pulsating earth fault currents with an intentional tripping delay, which permits to realize the selectivity with downstream instantaneous devices (for more information about selectivity see the technical guide); protection against indirect contacts; command and isolation of resistive and inductive circuits.

Application: commercial, industrial.

Standard: IEC/EN 61008

Surge current resistance (wave 8/20)=5000 A





Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	100	40	**F202 A S-40/0.1**	2CSF202201R2400	**822905**			0.225	1/6
		63	**F202 A S-63/0.1**	2CSF202201R2630	**823001**			0.225	1/6
	300	40	**F202 A S-40/0.3**	2CSF202201R3400	**784302**			0.225	1/6
		63	**F202 A S-63/0.3**	2CSF202201R3630	**784401**			0.225	1/6
	500	40	**F202 A S-40/0.5**	2CSF202201R4400	**784500**			0.225	1/6
		63	**F202 A S-63/0.5**	2CSF202201R4630	**784609**			0.225	1/6
	1000	40	**F202 A S-40/1**	2CSF202201R5400	**823100**			0.225	1/6
		63	**F202 A S-63/1**	2CSF202201R5630	**823209**			0.225	1/6
4	100	40	**F204 A S-40/0.1**	2CSF204201R2400	**823308**			0.375	1/3
		63	**F204 A S-63/0.1**	2CSF204201R2630	**823407**			0.375	1/3
	300	40	**F204 A S-40/0.3**	2CSF204201R3400	**784708**			0.375	1/3
		63	**F204 A S-63/0.3**	2CSF204201R3630	**784807**			0.375	1/3
	500	40	**F204 A S-40/0.5**	2CSF204201R4400	**784906**			0.375	1/3
		63	**F204 A S-63/0.5**	2CSF204201R4630	**785002**			0.375	1/3
	1000	40	**F204 A S-40/1**	2CSF204201R5400	**823506**			0.375	1/3
		63	**F204 A S-63/1**	2CSF204201R5630	**823605**			0.375	1/3

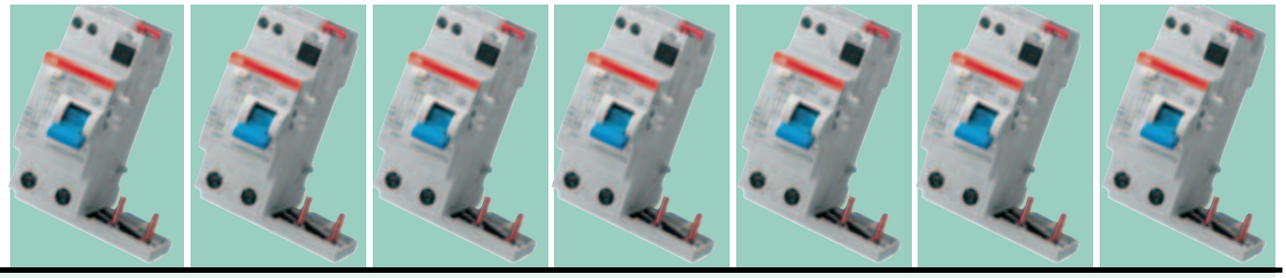
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3

	TECHNICAL FEATURES		
	Standards		
Electrical features	Type (wave form of the earth leakage sensed)		
	Poles		
	Size		A
	Rated voltage Ue		V
	Rated sensitivity		A
	Insulation voltage Ui		V
	Max. operating voltage of circuit test		V
	Min. operating voltage of circuit test		V
	Rated frequency		Hz
	Rated breaking capacity (Icn) acc. to IEC /EN 61009		A
	Rated breaking capacity (Icn) acc. to IEC/EN 60947-2		A
	Rated residual breaking capacity IΔm		kA
	Rated impulse withstand voltage (1.2/50) Uimp		kV
	Dielectric test voltage at ind. freq. for 1 min.		kV
	Surge current resistance acc. to VDE 0432 Part 2 (wave 8/20)		A
Mechanical features	Toggle		
	Electrical life		
	Mechanical life		
	Protection degree	housing terminals	
	Tropicalization acc. to IEC /EN 60068-2	humid heat constant climatic conditions variable climatic conditions	°C/RH °C/RH °C/RH
	Ambient temperature (with daily average≤+35°C)		°C
	Storage temperature		°C
Installation	Terminal type	2P 3P/4P In = 25 and 40 A 3P/4P In = 63 A	
	Terminal size per cable	2P 3P/4P In = 25 and 40 A 3P/4P In = 63 A	mm^2 mm^2 mm^2
	Tightening torque	2P 3P/4P In = 25 and 40 A 3P/4P In = 63 A	N*m N*m N*m
	Mounting		
Dimensions and weight	Dimensions (H x D x W)	2P 3P/4P In = 25 and 40 A 3P/4P In = 63 A	mm mm mm
	Weight	2P 3P/4P In = 25 and 40 A 3P/4P In = 63 A	g g g
Combination with MCBs	Combinable with:	S 200 S 200 M S 200 P	

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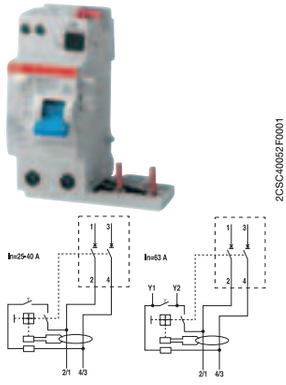
Technical features
RCD-blocks DDA 200 series

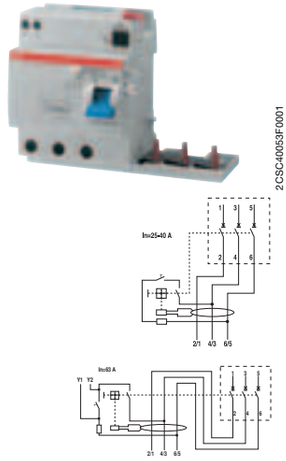


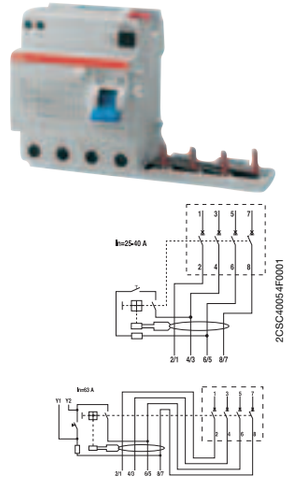
DDA 200 AC	DDA 200 A	DDA 200 A AE	DDA 200 AC AP-R	DDA 200 A AP-R	DDA 200 AC S	DDA 200 A S
IEC/EN 61009 Ann.G						
AC	A	A	AC	A	AC	A
2P, 3P, 4P						
25, 40, 63		63	25, 40, 63		63	
230/400 - 240/415						
0.01...1		0.03...1	0.03		0.1...1	
500						
254 (440 for 63 A 4P)						
110 (195 for 63 A 4P)						
50…60						
Icn of the associated MCB						
Icu of the associated MCB						
Icn of the associated MCB						
5						
2.5						
250			3000		5000	
blue						
10000						
20000						
IP4X						
IP2X						
28 cycles with 55/95…100 23/83 - 40/93 - 55/20 25/95 - 40/95						
-25...+55						
-40…+70						
failsafe bidirectional cylinder-lift terminal (shock protected) cage (shock protected) failsafe bidirectional cylinder-lift terminal (shock protected)						
(rigid and flexible) up to 25 (rigid and flexible) up to 16 (rigid and flexible) up to 25						
2.8 1.2 2.8						
on DIN rail EN 60715 (35 mm) by means of fast clip device						
85 x 69 x 35 85 x 69 x 35 85 x 69 x 70						
175 175 325						
yes yes yes						

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AC







DDA 200 AC type

Function: RCD-block for assembly on site with MCBs S 200 series. Protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts.

Application: residential, commercial, industrial.

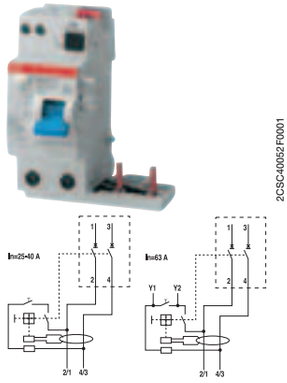
Standard: IEC/EN 61009 Ann. G

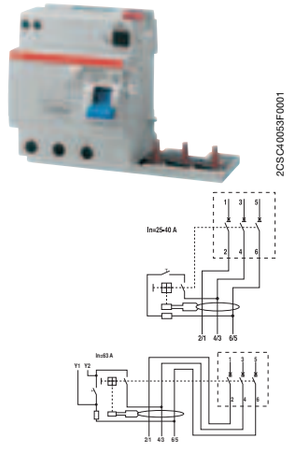
Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	10	25	**DDA202 AC-25/0.01**	2CSB202001R0250	**791003**			0.200	1
	30	25	**DDA202 AC-25/0.03**	2CSB202001R1250	**791102**			0.200	1
		40	**DDA202 AC-40/0.03**	2CSB202001R1400	**791201**			0.200	1
		63 ②	**DDA202 AC-63/0.03**	2CSB202001R1630	**791300**			0.200	1
	100	25	**DDA202 AC-25/0.1**	2CSB202001R2250	**791409**			0.200	1
		40	**DDA202 AC-40/0.1**	2CSB202001R2400	**791508**			0.200	1
		63 ②	**DDA202 AC-63/0.1**	2CSB202001R2630	**791607**			0.200	1
	300	25	**DDA202 AC-25/0.3**	2CSB202001R3250	**791706**			0.200	1
		40	**DDA202 AC-40/0.3**	2CSB202001R3400	**791805**			0.200	1
		63 ②	**DDA202 AC-63/0.3**	2CSB202001R3630	**791904**			0.200	1
	500	25	**DDA202 AC-25/0.5**	2CSB202001R4250	**790200**			0.200	1
		40	**DDA202 AC-40/0.5**	2CSB202001R4400	**792109**			0.200	1
		63 ②	**DDA202 AC-63/0.5**	2CSB202001R4630	**792208**			0.200	1
	1000	25	**DDA202 AC-25/1**	2CSB202001R5250	**808305**			0.200	1
		40	**DDA202 AC-40/1**	2CSB202001R5400	**808404**			0.200	1
		63 ②	**DDA202 AC-63/1**	2CSB202001R5630	**792307**			0.200	1
3	30	25	**DDA203 AC-25/0.03**	2CSB203001R1250	**792505**			0.200	1
		40	**DDA203 AC-40/0.03**	2CSB203001R1400	**792604**			0.200	1
		63 ②	**DDA203 AC-63/0.03**	2CSB203001R1630	**792703**			0.350	1
	100	25	**DDA203 AC-25/0.1**	2CSB203001R2250	**792802**			0.200	1
		40	**DDA203 AC-40/0.1**	2CSB203001R2400	**792901**			0.200	1
		63 ②	**DDA203 AC-63/0.1**	2CSB203001R2630	**793007**			0.350	1
	300	25	**DDA203 AC-25/0.3**	2CSB203001R3250	**793106**			0.200	1
		40	**DDA203 AC-40/0.3**	2CSB203001R3400	**793205**			0.200	1
		63 ②	**DDA203 AC-63/0.3**	2CSB203001R3630	**793304**			0.350	1
	500	25	**DDA203 AC-25/0.5**	2CSB203001R4250	**793403**			0.200	1
		40	**DDA203 AC-40/0.5**	2CSB203001R4400	**793502**			0.200	1
		63 ②	**DDA203 AC-63/0.5**	2CSB203001R4630	**793601**			0.350	1
	1000	25	**DDA203 AC-25/1**	2CSB203001R5250	**808503**			0.200	1
		40	**DDA203 AC-40/1**	2CSB203001R5400	**808602**			0.200	1
		63 ②	**DDA203 AC-63/1**	2CSB203001R5630	**793700**			0.350	1
4	30	25	**DDA204 AC-25/0.03**	2CSB204001R1250	**793908**			0.200	1
		40	**DDA204 AC-40/0.03**	2CSB204001R1400	**794004**			0.200	1
		63 ① ②	**DDA204 AC-63/0.03**	2CSB204001R1630	**794103**			0.350	1
	100	25	**DDA204 AC-25/0.1**	2CSB204001R2250	**794202**			0.200	1
		40	**DDA204 AC-40/0.1**	2CSB204001R2400	**794301**			0.200	1
		63 ②	**DDA204 AC-63/0.1**	2CSB204001R2630	**794400**			0.350	1
	300	25	**DDA204 AC-25/0.3**	2CSB204001R3250	**794509**			0.200	1
		40	**DDA204 AC-40/0.3**	2CSB204001R3400	**794608**			0.200	1
		63 ②	**DDA204 AC-63/0.3**	2CSB204001R3630	**794707**			0.350	1
	500	25	**DDA204 AC-25/0.5**	2CSB204001R4250	**794806**			0.200	1
		40	**DDA204 AC-40/0.5**	2CSB204001R4400	**794905**			0.200	1
		63 ②	**DDA204 AC-63/0.5**	2CSB204001R4630	**795001**			0.350	1
	1000	25	**DDA204 AC-25/1**	2CSB204001R5250	**808701**			0.200	1
		40	**DDA204 AC-40/1**	2CSB204001R5400	**808800**			0.200	1
		63 ②	**DDA204 AC-63/1**	2CSB204001R5630	**795100**			0.350	1

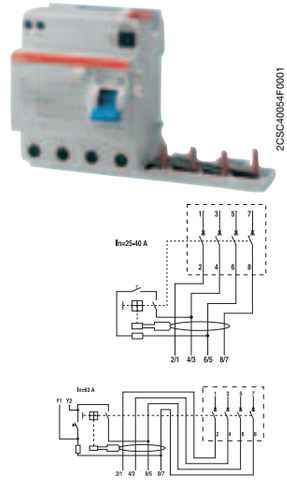
① version with test button working at 115VAC - 127VAC is available on request
② provided with additional terminals for remote tripping

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A







DDA 200 A type

Function: RCD-block for assembly on site with MCBs S 200 series. Protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts.

Application: residential, commercial, industrial.

Standard: IEC/EN 61009 Ann. G

Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	10	25	**DDA202 A-25/0.01**	2CSB202101R0250	**795308**			0.200	1
	30	25	**DDA202 A-25/0.03**	2CSB202101R1250	**795407**			0.200	1
		40	**DDA202 A-40/0.03**	2CSB202101R1400	**795506**			0.200	1
		63 ③	**DDA202 A-63/0.03**	2CSB202101R1630	**795605**			0.200	1
	100	25	**DDA202 A-25/0.1**	2CSB202101R2250	**795704**			0.200	1
		40	**DDA202 A-40/0.1**	2CSB202101R2400	**795803**			0.200	1
		63 ③	**DDA202 A-63/0.1**	2CSB202101R2630	**795902**			0.200	1
	300	25	**DDA202 A-25/0.3**	2CSB202101R3250	**796008**			0.200	1
		40	**DDA202 A-40/0.3**	2CSB202101R3400	**796107**			0.200	1
		63 ③	**DDA202 A-63/0.3**	2CSB202101R3630	**796206**			0.200	1
	500	25	**DDA202 A-25/0.5**	2CSB202101R4250	**796305**			0.200	1
		40	**DDA202 A-40/0.5**	2CSB202101R4400	**796404**			0.200	1
		63 ③	**DDA202 A-63/0.5**	2CSB202101R4630	**796503**			0.200	1
	1000	25	**DDA202 A-25/1**	2CSB202101R5250	**808909**			0.200	1
		40	**DDA202 A-40/1**	2CSB202101R5400	**809005**			0.200	1
		63 ③	**DDA202 A-63/1**	2CSB202101R5630	**796602**			0.200	1
3	30	25 ①	**DDA203 A-25/0.03**	2CSB203101R1250	**796701**			0.200	1
		40 ①	**DDA203 A-40/0.03**	2CSB203101R1400	**796800**			0.200	1
		63 ③	**DDA203 A-63/0.03**	2CSB203101R1630	**796909**			0.350	1
	100	25	**DDA203 A-25/0.1**	2CSB203101R2250	**797005**			0.200	1
		40	**DDA203 A-40/0.1**	2CSB203101R2400	**797104**			0.200	1
		63 ③	**DDA203 A-63/0.1**	2CSB203101R2630	**797203**			0.350	1
	300	25 ①	**DDA203 A-25/0.3**	2CSB203101R3250	**797302**			0.200	1
		40 ①	**DDA203 A-40/0.3**	2CSB203101R3400	**797401**			0.200	1
		63 ③	**DDA203 A-63/0.3**	2CSB203101R3630	**797500**			0.350	1
	500	25	**DDA203 A-25/0.5**	2CSB203101R4250	**797609**			0.200	1
		40	**DDA203 A-40/0.5**	2CSB203101R4400	**797708**			0.200	1
		63 ③	**DDA203 A-63/0.5**	2CSB203101R4630	**797807**			0.350	1
	1000	25	**DDA203 A-25/1**	2CSB203101R5250	**809104**			0.200	1
		40	**DDA203 A-40/1**	2CSB203101R5400	**809203**			0.200	1
		63 ③	**DDA203 A-63/1**	2CSB203101R5630	**797906**			0.350	1
4	30	25 ①	**DDA204 A-25/0.03**	2CSB204101R1250	**798002**			0.200	1
		40 ①	**DDA204 A-40/0.03**	2CSB204101R1400	**798101**			0.200	1
		63 ② ③	**DDA204 A-63/0.03**	2CSB204101R1630	**798200**			0.350	1
	100	25	**DDA204 A-25/0.1**	2CSB204101R2250	**798309**			0.200	1
		40	**DDA204 A-40/0.1**	2CSB204101R2400	**798408**			0.200	1
		63 ③	**DDA204 A-63/0.1**	2CSB204101R2630	**798507**			0.350	1
	300	25 ①	**DDA204 A-25/0.3**	2CSB204101R3250	**798606**			0.200	1
		40 ①	**DDA204 A-40/0.3**	2CSB204101R3400	**798705**			0.200	1
		63 ③	**DDA204 A-63/0.3**	2CSB204101R3630	**798804**			0.350	1
	500	25	**DDA204 A-25/0.5**	2CSB204101R4250	**798903**			0.200	1
		40	**DDA204 A-40/0.5**	2CSB204101R4400	**799009**			0.200	1
		63 ③	**DDA204 A-63/0.5**	2CSB204101R4630	**799108**			0.350	1
	1000	25	**DDA204 A-25/1**	2CSB204101R5250	**809302**			0.200	1
		40	**DDA204 A-40/1**	2CSB204101R5400	**809401**			0.200	1
		63 ③	**DDA204 A-63/1**	2CSB204101R5630	**799207**			0.350	1

① available in the version fitting in 4 modules
② version with test button working at 115 VAC-127 VAC is available on request
③ provided with additional terminals for remote tripping

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A

3

DDA 200 AE, A type

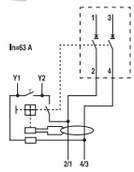
Function: RCD-block for assembly on site with MCBs S 200 series. Protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; the RCD-block is provided with two additional terminals to be used in emergency circuits for remote opening in positive safety; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts.

Application: commercial, industrial.

Standard: IEC/EN 61009 Ann. G

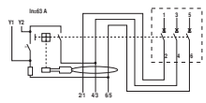


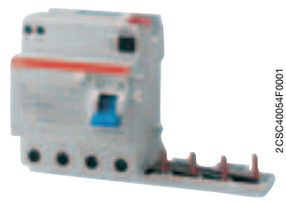
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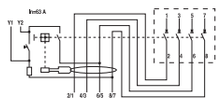


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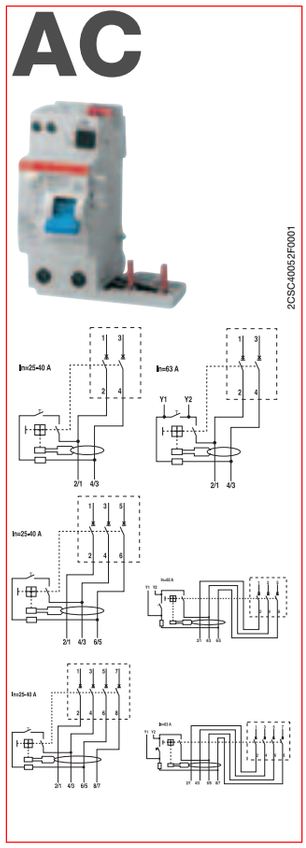


2CSC400554F0001



Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	30	63	**DDA202 A-63/0.03 AE**	2CSB202701R1630	**801702**			0.200	1
	300	63	**DDA202 A-63/0.3 AE**	2CSB202701R3630	**801801**			0.200	1
	500	63	**DDA202 A-63/0.5 AE**	2CSB202701R4630	**801900**			0.200	1
	1000	63	**DDA202 A-63/1 AE**	2CSB202701R5630	**802006**			0.200	1
3	30	63	**DDA203 A-63/0.03 AE**	2CSB203701R1630	**802105**			0.350	1
	300	63	**DDA203 A-63/0.3 AE**	2CSB203701R3630	**802204**			0.350	1
	500	63	**DDA203 A-63/0.5 AE**	2CSB203701R4630	**802303**			0.350	1
	1000	63	**DDA203 A-63/1 AE**	2CSB203701R5630	**802402**			0.350	1
4	30	63	**DDA204 A-63/0.03 AE**	2CSB204701R1630	**802501**			0.350	1
	300	63	**DDA204 A-63/0.3 AE**	2CSB204701R3630	**802600**			0.350	1
	500	63	**DDA204 A-63/0.5 AE**	2CSB204701R4630	**802709**			0.350	1
	1000	63	**DDA204 A-63/1 AE**	2CSB204701R5630	**802808**			0.350	1

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DDA 200 AP-R, AC type

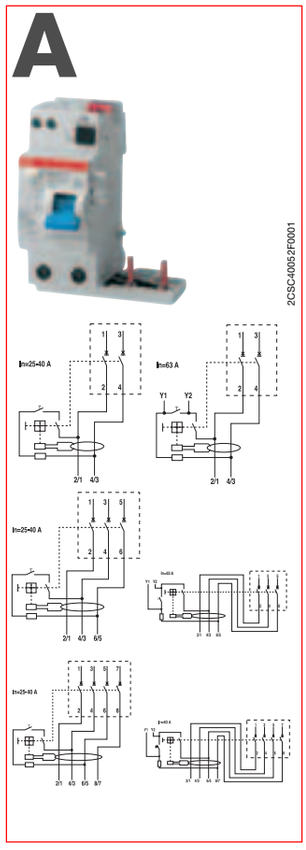
Function: RCD-block for assembly on site with MCBs S 200 series. Protection against the effects of sinusoidal alternating earth fault currents, providing the best compromise between safety and continuity in the service thanks to the resistance to unwanted trippings; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts.

Application: residential, commercial, industrial.

Standard: IEC/EN 61009 Ann. G

Surge current resistance (wave 8/20)=3000 A

Number of poles	Nominal fault current	Nominal current	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	Type code	Order code	EAN			kg	pc.
2	30	25	**DDA202 AC-25/0.03 AP-R**	2CSB202301R1250	**800507**			0.200	1
		40	**DDA202 AC-40/0.03 AP-R**	2CSB202301R1400	**800606**			0.200	1
		63 ①	**DDA202 AC-63/0.03 AP-R**	2CSB202301R1630	**800705**			0.200	1
3	30	25	**DDA203 AC-25/0.03 AP-R**	2CSB203301R1250	**810704**			0.200	1
		40	**DDA203 AC-40/0.03 AP-R**	2CSB203301R1400	**810803**			0.200	1
		63 ①	**DDA203 AC-63/0.03 AP-R**	2CSB203301R1630	**810902**			0.350	1
4	30	25	**DDA204 AC-25/0.03 AP-R**	2CSB204301R1250	**800804**			0.200	1
		40	**DDA204 AC-40/0.03 AP-R**	2CSB204301R1400	**800903**			0.200	1
		63 ①	**DDA204 AC-63/0.03 AP-R**	2CSB204301R1630	**801009**			0.350	1



DDA 200 AP-R, A type

Function: RCD-block for assembly on site with MCBs S 200 series. Protection against the effects of sinusoidal alternating and direct pulsating earth fault currents, providing the best compromise between safety and continuity in the service thanks to the resistance to unwanted trippings; protection against indirect contacts and additional protection against direct (with IΔn=30 mA) contacts.

Application: residential, commercial, industrial.

Standard: IEC/EN 61009 Ann. G

Surge current resistance (wave 8/20)=3000 A

Number of poles	Nominal fault current	Nominal current	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	Type code	Order code	EAN			kg	pc.
2	30	25	**DDA202 A-25/0.03 AP-R**	2CSB202401R1250	**801108**			0.200	1
		40	**DDA202 A-40/0.03 AP-R**	2CSB202401R1400	**801207**			0.200	1
		63 ①	**DDA202 A-63/0.03 AP-R**	2CSB202401R1630	**801306**			0.200	1
3	30	25	**DDA203 A-25/0.03 AP-R**	2CSB203401R1250	**811008**			0.200	1
		40	**DDA203 A-40/0.03 AP-R**	2CSB203401R1400	**811107**			0.200	1
		63 ①	**DDA203 A-63/0.03 AP-R**	2CSB203401R1630	**811206**			0.350	1
4	30	25	**DDA204 A-25/0.03 AP-R**	2CSB204401R1250	**801405**			0.200	1
		40	**DDA204 A-40/0.03 AP-R**	2CSB204401R1400	**801504**			0.200	1
		63 ①	**DDA204 A-63/0.03 AP-R**	2CSB204401R1630	**801603**			0.350	1

① provided with additional terminals for remote tripping

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AC

3

DDA 200 AC selective type

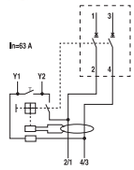
Function: RCD-block for assembly on site with MCBs S 200 series. Protection against the effects of sinusoidal alternating earth fault currents with an intentional tripping delay, which permits to realize the selectivity with downstream instantaneous devices (for more information about selectivity see the technical guide).

Application: commercial, industrial.

Standard: IEC/EN 61009 Ann. G

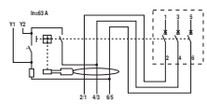
Surge current resistance (wave 8/20)=5000 A


2CSC400052F0001

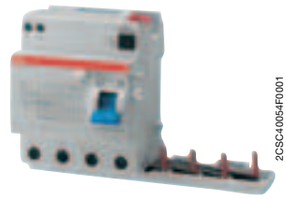


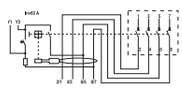
Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	100	63	**DDA202 AC S-63/0.1**	2CSB202901R2630	**809500**			0.200	1
	300	63	**DDA202 AC S-63/0.3**	2CSB202901R3630	**809609**			0.200	1
	500	63	**DDA202 AC S-63/0.5**	2CSB202901R4630	**809708**			0.200	1
	1000	63	**DDA202 AC S-63/1**	2CSB202901R5630	**809807**			0.200	1


2CSC400053F0001



3	100	63	**DDA203 AC S-63/0.1**	2CSB203901R2630	**809906**			0.350	1
	300	63	**DDA203 AC S-63/0.3**	2CSB203901R3630	**810001**			0.350	1
	500	63	**DDA203 AC S-63/0.5**	2CSB203901R4630	**810100**			0.350	1
	1000	63	**DDA203 AC S-63/1**	2CSB203901R5630	**810209**			0.350	1


2CSC400054F0001



4	100	63	**DDA204 AC S-63/0.1**	2CSB204901R2630	**810308**			0.350	1
	300	63	**DDA204 AC S-63/0.3**	2CSB204901R3630	**810407**			0.350	1
	500	63	**DDA204 AC S-63/0.5**	2CSB204901R4630	**810506**			0.350	1
	1000	63	**DDA204 AC S-63/1**	2CSB204901R5630	**810605**			0.350	1

Attention:
All DDA 200 AC S are provided with additional terminals for remote tripping

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A

DDA 200 A selective type

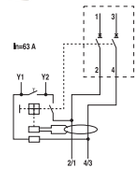
Function: RCD-block for assembly on site with MCBs S 200 series. Protection against the effects of sinusoidal alternating and direct pulsating earth fault currents with an intentional tripping delay, which permits to realize the selectivity with downstream instantaneous devices (for more information about selectivity see the technical guide).

Application: commercial, industrial.

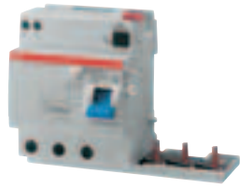
Standard: IEC/EN 61009 Ann. G

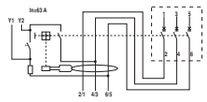
Surge current resistance (wave 8/20)=5000 A


2CSC400052F0001

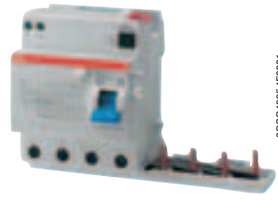


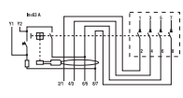
Number of poles	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	100	63	**DDA202 A S-63/0.1**	2CSB202201R2630	**799306**			0.200	1
	300	63	**DDA202 A S-63/0.3**	2CSB202201R3630	**799405**			0.200	1
	500	63	**DDA202 A S-63/0.5**	2CSB202201R4630	**799504**			0.200	1
	1000	63	**DDA202 A S-63/1**	2CSB202201R5630	**799603**			0.200	1


2CSC400053F0001



3	100	63	**DDA203 A S-63/0.1**	2CSB203201R2630	**799702**			0.350	1
	300	63	**DDA203 A S-63/0.3**	2CSB203201R3630	**799801**			0.350	1
	500	63	**DDA203 A S-63/0.5**	2CSB203201R4630	**799900**			0.350	1
	1000	63	**DDA203 A S-63/1**	2CSB203201R5630	**800002**			0.350	1


2CSC400054F0001



4	100	63	**DDA204 A S-63/0.1**	2CSB204201R2630	**800101**			0.350	1
	300	63	**DDA204 A S-63/0.3**	2CSB204201R3630	**800200**			0.350	1
	500	63	**DDA204 A S-63/0.5**	2CSB204201R4630	**800309**			0.350	1
	1000	63	**DDA204 A S-63/1**	2CSB204201R5630	**800408**			0.350	1

Attention:
All DDA 200 A S are provided with additional terminals for remote tripping

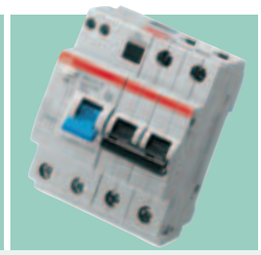
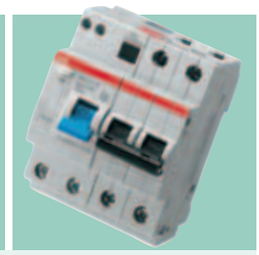
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3

	TECHNICAL CHARACTERISTICS		
	Standards		
Electrical features	Type (wave form of the earth leakage sensed)		
	Poles		
	Rated current In		A
	Rated voltage Ue	1P+N	V
		2P, 3P, 4P	V
	Rated sensitivity		A
	Insulation voltage Ui		
	Max. operating voltage of circuit test		V
	Min. operating voltage of circuit test		V
	Rated frequency		Hz
	Rated breaking capacity acc. to IEC/EN 61009	ultimate Icn	A
	Rated breaking capacity	ultimate Icu	kA
	acc. to IEC/EN 60947-2 1P+N @230 VAC, 2P, 3P, 4P @400 VAC	service Ics	kA
	Rated residual breaking capacity IΔm		kA
	Rated impulse withstand voltage (1.2/50) Uimp		kV
	Dielectric test voltage at ind. freq. for 1 min.		kV
	Overvoltage category		
	Thermomagnetic release characteristic	B: 3 In ≤ Im ≤ 5 In C: 5 In ≤ Im ≤ 10 In K: 8 In ≤ Im ≤ 14 In	
	Surge current resistance acc. to VDE 0432 Part 2 (wave 8/20)		A
Mechanical features	Toggle	1P+N 2P, 3P, 4P	
	Electrical life		
	Mechanical life		
	Protection degree	housing terminals	
	Tropicalization	humid heat	°C/RH
	acc. to IEC /EN 60068-2	constant climatic conditions	°C/RH
		variable climatic conditions	°C/RH
	Reference temperature for setting of thermal element		°C
	Ambient temperature (with daily average≤+35°C)		°C
	Storage temperature		°C
Installation	Terminal type	top bottom 1P+N/2P 3P/4P In≤40 A 3P/4P 50 A≤In≤63 A	
	Terminal size top/bottom per cable	1P+N	mm^2
		2P	mm^2
		3P/4P In ≤ 40 A	mm^2
		3P/4P 50 A ≤ In ≤ 63 A	mm^2
	Tightening torque top/bottom	1P+N	N*m
		2P	N*m
		3P/4P In ≤ 40 A	N*m
		3P/4P 50 A ≤ In ≤ 63 A	N*m
	Mounting		
	Connection		
Dimensions and weight	Dimensions (H x D x W)	1P+N	mm
		2P	mm
		3P In ≤ 40 A	mm
		4P In ≤ 40 A	mm
		3P 50 A ≤ In ≤ 63 A	mm
		4P 50 A ≤ In ≤ 63 A	mm
	Weight	1P+N	g
		2P	g
		3P In ≤ 40 A	g
		4P In ≤ 40 A	g
		3P 50 A ≤ In ≤ 63 A	g
		4P 50 A ≤ In ≤ 63 A	g
Combination with auxiliary elements	Combinable with:	auxiliary contact signal contact/auxiliary switch shunt trip undervoltage release	

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FS 201	DS 200 AC	DS 200 A	DS 200 M AC	DS 200 M A
IEC/EN 61009, IEC/EN 60947-2				
A	AC	A	AC	A
1P+N	2P, 3P, 4P			
6, 10, 13, 16, 20, 25, 32, 40	6, 10, 13, 16, 20, 25, 32, 40, 50, 63			
230-240 230/400 - 240/415				
0.01...0.3	0.03			
500				
254 (440 for 63 A 4P)				
110 (195 for 63 A 4P)				
50…60				
6000	6000	6000	10000	10000
10	10	10	15	15
7.5	7.5	7.5	11.2	11.2
6	6	6	10	10
5				
2.5				
III, disconnector abilities				
■ ■ ■		■ ■		
250				
black sealable in ON-OFF position	black (MCB) sealable in ON-OFF position + blue (RCD)			
10000				
20000				
IP4X				
IP2X				
28 cycles with 55/95…100 23/83 - 40/93 - 55/20 25/95 - 40/95				
30 (20 for characteristics K)				
-25…+55				
-40…+70				
failsafe bidirectional cylinder-lift terminal (shock protected)				
failsafe bidirectional cylinder-lift terminal (shock protected)				
-	cage (shock protected)			
-	failsafe bidirectional cylinder-lift terminal (shock protected)			
(rigid and flexible) up to 16/16	-			
-	(rigid and flexible) up to 25/25			
-	(rigid and flexible) up to 25/16			
-	(rigid and flexible) up to 25/25			
2.5/2.5	-			
-	2.8/2.8			
-	2.8/1.2			
-	2.8/2.8			
on DIN rail EN 60715 (35 mm) by means of fast clip device				
from top and bottom				
85 x 69 x 35	-			
-	85 x 69 x 70			
-	85 x 69 x 87.5			
-	85 x 69 x 105			
-	85 x 69 x 122.5			
-	85 x 69 x 140			
200	-			
-	475			
-	625			
-	775			
-	775			
-	925			
no	yes			
no	yes			
no	yes			
no	yes			

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B

FS 201 A type, B, C and K characteristics

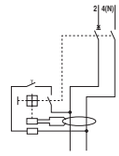
Function: protection against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contacts and additional protection against direct contacts; command and isolation of resistive and inductive circuits.

Application: commercial, industrial.

Standard: IEC/EN 61009 and IEC/EN 60947-2

Icn=6 kA

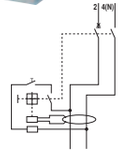




Number of poles	Type/ class	Nominal fault current	Nominal current	**Order details**		**Bbn 40 16779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
		IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
1P+N	A	10	10	**FS 201-B 10/0.01**	2CSR255101R0105	**564731**			0.200	1
			13	**FS 201-B 13/0.01**	2CSR255101R0135	**564748**			0.200	1
			16	**FS 201-B 16/0.01**	2CSR255101R0165	**564755**			0.200	1
		30	6	**FS 201-B 6/0.03**	2CSR255101R1065	**516990**			0.200	1
			10	**FS 201-B 10/0.03**	2CSR255101R1105	**517034**			0.200	1
			13	**FS 201-B 13/0.03**	2CSR255101R1135	**517041**			0.200	1
			16	**FS 201-B 16/0.03**	2CSR255101R1165	**517072**			0.200	1
			20	**FS 201-B 20/0.03**	2CSR255101R1205	**517089**			0.200	1
			25	**FS 201-B 25/0.03**	2CSR255101R1255	**517119**			0.200	1
			32	**FS 201-B 32/0.03**	2CSR255101R1325	**517126**			0.200	1
			40	**FS 201-B 40/0.03**	2CSR255101R1405	**517133**			0.200	1

C





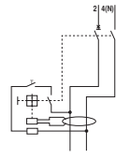
1P+N	A	30	6	**FS 201-C 6/0.03**	2CSR255101R1064	**552882**			0.200	1
			10	**FS 201-C 10/0.03**	2CSR255101R1104	**552899**			0.200	1
			13	**FS 201-C 13/0.03**	2CSR255101R1134	**552905**			0.200	1
			16	**FS 201-C 16/0.03**	2CSR255101R1164	**552912**			0.200	1
			20	**FS 201-C 20/0.03**	2CSR255101R1204	**552929**			0.200	1
			25	**FS 201-C 25/0.03**	2CSR255101R1254	**552936**			0.200	1
			32	**FS 201-C 32/0.03**	2CSR255101R1324	**552936**			0.200	1
			40	**FS 201-C 40/0.03**	2CSR255101R1404	**552950**			0.200	1
		300	6	**FS 201-C 6/0.3**	2CSR255101R3064	**539838**			0.200	1
			10	**FS 201-C 10/0.3**	2CSR255101R3104	**539845**			0.200	1
			13	**FS 201-C 13/0.3**	2CSR255101R3134	**539852**			0.200	1
			16	**FS 201-C 16/0.3**	2CSR255101R3164	**539869**			0.200	1
			20	**FS 201-C 20/0.3**	2CSR255101R3204	**539876**			0.200	1
			25	**FS 201-C 25/0.3**	2CSR255101R3254	**539883**			0.200	1
			32	**FS 201-C 32/0.3**	2CSR255101R3324	**539890**			0.200	1
			40	**FS 201-C 40/0.3**	2CSR255101R3404	**539906**			0.200	1

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Selection tables
RCBOs FS 201 series
6000 - A type

K





1P+N	A	10	16	**FS 201-K 16/0.01**	2CSR255101R0167	**564762**	0.200	1
		30	1	**FS 201-K 1/0.03**	2CSR255101R1017	**569576**	0.200	1
			2	**FS 201-K 2/0.03**	2CSR255101R1027	**569583**	0.200	1
			4	**FS 201-K 4/0.03**	2CSR255101R1047	**569996**	0.200	1
			6	**FS 201-K 6/0.03**	2CSR255101R1067	**517140**	0.200	1
			10	**FS 201-K 10/0.03**	2CSR255101R1107	**517157**	0.200	1
			13	**FS 201-K 13/0.03**	2CSR255101R1137	**569590**	0.200	1
			16	**FS 201-K 16/0.03**	2CSR255101R1167	**517164**	0.200	1
			20	**FS 201-K 20/0.03**	2CSR255101R1207	**517171**	0.200	1
			25	**FS 201-K 25/0.03**	2CSR255101R1257	**517188**	0.200	1
			32	**FS 201-K 32/0.03**	2CSR255101R1327	**517195**	0.200	1
		300	1	**FS 201-K 1/0.3**	2CSR255101R3017	**569613**	0.200	1
			2	**FS 201-K 2/0.3**	2CSR255101R3027	**569620**	0.200	1
			4	**FS 201-K 4/0.3**	2CSR255101R3047	**569637**	0.200	1
			6	**FS 201-K 6/0.3**	2CSR255101R3067	**569644**	0.200	1
			10	**FS 201-K 10/0.3**	2CSR255101R3107	**569651**	0.200	1
			13	**FS 201-K 13/0.3**	2CSR255101R3137	**569668**	0.200	1
			16	**FS 201-K 16/0.3**	2CSR255101R3167	**569675**	0.200	1
			20	**FS 201-K 20/0.3**	2CSR255101R3207	**569682**	0.200	1
			25	**FS 201-K 25/0.3**	2CSR255101R3257	**569699**	0.200	1
			32	**FS 201-K 32/0.3**	2CSR255101R3327	**569705**	0.200	1

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B

DS 200 AC type, B characteristic

Function: protection against overload and short-circuit currents; protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct contacts; command and isolation of resistive and inductive loads.

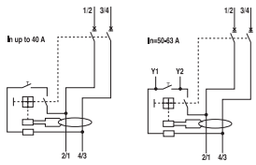
Application: commercial, industrial.

Standard: IEC/EN 61009 and IEC/EN 60947-2

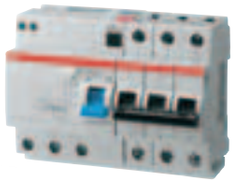
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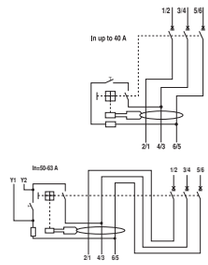
2CSC400055F0001



Number of poles	Type/ class	Nominal fault current	Nominal current	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
		IΔn mA	In A	Type code	Order code	EAN			kg	pc.
2	AC	30	6	**DS202 AC-B6/0.03**	2CSR252001R1065	**863502**			0.475	1
			10	**DS202 AC-B10/0.03**	2CSR252001R1105	**863601**			0.475	1
			13	**DS202 AC-B13/0.03**	2CSR252001R1135	**863700**			0.475	1
			16	**DS202 AC-B16/0.03**	2CSR252001R1165	**863809**			0.475	1
			20	**DS202 AC-B20/0.03**	2CSR252001R1205	**863908**			0.475	1
			25	**DS202 AC-B25/0.03**	2CSR252001R1255	**864004**			0.475	1
			32	**DS202 AC-B32/0.03**	2CSR252001R1325	**864103**			0.475	1
			40	**DS202 AC-B40/0.03**	2CSR252001R1405	**864202**			0.475	1
			50 ①	**DS202 AC-B50/0.03**	2CSR252001R1505	**864301**			0.475	1
			63 ①	**DS202 AC-B63/0.03**	2CSR252001R1635	**864400**			0.475	1



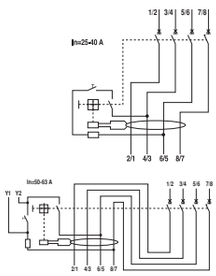
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3	AC	30	6	**DS203 AC-B6/0.03**	2CSR253001R1065	**865506**			0.625	1
			10	**DS203 AC-B10/0.03**	2CSR253001R1105	**865605**			0.625	1
			13	**DS203 AC-B13/0.03**	2CSR253001R1135	**865704**			0.625	1
			16	**DS203 AC-B16/0.03**	2CSR253001R1165	**865803**			0.625	1
			20	**DS203 AC-B20/0.03**	2CSR253001R1205	**865902**			0.625	1
			25	**DS203 AC-B25/0.03**	2CSR253001R1255	**866008**			0.625	1
			32	**DS203 AC-B32/0.03**	2CSR253001R1325	**866107**			0.625	1
			40	**DS203 AC-B40/0.03**	2CSR253001R1405	**866206**			0.625	1
			50 ①	**DS203 AC-B50/0.03**	2CSR253001R1505	**866305**			0.775	1
			63 ①	**DS203 AC-B63/0.03**	2CSR253001R1635	**866404**			0.775	1



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4	AC	30	6	**DS204 AC-B6/0.03**	2CSR254001R1065	**867500**			0.775	1
			10	**DS204 AC-B10/0.03**	2CSR254001R1105	**867609**			0.775	1
			13	**DS204 AC-B13/0.03**	2CSR254001R1135	**867708**			0.775	1
			16	**DS204 AC-B16/0.03**	2CSR254001R1165	**867807**			0.775	1
			20	**DS204 AC-B20/0.03**	2CSR254001R1205	**867906**			0.775	1
			25	**DS204 AC-B25/0.03**	2CSR254001R1255	**868002**			0.775	1
			32	**DS204 AC-B32/0.03**	2CSR254001R1325	**868101**			0.775	1
			40	**DS204 AC-B40/0.03**	2CSR254001R1405	**868200**			0.775	1
			50 ①	**DS204 AC-B50/0.03**	2CSR254001R1505	**868309**			0.925	1
			63 ①	**DS204 AC-B63/0.03**	2CSR254001R1635	**868408**			0.925	1

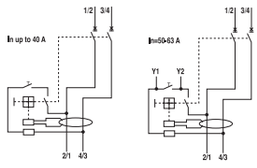
① provided with additional terminals for remote tripping

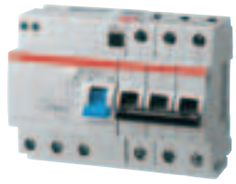
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C

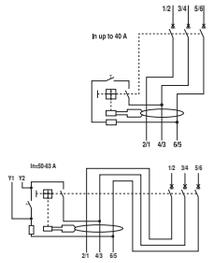


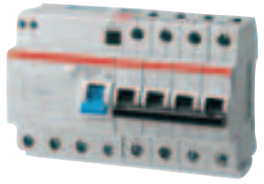
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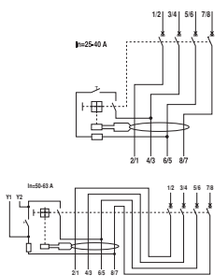


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DS 200 AC type, C characteristic

Function: protection against overload and short-circuit currents; protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct contacts; command and isolation of resistive and inductive loads.

Application: commercial, industrial.

Standard: IEC/EN 61009 and IEC/EN 60947-2

Icn=6 kA

3

Number of poles	Type/ class	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
		IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	AC	30	6	**DS202 AC-C6/0.03**	2CSR252001R1064	**869504**			0.475	1
			10	**DS202 AC-C10/0.03**	2CSR252001R1104	**869603**			0.475	1
			13	**DS202 AC-C13/0.03**	2CSR252001R1134	**869702**			0.475	1
			16	**DS202 AC-C16/0.03**	2CSR252001R1164	**869801**			0.475	1
			20	**DS202 AC-C20/0.03**	2CSR252001R1204	**869900**			0.475	1
			25	**DS202 AC-C25/0.03**	2CSR252001R1254	**870005**			0.475	1
			32	**DS202 AC-C32/0.03**	2CSR252001R1324	**870104**			0.475	1
			40	**DS202 AC-C40/0.03**	2CSR252001R1404	**870203**			0.475	1
			50 ①	**DS202 AC-C50/0.03**	2CSR252001R1504	**870302**			0.475	1
			63 ①	**DS202 AC-C63/0.03**	2CSR252001R1634	**870401**			0.475	1
3	AC	30	6	**DS203 AC-C6/0.03**	2CSR253001R1064	**871507**			0.625	1
			10	**DS203 AC-C10/0.03**	2CSR253001R1104	**871606**			0.625	1
			13	**DS203 AC-C13/0.03**	2CSR253001R1134	**871705**			0.625	1
			16	**DS203 AC-C16/0.03**	2CSR253001R1164	**871804**			0.625	1
			20	**DS203 AC-C20/0.03**	2CSR253001R1204	**871903**			0.625	1
			25	**DS203 AC-C25/0.03**	2CSR253001R1254	**872009**			0.625	1
			32	**DS203 AC-C32/0.03**	2CSR253001R1324	**872108**			0.625	1
			40	**DS203 AC-C40/0.03**	2CSR253001R1404	**872207**			0.625	1
			50 ①	**DS203 AC-C50/0.03**	2CSR253001R1504	**872306**			0.775	1
			63 ①	**DS203 AC-C63/0.03**	2CSR253001R1634	**872405**			0.775	1
4	AC	30	6	**DS204 AC-C6/0.03**	2CSR254001R1064	**873501**			0.775	1
			10	**DS204 AC-C10/0.03**	2CSR254001R1104	**873600**			0.775	1
			13	**DS204 AC-C13/0.03**	2CSR254001R1134	**873709**			0.775	1
			16	**DS204 AC-C16/0.03**	2CSR254001R1164	**873808**			0.775	1
			20	**DS204 AC-C20/0.03**	2CSR254001R1204	**873907**			0.775	1
			25	**DS204 AC-C25/0.03**	2CSR254001R1254	**874003**			0.775	1
			32	**DS204 AC-C32/0.03**	2CSR254001R1324	**874102**			0.775	1
			40	**DS204 AC-C40/0.03**	2CSR254001R1404	**874201**			0.775	1
			50 ①	**DS204 AC-C50/0.03**	2CSR254001R1504	**874300**			0.925	1
			63 ①	**DS204 AC-C63/0.03**	2CSR254001R1634	**874409**			0.925	1

① provided with additional terminals for remote tripping

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B

3

DS 200 A type, B characteristic

Function: protection against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contacts and additional protection against direct contacts; command and isolation of resistive and inductive loads.

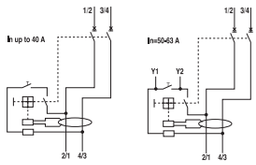
Application: commercial, industrial.

Standard: IEC/EN 61009 and IEC/EN 60947-2

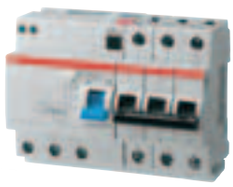
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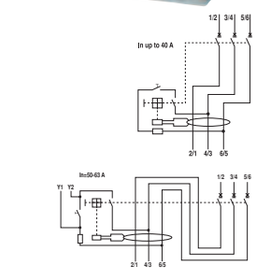
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Number of poles	Type/ class	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
		IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	A	30	6	**DS202 A-B6/0.03**	2CSR252101R1065	**857501**			0.475	1
			10	**DS202 A-B10/0.03**	2CSR252101R1105	**857600**			0.475	1
			13	**DS202 A-B13/0.03**	2CSR252101R1135	**857709**			0.475	1
			16	**DS202 A-B16/0.03**	2CSR252101R1165	**857808**			0.475	1
			20	**DS202 A-B20/0.03**	2CSR252101R1205	**857907**			0.475	1
			25	**DS202 A-B25/0.03**	2CSR252101R1255	**858003**			0.475	1
			32	**DS202 A-B32/0.03**	2CSR252101R1325	**858102**			0.475	1
			40	**DS202 A-B40/0.03**	2CSR252101R1405	**858201**			0.475	1
			50 ①	**DS202 A-B50/0.03**	2CSR252101R1505	**858300**			0.475	1
			63 ①	**DS202 A-B63/0.03**	2CSR252101R1635	**858409**			0.475	1



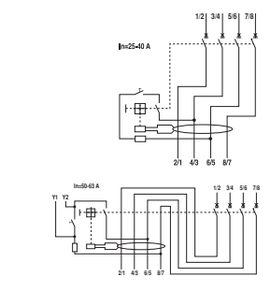
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3	A	30	6	**DS203 A-B6/0.03**	2CSR253101R1065	**858508**			0.625	1
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			13	**DS203 A-B13/0.03**	2CSR253101R1135	**858706**			0.625	1
			16	**DS203 A-B16/0.03**	2CSR253101R1165	**858805**			0.625	1
			20	**DS203 A-B20/0.03**	2CSR253101R1205	**858904**			0.625	1
			25	**DS203 A-B25/0.03**	2CSR253101R1255	**859000**			0.625	1
			32	**DS203 A-B32/0.03**	2CSR253101R1325	**859109**			0.625	1
			40	**DS203 A-B40/0.03**	2CSR253101R1405	**859208**			0.625	1
			50 ①	**DS203 A-B50/0.03**	2CSR253101R1505	**859307**			0.775	1
			63 ①	**DS203 A-B63/0.03**	2CSR253101R1635	**859406**			0.775	1



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4	A	30	6	**DS204 A-B6/0.03**	2CSR254101R1065	**859505**			0.775	1
			10	**DS204 A-B10/0.03**	2CSR254101R1105	**859604**			0.775	1
			13	**DS204 A-B13/0.03**	2CSR254101R1135	**859703**			0.775	1
			16	**DS204 A-B16/0.03**	2CSR254101R1165	**859802**			0.775	1
			20	**DS204 A-B20/0.03**	2CSR254101R1205	**859901**			0.775	1
			25	**DS204 A-B25/0.03**	2CSR254101R1255	**860006**			0.775	1
			32	**DS204 A-B32/0.03**	2CSR254101R1325	**860105**			0.775	1
			40	**DS204 A-B40/0.03**	2CSR254101R1405	**860204**			0.775	1
			50 ①	**DS204 A-B50/0.03**	2CSR254101R1505	**860303**			0.925	1
			63 ①	**DS204 A-B63/0.03**	2CSR254101R1635	**860402**			0.925	1

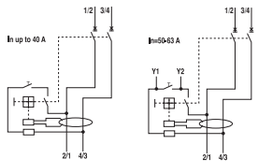
① provided with additional terminals for remote tripping

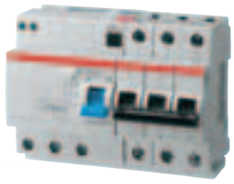
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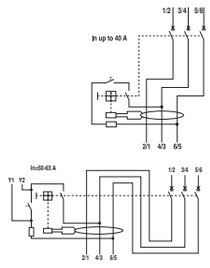


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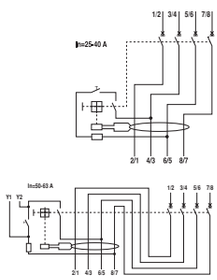


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2CSC400057F0001



DS 200 A type, C characteristic

Function: protection against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contacts and additional protection against direct contacts; command and isolation of resistive and inductive loads.

Application: commercial, industrial.

Standard: IEC/EN 61009 and IEC/EN 60947-2

Icn=6 kA

3

Number of poles	Type/ class	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
		IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	A	30	6	**DS202 A-C6/0.03**	2CSR252101R1064	**860501**			0.475	1
			10	**DS202 A-C10/0.03**	2CSR252101R1104	**860600**			0.475	1
			13	**DS202 A-C13/0.03**	2CSR252101R1134	**860709**			0.475	1
			16	**DS202 A-C16/0.03**	2CSR252101R1164	**860808**			0.475	1
			20	**DS202 A-C20/0.03**	2CSR252101R1204	**860907**			0.475	1
			25	**DS202 A-C25/0.03**	2CSR252101R1254	**861003**			0.475	1
			32	**DS202 A-C32/0.03**	2CSR252101R1324	**861102**			0.475	1
			40	**DS202 A-C40/0.03**	2CSR252101R1404	**861201**			0.475	1
			50 ①	**DS202 A-C50/0.03**	2CSR252101R1504	**861300**			0.475	1
			63 ①	**DS202 A-C63/0.03**	2CSR252101R1634	**861409**			0.475	1
3	A	30	6	**DS203 A-C6/0.03**	2CSR253101R1064	**861508**			0.625	1
			10	**DS203 A-C10/0.03**	2CSR253101R1104	**861607**			0.625	1
			13	**DS203 A-C13/0.03**	2CSR253101R1134	**861706**			0.625	1
			16	**DS203 A-C16/0.03**	2CSR253101R1164	**861805**			0.625	1
			20	**DS203 A-C20/0.03**	2CSR253101R1204	**861904**			0.625	1
			25	**DS203 A-C25/0.03**	2CSR253101R1254	**862000**			0.625	1
			32	**DS203 A-C32/0.03**	2CSR253101R1324	**862109**			0.625	1
			40	**DS203 A-C40/0.03**	2CSR253101R1404	**862208**			0.625	1
			50 ①	**DS203 A-C50/0.03**	2CSR253101R1504	**862307**			0.775	1
			63 ①	**DS203 A-C63/0.03**	2CSR253101R1634	**862406**			0.775	1
4	A	30	6	**DS204 A-C6/0.03**	2CSR254101R1064	**862505**			0.775	1
			10	**DS204 A-C10/0.03**	2CSR254101R1104	**862604**			0.775	1
			13	**DS204 A-C13/0.03**	2CSR254101R1134	**862703**			0.775	1
			16	**DS204 A-C16/0.03**	2CSR254101R1164	**862802**			0.775	1
			20	**DS204 A-C20/0.03**	2CSR254101R1204	**862901**			0.775	1
			25	**DS204 A-C25/0.03**	2CSR254101R1254	**863007**			0.775	1
			32	**DS204 A-C32/0.03**	2CSR254101R1324	**863106**			0.775	1
			40	**DS204 A-C40/0.03**	2CSR254101R1404	**863205**			0.775	1
			50 ①	**DS204 A-C50/0.03**	2CSR254101R1504	**863304**			0.925	1
			63 ①	**DS204 A-C63/0.03**	2CSR254101R1634	**863403**			0.925	1

① provided with additional terminals for remote tripping

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B

DS 200 M AC type, B characteristic

Function: protection against overload and short-circuit currents; protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct contacts; command and isolation of resistive and inductive loads.

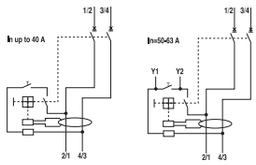
Application: commercial, industrial.

Standard: IEC/EN 61009 and IEC/EN 60947-2

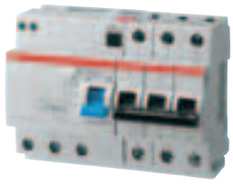
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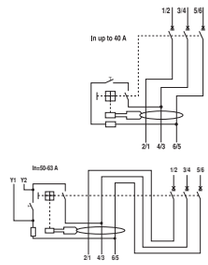
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Number of poles	Type/ class	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
		IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	AC	30	6	**DS202 M AC-B6/0.03**	2CSR272001R1065	**851509**			0.475	1
			10	**DS202 M AC-B10/0.03**	2CSR272001R1105	**851608**			0.475	1
			13	**DS202 M AC-B13/0.03**	2CSR272001R1135	**851707**			0.475	1
			16	**DS202 M AC-B16/0.03**	2CSR272001R1165	**851806**			0.475	1
			20	**DS202 M AC-B20/0.03**	2CSR272001R1205	**851905**			0.475	1
			25	**DS202 M AC-B25/0.03**	2CSR272001R1255	**852001**			0.475	1
			32	**DS202 M AC-B32/0.03**	2CSR272001R1325	**852100**			0.475	1
			40	**DS202 M AC-B40/0.03**	2CSR272001R1405	**852209**			0.475	1
			50 ①	**DS202 M AC-B50/0.03**	2CSR272001R1505	**852308**			0.475	1
			63 ①	**DS202 M AC-B63/0.03**	2CSR272001R1635	**852407**			0.475	1



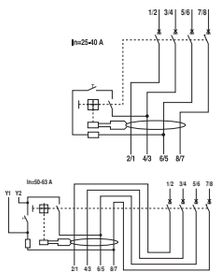
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3	AC	30	6	**DS203 M AC-B6/0.03**	2CSR273001R1065	**852506**			0.625	1
			10	**DS203 M AC-B10/0.03**	2CSR273001R1105	**852605**			0.625	1
			13	**DS203 M AC-B13/0.03**	2CSR273001R1135	**852704**			0.625	1
			16	**DS203 M AC-B16/0.03**	2CSR273001R1165	**852803**			0.625	1
			20	**DS203 M AC-B20/0.03**	2CSR273001R1205	**852902**			0.625	1
			25	**DS203 M AC-B25/0.03**	2CSR273001R1255	**853008**			0.625	1
			32	**DS203 M AC-B32/0.03**	2CSR273001R1325	**853107**			0.625	1
			40	**DS203 M AC-B40/0.03**	2CSR273001R1405	**853206**			0.625	1
			50 ①	**DS203 M AC-B50/0.03**	2CSR273001R1505	**853305**			0.775	1
			63 ①	**DS203 M AC-B63/0.03**	2CSR273001R1635	**853404**			0.775	1



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4	AC	30	6	**DS204 M AC-B6/0.03**	2CSR274001R1065	**853503**			0.775	1
			10	**DS204 M AC-B10/0.03**	2CSR274001R1105	**853602**			0.775	1
			13	**DS204 M AC-B13/0.03**	2CSR274001R1135	**853701**			0.775	1
			16	**DS204 M AC-B16/0.03**	2CSR274001R1165	**853800**			0.775	1
			20	**DS204 M AC-B20/0.03**	2CSR274001R1205	**853909**			0.775	1
			25	**DS204 M AC-B25/0.03**	2CSR274001R1255	**854005**			0.775	1
			32	**DS204 M AC-B32/0.03**	2CSR274001R1325	**854104**			0.775	1
			40	**DS204 M AC-B40/0.03**	2CSR274001R1405	**854203**			0.775	1
			50 ①	**DS204 M AC-B50/0.03**	2CSR274001R1505	**854302**			0.925	1
			63 ①	**DS204 M AC-B63/0.03**	2CSR274001R1635	**854401**			0.925	1

① provided with additional terminals for remote tripping

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C

DS 200 M AC type, C characteristic

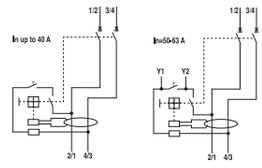
Function: protection against overload and short-circuit currents; protection against the effects of sinusoidal alternating earth fault currents; protection against indirect contacts and additional protection against direct contacts; command and isolation of resistive and inductive loads.

Application: commercial, industrial.

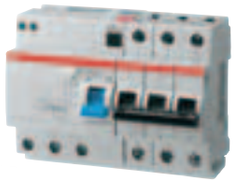
Standard: IEC/EN 61009 and IEC/EN 60947-2

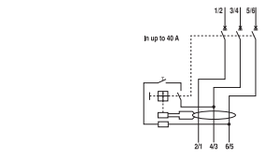
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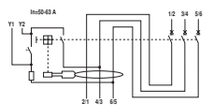




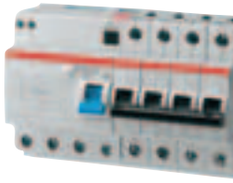
Number of poles	Type/ class	Nominal fault current	Nominal current	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
		IΔn mA	In A	Type code	Order code	EAN			kg	pc.
2	AC	30	6	**DS202 M AC-C6/0.03**	2CSR272001R1064	**851509**			0.475	1
			10	**DS202 M AC-C10/0.03**	2CSR272001R1104	**851608**			0.475	1
			13	**DS202 M AC-C13/0.03**	2CSR272001R1134	**851707**			0.475	1
			16	**DS202 M AC-C16/0.03**	2CSR272001R1164	**851806**			0.475	1
			20	**DS202 M AC-C20/0.03**	2CSR272001R1204	**851905**			0.475	1
			25	**DS202 M AC-C25/0.03**	2CSR272001R1254	**852001**			0.475	1
			32	**DS202 M AC-C32/0.03**	2CSR272001R1324	**852100**			0.475	1
			40	**DS202 M AC-C40/0.03**	2CSR272001R1404	**852209**			0.475	1
			50 ①	**DS202 M AC-C50/0.03**	2CSR272001R1504	**852308**			0.475	1
			63 ①	**DS202 M AC-C63/0.03**	2CSR272001R1634	**852407**			0.475	1

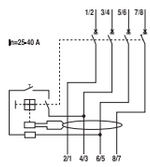


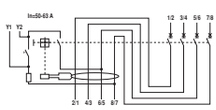




3	AC	30	6	**DS203 M AC-C6/0.03**	2CSR273001R1064	**852506**			0.625	1
			10	**DS203 M AC-C10/0.03**	2CSR273001R1104	**852605**			0.625	1
			13	**DS203 M AC-C13/0.03**	2CSR273001R1134	**852704**			0.625	1
			16	**DS203 M AC-C16/0.03**	2CSR273001R1164	**852803**			0.625	1
			20	**DS203 M AC-C20/0.03**	2CSR273001R1204	**852902**			0.625	1
			25	**DS203 M AC-C25/0.03**	2CSR273001R1254	**853008**			0.625	1
			32	**DS203 M AC-C32/0.03**	2CSR273001R1324	**853107**			0.625	1
			40	**DS203 M AC-C40/0.03**	2CSR273001R1404	**853206**			0.625	1
			50 ①	**DS203 M AC-C50/0.03**	2CSR273001R1504	**853305**			0.775	1
			63 ①	**DS203 M AC-C63/0.03**	2CSR273001R1634	**853404**			0.775	1







4	AC	30	6	**DS204 M AC-C6/0.03**	2CSR274001R1064	**853503**			0.775	1
			10	**DS204 M AC-C10/0.03**	2CSR274001R1104	**853602**			0.775	1
			13	**DS204 M AC-C13/0.03**	2CSR274001R1134	**853701**			0.775	1
			16	**DS204 M AC-C16/0.03**	2CSR274001R1164	**853800**			0.775	1
			20	**DS204 M AC-C20/0.03**	2CSR274001R1204	**853909**			0.775	1
			25	**DS204 M AC-C25/0.03**	2CSR274001R1254	**854005**			0.775	1
			32	**DS204 M AC-C32/0.03**	2CSR274001R1324	**854104**			0.775	1
			40	**DS204 M AC-C40/0.03**	2CSR274001R1404	**854203**			0.775	1
			50 ①	**DS204 M AC-C50/0.03**	2CSR274001R1504	**854302**			0.925	1
			63 ①	**DS204 M AC-C63/0.03**	2CSR274001R1634	**854401**			0.925	1

① provided with additional terminals for remote tripping

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B

3

DS 200 M A type, B characteristic

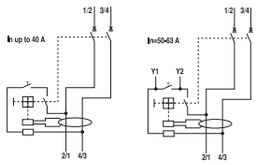
Function: protection against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contacts and additional protection against direct contacts; command and isolation of resistive and inductive loads.

Application: commercial, industrial.

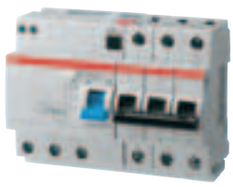
Standard: IEC/EN 61009 and IEC/EN 60947-2

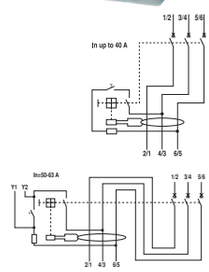
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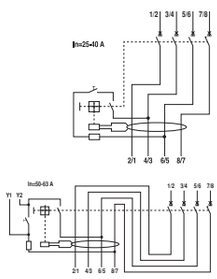
Number of poles	Type/ class	Nominal fault current	Nominal current	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
		IΔn mA	In A	Type code	Order code	EAN			kg	pc.
2	A	30	6	**DS202 M A-B6/0.03**	2CSR272101R1065	**845508**			0.475	1
			10	**DS202 M A-B10/0.03**	2CSR272101R1105	**845607**			0.475	1
			13	**DS202 M A-B13/0.03**	2CSR272101R1135	**845706**			0.475	1
			16	**DS202 M A-B16/0.03**	2CSR272101R1165	**845805**			0.475	1
			20	**DS202 M A-B20/0.03**	2CSR272101R1205	**845904**			0.475	1
			25	**DS202 M A-B25/0.03**	2CSR272101R1255	**846000**			0.475	1
			32	**DS202 M A-B32/0.03**	2CSR272101R1325	**846109**			0.475	1
			40	**DS202 M A-B40/0.03**	2CSR272101R1405	**846208**			0.475	1
			50 ①	**DS202 M A-B50/0.03**	2CSR272101R1505	**846307**			0.475	1
			63 ①	**DS202 M A-B63/0.03**	2CSR272101R1635	**846406**			0.475	1





3	A	30	6	**DS203 M A-B6/0.03**	2CSR273101R1065	**846505**			0.625	1
			10	**DS203 M A-B10/0.03**	2CSR273101R1105	**846604**			0.625	1
			13	**DS203 M A-B13/0.03**	2CSR273101R1135	**846703**			0.625	1
			16	**DS203 M A-B16/0.03**	2CSR273101R1165	**846802**			0.625	1
			20	**DS203 M A-B20/0.03**	2CSR273101R1205	**846901**			0.625	1
			25	**DS203 M A-B25/0.03**	2CSR273101R1255	**847007**			0.625	1
			32	**DS203 M A-B32/0.03**	2CSR273101R1325	**847106**			0.625	1
			40	**DS203 M A-B40/0.03**	2CSR273101R1405	**847205**			0.625	1
			50 ①	**DS203 M A-B50/0.03**	2CSR273101R1505	**847304**			0.775	1
			63 ①	**DS203 M A-B63/0.03**	2CSR273101R1635	**847403**			0.775	1





4	A	30	6	**DS204 M A-B6/0.03**	2CSR274101R1065	**847502**			0.775	1
			10	**DS204 M A-B10/0.03**	2CSR274101R1105	**847601**			0.775	1
			13	**DS204 M A-B13/0.03**	2CSR274101R1135	**847700**			0.775	1
			16	**DS204 M A-B16/0.03**	2CSR274101R1165	**847809**			0.775	1
			20	**DS204 M A-B20/0.03**	2CSR274101R1205	**847908**			0.775	1
			25	**DS204 M A-B25/0.03**	2CSR274101R1255	**848004**			0.775	1
			32	**DS204 M A-B32/0.03**	2CSR274101R1325	**848103**			0.775	1
			40	**DS204 M A-B40/0.03**	2CSR274101R1405	**848202**			0.775	1
			50 ①	**DS204 M A-B50/0.03**	2CSR274101R1505	**848301**			0.925	1
			63 ①	**DS204 M A-B63/0.03**	2CSR274101R1635	**848400**			0.925	1

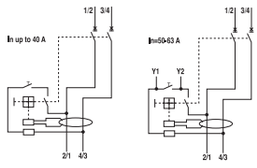
① provided with additional terminals for remote tripping

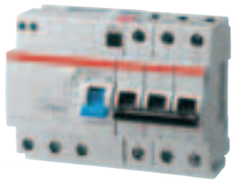
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C

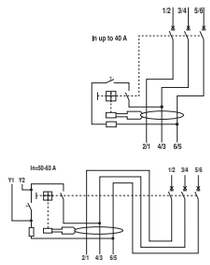


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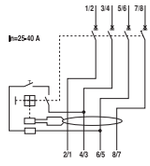


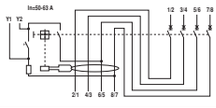
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2CSC400057F0001





DS 200 M A type, C characteristic

Function: protection against overload and short-circuit currents; protection against the effects of sinusoidal alternating and direct pulsating earth fault currents; protection against indirect contacts and additional protection against direct contacts; command and isolation of resistive and inductive loads.

Application: commercial, industrial.

Standard: IEC/EN 61009 and IEC/EN 60947-2

Icn=10 kA

3

Number of poles	Type/ class	Nominal fault current	Nominal current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
		IΔn mA	In A	**Type code**	Order code	**EAN**			kg	pc.
2	A	30	6	**DS202 M A-C6/0.03**	2CSR272101R1064	**848509**			0.475	1
			10	**DS202 M A-C10/0.03**	2CSR272101R1104	**848608**			0.475	1
			13	**DS202 M A-C13/0.03**	2CSR272101R1134	**848707**			0.475	1
			16	**DS202 M A-C16/0.03**	2CSR272101R1164	**848806**			0.475	1
			20	**DS202 M A-C20/0.03**	2CSR272101R1204	**848905**			0.475	1
			25	**DS202 M A-C25/0.03**	2CSR272101R1254	**849001**			0.475	1
			32	**DS202 M A-C32/0.03**	2CSR272101R1324	**849100**			0.475	1
			40	**DS202 M A-C40/0.03**	2CSR272101R1404	**849209**			0.475	1
			50 ①	**DS202 M A-C50/0.03**	2CSR272101R1504	**849308**			0.475	1
			63 ①	**DS202 M A-C63/0.03**	2CSR272101R1634	**849407**			0.475	1
3	A	30	6	**DS203 M A-C6/0.03**	2CSR273101R1064	**849506**			0.625	1
			10	**DS203 M A-C10/0.03**	2CSR273101R1104	**849605**			0.625	1
			13	**DS203 M A-C13/0.03**	2CSR273101R1134	**849704**			0.625	1
			16	**DS203 M A-C16/0.03**	2CSR273101R1164	**849803**			0.625	1
			20	**DS203 M A-C20/0.03**	2CSR273101R1204	**849902**			0.625	1
			25	**DS203 M A-C25/0.03**	2CSR273101R1254	**850007**			0.625	1
			32	**DS203 M A-C32/0.03**	2CSR273101R1324	**850106**			0.625	1
			40	**DS203 M A-C40/0.03**	2CSR273101R1404	**850205**			0.625	1
			50 ①	**DS203 M A-C50/0.03**	2CSR273101R1504	**850304**			0.775	1
			63 ①	**DS203 M A-C63/0.03**	2CSR273101R1634	**850403**			0.775	1
4	A	30	6	**DS204 M A-C6/0.03**	2CSR274101R1064	**850502**			0.775	1
			10	**DS204 M A-C10/0.03**	2CSR274101R1104	**850601**			0.775	1
			13	**DS204 M A-C13/0.03**	2CSR274101R1134	**850700**			0.775	1
			16	**DS204 M A-C16/0.03**	2CSR274101R1164	**850809**			0.775	1
			20	**DS204 M A-C20/0.03**	2CSR274101R1204	**850908**			0.775	1
			25	**DS204 M A-C25/0.03**	2CSR274101R1254	**851004**			0.775	1
			32	**DS204 M A-C32/0.03**	2CSR274101R1324	**851103**			0.775	1
			40	**DS204 M A-C40/0.03**	2CSR274101R1404	**851202**			0.775	1
			50 ①	**DS204 M A-C50/0.03**	2CSR274101R1504	**851301**			0.925	1
			63 ①	**DS204 M A-C63/0.03**	2CSR274101R1634	**851400**			0.925	1

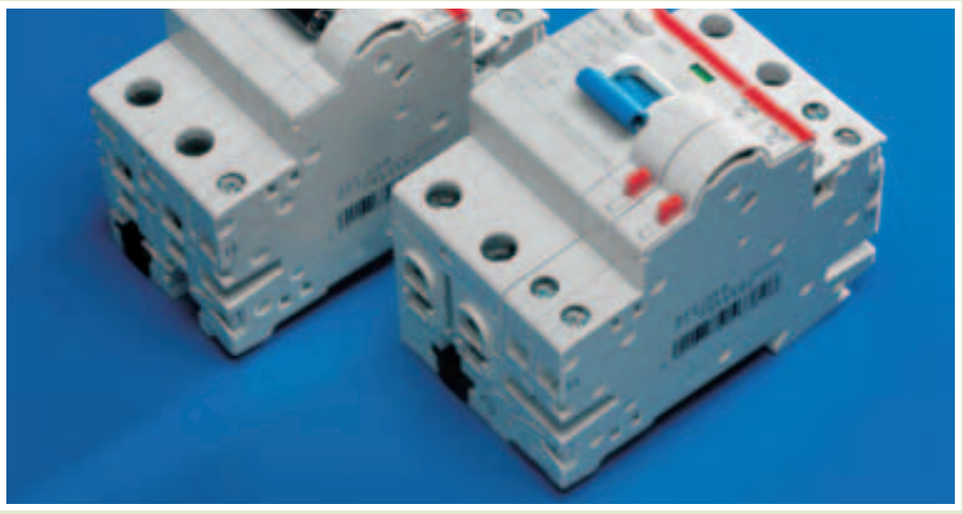
① provided with additional terminals for remote tripping

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New System pro *M* compact range of auxiliary elements and accessories is universal: in fact it is suitable for MCBs S 200 range, for RCDs F 200 range, for RCD-blocks DDA 200 range and also for RCBOs DS 200 range and it is useful in terms of stock management.

The auxiliary elements range (composed by auxiliary and signal contacts, shunt trips, undervoltage releases and automatic reclosing units) is quite wide and there are different possible schemes for assemblage with devices. All these configurations are possible without the need of any dedicated auxiliary interface contact. Thus MCBs and RCDs performances are improved, even because innovative and integrated solutions can be used in every installation.

The connection accessories range (busbars, connection terminals, feeder terminals) allows any kind of wiring. The range of standard accessories (labels, covers) permits to customize the installation.





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Auxiliary elements and accessories

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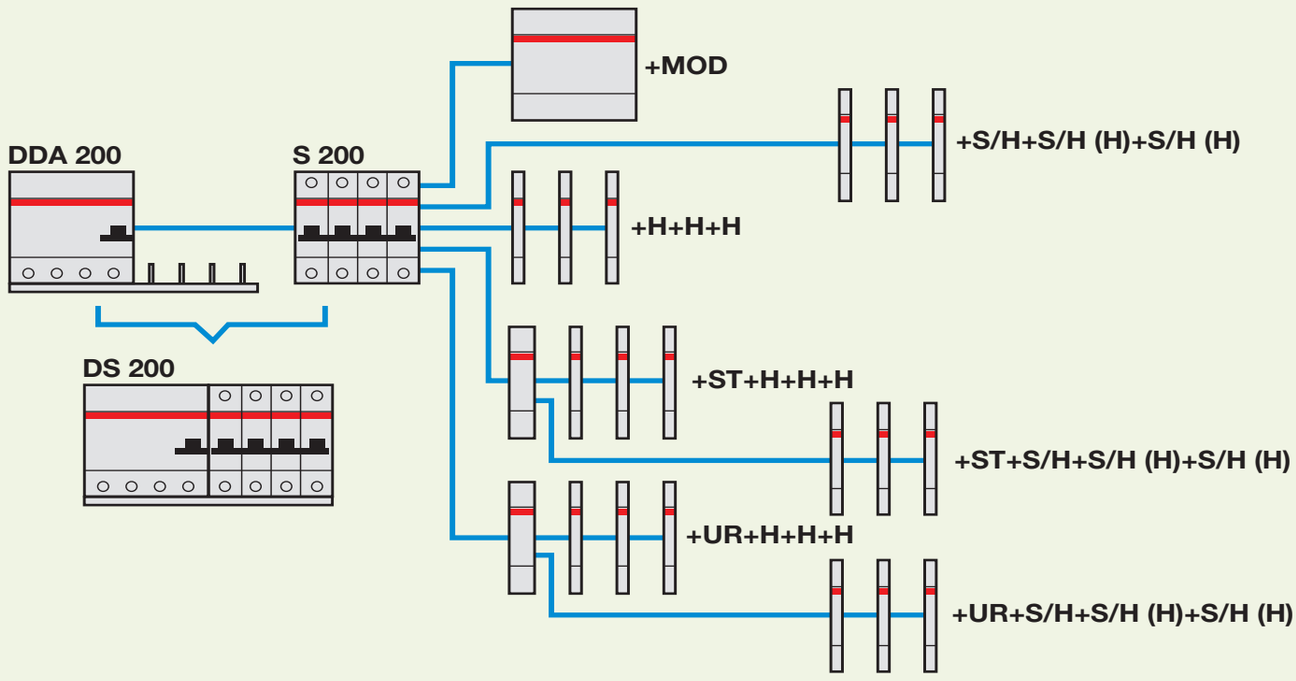
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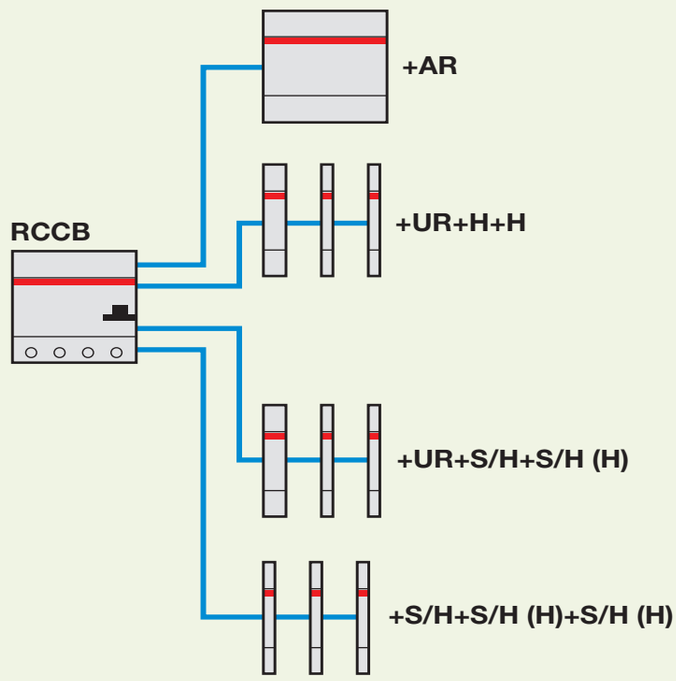
Technical features
Auxiliary elements and accessories

Combination between auxiliary elements and S 200*



* it could also be considered the combination between auxiliary elements and DS 200 because DS 200 RCBO is composed by a RCD-block DDA 200 and a MCB S 200 factory fitted

Combination between auxiliary elements and F 200



Legenda

Auxiliary contact	**H**
Signal/Auxiliary contact	**S/H**
Signal/Auxiliary contact used as auxiliary contact	**S/H (H)**
Shunt trip	**ST**
Undervoltage release	**UR**
Autro reclosing unit	**AR**
Motor operating device	**MOD**

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Technical features
Auxiliary elements and accessories

Shunt trip		Type	S 2C-A1	S 2C-A2
Rated voltage	AC	V	12…60	110…415
	DC	V	12…60	110…250
Max release duration		ms	<10	<10
Min. release voltage	AC	V	7	55
	DC	V	10	80
Consumption on release	AC	VA	40…200	55…210
	DC	VA	40…200	55…110
Coil resistance		Ω	3.7	225
Terminals		mm^2	16	16
Tightening torque		Nm	2	2
Dimensions (H x D x W)		mm	85 x 69 x 17.5	85 x 69 x 17.5

Undervoltage release		Type	S2C-UA24 DC	S2C-UA24 AC	S2C-UA230 AC
Standards			IEC/EN 60947-1		
Rated voltage	AC	V	-	24	220-240
	DC	V	24	-	-
Frequency		Hz	50…60		
Release trip		V	0.35 Un≤V≤0.7 Un		
Terminals		mm^2	2 x 1.5		
Consumption		mA	10		
Resistance to corrosion		°C/RH	constant atmosphere: 23/83 - 40/93 - 55/20; variable atmosphere: 25/95 - 40/93		
Protection degree			IPXXB/IP2X		
Tightening torque		Nm	0.04		
Dimensions (H x D x W)		mm	85 x 69 x 17.5		

Auxiliary contact and signal/auxiliary contact		Type	S2C-H6R	S2C-S/H6R
Rated current		A	10	10
Min. rated voltage UBmin	AC	V	24	24
	DC	V	24	24
Min. rated operational current		VA	5	5
Short-circuit withstand capacity		V	230 a.c. 100A with S201 K4	230 a.c. 100A with S201 K4
Overvoltage category			III	III
Surge voltage (1.2/50 ms)		kV	4	4
Connection cross section		mm^2	0.75…2.5	0.75…2.5
Tightening torque		Nm	1.2	1.2
Contact stability in vibration test according to DIN IEC 68-2-6			5g, 20 sweep cycles 5…150…5 Hz at 24 V AC/D, 5 mA automatic reclosing < 10 ms	5g, 20 sweep cycles 5…150…5 Hz at 24 V AC/D, 5 mA automatic reclosing < 10 ms
Mechanical service life			10000 operations	10000 operations
Dimensions (H x D x W)		mm	85 x 69 x 8.8	85 x 69 x 8.8

Busbars	Type	Busbars for S200 MCBs, F200 RCCBs, DDA200 RCD-blocks, DS200 RCBOs and FS201 RCBOs
Specifications		DIN IEC/EN 60439-1
Busbars material		SF-Cu F 244
Insulating profile material		plastic temperature resistant≥90°C flame-retardant, self estinguishing, dioxine and halogene-free
Busbar cross section	mm^2	10
Max. operating voltage	V	440
Rated surge voltage	kV	4
Test surge voltage (1.2/50)	kV	6.02
Short-circuit withstand capacity	kA	25
Climatic resistance		constant climate L23/83; 40/92 55/20 according to DIN 50015 humid heat, 28 cycles (≥ IEC/EN 60068-2-30)
Overvoltage category		III

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Signal/auxiliary contacts


SK 135 B 02

Function: choice through a selector between indication of the position of the device's contacts and signalling of the fault (overcurrent/short-circuit for MCBs and RCBOs; earth fault for RCCBs and RCBOs)
Suitable for MCBs S 200 series, RCCBs F 200 series, RCBOs DS 200 series

Description	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
Signal contact/ auxiliary switch	**S 2C-S/H6R**	2CDS200922R0001	**563819**			0.04	1

Auxiliary contacts

Function: indication of the position of the device's contacts
Suitable for MCBs S 200 series, RCCBs F 200 series, RCBOs DS 200 series


SK 135 B 02

Description	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
Auxiliary contact	**S 2C-H6R**	2CDS200912R0001	**563826**			0.04	1

Shunt trip

Function: remote opening of the device when a voltage is applied
Suitable for MCBs S 200 series and RCBOs DS 200 series


SK 209 B 02

Description	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
Shunt trip							
AC/DC 12…60 V	**S 2C-A1**	2CDS200909R0001	**570992**			0.15	1
AC 110…415 V/ DC110…250 V	**S 2C-A2**	2CDS200909R0002	**571005**			0.15	1

Undervoltage release

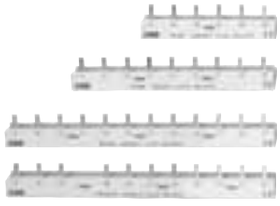
Function: protection of the load in the event of a voltage drop (between 70% and 35% of its rated value); positive safety (device's tripping when the voltage is disconnected) emergency stop by means of a button
Suitable for MCBs S 200 series, RCCBs F 200 series, RCBOs DS 200 series

Description	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
Undervoltage releases							
AC 24 V	**S2-UA 24 AC**	2CSS200911R0002	**839804**			0.09	1
AC 230 V	**S2-UA 230 AC**	2CSS200911R0005	**840107**			0.09	1
DC 24 V	**S2-UA 24 DC**	2CSS200911R0007	**896401**			0.09	1

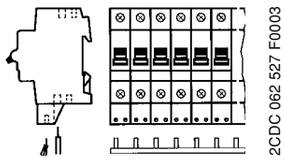
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PS 1/2 - PS 1/12 SK 0027 B 99

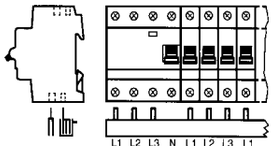


PS 3/6 - PS 3/12 SK 0028 B 99

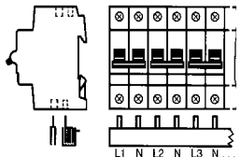


2CDC 062 527 F0003

PS 1/57/6



PS 3/57 FI SK 0058 Z 02
PS 3/9 FI
PS 9/10 FI
PS 3/12 FI (2 CDL 230...)



PS 4/12 NA SK 0065 Z 02
PS 4/58 N
PS 4/58/16 N
PS 4/58/16 NA

* rail with cutout for auxiliary switch
** blue isolation cover
Note: PS 1/60 and PS 1/60/16 no end cap required
PS 2/.. and PS 3/.. use PS END
PS 4/.. use PS END 1
see also wiring examples on the next page

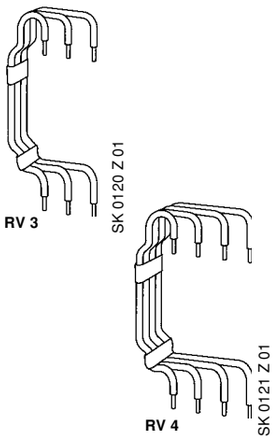
Busbars (can only be used for compact series)

Conn. capacity	Module	Phases	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
mm²			**Type code**	Order code	**EAN**			kg	pc.
Busbars not to be cut to length (closed design) no end caps required									
10	2	1	**PS 1/2**	2CDL 210 001 R1002	**46300 3**			0.008	180
	3	1	**PS 1/3**	2CDL 210 001 R1003	**51465 1**			0.025	60
	6	1	**PS 1/6**	2CDL 210 001 R1006	**46310 2**			0.025	60
	9	1	**PS 1/9**	2CDL 210 001 R1009	**46320 1**			0.039	30
	12	1	**PS 1/12**	2CDL 210 001 R1012	**46330 0**			0.052	30
	6	3	**PS 3/6**	2CDL 231 001 R1006	**46340 9**			0.042	60
	9	3	**PS 3/9**	2CDL 231 001 R1009	**46350 8**			0.069	30
	12 (no NA)	3	**PS 3/12**	2CDL 231 001 R1012	**46360 7**			0.096	30
	12	3	**PS 3/12 FI**	2CDL 231 002 R1012	**46370 6**			0.094	30
1, 2, 3 and 4-pole busbars to be cut to length									
6	23	1	**PS 1/23/6**	2CDL 210 005 R0623	**58473 9**			0.090	50
6	29	1	**PS 1/29/6**	2CDL 210 005 R0629	**58082 3**			0.100	50
6	38	1	**PS 1/38/6**	2CDL 210 005 R0638	**58081 6**			0.090	50
6	57	1	**PS 1/57/6**	2CDL 210 005 R0657	**58530 9**			0.080	50
10	57	1	**PS 1/57 NA****	2CDL 210 011 R1057	**57972 8**			0.140	50
16	57	1	**PS 1/57/16 NA****	2CDL 210 011 R1657	**57973 5**			0.200	50
10	60	1	**PS 1/60**	2CDL 210 001 R1060	**51466 8**			0.260	20
16	60	1	**PS 1/60/16**	2CDL 210 001 R1660	**51665 5**			0.410	20
10	39	1	**PS 1/38 H***	2CDL 210 001 R1038	**58613 9**			0.260	30
16	39	1	**PS 1/38/16 H***	2CDL 210 001 R1638	**58614 6**			0.410	30
10	12	2	**PS 2/12**	2CDL 220 001 R1012	**55652 1**			0.075	50
10	12	2	**PS 2/12 A**	2CDL 220 010 R1012	**58461 6**			0.075	50
10	58	2	**PS 2/58**	2CDL 220 001 R1058	**55655 2**			0.360	10
16	58	2	**PS 2/58/16**	2CDL 220 001 R1658	**55656 9**			0.490	10
16	58	2	**PS 2/58/16 A**	2CDL 220 010 R1658	**58474 6**			0.490	10
10	48	2	**PS 2/48 H**	2CDL 220 001 R1048	**55653 8**			0.350	10
16	48	2	**PS 2/48/16 H***	2CDL 220 001 R1648	**55654 5**			0.480	10
16	48	2	**PS 2/48/16 HA**	2CDL 220 012 R1648	**58463 0**			0.480	10
10	9	3	**PS 3/9 FI**	2CDL 230 002 R1009	**51751 5**			0.060	50
10	10	3	**PS 3/10 FI**	2CDL 230 002 R1010	**51752 2**			0.070	50
10	12	3	**PS 3/12**	2CDL 230 001 R1012	**57611 6**			0.090	50
10	12	3	**PS 3/12 A**	2CDL 230 010 R1012	**58464 7**			0.090	50
10	60	3	**PS 3/60**	2CDL 230 001 R1060	**51469 9**			0.470	10
10	60	3	**PS 3/60 A**	2CDL 230 010 R1060	**56375 8**			0.470	10
16	12	3	**PS 3/12/16**	2CDL 230 001 R1612	**56280 5**			0.120	50
16	60	3	**PS 3/60/16**	2CDL 230 001 R1660	**51470 5**			0.650	10
16	60	3	**PS 3/60/16 A**	2CDL 230 010 R1660	**56376 5**			0.650	10
10	30	3	**PS 3/30**	2CDL 230 001 R1030	**55658 3**			0.420	10
10	39	3	**PS 3/39 H***	2CDL 230 001 R1039	**55659 0**			0.430	10
16	39	3	**PS 3/39/16 H***	2CDL 230 001 R1639	**55660 6**			0.595	10
10	48	3	**PS 3/48 H***	2CDL 230 001 R1048	**55661 3**			0.430	10
16	48	3	**PS 3/48/16 H***	2CDL 230 001 R1648	**55664 4**			0.600	10
16	48	3	**PS 3/48/16 HA**	2CDL 230 012 R1648	**58465 4**			0.600	10
10	12	3	**PS 3/12 FI**	2CDL 230 002 R1012	**57107 4**			0.090	50
10	12	3	**PS 3/12 FIH**	2CDL 230 003 R1012	**57108 1**			0.090	50
10	57	3	**PS 3/57 FI**	2CDL 230 002 R1057	**55665 1**			0.460	10
10	12	3	**PS 3/12 E463**	2CDL 230 004 R1012	**51741 6**			0.090	50
10	24	3	**PS 3/24 H**	2CDL 230 001 R1024	**55657 6**			0.400	10
10	12	4	**PS 4/12**	2CDL 240 001 R1012	**55666 8**			0.110	30
10	12	4	**PS 4/12 A**	2CDL 240 010 R1012	**58467 8**			0.110	30
10	12	4	**PS 4/12 NA**	2CDL 240 013 R1012	**58470 8**			0.100	30
10	60	4	**PS 4/60**	2CDL 240 001 R1060	**55668 2**			0.640	10
16	12	4	**PS 4/12/16**	2CDL 240 001 R1612	**55667 5**			0.160	30
16	60	4	**PS 4/60/16**	2CDL 240 001 R1660	**55674 3**			0.890	10
16	60	4	**PS 4/60/16 A**	2CDL 240 010 R1660	**58468 5**			0.890	10
10	58	4	**PS 4/58 N**	2CDL 240 001 R1058	**55670 5**			0.590	10
10	58	4	**PS 4/58 NNA**	2CDL 240 010 R1058	**56373 4**			0.590	10
16	58	4	**PS 4/58/16 N**	2CDL 240 001 R1658	**55673 6**			0.770	10
16	58	4	**PS 4/58/16 NA**	2CDL 240 013 R1658	**58471 5**			0.770	10
16	58	4	**PS 4/58/16 NNA**	2CDL 240 010 R1658	**56374 1**			0.800	10
16	52	4	**PS 4/52/16 H***	2CDL 240 001 R1652	**55669 9**			0.780	10
16	52	4	**PS 4/52/16 HA**	2CDL 240 012 R1652	**58469 2**			0.780	10
16	48	4	**PS 4/48/16 NHA**	2CDL 240 014 R1648	**58472 2**			0.760	10

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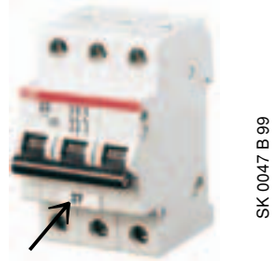
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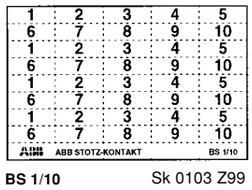


SZ-BSK SK 0100 B 99



SK 0047 B 99

identification label from BS 1/40



BS 1/10 Sk 0103 Z99

Conn. capacity	Module	Phases	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
mm²			Type code	Order code	EAN			kg	pc.

End caps

			PS-END	2CDL 200 001 R0001	**51472 9**			0.001	50
			PS-END 1	2CDL 200 001 R0002	**57011 4**			0.001	

Main circuit breaker busbar

3-phase busbar (10 mm²) for connecting main circuit breaker E 463/3-KB and pro *M* compact devices incl. end caps. No. of poles: 12 (1 x E 463/3-KB + 9 x S 201)

	12	3	**PS 3/12 E463**	GH V203 0507 R1009	**51741 6**			0.081	30

Rail connectors

For wiring of component rails in the consumer unit, rail-to-rail clearance 125 mm. In the case of the 4-pole connector, the color of the N conductor is blue.

10	3-pole		**RV 3**	GH V036 0504 R0023	**51238 1**			0.080	25
10	4-pole		**RV 4**	GH V036 0504 R0024	**51224 4**			0.114	25

Auxiliary contact bridge

Wire jumper for integrated auxiliary contact S 200 H for series connections.

	1/2 mod.		**HKB**	GH V036 0504 R0100	**52313 4**			0.001	1000

Shock-protection caps for PS...

		5 parts	**SZ-BSK**	2CDL 200 001 R0011	**42000 6**			0.003	10

Labelling system

Package comes with 40 labels, marked or blank. Blank labels can be labeled by hand with an indelible, waterproof pen or with computerised labelling systems (plotter).

identification labels blank			**BS**	GH S200 1946 R0001	**47810 6**			0.004	30
identification labels with pictograms			**BS Pikto**	GH S200 1946 R0002	**47820 5**			0.004	30
identification labels marked 4 x 1 – 10			**BS 1/10**	GH S200 1946 R0003	**47830 4**			0.004	30
identification labels marked 2 x 1 – 20			**BS 1/20**	GH S200 1946 R0004	**47840 3**			0.004	30
identification labels marked 1 – 40			**BS 1/40**	GH S200 1946 R0005	**47850 2**			0.004	30
identification labels marked 41 – 80			**BS 41 – 80**	GH S200 1946 R0006	**58591 0**			0.004	30
identification labels marked 81 – 120			**BS 81 – 120**	GH S200 1946 R0007	**58592 7**			0.004	30
identification labels marked 121 – 160			**BS 121/160**	GH S200 1946 R0008	**58593 4**			0.004	30

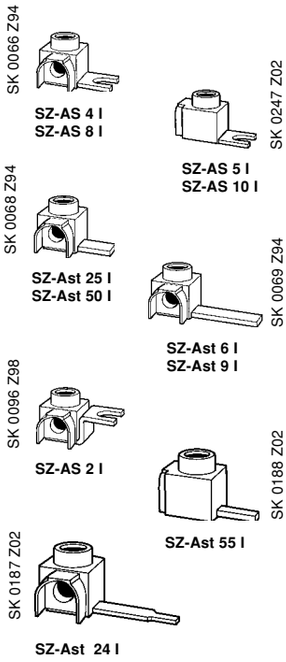
Customised labels on request.

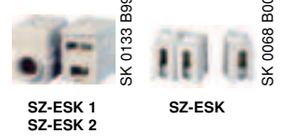
Individual labelling system ILS

At the individual labelling system ILS is a matter of a DIN A5 polyester foil with coating for ink jet and laser printer (in case of using a laser printer, please check, if it is possible to print adhesive coating foils with thickness of 250µm) with high temperature resistance. The adhesive coating 3M(9471 LE is noted at UL file number MH 11410. The single labels are punched on one side for easy take-out. Word file could be downloaded under www.abb.com/de.
Also inscribable with ink, ball-pen, pencil and crayon

1 foil with 126 labels (1-module: 6 x 17.2 mm)			**ILS**	2CDL 200 002 R0001	**58922 2**			0.011	1
1 foil with 210 labels ($^1/_2$-module: 6 x 8.5 mm)			**ILS-H**	2CDL 200 002 R0002	**58923 9**			0.011	1

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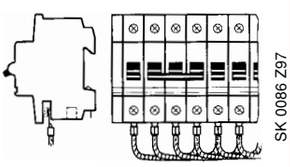





SZ-DB 121


SZ-DB 232 N


SZ-DB 125 N



example 1
wiring of devices consisting of modules with different lengths with SZ-DB 121 or 122

Conn. capacity	Type of connection	Terminal lug	Order details		Bbn 4012233	Cu No.	Price 1 piece	Price group	Weight 1 piece	Pack unit
mm²		L/mm	Type code	Order code	EAN				kg	pc.
Terminals, insulated										
6-35	fork	10	**SZ-AS 2 I**	GH V036 0501 R0011	**39330 0**①				0.023	30
6-25	fork	15	**SZ-AS 4 I**	GH V036 0501 R0005	**12410 2**①				0.011	50
6-25	fork	15	**SZ-AS 5 I**	GH V036 0501 R0014	**57012 1**①				0.012	50
6-50	fork	15	**SZ-AS 8 I**	GH V036 0501 R0008	**25950 7**①				0.014	50
6-50	fork	15	**SZ-AS 10 I**	GH V036 0501 R0017	**58295 7**①				0.014	50
6-25	pin	15	**SZ-Ast 25 I**	GH V036 0501 R0007	**12430 0**①				0.011	50
6-25	pin	30*	**SZ-Ast 6 I**	GH V036 0501 R0004	**12400 3**①				0.014	50
6-50	pin	15	**SZ-Ast 50 I**	GH V036 0501 R0009	**25960 6**①				0.014	50
6-50	pin	15	**SZ-Ast 55 I**	GH V036 0501 R0015	**57131 9**①				0.014	50
6-50	pin	32	**SZ-Ast 12 I**	GH V036 0501 R0010	**25970 5**①				0.024	50
6-50	pin	42	**SZ-Ast 24 I**	GH V036 0501 R0016	**57191 3**①				0.025	50
6-25	pin	30	**SZ-Ast 9 I**	GH V036 0501 R0003	**15900 5**①				0.014	50
25-95	pin	18*	**SZ-Ast 95**	GH V036 0501 R0013	**52262 5**①				0.067	3
25-95	pin	12*	**SZ-Ast 95 gk**	GH V036 0501 R0012	**52261 8**①				0.067	3

① bbn-No. 4016779 * not available for pro *M* compact

Feeder terminals

Safe from touch of the back of the hand/finger according to DIN EN 50274 (DIN VDE 0660 Part 514). Single-pole terminals can be mounted side by side to multipole terminals.

6-35	**SZ-ESK**	GH V036 0501 R0021	**50661 8**①			0.030	10
6-35	**SZ-ESK 2**	GH V036 0501 R0001	**96920 3**			0.024	10
6-25	**SZ-ESK 1**	GH V036 0501 R0020	**51841 3**①			0.031	10

① bbn-No. 4016779

Flexible connecting wires

with fork-type cable lug (black)

Conn. capacity	Length	Order details		Bbn 4012233	Cu No.	Price 1 piece	Price group	Weight 1 piece	Pack unit
mm²		Type code	Order code	EAN				kg	pc.
6	125	**SZ-DB 121**	GH V036 1425 R0001	**55650 2**	0.006			0.025	1000/50
10	135	**SZ-DB 122 N**	GH V036 1425 R0031	**55670 0**	0.010			0.02	500/25
6	260	**SZ-DB 231 N**	GH V036 1425 R0032	**55680 9**	0.014			0.02	500/25
10		**SZ-DB 232 N**	GH V036 1425 R0033	**55690 8**	0.022			0.04	250/25
10	330	**SZ-DB 311**	GH V036 1425 R0034	**55700 4**	0.029			0.05	100/25

with fork-type cable lug and connector sleeve (black)

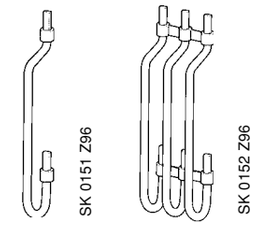
6	125	**SZ-DB 123**	GH V036 1425 R0006	**55660 1**	0.007			0.01	1000/50
10	135	**SZ-DB 124 N**	GH V036 1425 R0035	**55710 3**	0.012			0.02	500/25
6	260	**SZ-DB 235**	GH V036 1425 R0036	**55720 2**	0.014			0.02	500/25
10		**SZ-DB 236**	GH V036 1425 R0037	**55730 1**	0.024			0.04	250/25

with connector sleeves (black)

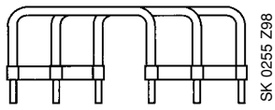
6	125	**SZ-DB 125 N**	GH V036 1425 R0038	**55740 0**	0.007			0.01	1000/50
6	260	**SZ-DB 233 N**	GH V036 1425 R0039	**55750 9**	0.015			0.02	500/25
10	135	**SZ-DB 126 N**	GH V036 1425 R0040	**55760 8**	0.013			0.02	500/25
10	260	**SZ-DB 234 N**	GH V036 1425 R0041	**55770 7**	0.025			0.04	250/25
10	330	**SZ-DB 312**	GH V036 1425 R0042	**55780 6**	0.032			0.05	100/25

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Selection tables
Wiring kit and neutral (N) and protective conductor (PE) common terminals



SZ-VS 1 SZ-VS 3



SZ-SM 3



SZ-6/3



SZ-KLB 8, 12, 16, 24



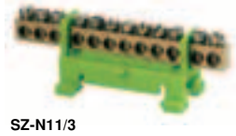
SZ-Ktr



SZ-Ktr mit KLB



SZ-N6/3



SZ-N11/3

Conn. capacity	No. of poles	Order details Type code	Order code	Bbn 4016779 EAN	Cu	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.

Wiring kit

For wiring of component rails in the consumer unit, rail-to-rail clr. 125 mm.

10 mm²	1 pole	**SZ-VS 1**	GH V036 0504 R0001	**28790 6**	0.022			0.03	30
10 mm²	1 pole	**SZ-VS 1B***	GH V036 0504 R0011	**49670 4**	0.022			0.03	30
10 mm²	2 pole	**SZ-VS 2**	GH V036 0504 R0002	**28800 2**	0.044			0.06	30
10 mm²	3 pole	**SZ-VS 3**	GH V036 0504 R0003	**28810 1**	0.066			0.10	30
10 mm²	4 pole	**SZ-VS 4**	GH V036 0504 R0004	**28820 0**	0.088			0.13	30

* insulation blue

Connection set

For 3-pole MCBs of the S 2 series and motor circuit-breakers MS 225/325.
Use filling piece SZ-FST 2 if no accessories are fitted.

connection set		**SZ-SM 3**	GH V036 0504 R0005	**41580 4**	0.02			15	0.047 50

Input mm²	Output mm²	Order details Type code	Order code	Bbn 4012233 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.

Neutral or protective-conductor terminals without insulation holder

1 x 16	6 x to 16	**SZ-6/3**	GH V036 0876 R0003	**50592 5**①			0.022	10
1 x 16	2 x to 16 6 x to 10	**SZ-KLB 8**	GJ I232 0131 R0001	**59660 7**			0.025	30
1 x 16	2 x to 16 10 x to 10	**SZ-KLB 12**	GJ I232 0071 R0013	**59530 3**			0.035	30
1 x 35	4 x to 16 12 x to 10	**SZ-KLB 16**	GJ I232 0072 R0017	**59540 2**			0.077	30
1 x 35	4 x to 16 20 x to 10	**SZ-KLB 24**	GJ I232 0073 R0016	**59550 1**			0.100	30

Holders for SZ-KLB terminals

Screw-fixing
SZ-KLB 8 and 12 each 1 piece required
SZ-KLB 16 and 24 each 2 pieces required

		SZ-Ktr	GJ I202 4027 R0001	**59450 4**			0.003	100

Neutral and protective-conductor terminals with insulation holder for quick fastening onto DIN rails EN 50 022

Neutral with insulation holder blue; type C finger safe, conductor opening closed on one side

1 x 16	6 x 16	**SZ-N 6/3**	GH V036 0876 R0001	**55570 3**			0.027	20
1 x 16	11 x 16	**SZ-N 11/3**	GH V036 0876 R0002	**55580 2**			0.043	20
1 x 16	6 x 16	**SZ-N 6/3 C**	GH V036 0876 R0011	**57095 4**①			0.028	20
1 x 16	6 x 16	**SZ-N 11/3 C**	GH V036 0876 R0012	**57096 1**①			0.046	20

Protective conductor with insulation holder green/yellow; type C finger safe, conductor opening closed on one side

1 x 16	6 x 16	**SZ-PE 6/3**	GH V036 0876 R0004	**55600 7**			0.027	20
1 x 16	11 x 16	**SZ-PE 11/3**	GH V036 0876 R0005	**55610 6**			0.043	20
1 x 16	6 x 16	**SZ-PE 6/3 C**	GH V036 0876 R0014	**57097 8**①			0.028	20
1 x 16	11 x 16	**SZ-PE 11/3 C**	GH V036 0876 R0015	**57098 5**①			0.046	20

① bbn-No. 40 16779

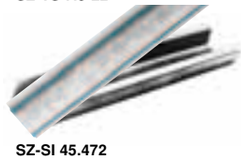
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SKV-GTS 1


SZ-SI 45.460


SZ-TS 7.5 L2


SZ-SI 45.472


SZ-TS 15 L2



Length	Order details		Bbn 4012233	Price 1 piece	Price group	Weight 1 piece	Pack unit
mm	Type code	Order code	EAN			kg	pc.

DIN rails

DIN rails (DIN EN 60 715 – 35 x 7.5) for individual installation with 2 screws on an even surface (1 module = 17.5 mm)

for 1 module	**DSW 1**	GH S210 1926 R0001	**13580 6**		0.060	10
for 2 modules	**DSW 2**	GH S210 1926 R0002	**13590 5**		0.012	10
for 3 modules	**DSW 3**	GH S210 1926 R0003	**13600 1**		0.018	10
for 4 modules	**DSW 4**	GH S210 1926 R0004	**13610 0**		0.024	10
for 6 modules	**DSW 6**	GH S210 1926 R0006	**13620 9**		0.036	10

DIN rail DIN EN 60 715, 35 x 7.5, material thickness 1 mm, surface protected, galvanised.

241	**SKV-GTS 1**	GH L110 1915 R0001	**04090 2**		0.09	40

DIN rails DIN EN 60 715, 35 x 7.5, material thickness 1 mm, surface galvanised.

1000	**SZ-SI 45.460**	GJ I232 2218 R0001	**59730 7**		0.35	10
2000	**SZ-TS 7.5 L2**	GJ I232 2218 R0007	**59760 4**		0.70	20

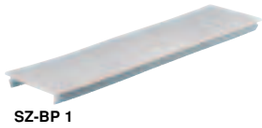
DIN rails DIN EN 60 715, 35 x 15, material thickness 1.5 mm, surface galvanised

2000	**SZ-SI 45.472**	GJ I232 2218 R0010	**59780 2**		1.30	10
2000	**SZ-TS 15 L2**	GJ I232 2218 R0009	**59770 3**		0.78	10

Catch spring for mounitng devices onto DIN rails (DIN EN 60 715, 35 x 7.5)

for screw type M4	**SZ-FB 45.53-3**	GJ I184 2013 P0003	**64560 2**		0.03	50
for screw type M5	**SZ-FB 45.53-1**	GJ I184 2013 P0004	**64580 0**		0.03	50

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SZ-BP 1

SZ-B



SZ-BP 2



SZ-VP 1500



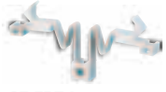
2CDC 023 191 F0003

S2C-DH



SK 0090 B00

END



SZ-FDT 2



SZ-FST 2 + SZ-FDT 2



SZ-FST

Height of cutout/color	Width	**Order details**		**Bbn 4012233**	Price 1 piece	Price group	Weight 1 piece	Pack unit
mm	mm	**Type code**	Order code	**EAN**			kg	pc.

Blanking plates

For device covers with materials of a thickness of 1 to 3 mm, width: 1 module = 17.5 mm; color: grey RAL 7035, white RAL 9001

46/grey	213	**SZ-BP 1**	GH L530 1904 R0001	**06050 4**		0.028	100
46/white	17.5	**SZ-BP**	GH S270 1913 R0001	**12857 4** ①		0.005	
46/grey	17.5	**SZ-BP 2**	GH S270 1913 R0002	**12861 1** ①		0.005	

① **bbn-Nr. 80 00126**

Sealing plate

Seal-proof locking of stamped-out device covers.
Detachable only from the inside of the device cover.
Can be used for device covers with 1.5 to 3 mm material thickness.

46/grey	1500	**SZ-VP 1500**	GJ I995 9038 R0001	**60290 2**		0.366	10

Rotary operating mechanism

(for operation of MCBs in closed distribution boards)

		S2C-DH	GH S200 1901 R0003	**57960 5** ①		0.01	25

① bbn-Nr. 4016779

End bracket

Prevents lateral shifting of built-in devices mounted on DIN rails according to DIN EN 60 715, 35 x 7.5 mm.

		END	GJ I100 1814 R0001	**59090 2**		0.02	50

Filling piece

For e.g. heat dissipation of closely mounted devices that generate much heat.
Width 8.75 mm, as spacer, two different heights, breakbale, for DIN rails according to DIN EN 60 715, 35 x 7.5 mm.

8.75		**SZ-FST 2**	GH L530 1908 R0002	**06070 2**		0.01	25

Spring piece

Holder for device covers, various heights available (in connection with filling piece FST 2)

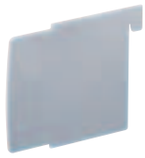
		SZ-FDT 2	GH L530 1908 R0005	**06080 1**		0.002	25

Filling piece

Two different heights, breakable, for DIN rails according to DIN EN 60 715, 35 x 7.5 mm for MCBs S 220 (3 different heights)

8.75		**SZ-FST**	GH I148 0003 R0001	**59410 8**		0.01	25

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SZ-FW



SK 0091 B00

SZ-ES 68/83



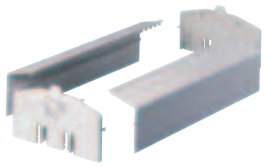
SK 0108 B91

SA 1



SK 0109 B91

SA 2



KA 27 H + KA 27 S



SK 0076 B96

PCD 2 N



SK 0077 B96

PCD 4 N



SK 0079 B96

PCD 8 N

Description	Order details Type code	Order code	Bbn 4012233 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.

Filler plate *

Material thickness 1 mm, color grey RAL 7035, compensates for mounting tolerances of MCBs

	SZ-FW	GH L530 1901 R0001	**06030 6**			0.001	25

* to be discontinued

Elevation piece

Compensates for different size of built-in devices with a mounting height of 68 mm and power MCBs of series S 500 (83 mm)

	SZ-ES 68/83	GH V021 1425 R0001	**53390 9**			0.003	100

4

Locking device for MCBs and switches

Prevents unauthorised or dangerous operation of the operating lever. An adaptor makes it possible to block the operating lever whether switched ON or OFF. The lever is blocked with a padlock having a cross bar section of 3 or, as the case may be, 6 mm max. For multipole devices, one lock may be fitted per pole.
The lock adaptor can be used for all MCBs of the S 220, S 280 series as well as for switches E 220 and 270.

locking devices	3 mm	**SA 1**	GJ F110 1903 R0001	**58760 5**		0.004	10
for padlock bar	6 mm	**SA 1E**	GJ F110 1903 R0004	**58790 2**		0.004	10
padlock with 2 keys		**SA 2**	GJ F110 1903 R0002	**58770 4**		0.02	10
padlock, identical locking with 2 keys		**SA 2 i**	GJ F110 9999 R0001	**96940 1**		0.02	10
lock adaptor incl. padlock with 3 keys in transparent box		**SA 3**	GJ F110 1903 R0003	**58780 3**		0.05	10

Terminal cover KA 27

Provides overall touch protection of live parts. Suitable for installations acc. to DIN EN 50274 (DIN VDE 0660 Part 514) and BGV A2.
End parts can be snapped onto mounting rails EN 60 715, 35 mm. Covers are 486 mm = 27 modules (18 mm each) long. Knockouts for each half module for individualised use.

cover, 1 piece		**KA 27 H**	GH S210 1933 R0001	**13630 8**		0.104	10
end part, 1 piece		**KA 27 S**	GH S210 1934 R0001	**13640 7**		0.027	10

Terminal covers with base plate, protection IP 40

Material: high-impact and flame-retardant (UL 94 V-0), color: white (RAL 9001), glow-wire test 960 °C according to IEC 695-2-1
The base plate has an integrated top-hat rail for snap-on fixing of MCBs, RCDs, modular built-in devices, etc.

for 2 modules		**PCD 2 N**	GH S270 1921 R0002	**12402 6**①		0.09	1
for 4 modules		**PCD 4 N**	GH S270 1921 R0004	**12404 0**①		0.15	1
for 6 modules		**PCD 6 N**	GH S270 1921 R0006	**12406 4**①		0.2	1
for 8 modules		**PCD 8 N**	GH S270 1921 R0008	**12408 8**①		0.7	1

Common terminals for terminal covers PCD*

for PCD 4 N and 6 N		**KL-PCD 4/6**	GH S270 1912 R0004	**12502 3**①		0.017	
for PCD 8 N		**KL-PCD 8**	GH S270 1912 R0008	**12592 7**①		0.079	

① bbn-No. 80 00126 * to be discontinued

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Other modular devices
Protection devices



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Toroidal transformers **5**/3
E 930 fuse holders **5**/4
M2160-M2060 fuse switches **5**/6
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5

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Selection tables
Protection devices
RD2 residual current monitors



Residual current monitors (RCMs) with external transformer can detect leakage currents. Through minidip you can set sensitivity and intervention time. According to the same diameter, transformers are made in a single version for all relay sensitivity values.

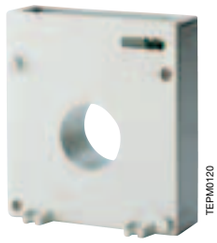
RD2 residual current monitors

Operating voltage	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
V	**Type code**	Order code	**EAN**			kg	pc.
230…400 AC	**RD2**	2CSM142120R1201	**058007**			0.125	1
48…150 AC/DC	**RD2-48**	2CSM242120R1201	**537809**			0.125	1

Technical features

Operating voltage	[V]	230÷400 a.c. (RD2) and 48÷150 a.c./d.c. (RD2-48)
Frequency	[Hz]	50÷60
Sensitivity settings IΔn	[A]	0.03; 0.1; 0.3; 0.5; 1; 2
Intervention time settings	[s]	0.3; 0.5; 1; 2; 5 (Fast = instantaneous)
Contact capacity	[A]	10 at 250 V a.c. (ohmic)
Contact type		change over
Operating temperature	[°C]	-5…+40 ±5
Modules	[n°]	2
Standards		IEC/EN 62020

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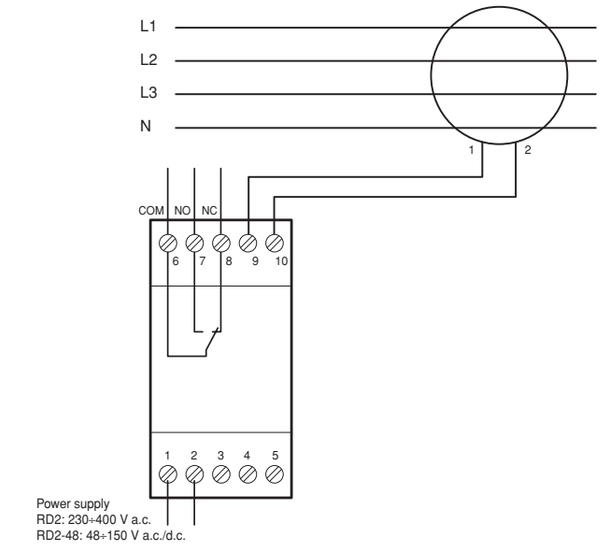


Toroidal transformers

Dimension Ø	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
mm	Type code	Order code	EAN			kg	pc.
29 (modular version)*	**TRM**	2CSM029000R1211	**020707**			0.170	1
35*	**TR1**	2CSG035100R1211	**020301**			0.212	1
60*	**TR2**	2CSG060100R1211	**020400**			0.274	1
80*	**TR3**	2CSG080100R1211	**020509**			0.454	1
110*	**TR4**	2CSG110100R1211	**020608**			0.530	1
160*	**TR160**	2CSG110200R1211	**743408**			0.600	1
210*	**TR5**	2CSG160100R1211	**743507**			1.350	1
110 (opening version)*	**TR4/A**	2CSG160200R1211	**743606**			1.600	1
160 (opening version)*	**TR160 A**	2CSG210100R1211	**024804**			1.534	1
210 (opening version)*	**TR5/A**	2CSG210200R1211	**065708**			1.856	1

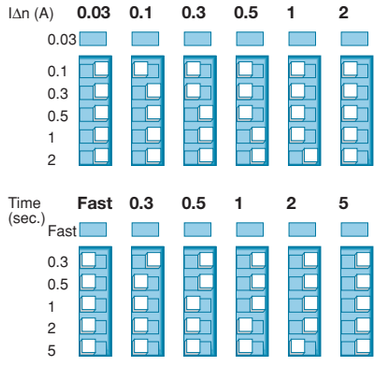
* Wiring terminals 1 and 2

5



OEPM0294

Selection of calibration



If the configuration is not appropriate, the device will automatically consider as valid the first configuration (according to the diagram) and enter the maximum safety.

OEPM0295

Indications
Green LED: rated voltage
Red LED: alarm status

More functions
The connection between the toroidal transformer and the residual current relay is continually controlled by the relay; when the connection breaks the residual current relay enters the “alarm” status.
The “test” pushbutton simulates a failure inside the residual current relay: if pushed it must enter the alarm status.
The “reset” pushbutton allows the residual current relay to return to the starting condition.

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Selection tables
Protection devices
E 930 fuse holders



E 930 fuse holders are appropriate to protect against overloads and short circuits. They are designed for use with cylindrical fuses of 20, 32, 50 and 125 A).

They are provided with IP20 protection degree, and for each version (1P, 1P+N, …) are also available on request sizes of 8.5x23 mm (up to 10 A), 10.3x25 mm (up to 16 A) and 10.3x31.5 mm (up to 25 A).

Fuse holders for 20 A and 32 A fuses

Poles	Rated current In	Modules	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	A		**Type code**	Order code	**EAN**			kg	pc.
1	20	1	**E 931/20**	2CSM131210R1801	**365006**			0.001	6
1+N*	20	1	**E 931N/20**	2CSM135210R1801	**374404**			0.010	6
2	20	2	**E 932/20**	2CSM132210R1801	**365204**			0.200	3
3	20	3	**E 933/20**	2CSM133210R1801	**365303**			0.300	2
3+N*	20	3	**E 933N/20**	2CSM137210R1801	**374503**			0.350	2
1	32	1	**E 931/32**	2CSM151510R1801	**366003**			0.100	6
1+N*	32	1	**E 931N/32**	2CSM155510R1801	**374602**			0.150	6
2	32	2	**E 932/32**	2CSM152510R1801	**366201**			0.200	3
3	32	3	**E 933/32**	2CSM153510R1801	**366300**			0.300	2
3+N*	32	3	**E 933N/32**	2CSM157510R1801	**374701**			0.350	2

* Fuse holder with disconnectable neutral on the right

Fuse holders for 50 A and 125 A fuses

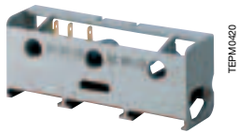
Poles	Rated current In	Modules	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	A		**Type code**	Order code	**EAN**			kg	pc.
1	50	1 1/2	**E 931/50**	2CSM361610R1801	**446804**			0.200	6
1+N*	50	3	**E 931N/50**	2CSM365610R1801	**446903**			0.400	3
2	50	3	**E 932/50**	2CSM362610R1801	**447009**			0.400	3
3	50	4 1/2	**E 933/50**	2CSM363610R1801	**447108**			0.600	1
3+N*	50	6	**E 933N/50**	2CSM367610R1801	**447207**			0.800	1
1	125	2	**E 931/125**	2CSM371710R1801	**447504**			0.200	6
1+N*	125	4	**E 931N/125**	2CSM375710R1801	**447603**			0.400	3
2	125	4	**E 932/125**	2CSM372710R1801	**447702**			0.400	3
3	125	6	**E 933/125**	2CSM373710R1801	**447801**			0.600	1
3+N*	125	8	**E 933N/125**	2CSM377710R1801	**447900**			0.800	1

* Fuse holder with disconnectable neutral on the right

Technical features of fuse holders for 20 A and 32 A fuses

		20 A fuses	**32 A fuses**
Rated voltage U_n	[V]	a.c. 400	a.c. 400
Rated current I_n	[A]	20	32
Rated frequency	[Hz]	50/60	50/60
Fuse dimension	[mm]	8.5x31.5	10.3x38
Power consumption per pole		see technical details	
Modules	[n°]	1, 2, 3	1, 2, 3
Standards		EN 60269-3; IEC 269-3	
Approvals		IMQ, LCIE	IMQ, LCIE

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Accessories

Microswitch for remote signalling on fuse holders for fuses with built-in striker

Poles	Rated current In	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	A	Type code	Order code	EAN			kg	pc.
1	50	**E 930/MCR1P50**	2CSM060019R1801	**451006**			0.030	1
3	50	**E 930/MCR3P50**	2CSM060029R1801	**451105**			0.030	1
1	125	**E 930/MCR1P125**	2CSM070019R1801	**451204**			0.030	1
3	125	**E 930/MCR3P125**	2CSM070029R1801	**451303**			0.030	1

Kit for coupling max. 10 one pole fuses

	Rated current In	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	A	Type code	Order code	EAN			kg	pc.
	50	**E 930/ACP50**	2CSM060039R1801	**451402**			0.050	1
	125	**E 930/ACP125**	2CSM070039R1801	**451501**			0.050	1

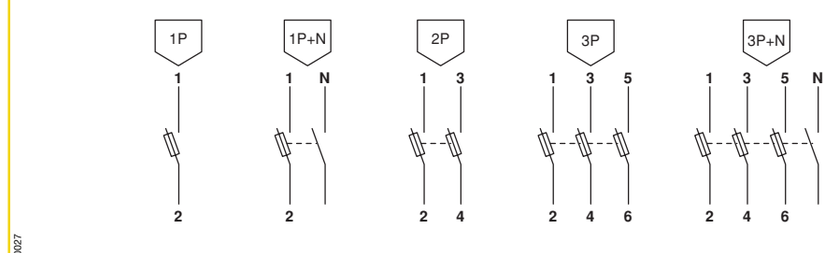
Transparent cover for signalling 20 A and 32 A fuse trip

Description	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
only cover	**E 930/KIT**	2CSM050018R1801	**367000**			0.020	5
cover+torpedo lamp (Un=230V)	**E 930/KIT+Lamp**	2CSM050028R1801	**539902**			0.050	5

5

Technical features of fuse holders for 50 A and 125 A fuses

		50 A fuses	125 A fuses
Rated voltage U_n	[V]	a.c. 690	a.c. 690
Rated current I_n	[A]	50	125
Rated frequency	[Hz]	50/60	50/60
Fuse dimension	[mm]	14x51	22x58
Utilization category		AC20	AC20
Power consumption per pole	[W]	see technical details	
Modules	[n°]	$1^{1/2}$, 3, $4^{1/2}$, 6	2, 4, 6, 8
Standards		EN 60269-2; EN 60947-3 IEC 269-2; IEC 947-3	
Approvals		UL, CSA	UL, CSA



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Selection tables
Protection devices
M2160 - M2060 fuse switches


TEPM0182

Fuse switches are used in tertiary and small industrial plants to open/close under load circuits, allowing protection against short circuits and overloads. The contact tongs are of silver-plated copper (fuse is not provided).

M2160: switches + fuses (8.5 x 31.5)

Poles	Modules	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
1	1	**M 2161**	2CSM131210R1811	**026808**			0.100	12
1+N	2	**M 2161 Na**	2CSM135210R1811	**026907**			0.200	6
2	2	**M 2162**	2CSM132210R1811	**027003**			0.200	6
3	3	**M 2163**	2CSM133210R1811	**027201**			0.300	4
3+N	4	**M 2163 Na**	2CSM137210R1811	**027102**			0.400	3

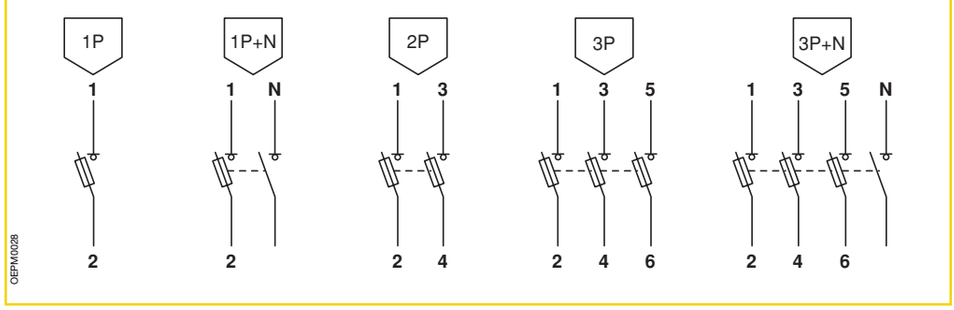
M2060: switches + fuses (10.3 x 38)

Poles	Modules	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
1	1	**M 2061**	2CSM131510R1811	**027300**			0.100	12
1+N	2	**M 2061 Na**	2CSM135510R1811	**027409**			0.200	6
2	2	**M 2062**	2CSM132510R1811	**027508**			0.200	6
3	3	**M 2063**	2CSM133510R1811	**027607**			0.300	4
3+N	4	**M 2063 Na**	2CSM137510R1811	**027706**			0.400	3

Technical features

Rated voltage U_n	[V]	a.c. 400
Rated current I_n	[A]	20
Rated frequency	[Hz]	50/60
Fuse dimension	[mm]	8.5x31.5; 10.3x38
Utilization category		AC-22
Power consumption		see technical details
Modules	[n°]	1, 2, 3, 4
Standards		EN 60947-3; IEC/EN 60669-1 IEC 947-3

The fuse can be inserted only with open switch.



OEPM0028

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Surge protection devices, class II









Rated discharge current (20 times) 8/20 wave	Protect. level Up	Rated voltage Un	Max. steady state voltage Uc	**Order details**		**Bbn 3660308**	Price 1 piece	Price group	Weight 1 piece	Pack unit
In kA	kV	V	V	**Type code**	Order code	**EAN**			kg	pc.
Single pole, Imax=40kA										
10	1.2	230	275	**OVR 40 275**	2CTB 8138 11 R 07 00	**505491**			0.12	1
15	1.2	230	275	**OVR 40 275 P**	2CTB 8138 51 R 23 00	**504555**			0.12	1
15	1.2	230	275	**OVR 40 275 P TS**	2CTB 8138 51 R 17 00	**504494**			0.12	1
15	1.2	230	275	**OVR 40 275 s P TS**	2CTB 8138 51 R 14 00	**504463**			0.12	1
10	1.8	400	440	**OVR 40 440**	2CTB 8138 11 R 03 00	**505439**			0.12	1
15	1.8	400	440	**OVR 40 440 P**	2CTB 8138 51 R 11 00	**504432**			0.12	1
15	1.8	400	440	**OVR 40 440 P TS**	2CTB 8138 51 R 05 00	**504371**			0.12	1
15	1.8	400	440	**OVR 40 440 s P TS**	2CTB 8138 51 R 02 00	**504340**			0.12	1
Multipole										
10	1.2	230	275	**OVR 1N 40 275**	2CTB 8139 12 R 03 00	**507730**			0.22	1
15	1.2	230	275	**OVR 1N 40 275 P**	2CTB 8139 52 R 11 00	**506030**			0.22	1
15	1.2	230	275	**OVR 1N 40 275 P TS**	2CTB 8139 52 R 05 00	**505910**			0.22	1
15	1.2	230	275	**OVR 1N 40 275 s P TS**	2CTB 8139 52 R 02 00	**505859**			0.22	1
10	1.2	230	275	**OVR 3N 40 275**	2CTB 8139 13 R 03 00	**507761**			0.50	1
15	1.2	230	275	**OVR 3N 40 275 P**	2CTB 8139 53 R 11 00	**506283**			0.50	1
15	1.2	230	275	**OVR 3N 40 275 P TS**	2CTB 8139 53 R 05 00	**506160**			0.50	1
15	1.2	230	275	**OVR 3N 40 275 s P TS**	2CTB 8139 53 R 02 00	**506108**			0.50	1
Neutral										
20	1.9	0	250	**OVR 65 N P**	2CTB 8139 51 R 01 00	**505712**			0.12	1
Cartridges for surge protection devices class II										
15	1.2	230	275	**OVR 40 275 C**	2CTB 8138 54 R 10 00	**505354**			0.08	1
15	1.2	230	275	**OVR 40 275 s C**	2CTB 8138 54 R 09 00	**505347**			0.08	1
15	1.8	400	440	**OVR 40 440 C**	2CTB 8138 54 R 04 00	**505293**			0.08	1
15	1.8	400	440	**OVR 40 440 s C**	2CTB 8138 54 R 03 00	**505286**			0.08	1
20	1.9	0	250	**OVR 65 N C**	2CTB 8138 54 R 00 00	**505255**			0.08	1
Telecommunication and dataline protection surge protection devices										
5	0.015	6	7	**OVR TC 06 V**	2CTB 8138 14 R 01 00	**505668**			0.15	1
5	0.020	12	14	**OVR TC 12 V**	2CTB 8138 14 R 02 00	**505675**			0.15	1
5	0.035	24	27	**OVR TC 24 V**	2CTB 8138 14 R 03 00	**505682**			0.15	1
5	0.070	48	53	**OVR TC 48 V**	2CTB 8138 14 R 04 00	**505699**			0.15	1
5	0.700	200	220	**OVR TC 200 V**	2CTB 8138 14 R 05 00	**505651**			0.15	1
5	0.300	200	220	**OVR TC 200 FR**	2CTB 8138 14 R 00 00	**505644**			0.15	1

Many other products with different voltages, discharge capabilities and configurations, are available on request, depending on electrical networks and on the location of the site to be protected.

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Other modular devices
Command devices



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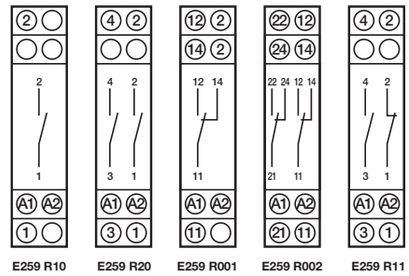


E 259 installation relays

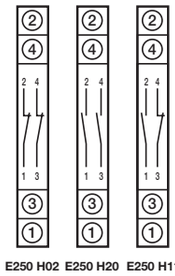
For applications in public/tertiary sectors (i.e. control of lamps), they are equipped with manual command (temporary) and contact position indicator (visual on the product). They can also be coupled with additional and signal contacts.

Contacts/voltage	**Order details** Type code	Order code	**Bbn 8012542** EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
Coil voltage Uc=8 V AC							
1 NO/8 V AC	**E 259 R10-8**	2CSM211000R0401	**533009**			0.100	12
1 NO+1NC/8 V AC	**E 259 R11-8**	2CSM214000R0401	**533405**			0.100	12
2 NO/8 V AC	**E 259 R20-8**	2CSM212000R0401	**533801**			0.100	12
Coil voltage Uc=12 V AC or 6 V DC							
1 NO/12 V AC or 6 V DC	**E 259 R10-12**	2CSM311000R0401	**532705**			0.100	12
1 NO+1 NC/12 V AC or 6 V DC	**E 259 R11-12**	2CSM314000R0401	**533108**			0.100	12
2 NO/12 V AC or 6 V DC	**E 259 R20-12**	2CSM312000R0401	**533504**			0.100	12
1 CO/12 V AC/DC	**E 259 R001-12**	2CSM315000R0401	**536109**			0.100	12
2 CO/12 V AC/DC	**E 259 R002-12**	2CSM316000R0401	**536406**			0.100	12
Coil voltage Uc=24 V AC or 12 V DC							
1 NO/24 V AC or 12 V DC	**E 259 R10-24**	2CSM411000R0401	**532903**			0.100	12
1 NO+1 NC/24 V AC or 12 V DC	**E 259 R11-24**	2CSM414000R0401	**533207**			0.100	12
2 NO/24 V AC or 12 V DC	**E 259 R20-24**	2CSM412000R0401	**533603**			0.100	12
1 CO/24 V AC/DC	**E 259 R001-24**	2CSM415000R0401	**536307**			0.100	12
2 CO/24 V AC/DC	**E 259 R002-24**	2CSM416000R0401	**536604**			0.100	12

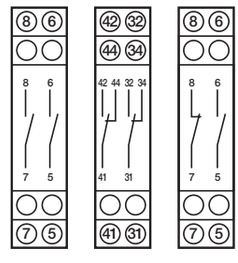
Modules with control coil



Auxiliary contacts



Additinal contact modules



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Coil voltage Uc=230 V AC or 115 V DC

1 NO/230 V AC or 115 V DC	**E 259 R10-230**	2CSM211000R0401	**533009**	0.100	12
1 NO+1 NC/230 V AC or 115 V DC	**E 259 R11-230**	2CSM211000R0401	**533009**	0.100	12
2 NO/230 V AC or 115 V DC	**E 259 R20-230**	2CSM211000R0401	**533009**	0.100	12
1 CO/230 V AC/DC	**E 259 R001-230**	2CSM211000R0401	**533009**	0.100	12
2 CO/230 V AC/DC	**E 259 R002-230**	2CSM211000R0401	**533009**	0.100	12

Further coil voltages

1 NO+1NC/48 V AC or 24 V DC	**E 259 R11-48**	2CSM514000R0401	**534204**	0.100	12
2 NO/48 V AC or 24 V DC	**E 259 R20-48**	2CSM512000R0401	**656708**	0.100	12
1 NO+1NC/115 V AC or 48 V DC	**E 259 R11-115**	2CSM614000R0401	**534006**	0.100	12
2 NO/115 V AC or 48 V DC	**E 259 R20-115**	2CSM612000R0401	**656807**	0.100	12
1 NO/230 V AC 60 Hz	**E 259 R10-230 60Hz**	2CSM111000R0401	**631101**	0.100	12
2 NO/230 V AC 60 Hz	**E 259 R20-230 60Hz**	2CSM112000R0401	**631309**	0.100	12
1 NO+1NC/230 V AC 60 Hz	**E 259 R11-230 60Hz**	2CSM114000R0401	**631200**	0.100	12
1 NO+1NC/60 V DC	**E 259 R11-60DC**	2CSM714000R0401	**534303**	0.100	12
2 NO/60 V DC	**E 259 R20-60DC**	2CSM712000R0401	**656906**	0.100	12
1 NO+1NC/220 V DC	**E 259 R11-220DC**	2CSM914000R0401	**534105**	0.100	12
2 NO/220 V DC	**E 259 R20-220DC**	2CSM912000R0401	**657002**	0.100	12

Additional components

Description	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	**EAN**			kg	pc.
contact module 2 NO multi voltage	**E 259 CM20**	2CSM012100R0401	**536000**			0.100	12
contact module 1 NO+1NC multi voltage	**E 259 CM11**	2CSM014100R0401	**535904**			0.100	12
contact module 2 CO multi voltage	**E 259 CM002**	2CSM016100R0401	**535805**			0.100	12
auxiliary switches 1 NC+1 NO	**E 259 H11**	2CSM004400R0201	**534709**			0.100	12
auxiliary switches 2 NO	**E 259 H20**	2CSM002400R0201	**536901**			0.100	12
auxiliary switches 2 NC	**E 259 H02**	2CSM008400R0201	**536802**			0.100	12

Technical features

			E259 R10, E259 R20, E259 R11	**E259 R001, E259 R002**
Rated voltage U_N		[V]	400/250	400/250
Rated current (according to EN 60947-4-1)		[A]	16	16
Rated frequency		[Hz]	50	50-60 d.c.
Number of poles			1...4	1...4
Control circuit voltage			8, 12, 24, 48, 115, 230 V a.c.	12, 24 V a.c./d.c.
Power supply voltage		[VAC]	60, 110, 220 V d.c.	230 V a.c.
D.c./a.c. ratio			0.5:1	0.5:1
Operation limits (in % of Un)		[%]	85-110	85-110
Power consumption*				
Alternated current	retained	[VA]	3.8	4.0
	change over	[VA]	6.0	4.0
Direct current		[W]	3.3	4.2
Duration (number of operations)				
Electric operations (in AC-1 at full load)			$3x10^5$	$4x10^5$
Mechanic operations			$2x10^6$	$2x10^6$
Max. lamp number (10^3 operations/h)				
Incandescent and halogen (lamps from 40 to 200W)		[W]	1800	1800
Fluorescent, with capacitors (cosφ = 0.9)				
	In series	[VA]	1800	1800
	In parallel	[VA]	500	500
Fluorescent, without capacitors (cosφ = 0.5)		[VA]	900	900
Width (number of DIN modules)				
Motor unit		[n°]	1	1
With main contact unit		[n°]	2	2

* Low consumpion relays on request E 259 LC

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2CDC 051 496 F0003

E 200i switches

Suitable for under load operations and equipped with sealable control lever in both positions. For correct operation, it is necessary an upstream protection by devices against short-circuit and overload (fuses, MCBs).
It is also possible the cross-wiring with MCBs and RCDs of the System Pro *M* compact series.

Poles	Rated voltage	Power loss	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	V AC	W	**Type code**	Order code	**EAN**			kg	pc.
Rated current = 63 A									
1 NO	240 V	2.5	**E 201i/63 gr**	2CDE 281 011 R1063	**58317 6**			0.1	10
1 NO	240 V	2.5	**E 201i/63 rd**	2CDE 281 011 R0063	**58318 3**			0.1	10
2 NO	415 V	5.0	**E 202i/63 gr**	2CDE 282 011 R1063	**58325 1**			0.21	5
2 NO	415 V	5.0	**E 202i/63 rd**	2CDE 282 011 R0063	**58326 8**			0.21	5
3 NO	415 V	7.5	**E 203i/63 gr**	2CDE 283 011 R1063	**58333 6**			0.33	3
3 NO	415 V	7.5	**E 203i/63 rd**	2CDE 283 011 R0063	**58334 3**			0.33	3
4 NO	415 V	10.0	**E 204i/63 gr**	2CDE 284 011 R1063	**58341 1**			0.44	2
4 NO	415 V	10.0	**E 204i/63 rd**	2CDE 284 011 R0063	**58342 8**			0.44	2
Rated current = 80 A									
1 NO	240 V	4.0	**E 201i/80 gr**	2CDE 281 011 R1080	**58319 0**			0.1	10
1 NO	240 V	4.0	**E 201i/80 rd**	2CDE 281 011 R0080	**58320 6**			0.1	10
2 NO	415 V	8.0	**E 202i/80 gr**	2CDE 282 011 R1080	**58327 5**			0.21	5
2 NO	415 V	8.0	**E 202i/80 rd**	2CDE 282 011 R0080	**58328 2**			0.21	5
3 NO	415 V	12.0	**E 203i/80 gr**	2CDE 283 011 R1080	**58335 0**			0.33	3
3 NO	415 V	12.0	**E 203i/80 rd**	2CDE 283 011 R0080	**58336 7**			0.33	3
4 NO	415 V	16.0	**E 204i/80 gr**	2CDE 284 011 R1080	**58343 5**			0.44	2
4 NO	415 V	16.0	**E 204i/80 rd**	2CDE 284 011 R0080	**58345 9**			0.44	2

6

Technical features

Switching capacity	3 In; 1,05 Un; cosφ = 0.65 according to IEC 60947-3; AC 22-A according to VDE 0660 Part 107, DIN EN 60947-3 respectively IEC 60947-3
Short-circuit-withstand capacity	25 kA_{eff} in series with NH 1C 100 A gL – gG
Rated voltage	240/415 V AC; 50/60 Hz
Ambient temperature	- 5 °C up to + 40 °C
Storage temperature	- 25 °C up to + 55 °C
Mounting position	optional
Degree of protection	IP xxB (with additional measure), in the consumer unit IP 40
Connection capacity	1.5 mm^2 up to 50 mm^2 (up to 100 A 35 mm^2)
Pick-up torque	5 Nm

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2CDC 051 002 F0004

Rated current = 100 A

1 NO	240 V	6.5	**E 201i/100 gr**	2CDE 281 011 R1100	**58321 3**	0.1	10
1 NO	240 V	6.5	**E 201i/100 rd**	2CDE 281 011 R0100	**58322 0**	0.1	10
2 NO	415 V	13.0	**E 202i/100 gr**	2CDE 282 011 R1100	**58329 9**	0.21	5
2 NO	415 V	13.0	**E 202i/100 rd**	2CDE 282 011 R0100	**58330 5**	0.21	5
3 NO	415 V	19.5	**E 203i/100 gr**	2CDE 283 011 R1100	**58337 4**	0.33	3
3 NO	415 V	19.5	**E 203i/100 rd**	2CDE 283 011 R0100	**58338 1**	0.33	3
4 NO	415 V	26.0	**E 204i/100 gr**	2CDE 284 011 R1100	**58346 6**	0.44	2
4 NO	415 V	26.0	**E 204i/100 rd**	2CDE 284 011 R0100	**58347 3**	0.44	2

Rated current = 125 A

1 NO	240 V	9.0	**E 201i/125 gr**	2CDE 281 011 R1125	**58323 7**	0.1	10
1 NO	240 V	9.0	**E 201i/125 rd**	2CDE 281 011 R0125	**58324 4**	0.1	10
2 NO	415 V	18.0	**E 202i/125 gr**	2CDE 282 011 R1125	**58331 2**	0.21	5
2 NO	415 V	18.0	**E 202i/125 rd**	2CDE 282 011 R0125	**58332 9**	0.21	5
3 NO	415 V	27.0	**E 203i/125 gr**	2CDE 283 011 R1125	**58339 8**	0.33	3
3 NO	415 V	27.0	**E 203i/125 rd**	2CDE 283 011 R0125	**58340 4**	0.33	3
4 NO	415 V	36.0	**E 204i/125 gr**	2CDE 284 011 R1125	**58348 0**	0.44	2
4 NO	415 V	36.0	**E 204i/125 rd**	2CDE 284 011 R0125	**58349 7**	0.44	2

Rated current < 63 A on request

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SK 119 B 99



SK 072 B 94



SK 109 B 91

E 463/3-KB, E 480/3-KB, E 463/3-SL switches

Rated current	Power loss	**Order details**		**Bbn 7612270**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	W	**Type code**	Order code	**EAN**			kg	pc.
63	5.4	**E 463/3-KB**	2CCE160300R0131	**932528**			0.190	1
63	5.5	**E 463/3-SL**	2CCE160301R0131	**932535**			0.195	1
80	9.9	**E 480/3-KB**	2CCE180300R0141	**932542**			0.210	1

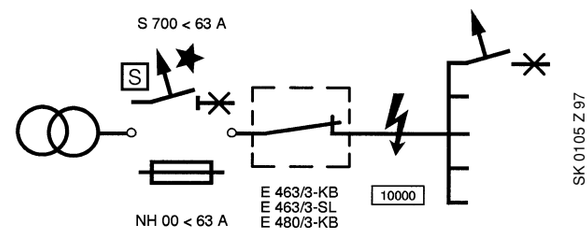
Padlock for E 463/3-SL with 2 keys

	Order details		**Bbn 7612270**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	**EAN**			kg	pc.
	SA 2	GJF1101903R0002	**587704**			0.020	1

6

Technical features

Switching capacity	1.25 In; 1.1 Un; cosφ = 0.6 according to DIN VDE 0632
Rated voltage	250/400 V a.c.
Connection cross section	1 mm^2 stranded wire/0.5 mm^2 wire up to 25 mm^2
Pick-up torque	3 Nm max.
Positive opening	according to DIN VDE 0113
Ambient temperature	-25°C to +55°C
Storage temperature	-40°C to +70°C
Poles	3 NO
Short-circuit withstanding capacity	10 kA, 400 V a.c.



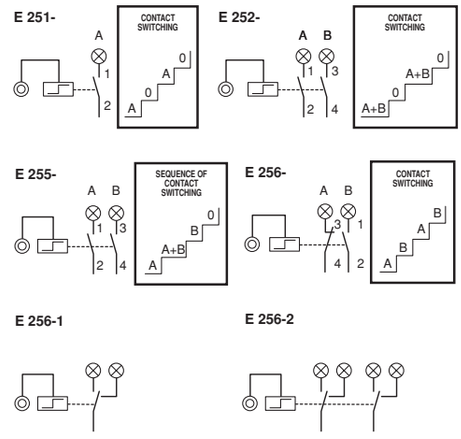
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E 250 electro-mechanical latching relays

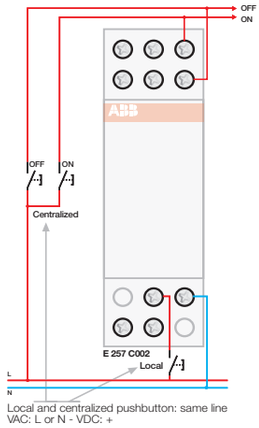
Electro-mechanical latching relays allow contact switching for each impulse sent to coil using normally open pushbuttons. Ideal for lamp controlling from different positions, they are available in various versions according to pick-up voltage and to contact positions. Basic modules are available in one-pole and bipolar versions and can be combined with bipolar contact modules in order to have three-pole and four-pole devices. E257C versions also allow centralized reset function (ON and OFF), that can be extended at a multi-level through the appropriate grouping module. They also allow manual operation on the product and contact position indicator (visual on the product). They can also be equipped with signalling auxiliary contacts.

Contacts/voltage	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	**EAN**			kg	pc.
Coil voltage U_c = 8 V AC							
1 NO / 8 V AC	**E 251-8**	2CSM 211 000 R0201	**53050 3**			0.114	12
2 NO / 8 V AC	**E 252-8**	2CSM 212 000 R0201	**53100 5**			0.116	12
1 NO + 1 NC / 8 V AC	**E 256-8**	2CSM 214 000 R0201	**53190 6**			0.116	12
series / 8 V AC	**E 255-8**	2CSM 219 000 R0201	**53150 0**			0.121	12

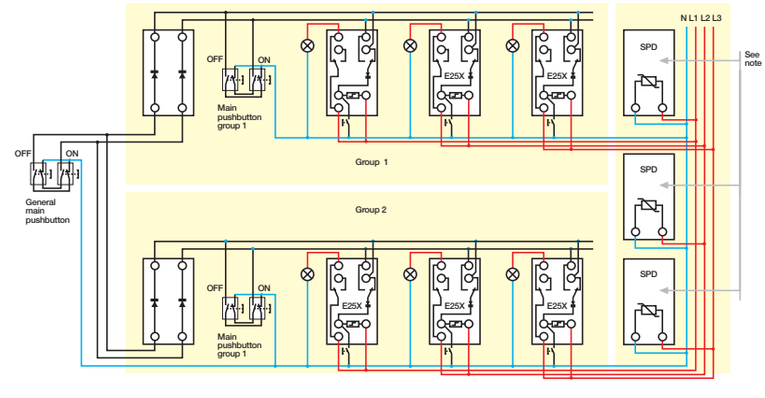


Examples of connection

E257 C002 – local and/or centralized pushbutton



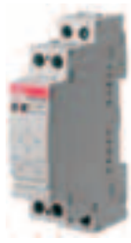
Group centralized control: wiring diagram for E250 GM



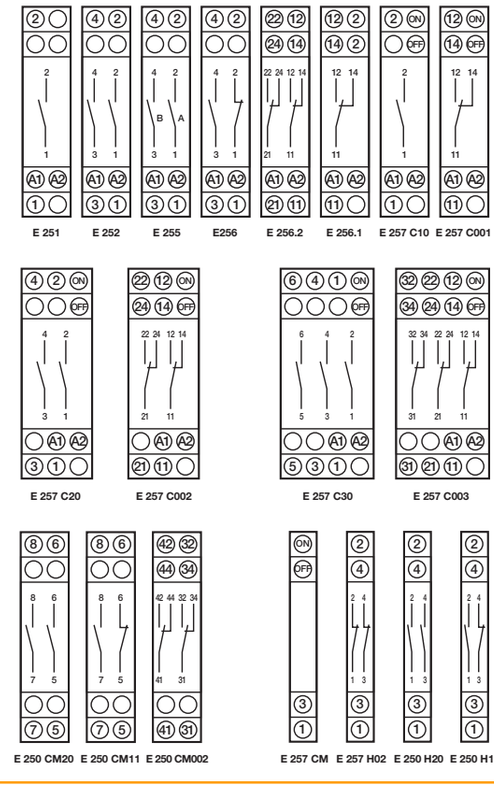
In the case of very long lines a surge protective device (SPD) is suggested. If the plant has been correctly implemented in terms of overvoltage protection we suggest a Class III SPD as a terminal protection.

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Selection tables
Command devices
E 250 latching relays



Contacts/voltage	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
Coil voltage U_c = 12 V AC or 6 V DC							
1 NO / 12 V AC or 6 V DC	**E 251-12**	2CSM 311 000 R0201	**53020 6**			0.114	12
2 NO / 12 V AC or 6 V DC	**E 252-12**	2CSM 312 000 R0201	**53070 1**			0.116	12
1 NO + 1NC / 12 V AC or 6 V DC	**E 256-12**	2CSM 314 000 R0201	**53160 9**			0.116	12
1 CO / 12 V AC or 6 V DC	**E 256.1-12**	2CSM 315 000 R0201	**53720 5**			0.115	12
2 CO / 12 V AC or 6 V DC	**E 256.2-12**	2CSM 316 000 R0201	**53750 2**			0.118	12
series / 12 V AC or 6 V DC	**E 255-12**	2CSM 319 000 R0201	**53120 3**			0.121	12
Coil voltage U_c = 24 V AC or 12 V DC							
1 NO / 24 V AC or 12 V DC	**E 251-24**	2CSM 411 000 R0201	**53040 4**			0.114	12
2 NO / 24 V AC or 12 V DC	**E 252-24**	2CSM 412 000 R0201	**53090 9**			0.116	12
1 NO + 1 NC / 24 V AC or 12 V DC	**E 256-24**	2CSM 414 000 R0201	**53180 7**			0.116	12
1 CO / 24 V AC or 12 V DC	**E 256.1-24**	2CSM 415 000 R0201	**53740 3**			0.115	12
2 CO / 24 V AC or 12 V DC	**E 256.2-24**	2CSM 416 000 R0201	**53770 0**			0.118	12
series / 24 V AC or 12 V DC	**E 255-24**	2CSM 419 000 R0201	**53140 1**			0.121	12
Coil voltage U_c = 48 V AC or 24 V DC							
1 NO / 48 V AC or 24 V DC	**E 251-48**	2CSM 511 000 R0201	**53060 2**			0.114	12
2 NO / 48 V AC or 24 V DC	**E 252-48**	2CSM 512 000 R0201	**53110 4**			0.116	12
1 NO + 1NC / 48 V AC or 24 V DC	**E 256-48**	2CSM 514 000 R0201	**53200 2**			0.116	12
Coil voltage U_c = 115 V AC or 48 V DC							
1 NO / 115 V AC or 48V DC	**E 251-115**	2CSM 611 000 R0201	**63090 6**			0.114	12
2 NO / 115 V AC or 48V DC	**E 252-115**	2CSM 612 000 R0201	**63100 2**			0.114	12
1 NO + 1 NC / 115 V AC or 48 V DC	**E 256-115**	2CSM 614 000 R0201	**63020 3**			0.114	12



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Coil voltage U_c = 230 V AC or 115 V DC

1 NO / 230 V AC or 115 V DC	**E 251-230**	2CSM 111 000 R0201	**53030 5**	0.114	12
2 NO / 230 V AC or 115 V DC	**E 252-230**	2CSM 112 000 R0201	**53080 0**	0.116	12
1 NO + 1 NC / 230 V AC or 115 V DC	**E 256-230**	2CSM 114 000 R0201	**53170 8**	0.116	12
1 CO / 230 V AC or 115 V DC	**E 256.1-230**	2CSM 115 000 R0201	**53730 4**	0.115	12
2 CO / 230 V AC or 115 V DC	**E 256.2-230**	2CSM 116 000 R0201	**53760 1**	0.118	12
series / 230 V AC or 115 V DC	**E 255-230**	2CSM 119 000 R0201	**53130 2**	0.121	12

Coil voltage U_c = 60 V DC and U_c = 220 V DC

2 NO / 60 V DC	**E 252-60DC**	2CSM 712 000 R0201	**63010 4**	0.116	12
2 NO / 220 V DC	**E 252-220DC**	2CSM 912 000 R0201	**63000 5**	0.116	12

Coil voltage U_c = 12 V AC or 6 V DC, central ON/OFF, same electr. potential

1 NO / 12 V AC or 6 V DC	**E 257 C10-12**	2CSM 311 000 R0211	**53210 1**	0.126	12
2 NO / 12 V AC or 6 V DC	**E 257 C20-12**	2CSM 312 000 R0211	**53240 8**	0.174	8
3 NO / 12 V AC or 6 V DC	**E 257 C30-12**	2CSM 313 000 R0211	**53480 8**	0.240	6
1 CO / 12 V AC or 6 V DC	**E 257 C001-12**	2CSM 315 000 R0211	**54020 5**	0.126	12
2 CO / 12 V AC or 6 V DC	**E 257 C002-12**	2CSM 316 000 R0211	**54050 2**	0.174	8
3 CO / 12 V AC or 6 V DC	**E 257 C003-12**	2CSM 317 000 R0211	**54080 9**	0.240	6

Coil voltage U_c = 24 V AC or 12 V DC, central ON/OFF, same electr. potential

1 NO / 24 V AC or 12V DC	**E 257 C10-24**	2CSM 411 000 R0211	**53230 9**	0.126	12
2 NO / 24 V AC or 12V DC	**E 257 C20-24**	2CSM 412 000 R0211	**53260 6**	0.174	8
3 NO / 24 V AC or 12V DC	**E 257 C30-24**	2CSM 413 000 R0211	**53500 3**	0.240	6
1 CO / 24 V AC or 24V DC	**E 257 C001-24**	2CSM 415 000 R0211	**54010 6**	0.126	12
2 CO / 24 V AC or 24V DC	**E 257 C002-24**	2CSM 416 000 R0211	**54040 3**	0.174	8
3 CO / 24 V AC or 24V DC	**E 257 C003-24**	2CSM 417 000 R0211	**54070 0**	0.240	6

Technical features

			E 255	E 251/E 252/ E 256	E 257 C
Rated load (according to EN 60669-2-2)					
250 V a.c. (1 and 2 poles)/400 V a.c. (3 and 4 poles)		[A]	16	16	16
Direct current (30 V d.c.)		[A]	16	16	16
Number of poles			2	1...4	1...3
Contacts					
Motor unit	NO		1+1	1-2	1...3
	CO		-	1-2	1...3
	NO+NC		-	1+1	-
Main contact units	NO		-	2	-
	CO		-	2	-
	NO+NC		-	1+1	-
Width (number of DIN modules)					
Motor unit		[mod.]	1	1	1-2
With main contact unit		[mod.]	-	2	-
Coil characteristics					
Supply voltage: d.c./a.c. ratio ①			0.5:1	0.5:1	0.5:1
Operation limits (in % of Un)		[%]	90-110	90-110	90-110
Alternated current	Retained	[VA]	11.0	11.0	11.0
Power consumption	Pick-up current	[VA]	14.5	14.5	11.0
Direct current power consumption		[W]	7.5	7.5	7.5
Max. time under supply ②					
Impulse endurance					
Minimum impulse endurance (at Un)		[s]	0.050	0.050	0.050
Minimum impulse endurance (90% Un)		[s]	0.100	0.100	0.100
Minimum interval between two impulses		[s]	0.150	0.150	0.150
Max. impulse number per minute			250	250	250
Duration (number of operations) ③					
Electric operations (in AC-1 at full load)			$3x10^5$	$4x10^5$	$4x10^5$
Mechanic operations			$2x10^6$	$2x10^6$	$2x10^6$

① Power supply voltage: all devices can operate at a.c. as well as d.c., according to the d.c./a.c. ratio: d.c. rated voltage=(a.c. rated voltage)x(d.c./a.c. ratio).

② The relays withstand the “blocked pushbutton” condition. When the permanent voltage operation is needed, it is necessary to use, on both sides, a spacer device and to ensure that the utilization factor allows the device to reach the ambient temperature.

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Contacts/voltage	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
Coil voltage U_c = 230 V AC or 115 V DC, central ON/OFF, same electr. potential							
1 NO / 230 V AC or 115 V DC	**E 257 C10-230**	2CSM 111 000 R0211	**53220 0**			0.126	12
2 NO / 230 V AC or 115 V DC	**E 257 C20-230**	2CSM 112 000 R0211	**53250 7**			0.174	8
3 NO / 230 V AC or 115 V DC	**E 257 C30-230**	2CSM 113 000 R0211	**53490 7**			0.240	6
1 CO / 230 V AC or 115 V DC	**E 257 C001-230**	2CSM 115 000 R0211	**54000 7**			0.126	12
2 CO / 230 V AC or 115 V DC	**E 257 C002-230**	2CSM 116 000 R0211	**54030 4**			0.174	8
3 CO / 230 V AC or 115 V DC	**E 257 C003-230**	2CSM 117 000 R0211	**54060 1**			0.240	6
Coil voltage U_c = 230 V AC (local), 24 V AC (central)							
1 NO / 230 V AC, 24 V AC	**E 258 C10-230/24**	2CSM 211 000 R0231	**78910 9**			0.226	6
2 NO / 230 V AC, 24 V AC	**E 258 C20-230/24**	2CSM 212 000 R0231	**78830 0**			0.235	6
1 NO + 1 NC / 230 V AC, 24 V AC	**E 258 C11-230/24**	2CSM 213 000 R0231	**78870 6**			0.232	6
1 NO + 1 NC +1 CO / 230 V AC, 24 V AC	**E 258 C111-230/24**	2CSM 215 000 R0231	**78890 4**			0.239	6
2 NO +1 CO / 230 V AC, 24 V AC	**E 258 C201-230/24**	2CSM 214 000 R0231	**78850 8**			0.241	6
2 CO /230 V AC, 24 V AC	**E 258 C002-230/24**	2CSM 216 000 R0231	**78960 4**			0.250	6
3 CO /230 V AC, 24 V AC	**E 258 C003-230/24**	2CSM 217 000 R0231	**78990 1**			0.256	6

			E 255	E 251/E 252/ E 256	E 257 C
Load characteristics					
AC-1 maximum load in per phase		[A]	20	20	20
DC maximum load (30 V d.c.)		[A]	16	16	16
Minimum load per phase (under 5 V)		[W]	2	2	2
Fuse against short circuit (gL)		[A]	20	20	20
Maximum lamp number (10^3 operations/h)					
Incandescent and halogen (lamps from 40 to 200 W)		[W]	3000	3000	3000
Fluorescent, with capacitors (cosφ=0.9)					
	In series	[VA]	3000	3000	3000
	In parallel	[VA]	2500	2500	2500
Fluorescent, without capacitors (cosφ =0.5)		[VA]	1800	1800	1800
Max. pushbutton number					
Not lighted pushbuttons			unlimited	unlimited	unlimited
Lighted pushbuttons	3 wires		unlimited	unlimited	unlimited
	2 wires		④	④	④
General characteristics					
Mounting on DIN rail			yes	yes	yes
Fixing on bistable DIN rail			yes	yes	yes
Two-position handle			-	yes	yes
Contact position indicator			yes	yes	yes
Label holder			yes	yes	yes
Cage terminals			yes	yes	yes
Loss-proof screws			yes	yes	yes
Sealable terminals			yes	yes	yes
Cable section (ø min./max.)		[mm²]	1.5/10	1.5/10	1.5/10 (2P: 6)
Min./max. operating temperature		[°C]	-20...+45	-20...+45	-20...+45

③ 1 cycle=2 operations per pole (close + open).

④ See E 250 CP compensation module table.

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Coil voltage U_c = 230 V AC (local), 230 V AC (central)

1 NO / 230 V AC, 230 V AC	**E 258 C10-230/230**	2CSM 111 000 R0231	**78920 8**	0.233	6
2 NO / 230 V AC, 230 V AC	**E 258 C20-230/230**	2CSM 112 000 R0231	**78840 9**	0.243	6
1 NO + 1NC/230V AC, 230V AC	**E 258 C11-230/230**	2CSM 113 000 R0231	**78880 5**	0.240	6
1 NO + 1 NC + 1 CO/230 V AC, 230 V AC	**E 258 C111-230/230**	2CSM 115 000 R0231	**78900 0**	0.244	6
2 NO + 1 CO /230 V AC, 230 V AC	**E 258 C201-230/230**	2CSM 114 000 R0231	**78860 7**	0.247	6
2 CO / 230 V AC, 230 V AC	**E 258 C002-230/230**	2CSM 116 000 R0231	**78970 3**	0.257	6
3 CO / 230 V AC, 230 V AC	**E 258 C003-230/230**	2CSM 117 000 R0231	**79000 6**	0.262	6

Coil voltage U_c = 24 V AC (local), 24 V AC (central)

1 NO / 24 V AC, 24 V AC	**E 258 C10-24/24**	2CSM 411 000 R0231	**79010 5**	0.225	6
2 NO / 24 V AC, 24 V AC	**E 258 C20-24/24**	2CSM 412 000 R0231	**78930 7**	0.234	6
2 NO + 1 CO / 24 V AC , 24 V AC	**E 258 C201-24/24**	2CSM 414 000 R0231	**78940 6**	0.241	6
2 CO / 24 V AC, 24 V AC	**E 258 C002-24/24**	2CSM 416 000 R0231	**78950 5**	0.249	6
3 CO / 24 V AC, 24 V AC	**E 258 C003-24/24**	2CSM 417 000 R0231	**78980 2**	0.256	6

Supplementary components

Description	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	**EAN**			kg	pc.
contact module 2 NO multi voltage	**E 250 CM20**	2CSM 012 100 R0201	**53460 0**			0.058	10
contact module 1 NO + 1 NC multi voltage	**E 250 CM11**	2CSM 014 100 R0201	**53450 1**			0.058	10
contact module 2CO multi voltage	**E 250 CM002**	2CSM 016 100 R0201	**53440 2**			0.059	10
central contact module	**E 257 CM**	2CSM 000 200 R0211	**53510 2**			0.062	16
auxiliary switches 1 NO + 1 NC	**E 250 H11**	2CSM 004 400 R0201	**53470 9**			0.033	16
auxiliary switches 2 NO	**E 250 H20**	2CSM 002 400 R0201	**53690 1**			0.033	16
auxiliary switches 2 NC	**E 250 H02**	2CSM 008 400 R0201	**53680 2**			0.033	16
Compensator	**E 250 CP**	2CSM 000 500 R0201	**53710 6**			0.058	12
Group module	**E 250-GM**	2CSM 000 600 R0201	**53700 7**			0.058	12

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E 260 electronic latching relays

The electronic version of latching relays guarantees maximum reliability, life, and noiseless operation. The E 260 C version also allows centralized reset function (ON/OFF).



2CDC 051 025 F0003

Contacts	Power loss	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W ①	Type code	Order code	EAN			kg	pc.

① Values in brackets indicate power loss when permanently excitated, rated voltage and rated contact loading.

Latching relays with control electronics

Coil voltage U_c = 24 V AC/DC

1 NO	2.4 (3.0)	**E 261-24**	2CDE 441 000 R0301	**57592 8**		0.085	1
1 NO+1 NC	2.4 (3.5)	**E 266-24**	2CDE 444 000 R0301	**57595 9**		0.096	1
2 NO	2.4 (3.5)	**E 262-24**	2CDE 442 000 R0301	**57593 5**		0.096	1

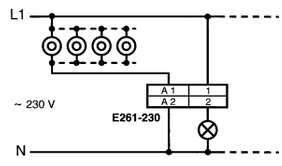
Coil voltage U_c = 230 V AC

1 NO	1.5 (2.0)	**E 261-230**	2CDE 141 000 R0301	**57596 6**		0.085	1
1 NO+1 NC	1.7 (3.6)	**E 266-230**	2CDE 144 000 R0301	**57598 0**		0.096	1
2 NO	1.7 (3.6)	**E 262-230**	2CDE 142 000 R0301	**57597 3**		0.096	1

6

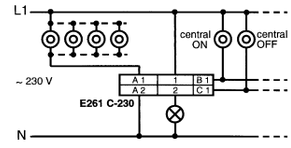
Connection examples

E 261-230



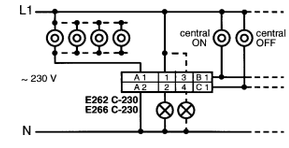
2CDC 052 087 F0003

E 261 C-230



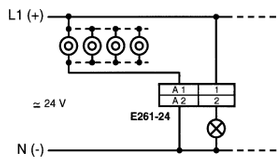
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E 266 C-230



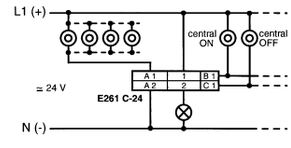
2CDC 052 092 F0003

E 261-24



2CDC 052 086 F0003

E 261 C-24



2CDC 052 088 F0003

* E 260 C
Caution!
The same electr. potential must be applied to terminals A1, B1 and C1.

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Latching relays with returning time

They switch off automatically after expiry of preset delay time (1 to 60 min.) if the manual OFF command has not been received. Glow lamp current 50 mA.

Coil voltage U_c = 230 V AC

1 NO	1.5 (2.0)	**E 261 SRV-230**	2CDE 111 010 R0301	**48570 8**	0.07	1

Technical features

	E 260/E 260 C	**E 261 SRV-230**
Short-circuit rupturing capacity	8 A/250 V AC	16 A/250 V AC
Load of filament lamps	1000 W	1600 W
Fluorescent lamp load in twin-lamp circuit	1000 W	1000 W
Fluorescent lamp load shunt compensated	350 W	500 W
Fluorescent lamp load inductive or capacitive	500 W	1000 W
Electronic ballast	I_{on} m 70 A/10 ms ①	I_{on} m 70 A/10 ms a
Inductive load, cosφ = 0.6/230 V ~	5 A	5 A
Contact rating at DC	100 W	100 W
Minimum contact rating	4 V AC/10 mA	4 V AC/10 mA
Contact gap/contact material	0.5 mm/Ag $Sn0_2$	0.5 mm/Ag $Sn0_2$
Service life mechanical switchover at 10^3/h	> 10^7	> 10^7
Service life at rated load cosφ = 1 and 10^3/h	> 10^5	> 10^5
Service life with filament lamps 1000 W and 10^3/h	> 10^5	> 10^5
Service life at rated load cosφ = 0.6 and 10^3/h	> 10^4	> 10^4
Max. switching rate	10^3/h	10^3/h
Bounce time	3 ms	
Connection capacity	2 x 1.5 mm² with connector sleeve 2 x 2.5 mm² without connector sleeve	
Tightening torque	0.5 … 0.8 Nm	0.5 … 0.8 Nm
ON duration at rated voltage	100 %	100 %
Coil voltage range	0.9 to 1.1 U_n	09. to 1.1 U_n
Minimum command time/interval between commands	50/1000 ms	50 ms
Ambient temperature	- 20 °C/- 4°F to 50 °C/122°F	- 20 °C/- 4°F to 50 °C/122°F
Control current when controlled locally	230 V AC 115 mA, after 10s 8 mA ± 20 % 24 V UC 140 mA, after 10s 80 mA ± 20 %	
Control current when controlled centrally	230 V AC 8 mA, after 10s 3 mA ± 20 % 24 V UC 17 mA ± 20 %	
Max. parallel capacity of individual control wire at 230 V ~ **Max. parallel capacity of central control wire at 230 V ~**	0.7 µF (ca. 2000 m) 0.2 µF (ca. 700 m)	
Max. glow lamp current – parallel to 230 V control buttons	10 mA	10 mA
Max. induced voltage at 230 V control inputs	0.2 U_n	120 V

Latching relays for lamp installations on request.
① In the case of electronic control gear, take into account a 40-fold inrush current.

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Latching relays with control electronics for central ON/OFF switch

The central commands have always priority and reliably switch on/off any given number of devices connected in parallel, irrespective of their previous switching position. Local control inputs are blocked when a central command is received. Same potential at central / local control input.

Contacts	Power loss	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W ①	Type code	Order code	EAN			kg	pc.

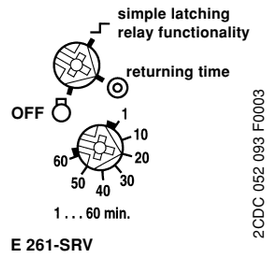
① Values in brackets indicate power loss when permanently excitated, rated voltage and rated contact loading.

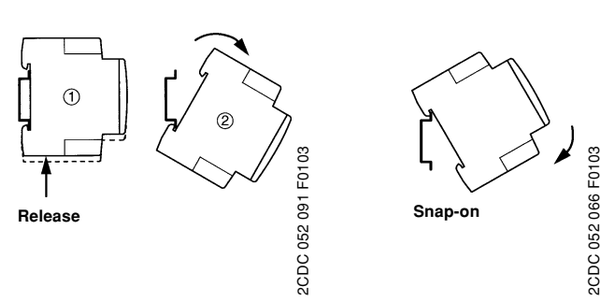
Coil voltage U_c = 24 V AC/DC

1 NO	2.4 (3.0)	**E 261 C-24**	2CDE 441 000 R0311	**57599 7**		0.085	1
1 NO+1 NC	2.4 (3.5)	**E 266 C-24**	2CDE 444 000 R0311	**57601 7**		0.096	1
2 NO	2.4 (3.5)	**E 262 C-24**	2CDE 442 000 R0311	**57600 0**		0.096	1

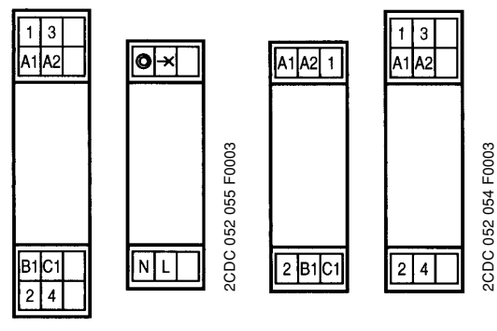
Coil voltage U_c = 230 V AC

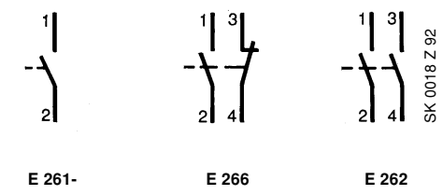
1 NO	1.5 (2.0)	**E 261 C-230**	2CDE 141 000 R0311	**57602 4**		0.085	1
1 NO+1 NC	1.7 (3.0)	**E 266 C-230**	2CDE 144 000 R0311	**57604 8**		0.096	1
2 NO	1.7 (3.0)	**E 262 C-230**	2CDE 142 000 R0311	**57603 1**		0.096	1





Terminal assignment





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SK 0122 B 99

E 220 switches

Suitable for underload operation and equipped with sealable control lever in both positions. All devices are manufactured in a single module, through simple, quick and safe procedures. For correct operation, they need an upstream protection by devices against short-circuit and overload (fuses, MCBs).

Type	Rated voltage	Power loss	**Order details**		**Bbn 7612270**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	V AC	W	**Type code**	Order code	**EAN**			kg	pc.
Control switches									
Rated current = 16 A									
2 NO+2 NC	250	1.92	**E 221–22**	2CCE 110 900 R0101	**93256 6**			0.070	10
3 NO+1 NC	400	1.92	**E 221–31**	2CCE 111 000 R0101	**93257 3**			0.070	10
1 NO+1 NC	250	0.96	**E 221–11**	2CCE 110 800 R0101	**93255 9**			0.070	10
Rated current = 25 A									
1 NO+1 NC	250	2.26	**E 222–11**	2CCE 120 800 R0111	**93262 7**			0.070	10
One-way switches									
Rated current = 16 A									
1 NO	250	0.48	**E 221–10**	2CCE 110 100 R0101	**93234 4**			0.055	10
2 NO	250	0.96	**E 221–20**	2CCE 110 200 R0101	**93236 8**			0.060	10
3 NO	400	1.44	**E 221–30**	2CCE 110 300 R0101	**93238 2**			0.065	10
4 NO	400	1.92	**E 221–40**	2CCE 110 400 R0101	**93240 5**			0.070	10
Rated current = 25 A									
1 NO	250	1.13	**E 222–10**	2CCE 120 100 R0111	**93241 2**			0.055	10
2 NO	250	2.26	**E 222–20**	2CCE 120 200 R0111	**93243 6**			0.060	10
3 NO	400	3.39	**E 222–30**	2CCE 120 300 R0111	**93245 0**			0.065	10
4 NO	400	4.52	**E 222–40**	2CCE 120 400 R0111	**93247 4**			0.070	10

6

Technical features

Switching capacity	1.25 I_n; 1.1 U_n; cosφ = 0.6 according to DIN VDE 0632, AC 22 according to VDE 0660 Part 107, IEC 947-3
Short-circuit-withstand capacity	3 kA, 400 V, cosφ = 0.8
Sealable	in ON and OFF positions
Climatic resistance	constant climate 40/92 DIN 50 015 alternating climate SFW DIN 50 017
Ambient temperature	- 25 °C/– 13° F to + 55 °C/131° F
Storage temperature	- 40 °C to + 70 °C
Connection capacity	from 1 x 1 mm² to 1 x 6 mm² or 2 x 2.5 mm² massive; from 1 x 0.75 mm² to 2 x 1.5 mm² flexible with connector sleeve or pin-end connector
Positive opening	according to DIN VDE 0113
Rated voltage	250/400 V AC
Minimum rated voltage	24 V DC/AC

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SK 0057 B 98

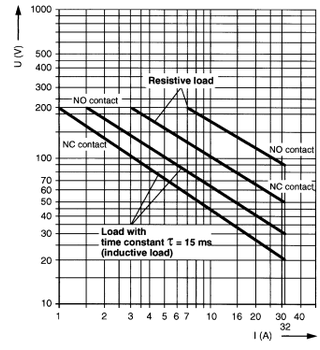


SK 0058 B 98

Type	Rated voltage	Power loss	**Order details**		**Bbn 7612270**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	V AC	W	**Type code**	Order code	**EAN**			kg	pc.
Rated current = 32 A									
1 NO	250	2.2	**E 223–10**	2CCE 130 100 R0121	**93248 1**			0.055	10
2 NO	250	4.4	**E 223–20**	2CCE 130 200 R0121	**93249 8**			0.060	10
3 NO	400	6.6	**E 223–30**	2CCE 130 300 R0121	**93250 4**			0.065	10
4 NO	400	8.8	**E 223–40**	2CCE 130 400 R0121	**93251 1**			0.070	10
One-way switches with built-in pilot lamp for 230 V~									
Rated current = 16 A									
1 NO	250	0.5	**E 221–10 x**	2CCE 110 103 R0101	**93235 1**			0.060	10
2 NO	250	1.0	**E 221–20 x**	2CCE 110 203 R0101	**93237 5**			0.065	10
3 NO	400	1.5	**E 221–30 x**	2CCE 110 303 R0101	**93239 9**			0.087	10
Rated current = 25 A									
1 NO	250	1.15	**E 222–10 x**	2CCE 120 103 R0111	**93242 9**			0.060	10
2 NO	250	2.30	**E 222–20 x**	2CCE 120 203 R0111	**93244 3**			0.065	10
3 NO	400	3.45	**E 222–30 x**	2CCE 120 303 R0111	**93246 7**			0.087	10
Two-way switches									
Rated current = 16 A									
1 CO	250	0.48	**E 221–6**	2CCE 110 500 R0101	**93260 3**			0.060	10
2 CO	250	0.96	**E 221–6/2**	2CCE 110 600 R0101	**93261 0**			0.070	10

6

E 220 DC switching capacity



SK 0079 Z00

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Rated current = 25 A

1 CO	250	1.13	**E 222–6**	2CCE 120 500 R0121	**932658**	0.060	10

Two-way switch with two off positions (I-O-II, manual-OFF-automatic)

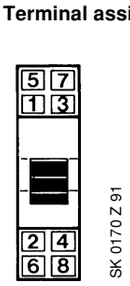
Rated current = 16 A

1-pole	250	0.48	**E 221–4**	2CCE 110 502 R0101	**93258 0**	0.060	10
2-pole	250	0.96	**E 221–4/2**	2CCE 110 602 R0101	**93259 7**	0.070	10

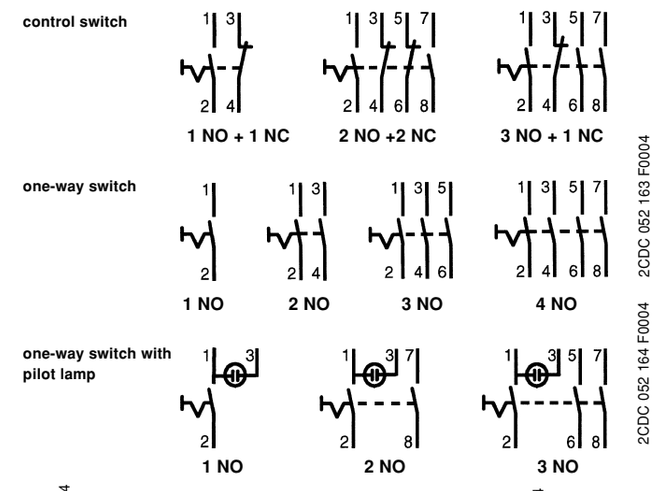
Rated current = 25 A

1-pole	250	1.13	**E 222–4**	2CCE 120 520 R0111	**93263 4**	0.060	10

Terminal assignment



SK 0170 Z 91



2CDC 052 163 F0004

2CDC 052 164 F0004

2CDC 052 165 F0004

2CDC 052 166 F0004

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SK 084 B 00


SK 087 B 00


SK 0290 B 91


SK 079 B 00

E 220 pushbuttons and indicator lamps

The pushbuttons are used for remote control in every kind of electric installation (public, tertiary, industrial).
The indicator lamps signal any event in every kind of electric installation (public, tertiary, industrial).

Not lighted pushbuttons with contacts 1NO+1NC

Hood's colour	Order details		Bbn 7612270	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
grey	**E225-11 B**	2CCE110810R0001	**932665**			0.055	10
red	**E225-11 C**	2CCE110820R0001	**932672**			0.055	10
green	**E225-11 D**	2CCE110830R0001	**932689**			0.055	10
yellow	**E225-11 E**	2CCE110840R0001	**932696**			0.055	10
black	**E225-11 F**	2CCE110850R0001	**932702**			0.055	10
blue	**E225-11 G**	2CCE110860R0001	**932719**			0.055	10
no hood	**E225-11 Z**	2CCE110804R0001	**932726**			0.053	10

Lighted pushbuttons with contacts 1NO+1NC

Button's colour	Order details		Bbn 7612270	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
transparent	**E227-11 B**	2CCE110870R0011	**932740**			0.055	10
red	**E227-11 C**	2CCE110820R0011	**932757**			0.055	10
green	**E227-11 D**	2CCE110830R0011	**932764**			0.055	10
yellow	**E227-11 E**	2CCE110840R0011	**932771**			0.055	10
blue	**E227-11 G**	2CCE110860R0011	**932788**			0.055	10
no button	**E227-11 Z**	2CCE110804R0011	**932795**			0.045	10

Indicator lamps with 220 V a.c. bulb

Hood's colour	Order details		Bbn 7612270	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
transparent	**E229-B**	2CCE100070R0021	**932801**			0.045	10
red	**E229-C**	2CCE100020R0021	**932818**			0.045	10
green	**E229-D**	2CCE100030R0021	**932825**			0.045	10
yellow	**E229-E**	2CCE100040R0021	**932832**			0.045	10
blue	**E229-G**	2CCE100060R0021	**932849**			0.045	10
no hood	**E229-Z**	2CCE100004R0021	**932856**			0.040	10

Technical features

Rated voltage Un	[V]	a.c. 250
Rated current In	[A]	16
Rated frequency	[Hz]	50/60
Power consumption	[W]	see technical details
Modules	[No]	1
Standards		IEC EN 60669-1
Approvals		UL, CSA, VDE, CEBEC

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Hoods for not lighted pushbuttons E225

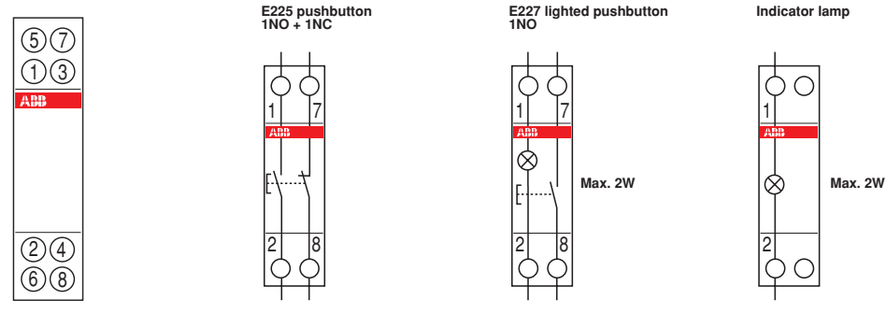
Hood's colour	Order details Type code	Order code	Bbn 7612270 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
grey	**E220-B 1**	2CCE000015R0001	**932948**			0.002	100
red	**E220-C 1**	2CCE000025R0001	**932979**			0.002	100
green	**E220-D 1**	2CCE000035R0001	**933006**			0.002	100
yellow	**E220-E 1**	2CCE000045R0001	**933037**			0.002	100
black	**E220-F 1**	2CCE000055R0001	**933051**			0.002	100
blue	**E220-G 1**	2CCE000065R0001	**933075**			0.002	100

Spare buttons for E227 indicator lamps

Button's colour	Order details Type code	Order code	Bbn 7612270 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
transparent	**E220-B**	2CCE000075R0011	**932931**			0.002	100
red	**E220-C**	2CCE000025R0011	**932962**			0.002	100
green	**E220-D**	2CCE000035R0011	**932993**			0.002	100
yellow	**E220-E**	2CCE000045R0011	**933020**			0.002	100
blue	**E220-G**	2CCE000065R0011	**933068**			0.002	100

Spare hoods for E229 indicator lamps

Hood's colour	Order details Type code	Order code	Bbn 7612270 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
transparent	**E220-B 3**	2CCE000075R0021	**932955**			0.002	100
red	**E220-C 3**	2CCE000025R0021	**932986**			0.002	100
green	**E220-D 3**	2CCE000035R0021	**933013**			0.002	100
yellow	**E220-E 3**	2CCE000045R0021	**933044**			0.002	100
blue	**E220-G 3**	2CCE000065R0021	**933082**			0.002	100



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Spare bulbs

Rated voltage	Order details		Bbn 4012233	Price 1 piece	Price group	Weight 1 piece	Pack unit
V	**Type code**	Order code	**EAN**			kg	pc.
12 AC	**E 10/12**	2CCE300005R0001	**631605**			0.004	100
24 AC	**E 10/24**	2CCE400005R0001	**631803**			0.004	100
48 AC	**E 10/48**	2CCE500005R0001	**632008**			0.004	100
60 AC	**E 10/60**	2CCE700005R0001	**632107**			0.004	100
110 AC	**E 10/110**	2CCE800005R0001	**632206**			0.003	100
230 AC	**E 10/230**	2CCE100005R0001	**983704**			0.003	100
220 DC	**E 10/220**	2CCE900005R0001	**667307**			0.003	100

Lamp driver

	Order details		Bbn 4012233	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	**EAN**			kg	pc.
	E 220-LZ	2CCE000005R0001	**002902**			0.002	10

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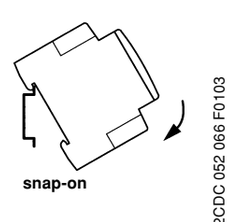
2CDC 051 026 F0003

E 234 CT time delay relays

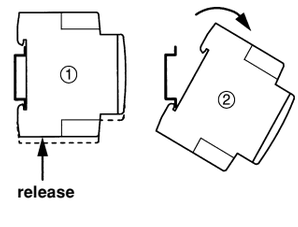
Used when, according to the time, the automatic load control is required for lighting, heating, ventilation systems, access barriers, gates, machine tools, etc.

Contact	Power loss	**Order details**		**Bbn 4013614**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W	**Type code**	Order code	**EAN**			kg	pc.
Multifunction time-delay relay offering this functions AV, RV, EW, AW, BI, BP, IF								
1 CO	2.5	**E 234 CT-MFD**	1S VR50 0020 R0000	**35063 4**			0.06	1
Time-delay relays pick-up delays AV ⊠								
1 CO	2.5	**E 234 CT-ERD**	1S VR50 0100 R0000	**35065 8**			0.06	1
Time-delay relays time-delayed after de-energization with auxiliary supply RV ■								
1 CO	2.5	**E 234 CT-AHD**	1S VR50 0110 R0000	**35066 5**			0.06	1
Time-delay relays passing make contact EW 1 ⎍ ⊠								
1 CO	2.5	**E 234 CT-VWD**	1S VR50 0130 R0000	**35067 2**			0.06	1
Time-delay relays flashing pulse-starting BI ⎍ ⊠								
1 CO	2.5	**E 234 CT-EBD**	1S VR50 0150 R0000	**35068 9**			0.06	1
Time-delay relays clock-pulse, no-pulse-starting TG (2 different times selectable) ⎍ ⊠ ■								
1 CO	2.5	**E 234 CT-TGD**	1S VR50 0160 R0000	**35069 6**			0.06	1

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2CDC 052 066 F0103



2CDC 052 091 F0103

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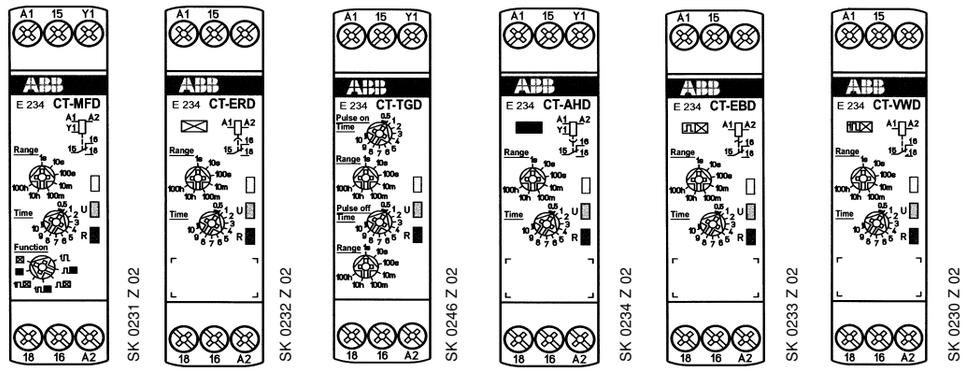
Technical features

Specification		IEC 61812-1 10.1996, EN 61812, DIN VDE 0435 Part 2021
Input circuit		
Supply voltage	A1/A2	24...240 V AC/24...48 V DC – 15 %/+ 10 %
Frequency		50/60 Hz/DC
ON duration		100 %
Supply voltage indication		LED green, flashes during timeout
Control voltage	Y1/A2	24...240 V AC/24...48 V DC – 15 %/+10 %
Frequency		50/60 Hz/DC
Length of control pulse		min. 20 ms
Control current 24 V/230 V		3 mA/4 mA
Power consumption 24/230 V		A 1/A 2 pick-up: 0.6 W/1.3 VA; A 1/A 2 release: 0.4 W/1.0 VA
Output circuit		1 changeover contact
Switching voltage		max. 250 V AC
Switched current	AC12 DC12	8 A (230 V AC) 8 A (24 V AC)
Rated operational current	AC15 DC13	3 A (230 V AC) 2 A (24 V AC)
Thermal current I_{th}		5 A
Tncandescent and fluorescent lamps: – inductive and capactive		 1000 W
Fluorescent lamps in twin-lamp circuit		4 x 65 W or max. 30 µF
Fluorescent lamps shunt compensated		4 x 65 W or max. 30 µF
Electronic control gear		I_{on} m 70 A/10 ms
Direct voltage		60 W
Minimum contact rating		100 mA/12 V
Mechanical service life		30 mio. switching cycles
Electrical service life 8A/250 V AC		0.1 mio. switching cycles
Fusing according to VDE 0660 Part 200		NO contact: 10 A gL NC contact: 6 A gL
Response time		max. 10 ms
Release time		max. 10 ms
Switching position indication		LED red
Ambient temperature		– 20 °C/– 4 °F up to + 60 °C/140 °F
Storage temperature		– 40 °C/°F up to + 85 °C/185 °F
Connection capacity		2 x 1.5 mm² with connector sleeve 2 x 2.5 mm² without connector sleeve
Overvoltage category		III according to EN 50178/VDE 0160/UL 508
Pollution degree		3 according to EN 50178/VDE 0160/UL 508
Rated insultation voltage Test voltage		300 V ACcording to IEC 50175/VDE 160/UL 508 2.5 kV/50 Hz/1 min.
Time		
Time ranges		1s, 10s, 100s, 10min, 100min, 10h, 100h
Setting accuracy		10 % of the upper range value
Time out within: – supply voltage – temperature ranges		 m 0.5 % m 0.06 %/°K
Recovery time		< 50 ms
Repeat accuracy		± 0.5 %

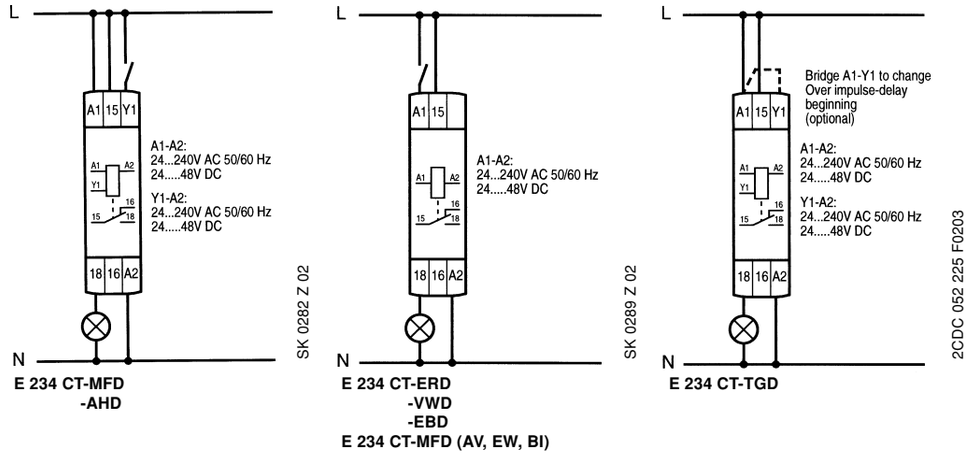
Glow lamps and shunt compensated fluorescent lamps parallel to control pushbuttons	not permissible
Max. parallel capacitance of control cable	A 1/A2 200 m/60 nF; Y 1/A2 100 m/30 nF

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Front sides



Connection example E 234 CT



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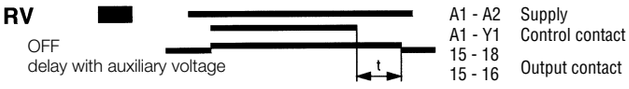
Functions

CT-MFD, CT-ERD ON delay AV



The timeout starts when the supply voltage is applied. When the prescribed time has elapsed, the output relay is activated. If the supply voltage is interrupted, the output relay returns to its normal position and the time sequence is deleted. If the supply voltage is interrupted before the prescribed time has elapsed the output relay is not activated.

CT-MFD, CT-AHD OFF delay with auxiliary voltage RV



This function requires a constant supply voltage to terminals A1-A2 for the timeout. The timeout is controlled by a Y1 control contact (supply voltage potential). If the control contact is closed, the output relay is activated. Opening the control contact activates the timeouts and the preset time starts to run. After the preset time has elapsed, the output relay returns to its initial position. If the control contact is closed again during a timeout, the sequence is reset; the timeout starts anew when the contact opens again.

CT-MFD, CT-VWD Impulse-ON relay EW



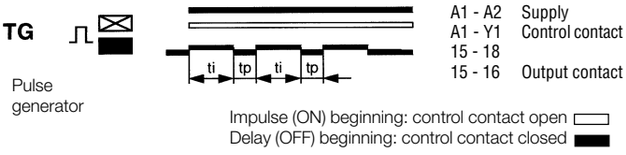
When applying the control voltage to terminals A1 and A2, the output relay picks up immediately and returns to its normal position after the preset impulse time has expired. When interrupting the supply voltage before the preset impulse time has elapsed, the output relay returns directly into its normal position.

CT-MFD, CT-EBD Flasher, starting with ON BI



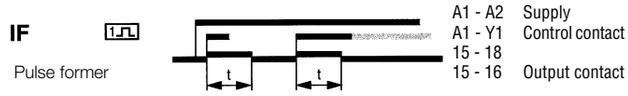
When applying the supply voltage to terminals A1-A2, the output relay starts to switch in a symmetrical pulse/no pulse pattern. The cycle starts with a pulse phase. If the supply voltage is interrupted, the output relay returns to its normal position.

CT-TGD pulse generator, starting with ON or OFF TG



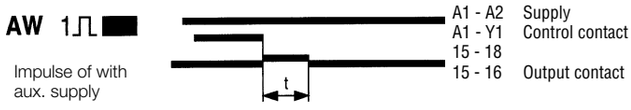
When applying the supply voltage to terminals A1 and A2, the time-delay relay starts either with a pulse or a no-pulse cycle. Pulse and no-pulse times can be adjusted individually. If the supply voltage is interrupted, the output relay returns to its normal position.

CT-MFD Pulse former IF



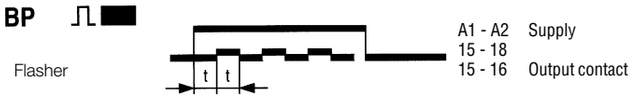
If the control contact (Y1) is closed when the supply voltage is applied, the output contact is activated for the preset pulse time, irrespective of whether the control contact is subsequently opened or remains closed. When the supply voltage is interrupted, the output contact returns directly into its initial position. Only if the pulse has elapsed, a new defined pulse of the preset time can be generated by closing the control contact.

CT-MFD Impulse OFF with auxiliary supply AW



The function requires a supply voltage to be permanently applied to terminals A1-A2. If the control contact (Y1) is opened when the supply voltage is applied (supply voltage potential), the output relay picks up immediately and the timeout is started. The output relay remains activated throughout the preset impulse time and then returns to its initial position. By interrupting the supply voltage or closing the control contact, the sequence is extinguished and the output relay returns to its initial position.

CT-MFD Flasher starting with OFF BP



When the supply voltage is applied to terminals A1-A2, the output relay starts flashing in a symmetrical pulse/no pulse pattern. The cycle starts with a no-pulse phase. If the supply voltage is interrupted, the output relay returns to its normal position.

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SK 0177 B 02

E 232 staircase lighting time delay switches

As a rule, staircase lighting time-delay switches (t.d.s) are controlled by pushbuttons fitted with glow lamps.
The switches are designed to sustain a continuous load of up to 50 glow lamps and can therefore be used in multi-story buildings.
T.d.s. E 232-230 is equipped with an electromechanical timer having a synchronous-motor-controlled mechanism that ensures a high level of operational reliability in any desired mounitng position. The time range is adjustable in intervals of 15 sec. within 1 to 7 min. Resettable after 30 sec.
Staircase lighting time-delay switch E 232 E has an electronic time delay function. Noteworthy features of the device include: high switching capacity, 100 mA glow lamp current to the pushbuttons, infinitely adjustable time range from
1 to 12 minutes as well as a low switching noise. The devices of type E 232 E-8/230 have an additional control input that is metallically separated for AC/DC 8...230 V.
E 232 E-8/230 Plus offers an integrated warning function (2 warning signals that double flash) according to DIN 18015-2, as well as additional long-term periods from 10-30 minutes adjustable in 5-minutes' steps by shortly pressing the button once for each step, press longer for 60-minutes' intervals (if in PROG mode).
Suitable also for energy-saving lamps and fluorescent lamps with electronic ballast.
The electronic semi-light module E 232-HLM is an add-on to all t.d.s for semi-light control according to DIN 18015-2. During the alarm period, the module switches glow lamps and 230 V halogen lamps of up to 2300 W to 50 % of the normal output current. Adjustable time range from 20 – 60 sec.

Technical features	E 232-230	E 232E-230	E 232E-8/230	E 232E-8/230 Plus
Time range	1 – 7 min.	1 – 12 min.	1 – 12 min.	1 – 12 min.
Control voltage 230 V AC	■	■	■	■
Universal voltage additionally			8 .. 230 V AC/DC	8 .. 230 V AC/DC
Filament lamp current	50 mA	100 mA	100 mA	100 mA
Automatic recognition 3/4 lead circuit	switches (side-mounted)	■	■	■
Can be connected in series	■	■	■	■
Steady-light switch	■	■	■	■
Advance warning (double flash)				■
Adjustment 10 – 30 min. in 5-min intervals*				■
Long-term range of 60 min.*				■
Load of filament lamp	2300 W	2300 W	2300 W	2300 W

* In PROG mode

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Selection tables
Command devices
E 232 staircase lighting time delay switches


SK 174 B 02


SK 176 B 02

Time range	Power loss	Order details		Bbn 4013614	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W	Type code	Order code	EAN			kg	pc.
1 … 7 min.	1 VA	**E 232-230**	2CDE 110 000 R0501	**54824 3**			0.081	10
1 … 12 min.	4.5 VA	**E 232 E-230**	2CDE 110 000 R0511	**54825 0**			0.083	10
1 … 12 min.	4.5 VA	**E 232 E-8/230**	2CDE 010 000 R0511	**54826 7**			0.092	10
1 … 12 min.	4.5 VA	**E 232 E-8/230 Plus**	2CDE 010 010 R0511	**54827 4**			0.093	10
20 … 60 sec.	6 VA	**E 232-HLM**	2CDE 150 000 R0521	**54828 1**			0.075	10

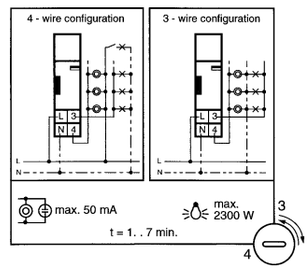
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Technical features	E 232-230	E 232E-...	E 232-HLM
Rated voltage	230 V AC, 50 Hz	230 V AC, 50/60 Hz	230 V AC, 50/60 Hz
Range of control voltage	0.9 to 1.1 U_n	0.9 to 1.1 U_n	0.9 to 1.1 U_n
Short-circuit rupturing capacity	16 A, 230 V AC	16 A, 230 V AC	10 A, 230 V AC
Load of filament lamp	2300 W	2300 W	2300 W
Load of halogen lamp	2300 W	2300 W	2300 W
Fluorescent lamps series compensated/not compensated	2300 VA	2300 VA	not permissible
Fluorescent lamps inductive or capacitive	2300 VA	2300 VA	not permissible
Fluorescent lamps shunt compensated	1300 VA (70 mF)	1300 VA (70 mF)	not permissible
Electronic ballast	9 x 7 W; 6 x 11 W; 5 x 15 W; 5 x 20 W	9 x 7 W; 6 x 11 W; 5 x 15 W; 5 x 20 W	not permissible
Inductive load cosφ = 0.6/230 V AC	2300 VA	2300 VA	not permissible
Contact material	Ag Sn O_2	Ag Sn O_2	Ag Sn O_2
Contact gap	M 3 mm	M 0.4 mm	M 0.4 mm
Service life, mechanical, switchover 10^3/h	> 10^6	> 10^7	> 10^7
Service life at rated load, cosφ = 1 or filament lamps 1000 W and 10^3/h	> 10^5	> 10^5	> 10^5
Service life at rated load cosφ = 0.6 and 10^3/h	> 10^4	> 10^4	> 10^4
Terminal cross section	10.7 mm^2	13.6 mm^2	13.6 mm^2
Max. conductor cross section	6 mm^2	6 mm^2	6 mm^2
ON duration	re-switchable after 30 sec.	100 %	100 %
Ambient temperature	- 10 °C/14°F to 50 °C/122°F	- 10 °C/14°F to 50 °C/122°F	- 10 °C/14°F to 50 °C/122°F
Casing and insulation materials	heat resistant, self-extinguishing thermoplast	heat resistant, self-extinguishing thermoplast	heat resistant, self-extinguishing thermoplast
Control current at 230 V AC (8 AC)	4.5 mA	20 mA (min. 8 mA)	–
Min. command time	10 ms	10 ms	–
Glow lamps parallel to 230 V AC control inputs	50 mA	100 mA	–

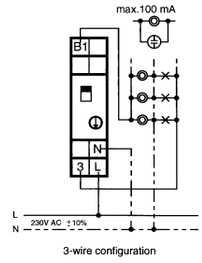
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Selection tables
Command devices
E 232 staircase lighting time delay switches

Wiring diagrams



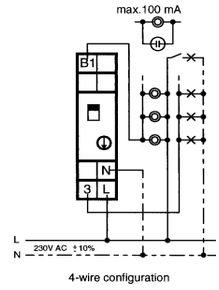
E 232-230



SK 0077 Z 02

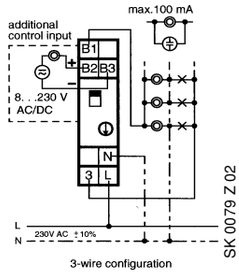
SK 0081 Z 02

E 232 E-230



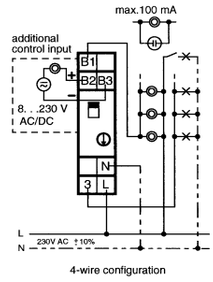
SK 0085 Z 02

E 232 E-230

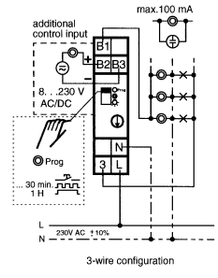


SK 0079 Z 02

E 232 E-8/230



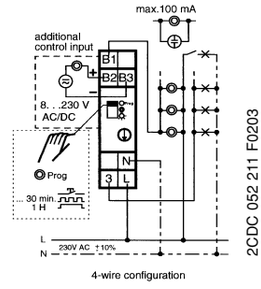
E 232 E-8/230



SK 0083 Z 02

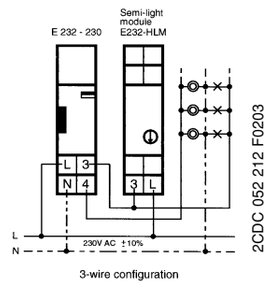
2CDC 052 210 F0203

E 232 E-8/230 Plus



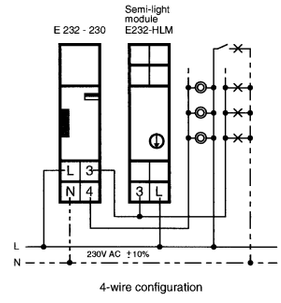
2CDC 052 211 F0203

E 232 E-8/230 Plus



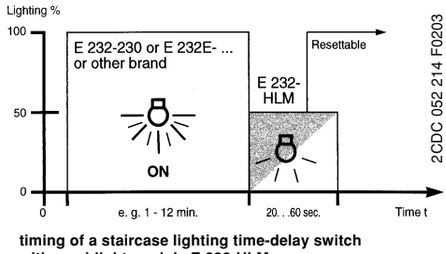
2CDC 052 212 F0203

E 232 HLM



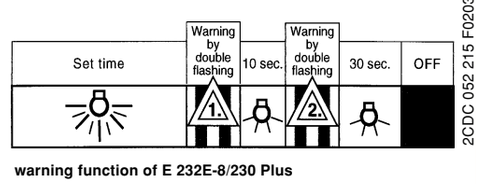
2CDC 052 213 F0203

E 232 HLM



2CDC 052 214 F0203

timing of a staircase lighting time-delay switch with semi-light module E 232-HLM



2CDC 052 215 F0203

warning function of E 232E-8/230 Plus

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SK 0070 B 00

STD50 dimmers for the control of lamps and ballast

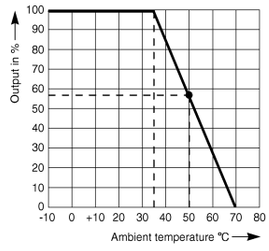
Description/ application	Power loss	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W	Type code	Order code	EAN			kg	pc.
Dimmer for brightness control of filament lamps , 230 V tungsten halogen lamps, lv halogen lamps with conventional transformers (phase control)								
	5 ①	**STD 50-3**	GH V021 1370 R0074	**02790 8**			0.155	1
Dimmer for brightness control of filament lamps , 230 V tungsten halogen lamps, lv halogen lamps with ABB electronic transformers (reverse phase)								
	4 ①	**STD 50-4**	GH V021 1370 R0075	**03300 8**			0.105	1

① power loss = 1% of connected load (4 or 5 W max)

Technical features

Rated voltage	230 V ~ 50 Hz
Ambient temperature	0 °C to + 35 °C
Interference suppression	CE

Control power STD 50-3: 20-500 W/VA
STD 50-4: 40-420 W/VA



SK 0043 Z 96

Influence of ambient temperature on the control power
The certified rated power is indicated on the dimmer.
Where higher ambient temperatures occur, reduce values as is specified in the diagram.
At 50 °C /122°F ambient temperature, the permissible load drops to 57%.

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SK 0087 B 96

Electronic potentiometer for electronic control gear with control input 0/1 - 10 V DC, control current 50 mA DC

Rated current (terminal 3 and 4) 4 A cosφ = 0.9; switching capacity 700 VA

	5 ①	**STD-EP**	GH V021 1370 R0076	**27050 2**	0.073	1

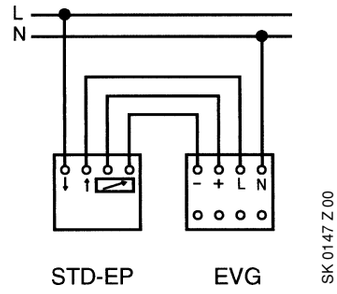
Memory touch controller for electronic control gear

Rated voltage/switching output 4 A (~ 10 electronic control gear units) cosφ = 0.9; 3 A cosφ = 0.5, switching capacity 700 VA

for electronic control gear with control input 1 – 10 V DC control current 50 mA max.	1 W	**STD-MTS**	GH V021 0881 R0004	**27070 0**	0.110	1

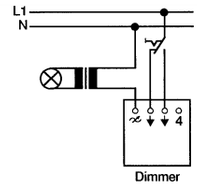
① power loss = 1% of connected load (7 W max)

Electronic potentiometer



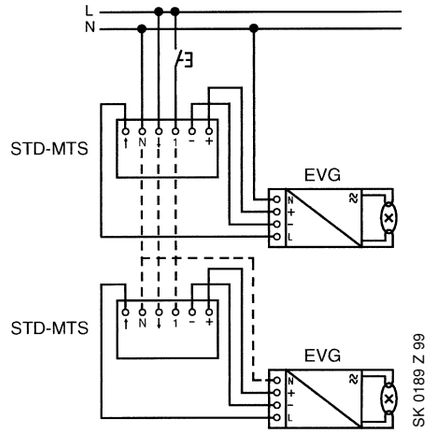
SK 0147 Z 00

Dimmer STD 50-4 in two-way circuit, lv halogen lamps via electronic transformer



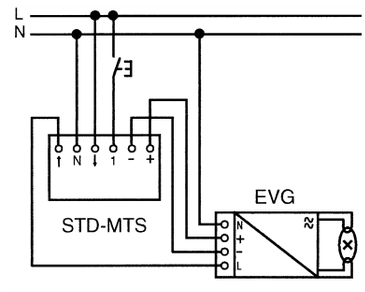
SK 0190 Z 99

Brightness control of fluorescent lamps with 1 -10 V control input. Control of more than one memory touch controller STD-MTS via one pushbutton.



SK 0189 Z 99

Brightness control of a fluorescent lamp with 1 - 10 V DC control input with memory touch controller STD-MTS with external pushbutton, e.g. E 225



SK 0190 Z 99

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STD universal dimmers

Universal dimmer STD-500 MA and the connected power extension unit STD-420 SL are suitable for the brightness control of:
- filament lamps
- 230 V tungsten halogen lamps
- lv halogen lamps with conventional transformers (phase control)
- electronic transformers for lv tungsten halogen lamps (reverse phase control) e.g.: ABB: ETR-70-230, 105-230, 150-230

The STD-500 MA dimmer can be operated by one or more unlit pushbuttons or via a data line:
- conventional, e.g. control element STD-SBS
- EIB control element SB/S1.1
- Powernet control element PSB/1.1

Power unit STD-420 SL is used to boost the connected load and controlled exclusively by the preset command of the STD-500 MA dimmer. The parallel connection of the outputs of the universal high-performance dimmer and the pertaining power extensions (up to 6 units) allow for a dimming power of 3,000 W/VA max at one load line.
Not suitable for dimming fluorescent lamps and transformers with current monitor.

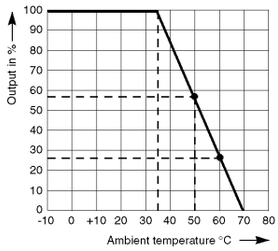


SK 0068 B 98

Description/ application	Power loss	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W	Type code	Order code	EAN			kg	pc.
high-performance dimmer	max 6 W	**STD-500 MA**	GJ B000 6590 A0161	**01394 6**			0.105	1
extension	max 6 W	**STD-420 SL**	GJ B000 6590 A0166	**01421 9**			0.135	1

Load and control cables must not be laid in one cable.

connected load-ambient temperature diagram

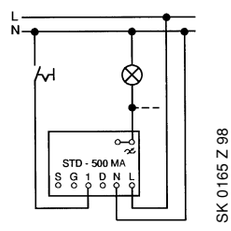


SK 0046 Z 96

Technical features

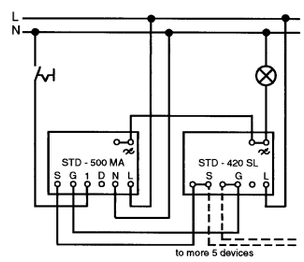
Rated voltage	230 V ~ ± 10%, 50/60 Hz
Rated current	MA 2.17 A SL 1.83 A
Max. connected load	MA 500 W/VA SL 420 W/VA
Power extension	1 MA + max. 6 SL/Phase = > max. 3 kVA
Min. connected	MA 60 W/VA SL 200 W/VA
Max. cable length	100 m pushbutton cable, 2 m data line
Interference suppression	CE
Ambient temperature	0 to 35 °C, at higher temperatures capacity derating

Electronic protection against short circuit, overload, excessive temperature, automatic load recognition, soft-OFF function optional, memory function, minimum brightness control, visual overload indication.



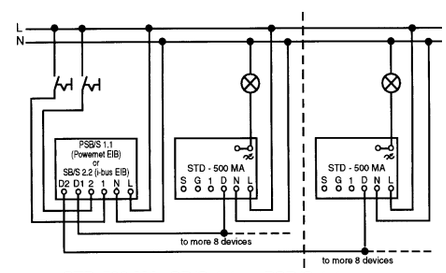
SK 0165 Z 98

STD-500 MA



SK 0117 Z 00

STD-500 MA, STD-420 SL



SK 0116 Z 00

STD-500 MA, SB/S 1.1 or PSB/S 1.1

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STD-SBS control unit for universal dimmer STD500MA

Control unit STD-SBS is a group control device for universal high-performance dimmers STD 500 MA and power extension STD 420 SL. Enables the independent control of 2 dimming groups with 9 STD 500 MA each and the respective power extensions STD 420 SL.
The control unit offers two connections for conventional pushbuttons that can control one group independently from the other. Furthermore, the device features an analogue input for 0 – 10 V or 0 – 20 mA converting signals in PWM (pulse width modulation) signals and thus jointly controls both dimmer groups.
After connecting the unit, the first operation of the pushbutton, or, as the case may be, analogue input determines what alternative will henceforth prevail. The other alternative is automatically blocked. This will persist even in the case of a power failure.

Types of operation (adjust with slide switch)

Pin 1 (Soft-ON)	Pin ON, connected STD-500MA start from OFF in ca. 5 sec. and go to max. brightness
Pin 2 (Soft-OFF)	Pin ON, connected STD-500MA go from max. brightness to OFF in ca. 5 sec.
Pin 3 (staircase lighting)	Pin ON, this type of operation is switched on via the pushbuttons (T1, T2). Depending on the type of function, individual or group control, the lighting is turned to max. brightness “Einzeln” (“individually”) (D1 or D2) or “Gesamt” (“group”). After three minutes, the light is turned down with Soft-OFF. This time period can be extended during the ON period for intervals of 3 more minutes by pressing the pushbutton again.
Pin 4 (holiday)	The control unit automatically saves the starting positions of each channel (D1/D2) in intervals of 6 minutes. After 24 hours, values are overwritten, starting with the oldest value. In the Pin OFF position, these data have no effect. Pin ON, the signals saved are automatically repeated in 24-hours intervals. Note: This type of operation allows for operation by pushbuttons. The holiday function is suspended and continued after switching off with the pushbuttons. Following a power failure, execution of “holiday data” may be delayed.
Pin 5 (cleaning light)	This type of operation is activated via an external, conventional switch; both channels D1 and D2 are adjusted to one brightness level. The brightness level is calibrated by the slide switch Pin ON, to allow for an increased brightness levels. Note: Other pushbutton or analogue signals are not accepted.
Pin 6 (analogue operation)	In order to differentiate between switching and dimming in the case of analogue operation, the Pin must be in the ON position. A precondition for this type of operation is that a switch (e.g. a time switch) is connected to pushbutton input T1 which will then assume the switching function.
Pin 7 (self test)	The self test checks the connection and the function of the connected STD-500MA. Pin ON, then the following signals are constantly sent on both channels D1/D2: D1: Soft ON, 1 second max. brightness level Soft OFF, 1 second break, then same procedure as for D2 To finish the self test, set Pin to OFF.
Pin 8 (reset)	Pin ON, all values stored are deleted, all functions deactivated and operation via pushbuttons/switches is impossible. To abort reset, set Pin to OFF again.
Pin 1 (analogue mode)	Pin ON = 0 – 20 mA; Pin OFF = 0 – 10 V Both channels operate synchronously. The device is switched off below a 10 % threshold of the input signal; if the value is exceeded, the device switches on with minimum brightness and reaches the maximum brightness level at 100 %. Note: If analogue operation = switching/dimming is to be separated, observe “analogue operation (Pin 6)” instructions.

A higher-ranking type of operation always invalidates lower-level types. The following hierarchy applies: reset, self test, group control, cleaning light, staircase lighting, manual operation.

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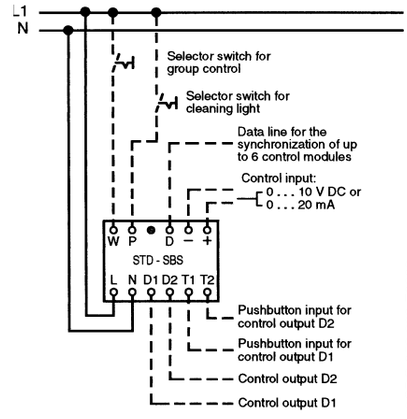
Selection tables
Command devices
STD-SBS control unit for universal dimmer STD500MA


SK 0111 B 00

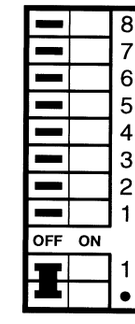
Description/ application	Power loss	Order details		Bbn 4011395	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W	Type code	Order code	EAN			kg	pc.
control unit	1.5	**STD-SBS**	GJ B000 6590 A 0152	**00461 6**			0.150	1

Connection example

control unit STD-SBS



2CDC 052 229 F0203



SK 0155 Z 00

Technical features

Rated voltage	230 V~ ± 10 %; 50 Hz
Specification	EN 60669-2-1; EN 55022

Extensions T1/T2	
Pushbutton	NO contact pushbutton
No. of pushbuttons	unlimited
Max. length of pushbutton cable	≤ 100 m
Reference potential	phase

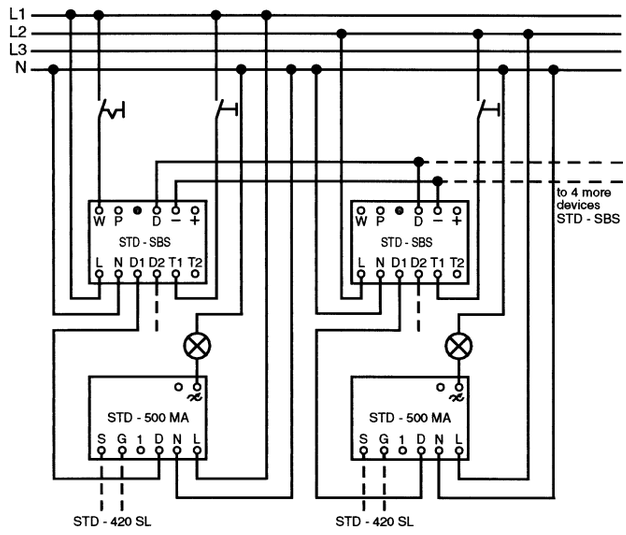
Control output D1/D2	
PWM output	12 V DC to N
Max. length of control cable	≤ 2m
Ambient temperature	– 5 °C/23 °F to 35 °C/95 °F
Terminals	up to 2 x 2.5 mm²
Radio interference suppression	CE
Degree of protection	II

electronic protection against short circuit, overload and excessive temperature

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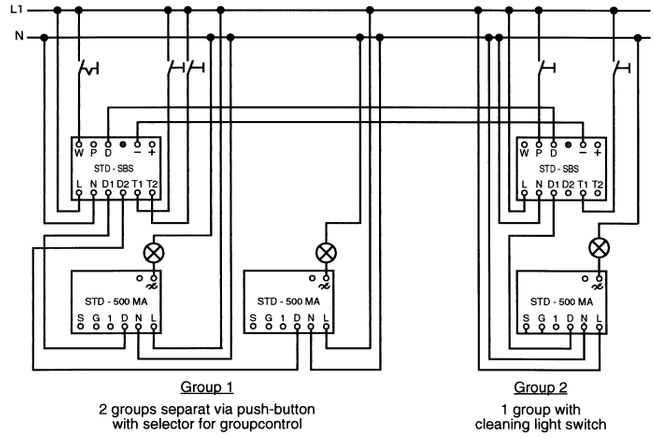
Other connection examples

control unit STD-SBS and universal high-performance dimmer STD-500 MA (Master)



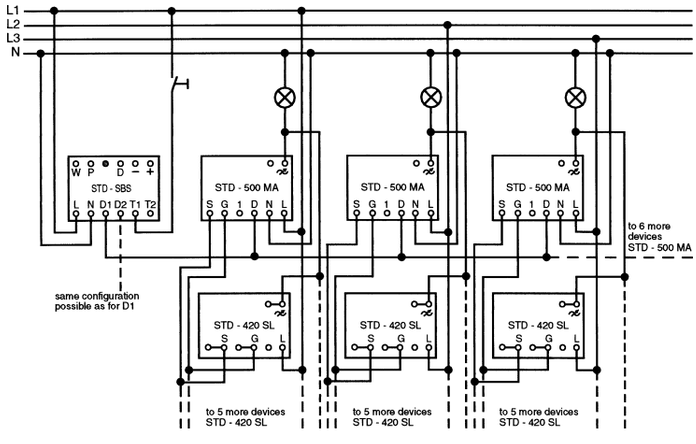
2CDC 052 230 F0203

control unit STD-SBS and universal high-performance dimmer STD-500 MA (Master)



2CDC 052 231 F0203

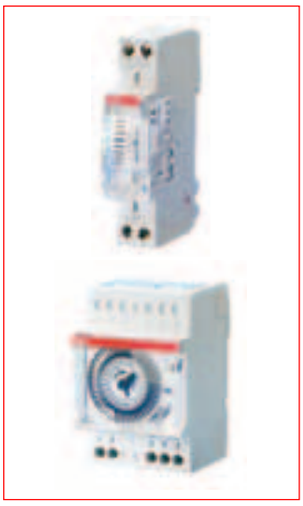
control unit STD-SBS, universal high-performance dimmer STD-500 MA (Master) and power extension STD-420 SL



2CDC 052 232 F0203

6

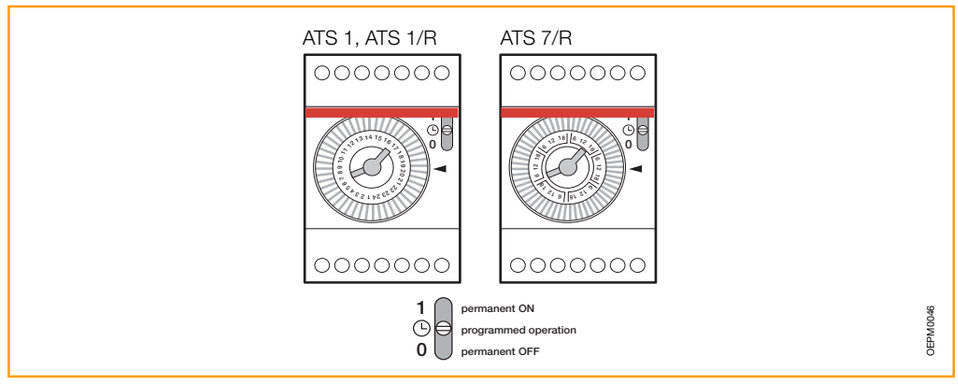
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ATS electro-mechanical time switches

They control circuit opening and closing according to scheduled planning. The time switches can be set on permanent ON-OFF, available both daily and weekly programs. ATS-1R and ATS-7R versions are equipped with a built-in battery that is generally charged by the network voltage that allows the devices to maintain the set time programs in case of long (up to 150h) power supply black-out.

Contacts	Power loss	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W	**Type code**	Order code	**EAN**			kg	pc.
1 NO synchronous	5 VA	**ATS 1M**	2CSM111010R0611	**62910 8**			0.120	1
1 NO quartz	5 VA	**ATS 1RM**	2CSM111110R0611	**62920 7**			0.120	1
1 CO synchronous	5 VA	**ATS 1**	2CSM111030R0611	**62930 6**			0.150	1
1 CO quartz	5 VA	**ATS 1R**	2CSM111130R0611	**62940 5**			0.150	1
1 CO quartz	5 VA	**ATS 7R**	2CSM121130R0611	**62950 4**			0.150	1

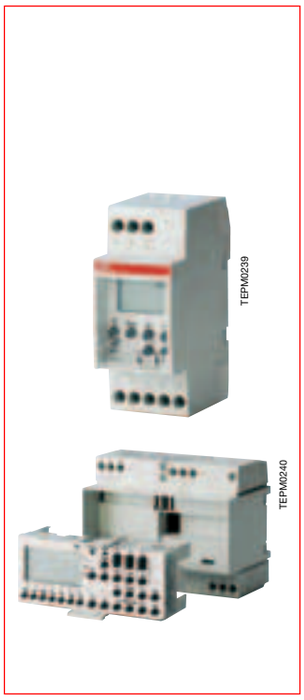


Technical features

Rated voltage Un	[V]	a.c. 230 +10%/-15%
Contact number and type		1 potential free contact
Number and type of contacts In	[A]	16 cosφ=1 2.5 cosφ=0.6
Potential free contact max. capacity		- ohmic load (cosφ=1) - AC 16 A/250 V - inductive load (cosφ=0.6) - 4 A/250 V incandescent lamps 1350 W/250 V
Rated frequency	[Hz]	50-60
Min. switching time		30 min (daily program) 3 hours (weekly program)
Max. number of command per cycle	[n°]	48 (daily program) 56 (weekly program)
Operating accuracy		2.5 sec/24 h
Power consumption	[VA]	1
Running reserve*	[h]	150
Time base		network frequency for ATS1
Operating temperature	[°C]	-20...+45
Storage temperature	[°C]	-30...+70
Tunnel terminals cable section	[mm²]	0.5...6
Modules	[n°]	1-3
Standards		IEC 669-1, CEE 24, EN 60730-1

* Life cycle of NiCd batteries allowing operation of timer and contacts in case of network voltage black-out.

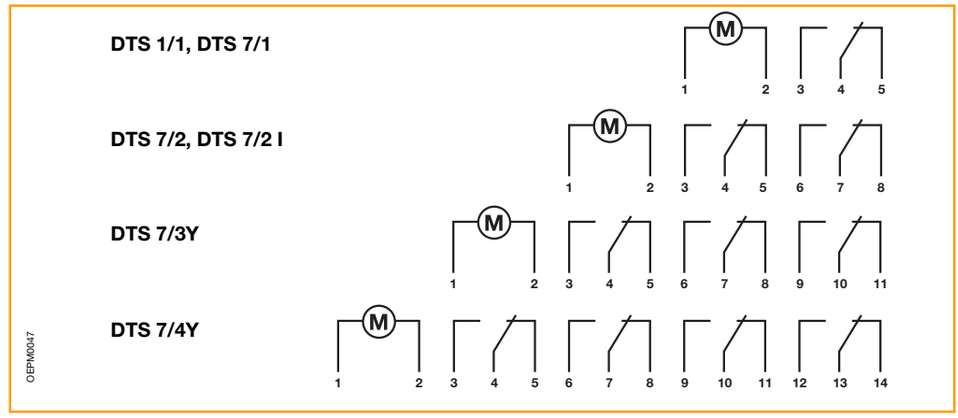
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DTS digital time switches

The range includes single/multichannel daily/yearly program switches. These are functionally more sophisticated and control several loads or independent groups of loads requiring different time controls with a unique time reference. The EEPROM memory of DTS series devices eliminates the risk of erasing configured program, regardless the duration of any voltage failure.

Contacts comple-ment	Memory locations	Power loss	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
		W	**Type code**	Order code	**EAN**			kg	pc.
1 CO	12	5 VA	**DTS 1/1**	2CSM111000R0601	**50660 7**			0.120	1
1 CO	20	5 VA	**DTS 7/1**	2CSM121000R0601	**50670 6**			0.120	1
2 CO	30	5 VA	**DTS 7/2**	2CSM122000R0601	**50680 5**			0.150	1
2 CO	40	5 VA	**DTS 7/2I**	2CSM122100R0601	**50690 4**			0.150	1
2 CO	40	5 VA	**DTS 7/2I 120AC**	2CSM322200R0601	**53840 0**			0.150	1
2 CO	40	5 VA	**DTS 7/2I 24AC/DC**	2CSM222200R0601	**53830 1**			0.150	1
3 CO	400	5 VA	**DTS 7/3 Y**	2CSM133100R0601	**50700 0**			0.380	1
4 CO	400	5 VA	**DTS 7/4 Y**	2CSM134100R0601	**53850 9**			0.410	1



Technical features

Rated voltage	[V]	a.c. 230 +10%/-15%
Contact capacity	[A]	16 (ohmic load), 2.5 (inductive load), 1000 (fluorescent lamps)
Contact type		free-switching contact
Frequency	[Hz]	50-60
ON/OFF memories		12 (DTS1/1), 20 (DTS7/1), 30 (DTS7/2), 40 (DTS7/2I)
Channels (contacts) number		1 (DTS1, DTS7/1), 2 (DTS7/2, DTS 7/2I), 3 (DTS7/3Y), 4 (DTS7/4Y)
Min. ON/OFF switching spread	[min.]	1
Pulse/cycle output	[s/min.]	1...99
Accuracy class	[s]	±2.5/day
Protection degree		IP20
Standby battery		3 years (lithium battery)
Operating temperature	[°C]	-25…+55
Power consumption	[W]	5
Modules	[n°]	2/6
Standards		EN 60730-1, IEC 730-1, CEI 107-70, VDE 0633

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Accessories

Description	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
signal receiving antenna for DTS 7/4Y	**DTS/DCF**	2CSM000010R0601	**53860 8**			0.230	1
interface/software for DTS 7/3Y and DTS 7/4Y	**DTS/PRG-SW**	2CSM000050R0601	**53870 7**			0.115	1

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Other modular devices
Load management devices



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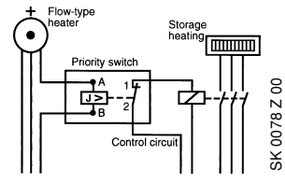


SK 0114 B 99

E 450 priority switches

The priority switch is used in wiring systems where existing lead cross sections or the size of the power supply service box do not allow for simultaneous operation of two powerful loads (e.g. storage heating and flow-type heater).
The priority switch disconnects the long-term load (storage heating) for as long as the short-term consumer (flow-type heater) is switched on.
The coil of the priority switch is connected in series to the short-term load. When this load is switched on, the NC contact of the priority switch disconnects e.g. the heating system contactor.

Rated current range	Power loss	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W	**Type code**	Order code	**EAN**			kg	pc.
For pneumatically controlled flow-type heaters								
6,7 ... 39 A	2.4	**E 451- 5.7 A**	2CDE160000R0901	**41590 3**			0.1	10
For electronically controlled flow-type heaters								
6.7 ... 39 A	2.4	**E 452-5,7 A**	2CDE160010R0901	**20950 2**			0.1	10



SK 0078 Z 00

Technical features	**E 451-5.7**	**E 452-5.7**
Operating coil		
Range of rated current equivalent to	6.7 … 39 A 1.5 … 9 kW at 230 V, 4.6 … 27 kW at 230/400 V	
Threshold current	3.1 … 5.3 A	
OFF delay (max.)	0 main half waves	2 main half waves
Max. continuous current	43 A	
Therm. continuous capacity at 40 °C/104 °F	5 W	
Contact assembly		
Control contact	1 NC contact	
Rated contact current at 250 V	1 A	
Contact material	solid silver	
Max. switching voltage	400 V	
Max. switching capacity	230 VA	
Max. switched current	1 A	
Max. inrush current peak	5 A	
Electr. service life	> 10^5 operations	
Mechanical service life	ca. 2 x 10^6 operations	
Max. electrical switching rate	ca. 1800 operations/hour	
ON duration	100 %	
Ambient temperature	– 20 °C/– 4 °F to + 40 °C/104 °F	
Response time	10 … 20 ms	
Release time	5 … 20 ms	M 20 ms
Test voltage contact/coil	2.5 kV	
Clearance and creepage distance	C/250 V AC cording to IEC 669-1-23	
Degree of protection	IP 40	
Protection against electric shock	according to DIN VDE 0106 Part 100 (BGV A2)	
Terminal contact	series coil up to 16 mm^2, control contact up to 2.5 mm^2	

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They switch-on and/or switch-off operating illuminating devices at preset level of ambient lighting. Used in combination with sensor detecting if lighting level is higher or lower than preset threshold. Versions with built-in time switch allow the control of the lighting plant in relation to the level of ambient lighting combined with a specific time program.

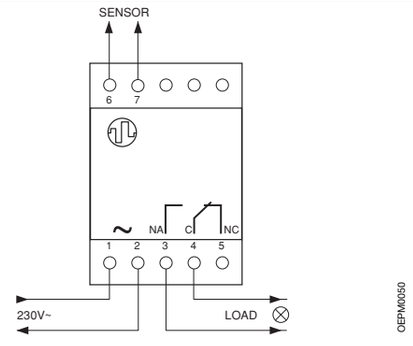
TWS twilight switches with sensor LS-1

Channels	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
1	**TWS-1**	2CSM111200R1341	**335009**			0.250	1
2	**TWS-2**	2CSM112200R1341	**507109**			0.350	1
1	**DTS7/1-TWS***	2CSM121300R1351	**507208**			0.350	1
2	**DTS7/2-TWS***	2CSM122300R1351	**507307**			0.350	1

* With built-in weekly program time switch

Sensor (as spare part)

	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
	LS-1	2CSM000010R1341	**335108**			0.050	1

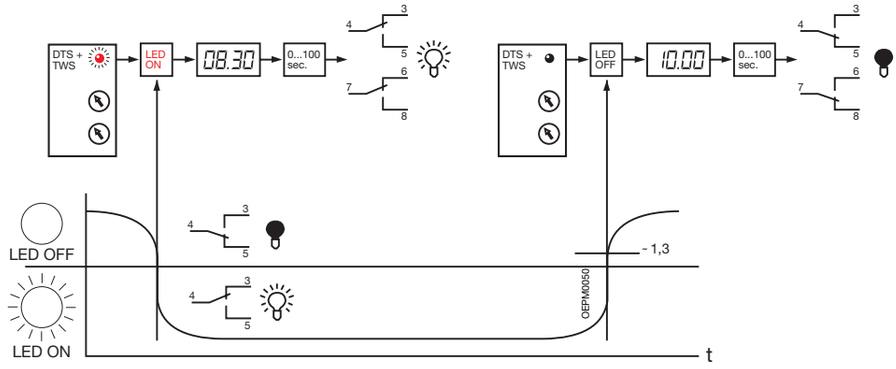


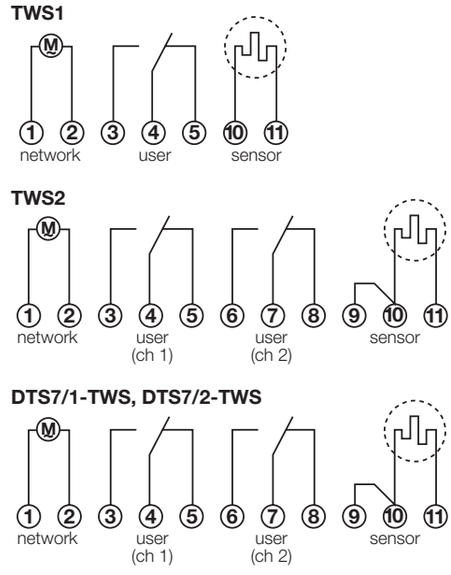
Technical features

Rated voltage	[V]	a.c. 230
Contact capacity	[A]	16 (ohmic load)
		2.5 (inductive load)
	[W]	1000 (fluorescent lamps)
Contact type		free-switching contact
Frequency	[Hz]	50/60
Channels (contacts) number	[Ch]	1 (DTS7/1+TWS) 2 (DTS7/2+TWS)
ON/OFF memories	[n°]	20 (DTS7/1+TWS) 30 (DTS7/2+TWS)
Time delay	[s]	0…100 ON 0…100 OFF
Adjustment range	[Lux]	2…500
Accuracy class	[s]	± 2.5/day
Protection degree	[IP]	20 (twilight), 65 (sensor)
Adjustment		electronic
Operating temperature	[°C]	-25…+55 (twilight) -30…+70 (sensor)
Power consumption	[W]	5
Modules	[n°]	3
Standards		EN 60730-1, IEC 730-1, CEI 107-70, VDE 0633

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DTS + TWS operating principle





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SK 0085 B 97



SK 073 B 00



SK 074 B 00

STL light level switches

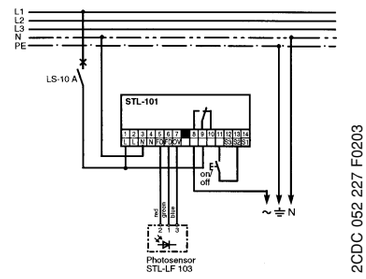
Light level switch STL 101 switches the connected lighting circuit (STL 103 up to 3 lighting circuits) on or off, depending on the brightness measured. Extra low-voltage signals of a photo sensor installed outside a building or in the immediate proximity of a window are processed according to the preset reference values.

Number of lighting group	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
1	**STL-101**	GJV5010000R0011	**604401***			0.400	1
3	**STL-103**	GJV5010000R0012	**127004**			0.450	1

* Bbn No. 40122233

Photo sensor (IP 54) and mounting bracket

	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
	STL LF-103	GJV0211370R0171	**127004**			0.100	1



2CDC 052 227 F0203

STL-101

Technical features

Rated voltage	230 V a.c. 50 HZ; d.c not permissible (will destroy equipment)
Power consumption	ca. 2 W (a.c. 3 W for STL-103)
Fusing	external 6 A/ for each load circuit
Ambient temperature	0 °C/32 °F to 45 °C/113 °F, supply air if installed horizontally
Photo sensor input	one photo sensor
Pushbutton input	1 pushbutton (NO contact), STL-101: 11/13; STL-103: 4/6
Control voltage range	0 - 5 V d.c. photo sensor, pushbutton, basic insulation according to IEC 664 (10/92) no safety extra-low voltage
Contact load	max. 10A/250 V~ or 10A/30 V- (μ)
Switching values	adjustale between ca. 10 -1000 Lux or 200 to 20000 Lux
Delay time	adjustable in the range of 5 seconds to 20 minutes
Class and degree of protection	II (total insulation), IP 20
Terminals	0.5 mm^2 - 2.5 mm^2 for one-wire conductor or with connector sleeve
Max. cable length	100 m, control leads 0.5 mm^2, load and supply lines 1.5 mm^2
Pollution degree	2 (dry, non-conductive, according to IEC 664, 10/92)
Terminal assignment	see connection example, incorrect installation may lead to malfunctioning or destruction
CE requirements	EMC fulfilled acc. to EN 61547 (04/96), low voltage acc. to IEC 669-2-1 (11/94)
Power loss	6 for STL-101; 8 for STL-103

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RAL overload alarms

Main circuit-breaker downstream installed, they constantly compare preset power consumption value to effective system power consumption, which is related to the number of devices operating simultaneously. An acoustic alarm alerts that it is necessary to switch-off some appliances in order to avoid the tripping of the main circuit-breaker. The device calibration is 3 kW.

Adjustable range	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
kW	**Type code**	Order code	**EAN**			kg	pc.
0/3	**RAL 3**	2CSM111200R1301	**400509**			0.200	1
0/6	**RAL 6**	2CSM121200R1301	**400608**			0.200	1

Technical features

Rated voltage U_n	[V]	a.c. 230
Rated current I_n	[A]	18.3 (for 3 kW); 27.5 (for 6 kW)
Rated contact capacity I_n	[A]	12 cosφ=1; 4 cosφ=0.8
Rated frequency	[Hz]	50
Adjustment ranges	[A]	0 ...18.3/0…27.5
Power consumption	[W]	10
Modules	[n°]	2

Additional technical features

RAL overload alarms are equipped with an acoustic alarm which signals an exceeding power consumption, allowing the user to disinsert loads before the energy-limiting circuit-breaker trips.

An appropriate relay output contact allows the choice between the following functions:

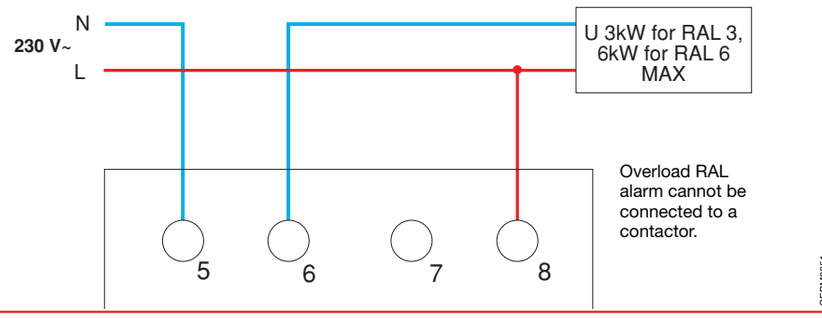
a) remote signalling (acoustic or lighting)

b) opening a specific divisional circuit-breaker and then disabling a particular not primary electric appliance.

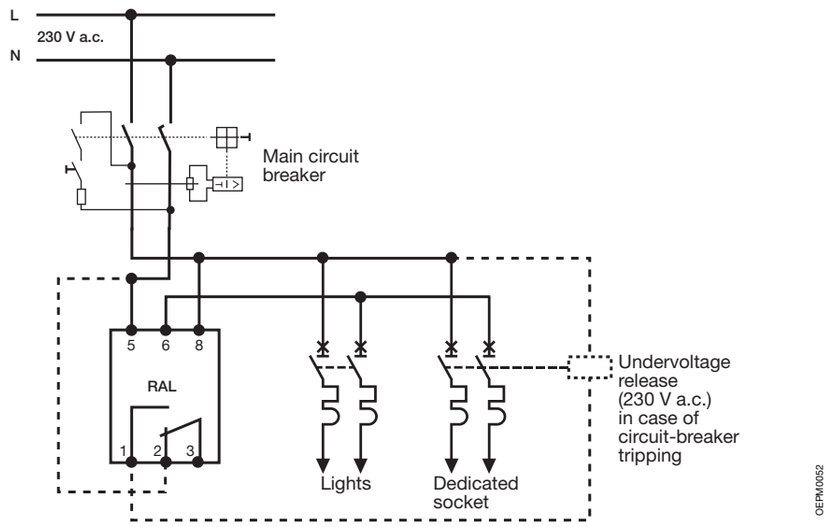
If appropriately used, the function b) causes the automatic switchoff of one or more appliances in order to keep the power consumption within the preset limits, avoiding the unexpected tripping of current-limiting device installed outside the housing (i.e. in the basement). Reset manually.

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Acoustic alarm



Load release



7

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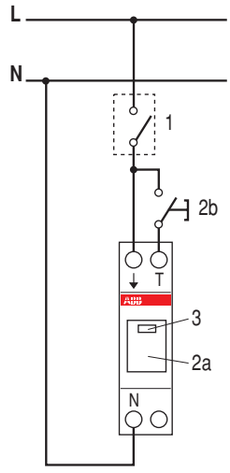


E 228 WM alarm indicator

It can report an alarm signalling switched on by the closing of any kind of external contact (fault, warning device, etc.) through an acoustic and lighting alarm.

Order details		Bbn 4012223	Price 1 piece	Price group	Weight 1 piece	Pack unit
Type code	Order code	**EAN**			kg	pc.
E 228-WM	2CDE100021R1401	**630301**			0.070	1

Wiring diagram



OEPM0058

Operation

1
External contact NO (monitored) has changed the initial position:
- LED 3 switches on (blinking)
- Acoustic alarm on

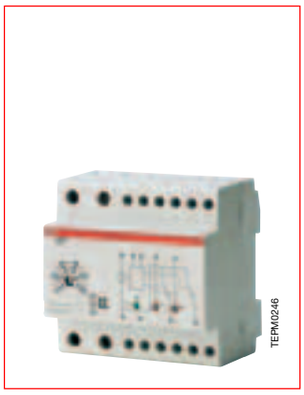
2a and 2b
Acoustic alarm disabled on the product (2a) or remotely (2b):
- LED 3 light is fixed up to system reset

3
Alarm indicator LED

Technical features

Rated voltage U_n	[V]	230 AC
Rated frequency	[Hz]	50
Power consumption	[W]	<4
Modules		1
Cycle time		on/off 1 sec ±10%
Sound level		60 dB
Ambient temperature		-20 °C up to +50 °C

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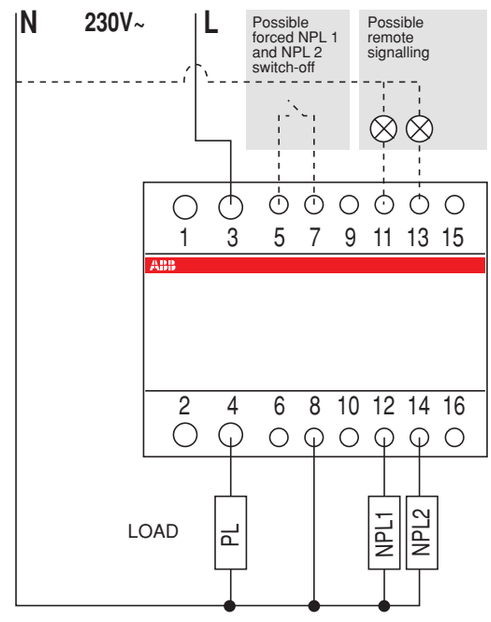


LSS1/2 load shedding switches

Main circuit-breaker downstream installed, they compare the higher allowed and preset value of power consumption to the effective system power consumption avoiding the tripping of the main circuit-breaker through switching-off in sequence of maximum two not primary loads (NPL1 and NPL2) when the preset threshold is exceeded. A green LED signals the voltage and two red leds indicate load OFF. At preset time intervals the device automatically tries to insert again not primary disabled loads.

Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
Type code	Order code	EAN			kg	pc.
LSS1/2	2CSM112500R1311	**274407**			0.400	1

Single-phase wiring diagram



Technical features

Rated voltage U_n		[V]	a.c. 230
Rated capacity I_n		[A]	90
Rated contact capacity I_n NPL1 and NPL2		[A]	16 each (terminals 12 and 14)
Rated frequency		[Hz]	50/60
Regulating thresholds		[A]	5...30 10...60 15...90
Load reinsertion delay			5-7 min. (NPL1); 4-5, 50 min. (NPL2)
Load disinsertion delay			about 2 sec.
Indicators			1 green LED= supply voltage available
			2 red LED= switched off loads
Load OFF remote signalling		[A]	1 (terminals 11 and 13)
Terminals	Primary load		35 mm²
	Not primary loads		10 mm²
Power consumption		[W]	5
Modules		[n°]	5

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TEPM0255

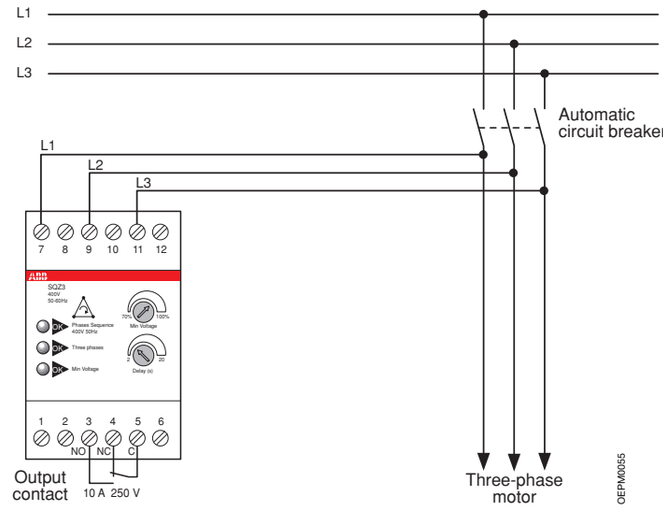
SQZ3 phase and sequence relays

SQZ3 relay performs the following continue monitoring functions on three-phase networks at 400 V a.c.:
- phase sequence
- phase failure
- minimum voltage (adjustable up to 70% of Vn).

If one of the three failures is detected, the output relay (safety switching contact) intervenes with a delay adjustable from 2 to 20 seconds for minimum voltage only and controls the following:
- acoustic alarms
- motor controlling contactors
- circuit-breakers with coils.

Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
Type code	Order code	**EAN**			kg	pc.
SQZ3	2CSM111310R1331	**372004**			0.300	1

Wiring diagram



Technical features

Supply voltage	[Vn]	400 V a.c.
Frequency	[Hz]	50/60
Contact capacity	[A]	10 (cosφ=1)
Contact type		safety switching, changeover
Minimum voltage regulating trimmer	[%]	from 100 to 70 of Vn
Intervention delayregulating trimmer	[s]	from 2 to 20 (only for min. voltage)
Insulation rating		II
Protection degree	[IP]	20
Operating temperature	[°C]	-10…+55
Power consumption	[W]	10
Modules	[n°]	3

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LEE 230 power failure signalling exctractable lamp

The LEE 230 lamp is an automatic electronic lamp to be installed in any modular socket or wiring accessories socket with German standard VDE Schuko (M1173 or E1175) and Italian standard P11, 10 A or dual standard 10/16 A.

The device can operate as a power failure signalling lamp as well as a lighting device, to be used for example during maintenance activities or for looking for possible faults in the panel.

Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
Type code	Order code	**EAN**			kg	pc.
LEE-230	2CSM110000R1361	**844105**			0.100	1

Technical features

2P 10 A plug		distance between pins 19 mm, pin ø 4 mm
Supply	[V]	230 a.c., 50-60 Hz
Recharge time	[h]	24
Endurance	[h]	3
Lighting level	[mcd]	3000
Operating temperature	[°C]	0…+45
Min. life cycle		5 years (battery)

Additional technical features

The LEE-230 lamp automatically switches on when the voltage fails; the built-in rechargeable battery guarantees the supply.

It is particularly useful thanks to its construction and functional characteristics:
- it can be extracted from the socket and used as a torch with ON-OFF button on its frontal side
- when necessary it can work with standard sockets
- it can be moved when it is needed
- it has a long operation endurance, up to three hours
- it is ready to use, it does not require installation
- with a screw (ø 3.5 mm, L 16 mm) it is possible to fix it preventing the extraction from the M1173 ABB sockets with central hole
- the projecting part of the Schuko profile is very small (8 mm).

The two LEDs placed on the frontal side of the lamp indicate its operation condition:
- the red LED indicates the recharge activity and that, in the case of a network voltage back-out, the lamp will remain off
- the green LED indicates the recharge activity and that, in the case of a network voltage black-out, the lamp will switch on (it will automatically switch off when the voltage returns).

By pushing the frontal pushbutton it is possible to change the status; if you do not use the lamp for a prolonged time it is suggested to set the first condition in order to preserve the battery life.

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Max./min. current/voltage ammetric and voltmetric relays

These devices are used to measure current (ammetric) and voltage (voltmetric) on single-phase electric networks for a perfect protection of devices used.

The range includes:

- **maximum current (RHI)** and **maximum voltage (RHV) relay.** The control relay remains on as long as the quantity to be measured is lower than the set threshold value;
- **minimum current (RLI)** and **minimum voltage (RLV) relay.** The control relay remains on as long as the quantity to be measured is higher than the set threshold value.

In both cases the relay switches off with a delay adjustable by the potentiometer, which also allows to adjust hysteresis (from 1 to 45%).

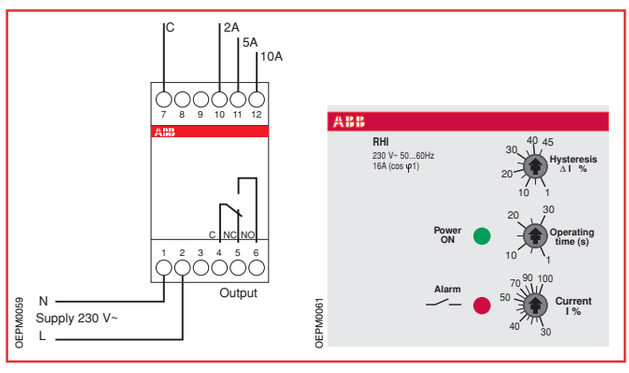
Type	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
maximum current ammetric relay	**RHI**	2CSM121310R1321	**334309**			0.300	1
maximum voltage voltmetric relay	**RHV**	2CSM111310R1321	**334101**			0.300	1
minimum current ammetric relay	**RLI**	2CSM122310R1321	**334200**			0.300	1
minimum voltage voltmetric relay	**RLV**	2CSM112310R1321	**334002**			0.300	1

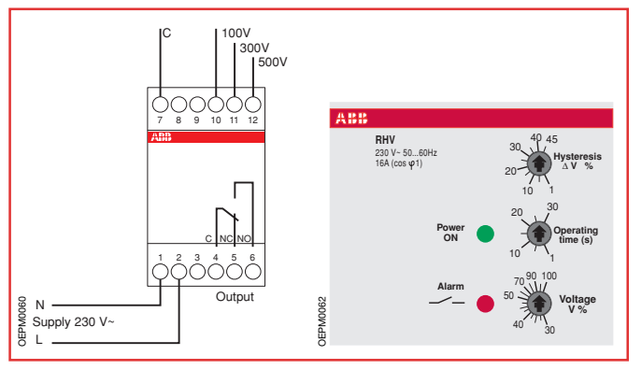
Technical features

Rated voltage U_n	[V]	a.c. 230
Switching contact capacity	[A]	16
Rated frequency	[Hz]	50/60
Ammetric relay alarm thresholds	[A]	2, 5, 10
Voltmetric relay alarm thresholds	[V]	100, 300, 500
Adj. calibration of In and Vn%	[%]	30...100
Adjustable hysteresis value	[%]	1...45
Time delay	[s]	1...30
Power consumption	[W]	2
Modules	[n°]	3

Additional technical features

Control relay intervention lighting indication	red LED on=intervening
Power supply lighting indication	green LED on=ON
Intervention lighting indication	blinking green LED=intervening





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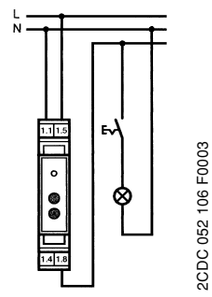


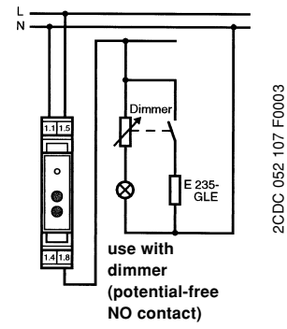
E 235 mains disconnection relays

Constant exposure of electrical interference fields originating from live conductors - as is the case e.g. in bedrooms - may impair the well-being of people, experts say.
With the extra base load adapter E235-GLA, the mains disconnection relays can be switched on manually.
For the permanent installation of loads that switch on independently of the supply voltage, such as fluorescent lamps, a E235-GLE PTC base load element is available.

Description	**Order details**		**Bbn 4016779**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	**EAN**			kg	pc.
mains disconnection relay	**E 235-NFS**	2CDE110000R1701	**571821**			0.065	1
base load element	**E 235-GLE**	2CDE100500R1711	**571814**			0.001	1
base load adapter	**E 235-GLA**	2CDE100510R1711	**571869**			0.070	1

Wiring diagram





Technical features

Short circuit rupturing capacity		16 A/230 V a.c.
Rated frequency		50/60 Hz
Range of control voltage		0.9 to 1.1 Un
Load of filament lamps		2300 W
Fluorescent lamp load:		
	twin lamp circuit	100 W
	shunt compensated	56 W
	electronic ballast	max. 36 W, dependent on manufacturer
Induce load		6 A cosφ = 0.6
Max. switching capacity (cosφ 0.5)		3500 VA
Intrinsic consumption ca. 1 W		
Control voltage		5 V a.c.
Adjustable making capacity		2 - 15 VA
Breaking capacity		0.66 x making capacity
ON delay		50 ms
OFF delay		ca. 3 sec.
Contact assembly		1 NO contact
Service life at rated load		> 100000 switching cycles
Ambient temperature		- 10 °C/14 °F to +45 °C/113 °F
Connection capacity (clamping terminal)		max 2.5 mm^2

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E 236 undervoltage monitoring relays

Function

The green LED is lit when the supply voltage is applied. If each phase voltage exceeds 195 V (US1) or exceeds the preset threshold value (US2) with respect to the neutral including the hysteresis when switching the device on, the relay switches immediately into the working position. The yellow LED is lit. If at least one phase voltage falls below the threshold value, the relay goes back into its normal position and the yellow LED goes out.
If also phase 2 fails, the green LED goes out, too.
It is indispensable to connect the neutral conductor!

Application

For the control of three-phase undervoltage (each phase to neutral) of switchgear, also for installations according to DIN VDE 0107 (power installations in hospitals and rooms used for medical purposes outside of hospitals) and DIN VDE 0108 (power installations and safety supply in buildings where many people gather).
US 1: 3 phases to neutral with fixed threshold at 195V; hysteresis fixed 5 %
US 2: 3 phases to neutral with fixed threshold at 160 – 240V; hysteresis fixed 5 %

Technical features

Rated voltage		250 V a.c.
Frequency		48-63 Hz
Measuring range:	supply voltage	3N 400/230 V a.c. (terminals N-L1-L2-L3)
	overload capacity	3N 459/265 V a.c.
Switching capacity		device in series (distance < 5 mm): 750 VA (3 A/250 V a.c.); device not in series (distance > 5 mm): 1250 VA (5 A/250 V a.c.)
Rated insulation voltage		250 V a.c. (corresponds with IEC 664-1)
Rated surge voltage		4 kV
Tripping delay		ca. 100 ms
Clearence and creepage distance		> 6 mm (between contact and electronics)
Mechanical service life		20 x 10^6 operations
Electrical service life at 10000VA		2 x 10^5 operations
Max. switching rate		max. 6/min (1000 VA Ohmic load); max. 60/min (100 VA Ohmic load)
Ambient temperature		-25 °C/-13 °F to +55 °C/131 °F
Overvoltage category		III
Accuracy in non-changing environment:		
	setting tolerance (US 2)	≤5 %
	repeat accuracy	±1 %
	temperature effect	≤0.1 %/°C
Terminals		up to 4 mm^2
Specifications		VDE 0110 and VDE 0435
EMC tests		EM 50081-1 and EN 50082-2
Displays		LED green= supply voltage applied; LED yellow= relay status
Power loss		1.7 W

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Selection tables
Load management devices
E 236 undervoltage monitoring relays

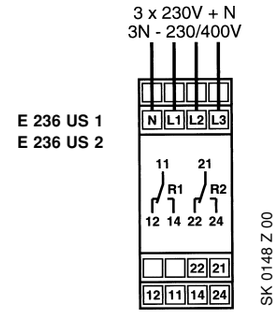


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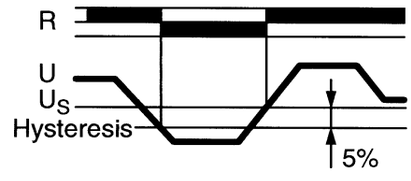


SK 0130 B 00

Contact	Order details		Bbn 4016779	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
2CO	**E 236-US 1**	2CDE165000R2001	**511087**			0.095	5
2CO	**E 236-US 2**	2CDE165010R2001	**511094**			0.095	5



SK 0148 Z 00



SK 0149 Z 00

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Other modular devices
Measurement devices



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TEPM0270


TEPM0271

The range provided includes analogue and digital instruments. In addition to standard measurement devices for electric quantities (voltmeters, ammeters, wattmeters, varmeters, frequency meters, power factor meters), other special instruments (RPM meters, hour meters) and a set of accessories are available, including ammetric transformers, which increase the functions of these instruments.

Analogue instruments for alternated current

Suitable for direct or indirect measurement through the appropriate accessories.

Scale	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
Direct voltmeters							
300 V	**VLM1/300**	2CSM110190R1001	**007906**			0.200	1
500 V	**VLM1/500**	2CSM110220R1001	**000006**			0.200	1
Direct ammeters							
5A	**AMT1/5**	2CSM310030R1001	**000709**			0.200	1
10A	**AMT1/10**	2CSM310040R1001	**000105**			0.200	1
15A	**AMT1/15**	2CSM310050R1001	**000204**			0.200	1
20A	**AMT1/20**	2CSM310060R1001	**000303**			0.200	1
25A	**AMT1/25**	2CSM310070R1001	**000402**			0.200	1
30A	**AMT1/30**	2CSM310080R1001	**000501**			0.200	1

Ammeters without scale for C.T. (sec. 5 A)

For scale (SCL1)	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
A1	**AMT1/A1**	2CSM320250R1001	**000600**			0.200	1
A5	**AMT1/A5**	2CSM320260R1001	**000808**			0.200	1

100/280V 45-65 Hz frequency meter with scale

	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
	FRZ1	2CSM810310R1001	**008606**			0.200	1

Power factor meter with scale for transducer (1 mA input)

	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
	CSF1	2CSM720310R1001	**028000**			0.300	1

Technical features

Rated voltage Un		[V]	a.c. 300, 500; d.c. 100, 300
Rated currents in a.c.	Direct reading Indirect reading	[A]	full scale values 5...30 full scale values 5...2500
Rated currents in d.c.	Direct reading Indirect reading	[A]	full scale values 0.1...30 full scale values 5...500
Frequency		[Hz]	50/60
Overload capacity		[%]	20 compared to the voltage or to the rated current
Accuracy class		[%]	1.5 (0.5 for frequency meters)
Power consumption		[W]	see technical details
Modules		[n°]	3
Standards			EN 60051

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Analogue instruments for direct current

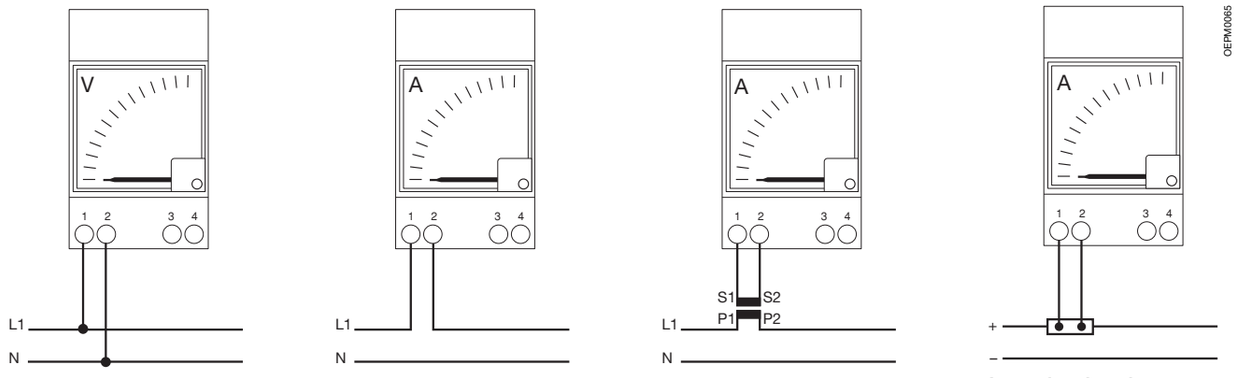
Scale	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
Direct voltmeters							
100 V	**VLM2/100**	2CSM210130R1001	**008002**			0.200	1
200 V	**VLM2/300**	2CSM210190R1001	**008101**			0.200	1
Direct ammeters							
10mA	**AMT2/0.01**	2CSM410330R1001	**028307**			0.200	1
100mA	**AMT2/0.1**	2CSM410340R1001	**028406**			0.200	1
1000mA	**AMT2/1**	2CSM410020R1001	**028505**			0.200	1
5A	**AMT2/5**	2CSM410030R1001	**028604**			0.200	1
10A	**AMT2/10**	2CSM410040R1001	**028703**			0.200	1
15A	**AMT2/15**	2CSM410050R1001	**028802**			0.200	1
20A	**AMT2/20**	2CSM410060R1001	**028901**			0.200	1
25A	**AMT2/25**	2CSM410070R1001	**029007**			0.200	1
30A	**AMT2/30**	2CSM410080R1001	**029106**			0.200	1

Ammeters without (SCL2) scale for shunt…/60 mV

Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
AMT2	2CSM420270R1001	**029205**			0.200	1

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Wiring diagrams



Direct insertion

Indirect insertion through C.T.

Insertion by shunt

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Suitable for direct or indirect measurement using appropriate accessories.

Measurements are displayed through 3-digit digital indicator with out-of-scale signalling.

As electronic instruments do not have parts subject to friction wear, they have a longer operation life and high accuracy.

Measuring instruments with digital display, class 0.5

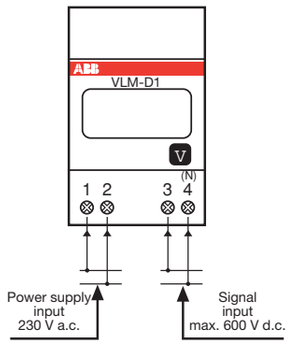
Effective range	Power loss	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
0-...	W	**Type code**	Order code	**EAN**			kg	pc.
Measuring instruments for alternating or direct voltage (direct measurement)								
600 V AC/DC	2.0	**VLMD-1-2**	GH V022 6553 R0001	**62040 2**			0.300	1
Measuring instruments for alternating voltage with setting button for different effective ranges (transformer measurement 5A)								
15-20-25-40-60 99.9-150-200 250-400-600-999 A	2.0	**AMTD-1**	GH V022 6561 R0001	**62050 1**			0.300	1
Measuring instruments for alternating voltage with setting button for different effective ranges (transformer measurement 5A)								
15-20-25-40-60 99.9-150-200 250-400-600-999 A	2.0	**AMTD-2**	GH V022 6579 R0001	**62060 0**			0.300	1
Measuring instruments for frequencies (direct measurement)								
40 ... 80 Hz	2.0	**FRZ-DIG**	GH V022 6587 R0001	**62070 9**			0.300	1
Single phase energy meter (local reset, direct/indirect reading)								
	Power loss	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W	**Type code**	Order code	**EAN**			kg	pc.
9999 kW/h	2	**EMT**	2CSM113000R1011					1

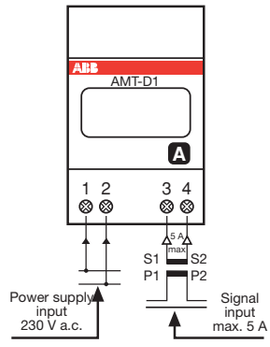
Technical features

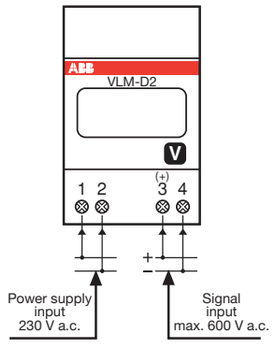
Rated voltage	[V]	a.c. 230
Rated frequency	[Hz]	50÷400
Overload capacity	[In/Vn]	1.2
Accuracy rating	[%]	±0.5 full scale ±1 digit at 25 °C
Max. signal input value		5 A a.c/60 mV d.c
Measurement field		VLM-D1 VLM-D2 0…999 A AMTD1 ATD2 0…999 A FRZ-DIG 40…80 Hz (0.5% rating)
Selection of capacity		continuous through menu pushbuttons
View		3-digit display+LED for out-of scale signalling
Operating temperature	[°C]	-10…+55
Storage temperature	[°C]	-40…+70
Protection degree	[IP]	20
Power consumption	[VA]	<2
Modules	[n°]	3
Standards		CEI EN 61010

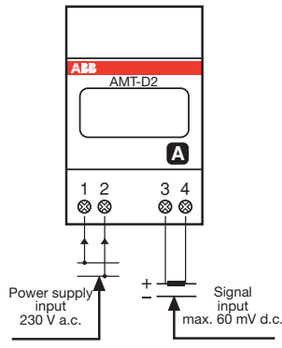
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Wiring diagrams

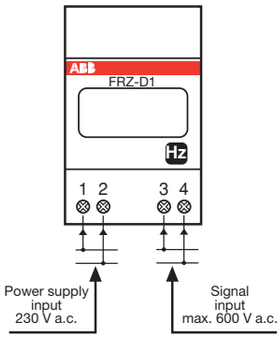


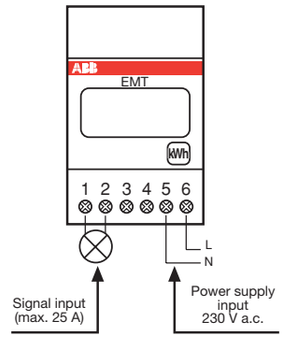






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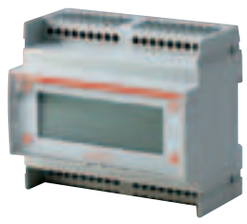
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Full scale calibration
Press the set up pushbutton for 3 seconds until the display blinks, then press repeatedly the pushbutton until viewing the desired full scale (3 lines=5 A full scale). Then press again the pushbutton for 3 seconds for saving the selected setting.

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TEPM0332


TEPM0447


TEPM0448

MTM multimeters

These instruments allow the measurement of the main electric quantities in three-phase networks at 230/400 V a.c., grouping in a single instrument the functions of voltmeters, ammeters, power factor meters, wattmeters, varmeters, frequency meters, and thermometers. The MTME multimeter detects also active and reactive energy. Being more practical than that of multiple different instruments, the use of these instruments is less difficult referring to the managing of dimensions and to the wiring, and more convenient.

The 30 measurable quantities are viewed by the four red LED displays, which guarantee the simultaneous reading of multiple values along with a good legibility.

In addition to instantaneous measured quantities (in effective value), it is possible for some of them to view the average and the maximum peak as well.

MTM modular multimeters

Type	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
for measurement at 230/400 VAC	**MTM**	2CSM120020R1021	**371908**			0.450	1
for measurement at 230/400 VAC + active and reactive energy	**MTME**	2CSM130030R1021	**333401**			0.450	1
for measurement at 230/400 VAC + active and reactive energy + pulse output	**MTME-I**	2CSM140030R1021	**333500**			0.450	1
for measurement at 230/400 VAC + active and reactive energy + output 485 + relay output	**MTME-485**	2CSM160030R1021	**333609**			0.450	1

Accessories for MTM modular multimeters (6 modules)

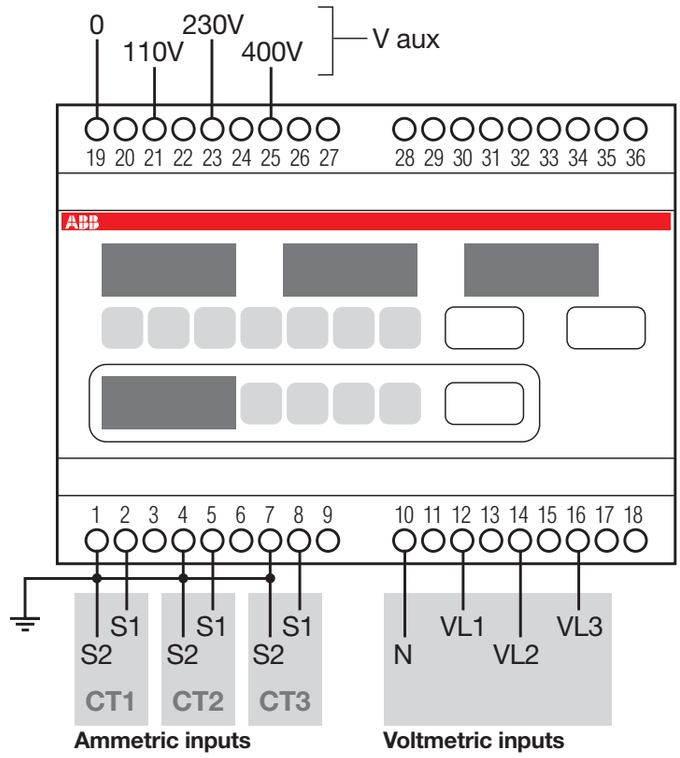
impulse concentrator for MTME-I	**CDI**	2CSM100000R1031	**333708**			0.050	1
converter RS485-232	**CUS**	2CSM200000R1031	**333807**			0.050	1
management software for MTME-I and MTME-485	**SW01**	2CSM300000R1031	**333906**			0.050	1

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Technical features

Auxiliary rated voltage	[V]	a.c. 110, 230, 400
Rated frequency	[Hz]	50/60
Rated input voltages	[V]	from 20 to 500
Permanent overload	[%]	+20
Rated input currents	[A]	5
Permanent overload	[%]	+30
Current values programmable for C.T.	[A]	from 0.02 to 10000
Insulation voltage	[kV]	2.5
Resistance to humidity	[%]	90
Protection degree		IP20
View		3-digit display
Operating temperature	[°C]	-10…+60
Storage temperature	[°C]	-25…+80
Maximum/minimum section of connection	[mm^2]	0.5-2.5
Weight	[kg]	0.4
Modules	[n°]	6
Power consumption	[W]	<3
Standards		CEI-EN 61010-1

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TEPM0274


TEPM0275

MCV - MCA voltmetric and ammetric switches

Cam rotary switches are suitable for mounting on EN 50022 rail. In three-phase systems they enable the use of a single measurement instrument (single-phase) for viewing the current or voltage value set through the switch itself.

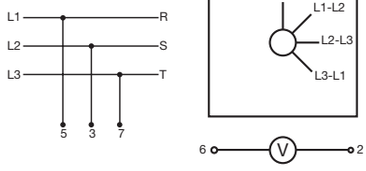
Range	Power loss	**Order details**		**Bbn 4034656**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	W	**Type code**	Order code	**EAN**			kg	pc.
Voltmeter changeover switches								
L1, L2, L3	0.5	**MCV 4**	1SCA 022 404 R4740	**52249 6**			0.095	1
L1, L2, L3, N	0.5	**MCV 7**	1SCA 022 647 R7840	**52243 8**			0.110	1
Ammeter changeover switches								
0-1-2-3	0.5	**MCA 4**	1SCA 022 404 R4820	**52245 2**			0.110	1

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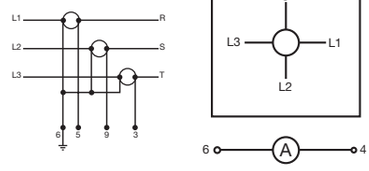
Technical features

Insulation voltage	[V]	600
Rated thermal current	[A]	12
Mechanic operations	[n°]	1000000
Power consumption	[W]	0.23
Modules	[n°]	3

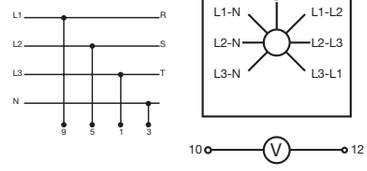
MCV4



MCA4



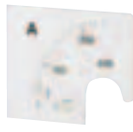
MCV7



Installation
1. Mount the switch on DIN rail
2. Wire it
3. Mount the cover and the knob and fix the screw

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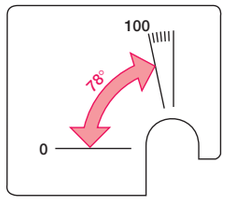
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TEPM0276

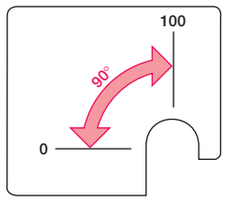
Interchangeable scales for analogue instruments

Scale	Order details Type code	Order code	Bbn 8012542 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
Interchangeable scales for analogue ammeters in a.c. AMT1							
A1-5A	**SCL 1/5**	2CSM110021R1041	**001201**		0.010	10	
A1-10A	**SCL 1/10**	2CSM110032R1041	**001300**		0.010	10	
A1-20A	**SCL 1/20**	2CSM110075R1041	**001409**		0.010	10	
A1-25A	**SCL 1/25**	2CSM110096R1041	**030706**		0.010	10	
A1-30A	**SCL 1/30**	2CSM110107R1041	**001508**		0.010	10	
A1-40A	**SCL 1/40**	2CSM110128R1041	**030805**		0.010	10	
A1-50A	**SCL 1/50**	2CSM110149R1041	**001607**		0.010	10	
A1-60A	**SCL 1/60**	2CSM110159R1041	**030904**		0.010	10	
A1-75A	**SCL 1/75**	2CSM110169R1041	**031000**		0.010	10	
A1-80A	**SCL 1/80**	2CSM110179R1041	**001706**		0.010	10	
A1-100A	**SCL 1/100**	2CSM110189R1041	**001805**		0.010	10	
A1-150A	**SCL 1/150**	2CSM110209R1041	**001904**		0.010	10	
A1-200A	**SCL 1/200**	2CSM110229R1041	**002000**		0.010	10	
A1-250A	**SCL 1/250**	2CSM110249R1041	**031109**		0.010	10	
A1-300A	**SCL 1/300**	2CSM110259R1041	**002109**		0.010	10	
A1-400A	**SCL 1/400**	2CSM110279R1041	**002208**		0.010	10	
A1-500A	**SCL 1/500**	2CSM110299R1041	**002307**		0.010	10	
A1-600A	**SCL 1/600**	2CSM110309R1041	**031208**		0.010	10	
A1-800A	**SCL 1/800**	2CSM110329R1041	**002406**		0.010	10	
A1-1000A	**SCL 1/1000**	2CSM110339R1041	**002505**		0.010	10	
A1-1500A	**SCL 1/1500**	2CSM110359R1041	**274704**		0.010	10	
A1-2000A	**SCL 1/2000**	2CSM110379R1041	**274803**		0.010	10	
A1-2500A	**SCL 1/2500**	2CSM110389R1041	**274902**		0.010	10	
A5-5A	**SCL 1/A5/5**	2CSM120021R1041	**031307**		0.010	10	
A5-10A	**SCL 1/A5/10**	2CSM120032R1041	**031406**		0.010	10	
A5-20A	**SCL 1/A5/20**	2CSM120075R1041	**031505**		0.010	10	
A5-30A	**SCL 1/A5/30**	2CSM120107R1041	**031604**		0.010	10	
A5-50A	**SCL 1/A5/50**	2CSM120149R1041	**031703**		0.010	10	
A5-80A	**SCL 1/A5/80**	2CSM120179R1041	**031802**		0.010	10	
A5-100A	**SCL 1/A5/100**	2CSM120189R1041	**031901**		0.010	10	
A5-150A	**SCL 1/A5/150**	2CSM120209R1041	**032007**		0.010	10	

SCL1/A5/100
Full scale at 78°
(with extra scale)



SCL1/A1/100
Full scale at 90°



OEPM0088

Interchangeable scales for analogue ammeters in d.c. AMT2

A1-5A	**SCL 2/5**	2CSM230025R1041	**032106**	0.010	10	
A1-6A	**SCL 2/6**	2CSM230345R1041	**032205**	0.010	10	
A1-10A	**SCL 2/10**	2CSM230035R1041	**032304**	0.010	10	
A1-20A	**SCL 2/20**	2CSM230075R1041	**032403**	0.010	10	
A1-30A	**SCL 2/30**	2CSM230105R1041	**032502**	0.010	10	
A1-50A	**SCL 2/50**	2CSM230145R1041	**032601**	0.010	10	
A1-80A	**SCL 2/80**	2CSM230179R1041	**032700**	0.010	10	
A1-100A	**SCL 2/100**	2CSM230189R1041	**032809**	0.010	10	
A1-150A	**SCL 2/150**	2CSM230209R1041	**032908**	0.010	10	
A1-200A	**SCL 2/200**	2CSM230229R1041	**033004**	0.010	10	
A1-250A	**SCL 2/250**	2CSM230249R1041	**033103**	0.010	10	
A1-300A	**SCL 2/300**	2CSM230259R1041	**033202**	0.010	10	
A1-400A	**SCL 2/400**	2CSM230279R1041	**033301**	0.010	10	
A1-500A	**SCL 2/500**	2CSM230299R1041	**033400**	0.010	10	

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Current transformers

Used to transform primary currents (max. 6000 A) into .../5 A and .../1 A low secondary currents indirectly supplying power to analogue and digital measurement devices. They are available both with wound and through primary. In the first case they are provided along with the bar or the primary terminal; in the second case they have a hole to insert in the bar or the cable which forms the primary.

Technical features

Standard secondary current	[A]	5 (other secondary on request)
Max. voltage for operation ①	[kV]	1.2 (0.72 for compact version)
Test voltage ②	[kV]	6 at 50 Hz/1 min. (3 for compact version)
Short circuit rated thermal current I_{min} ③	[IpN]	40 for 1 sec.
Short circuit rated dynamic current I_{min} ④	[I_{ter}]	2.5 for 1 sec.
Permanent overload	[IpN]	1.2
Safety factor ⑤	[Fs]	≤2 at ≤10 according to version and capacity
Frequency	[Hx]	50/60
Air insulation		E class
Terminals ⑥		primary = P1, P2 (K-L)
		secondary = s1, s2 (k-l)
		P1 (K)=primary wound input
		P2 (L)=primary wound output
		s1 (k)=secondary wound input
		s2 (l)=secondary wound output
		with double ration on secondary s1-s2=lower ratio, s1-s3=higher ratio
Housing		ABS resin
Protection degree		IP30
Operating temperature	[°C]	-20…+50
Max. temperature on bars	[°C]	+70
Storage temperature	[°C]	-40…+80
Relative humidity		80%

① Max. voltage (effective value) the transformer can bear.
② Industrial frequency voltage in relation to insulation the transformer bears for 1 min. between the primary and the secondary.
③ Max. primary current (effective value) the transformer bears for 1 sec. with counter-circuited secondary without overload-induced damages.
④ Max. primary current (effective value) the transformer bears for 1 sec. with counter-circuited secondary without damaged due to electromagnetic efforts.
⑤ Ratio between primary current causing nucleus saturation and the rated primary current value: the lower the Sf the higher the protection level on the transformer.
⑥ Brass terminals CuZn37, M4x6 screws with torsion value 1.9 Nm, tensile value 440 N/mm^2 and elasticity limit 340 N/mm^2.
During the installation control the correct input (P1-K) and output (P2-L) direction of the primary cable.
On versions with primary and secondary on terminals pay attention the connection of the primary with the secondary is not inverted.
In the case of a detachment from measurement devices of the transformer in a connected plant counter-circuit the two terminals of the transformer.
It is suggested to earth the transformers.

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CTA/25


CTA/40


CTA1


CTA2


CT3

Current transformer…/5 A with wound primary, primary and secondary current on terminals

Primary rated current Iprim	Rating power	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
5	0.5-5 and 1-7	**CTA/5**	2CSG111020R1141	**661306**			0.290	1
10	0.5-5 and 1-7	**CTA/10**	2CSG111030R1141	**661405**			0.290	1
15	0.5-5 and 1-7	**CTA/15**	2CSG111040R1141	**661504**			0.290	1
20	0.5-5 and 1-7	**CTA/20**	2CSG111050R1141	**661603**			0.290	1
25	0.5-5 and 1-7	**CTA/25**	2CSG111060R1141	**661702**			0.290	1
40	0.5-5 and 1-7	**CTA/40**	2CSG111080R1141	**661801**			0.290	1
50	0.5-5 and 1-7	**CTA/50**	2CSG111090R1141	**661900**			0.290	1
60	0.5-5 and 1-7	**CTA/60**	2CSG111100R1141	**662006**			0.290	1
80	0.5-5 and 1-7	**CTA/80**	2CSG111110R1141	**662105**			0.290	1
100	0.5-5 and 1-7	**CTA/100**	2CSG111120R1141	**662204**			0.290	1
5	0.5-10 and 1-20	**CTA1/5**	2CSG211020R1141	**662303**			0.440	1
10	0.5-10 and 1-20	**CTA1/10**	2CSG211030R1141	**662402**			0.440	1
15	0.5-10 and 1-20	**CTA1/15**	2CSG211040R1141	**662501**			0.440	1
20	0.5-10 and 1-20	**CTA1/20**	2CSG211050R1141	**662600**			0.440	1
25	0.5-10 and 1-20	**CTA1/25**	2CSG211060R1141	**662709**			0.440	1
40	0.5-10 and 1-20	**CTA1/40**	2CSG211080R1141	**662808**			0.440	1
50	0.5-10 and 1-20	**CTA1/50**	2CSG211090R1141	**662907**			0.440	1
60	0.5-10 and 1-20	**CTA1/60**	2CSG211100R1141	**663003**			0.440	1
80	0.5-10 and 1-20	**CTA1/80**	2CSG211110R1141	**663102**			0.440	1
100	0.5-10 and 1-20	**CTA1/100**	2CSG211120R1141	**663201**			0.440	1
150	0.5-10 and 1-20	**CTA1/150**	2CSG211130R1141	**663300**			0.440	1
200	0.5-10 and 1-20	**CTA1/200**	2CSG211140R1141	**663409**			0.440	1
250	0.5-10 and 1-20	**CTA1/250**	2CSG211150R1141	**663508**			0.440	1
300	0.5-10 and 1-20	**CTA1/300**	2CSG211160R1141	**663607**			0.440	1
400	0.5-10 and 1-20	**CTA1/400**	2CSG211170R1141	**663706**			0.440	1
500	0.5-10 and 1-20	**CTA1/500**	2CSG211180R1141	**663805**			0.440	1
5	0.5-10 and 1-35	**CTA2/5**	2CSG311020R1141	**663904**			0.440	1
10	0.5-10 and 1-35	**CTA2/10**	2CSG311030R1141	**664000**			0.440	1
15	0.5-10 and 1-35	**CTA2/15**	2CSG311040R1141	**664109**			0.440	1
20	0.5-10 and 1-35	**CTA2/20**	2CSG311050R1141	**664208**			0.440	1
25	0.5-10 and 1-35	**CTA2/25**	2CSG311060R1141	**664307**			0.440	1
40	0.5-10 and 1-35	**CTA2/40**	2CSG311080R1141	**664406**			0.440	1
50	0.5-10 and 1-35	**CTA2/50**	2CSG311090R1141	**664505**			0.440	1
60	0.5-10 and 1-35	**CTA2/60**	2CSG311100R1141	**664604**			0.440	1
80	0.5-10 and 1-35	**CTA2/80**	2CSG311110R1141	**664703**			0.440	1
100	0.5-10 and 1-35	**CTA2/100**	2CSG311120R1141	**664802**			0.440	1
150	0.5-10 and 1-35	**CTA2/150**	2CSG311130R1141	**664901**			0.440	1
200	0.5-10 and 1-35	**CTA2/200**	2CSG311140R1141	**665007**			0.440	1
250	0.5-10 and 1-35	**CTA2/250**	2CSG311150R1141	**665106**			0.440	1
300	0.5-10 and 1-35	**CTA2/300**	2CSG311160R1141	**665205**			0.440	1
400	0.5-10 and 1-35	**CTA2/400**	2CSG311170R1141	**665304**			0.440	1
500	0.5-10 and 1-35	**CTA2/500**	2CSG311180R1141	**665403**			0.440	1
40	3-2	**CT3/40**	2CSG121060R1101	**602408**			0.340	1
50	3-2	**CT3/50**	2CSG121070R1101	**602507**			0.340	1
60	3-2	**CT3/60**	2CSG121080R1101	**602606**			0.340	1
80	3-3	**CT3/80**	2CSG121090R1101	**602705**			0.340	1
100	1-3	**CT3/100**	2CSG121100R1101	**602804**			0.340	1
150	0.5-3	**CT3/150**	2CSG121110R1101	**602903**			0.340	1
200	0.5-3	**CT3/200**	2CSG121120R1101	**603009**			0.340	1
250	0.5-6	**CT3/250**	2CSG121130R1101	**603108**			0.340	1
300	0.5-6	**CT3/300**	2CSG121140R1101	**603207**			0.340	1
400	0.5-6	**CT3/400**	2CSG121150R1101	**603306**			0.340	1
500	0.5-6	**CT3/500**	2CSG121160R1101	**603405**			0.340	1
600	0.5-6	**CT3/600**	2CSG121170R1101	**603504**			0.340	1

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Selection tables
Measurement devices
Accessories for analogue and digital instruments


CT4


CT5


CT6


CT8


CT8/V

Primary rated current Iprim	Rating power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
100	1-3	**CT4/100**	2CSG221100R1101	**603603**			0.390	1
150	1-3	**CT4/150**	2CSG221110R1101	**603702**			0.390	1
200	0.5-4	**CT4/200**	2CSG221120R1101	**603801**			0.390	1
250	0.5-6	**CT4/250**	2CSG221130R1101	**603900**			0.390	1
300	0.5-6	**CT4/300**	2CSG221140R1101	**604006**			0.390	1
400	0.5-10	**CT4/400**	2CSG221150R1101	**604105**			0.390	1
500	0.5-10	**CT4/500**	2CSG221160R1101	**604204**			0.390	1
600	0.5-10	**CT4/600**	2CSG221170R1101	**604303**			0.390	1
800	0.5-10	**CT4/800**	2CSG221180R1101	**604402**			0.390	1
1000	0.5-10	**CT4/1000**	2CSG221190R1101	**604501**			0.390	1
250	0.5-3	**CT5/250**	2CSG321130R1101	**604600**			0.430	1
300	0.5-4	**CT5/300**	2CSG321140R1101	**604709**			0.430	1
400	0.5-6	**CT5/400**	2CSG321150R1101	**604808**			0.430	1
500	0.5-10	**CT5/500**	2CSG321160R1101	**604907**			0.430	1
600	0.5-10	**CT5/600**	2CSG321170R1101	**605003**			0.430	1
800	0.5-10	**CT5/800**	2CSG321180R1101	**605102**			0.430	1
1000	0.5-10	**CT5/1000**	2CSG321190R1101	**605201**			0.430	1
1200	0.5-10	**CT5/1200**	2CSG321200R1101	**605300**			0.430	1
1500	0.5-20	**CT5/1500**	2CSG321220R1101	**605409**			0.430	1
250	0.5-5	**CT6/250**	2CSG421130R1101	**605508**			0.430	1
300	0.5-5	**CT6/300**	2CSG421140R1101	**605607**			0.430	1
400	0.5-6	**CT6/400**	2CSG421150R1101	**605706**			0.430	1
500	0.5-6	**CT6/500**	2CSG421160R1101	**605805**			0.430	1
600	0.5-10	**CT6/600**	2CSG421170R1101	**605904**			0.430	1
800	0.5-10	**CT6/800**	2CSG421180R1101	**606000**			0.430	1
1000	0.5-20	**CT6/1000**	2CSG421190R1101	**606109**			0.430	1
1200	0.5-20	**CT6/1200**	2CSG421200R1101	**606208**			0.430	1
1500	0.5-30	**CT6/1500**	2CSG421220R1101	**606307**			0.430	1
2000	0.5-30	**CT6/2000**	2CSG421230R1101	**606406**			0.430	1
2500	0.5-30	**CT6/2500**	2CSG421240R1101	**606505**			0.430	1
300	0.5-5	**CT8/300**	2CSG521140R1101	**606604**			0.500	1
400	0.5-6	**CT8/400**	2CSG521150R1101	**606703**			0.500	1
500	0.5-10	**CT8/500**	2CSG521160R1101	**606802**			0.500	1
600	0.5-10	**CT8/600**	2CSG521170R1101	**606901**			0.500	1
800	0.5-10	**CT8/800**	2CSG521180R1101	**607007**			0.500	1
1000	0.5-10	**CT8/1000**	2CSG521190R1101	**607106**			0.500	1
1200	0.5-15	**CT8/1200**	2CSG521200R1101	**607205**			0.500	1
1500	0.5-20	**CT8/1500**	2CSG521220R1101	**607304**			0.500	1
2000	0.5-20	**CT8/2000**	2CSG521230R1101	**607403**			0.500	1
2500	0.5-20	**CT8/2500**	2CSG521240R1101	**607502**			0.500	1
3000	0.5-20	**CT8/3000**	2CSG521250R1101	**607601**			0.500	1
400	0.5-6	**CT8-V/400**	2CSG631150R1101	**608707**			0.500	1
500	0.5-10	**CT8-V/500**	2CSG631160R1101	**608806**			0.500	1
600	0.5-10	**CT8-V/600**	2CSG631170R1101	**608905**			0.500	1
800	0.5-10	**CT8-V/800**	2CSG631180R1101	**609001**			0.500	1
1000	0.5-10	**CT8-V/1000**	2CSG631190R1101	**609100**			0.500	1
1200	0.5-10	**CT8-V/1200**	2CSG631200R1101	**609209**			0.500	1
1500	0.5-10	**CT8-V/1500**	2CSG631220R1101	**609308**			0.500	1
2000	0.5-30	**CT8-V/2000**	2CSG631230R1101	**609407**			0.500	1
2500	0.5-30	**CT8-V/2500**	2CSG631240R1101	**609506**			0.500	1

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CT12

500	0.5-10	**CT12/500**	2CSG721160R1101	**607700**	0.700	1
600	0.5-10	**CT12/600**	2CSG721170R1101	**607809**	0.700	1
800	0.5-15	**CT12/800**	2CSG721180R1101	**607908**	0.700	1
1000	0.5-20	**CT12/1000**	2CSG721190R1101	**608004**	0.700	1
1200	0.5-20	**CT12/1200**	2CSG721200R1101	**608103**	0.700	1
1500	0.5-20	**CT12/1500**	2CSG721220R1101	**608202**	0.700	1
2000	0.5-30	**CT12/2000**	2CSG721230R1101	**608301**	0.700	1
2500	0.5-40	**CT12/2500**	2CSG721240R1101	**608400**	0.700	1
3000	0.5-40	**CT12/3000**	2CSG721250R1101	**608509**	0.700	1
4000	0.5-50	**CT12/4000**	2CSG721260R1101	**608608**	0.700	1
5000	0.5-50	**CT12/5000**	2CSG721270R1101	**745600**	0.700	1
6000	0.5-50	**CT12/6000**	2CSG721280R1101	**745709**	0.700	1

800	0.5-10	**CT12-V/800**	2CSG831180R1101	**609605**	0.660	1
1000	0.5-10	**CT12-V/1000**	2CSG831190R1101	**609704**	0.660	1
1250	0.5-10	**CT12-V/1200**	2CSG831200R1101	**609803**	0.660	1
1200	0.5-10	**CT12-V/1250**	2CSG831210R1101	**609902**	0.660	1
1500	0.5-12	**CT12-V/1500**	2CSG831220R1101	**610007**	0.660	1
2000	0.5-15	**CT12-V/2000**	2CSG831230R1101	**610106**	0.660	1
2500	0.5-20	**CT12-V/2500**	2CSG831240R1101	**610205**	0.660	1
3000	0.5-20	**CT12-V/3000**	2CSG831250R1101	**610304**	0.660	1
4000	-	**CT12-V/4000**	2CSG831260R1101	**745808**	0.660	1

Compact type current transformer.../5 A with through primary

From cable ø 21 mm max.



CT-M1

40	3-2	**CT-M1/40**	2CSG121060R1151	**665502**	0.230	1
50	3-2	**CT-M1/50**	2CSG121070R1151	**665601**	0.230	1
60	3-2	**CT-M1/60**	2CSG121080R1151	**665700**	0.230	1
80	3-3	**CT-M1/80**	2CSG121090R1151	**665809**	0.230	1
100	1-3	**CT-M1/100**	2CSG121100R1151	**665908**	0.230	1
150	1-4	**CT-M1/150**	2CSG121110R1151	**666004**	0.230	1
200	0.5-3	**CT-M1/200**	2CSG121120R1151	**666103**	0.230	1
250	0.5-3	**CT-M1/250**	2CSG121130R1151	**666202**	0.230	1

From cable ø 23 mm max. or horizontal bar 20x12 - 25x15 - 30x10 mm



CT-M3

100	1-2	**CT-M3/100**	2CSG221100R1151	**666301**	0.230	1
150	1-3	**CT-M3/150**	2CSG221110R1151	**666400**	0.230	1
200	1-3	**CT-M3/200**	2CSG221120R1151	**666509**	0.230	1
250	0.5-2	**CT-M3/250**	2CSG221130R1151	**666608**	0.230	1
300	0.5-2	**CT-M3/300**	2CSG221140R1151	**666707**	0.230	1
400	0.5-3	**CT-M3/400**	2CSG221150R1151	**666806**	0.230	1

From cable ø 30 mm max. or horizontal/vertical bar 25x25 - 30x20 - 40x10 mm



CT-M4

100	1-3	**CT-M4/100**	2CSG321100R1151	**666905**	0.290	1
150	1-3	**CT-M4/150**	2CSG321110R1151	**667001**	0.290	1
200	0.5-4	**CT-M4/200**	2CSG321120R1151	**667100**	0.290	1
250	0.5-6	**CT-M4/250**	2CSG321130R1151	**667209**	0.290	1
300	0.5-6	**CT-M4/300**	2CSG321140R1151	**667308**	0.290	1
400	0.5-10	**CT-M4/400**	2CSG321150R1151	**667407**	0.290	1
500	0.5-10	**CT-M4/500**	2CSG321160R1151	**667506**	0.290	1
600	0.5-10	**CT-M4/600**	2CSG321170R1151	**667605**	0.290	1

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CT-M5


CT-M6


CT-SM

Primary rated current Iprim	Rating power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
From horizontal bar 50x12 mm								
250	1-3	**CT-M5/250**	2CSG421130R1151	**667704**			0.290	1
300	0.5-4	**CT-M5/300**	2CSG421140R1151	**667803**			0.290	1
400	0.5-4	**CT-M5/400**	2CSG421150R1151	**667902**			0.290	1
500	0.5-6	**CT-M5/500**	2CSG421160R1151	**668008**			0.290	1
600	0.5-6	**CT-M5/600**	2CSG421170R1151	**668107**			0.290	1
800	0.5-10	**CT-M5/800**	2CSG421180R1151	**668206**			0.290	1
1000	0.5-10	**CT-M5/1000**	2CSG421190R1151	**668305**			0.290	1
From two cables (max. ø 22 mm) or from horizontal bar 50x23 - 60x20 mm								
300	0.5-5	**CT-M6/300**	2CSG521140R1151	**668404**			0.380	1
400	0.5-6	**CT-M6/400**	2CSG521150R1151	**668503**			0.380	1
500	0.5-6	**CT-M6/500**	2CSG521160R1151	**668602**			0.380	1
600	0.5-6	**CT-M6/600**	2CSG521170R1151	**668701**			0.380	1
800	0.5-10	**CT-M6/800**	2CSG521180R1151	**668800**			0.380	1
1000	0.5-10	**CT-M6/1000**	2CSG521190R1151	**668909**			0.380	1
1200	0.5-15	**CT-M6/1200**	2CSG521200R1151	**669005**			0.380	1
1500	0.5-20	**CT-M6/1500**	2CSG521220R1151	**669104**			0.380	1
Miniaturized type current transformer.../5 A with through primary								
From cable (max. ø 13 mm-minimum distance between cables = 27 mm)								
40	3-2	**CT-SM1/40**	2CSG121060R1161	**669203**			0.210	1
50	3-2	**CT-SM1/50**	2CSG121070R1161	**669302**			0.210	1
60	3-3	**CT-SM1/60**	2CSG121080R1161	**669401**			0.210	1
75	3-3	**CT-SM1/75**	2CSG121090R1161	**669500**			0.210	1
80	3-3	**CT-SM1/80**	2CSG121100R1161	**669609**			0.210	1
100	1-3	**CT-SM1/100**	2CSG121110R1161	**669708**			0.210	1
120	1-5	**CT-SM1/120**	2CSG121120R1161	**669807**			0.210	1
125	1-5	**CT-SM1/125**	2CSG121130R1161	**669906**			0.210	1
150	1-5	**CT-SM1/150**	2CSG121140R1161	**670001**			0.210	1
From cable (max. ø 11 mm) or horizontal bar 15x5 mm (minimum distance between cables or bars = 27 mm)								
60	3-3	**CT-SM2/60**	2CSG221080R1161	**670100**			0.210	1
75	3-3	**CT-SM2/75**	2CSG221090R1161	**670209**			0.210	1
80	3-3	**CT-SM2/80**	2CSG221100R1161	**670308**			0.210	1
100	1-3	**CT-SM2/100**	2CSG221110R1161	**670407**			0.210	1
120	1-5	**CT-SM2/120**	2CSG221120R1161	**670506**			0.210	1
125	1-5	**CT-SM2/125**	2CSG221130R1161	**670605**			0.210	1
150	1-5	**CT-SM2/150**	2CSG221140R1161	**670704**			0.210	1

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CT-SM

From cable (max. ø 18 mm-minimum distance between cables or bars = 45 mm)

40	3-3	**CT-SM3/40**	2CSG321060R1161	**670803**	0.320	1
50	3-4	**CT-SM3/50**	2CSG321070R1161	**670902**	0.320	1
60	3-5	**CT-SM3/60**	2CSG321080R1161	**671008**	0.320	1
75	3-5	**CT-SM3/75**	2CSG321090R1161	**671107**	0.320	1
80	3-5	**CT-SM3/80**	2CSG321100R1161	**671206**	0.320	1
100	1-5	**CT-SM3/100**	2CSG321110R1161	**671305**	0.320	1
120	1-3	**CT-SM3/120**	2CSG321120R1161	**671404**	0.320	1
125	1-3	**CT-SM3/125**	2CSG321130R1161	**671503**	0.320	1
150	0.5-5	**CT-SM3/150**	2CSG321140R1161	**671602**	0.320	1
200	0.5-5	**CT-SM3/200**	2CSG321150R1161	**671701**	0.320	1
250	0.5-10	**CT-SM3/250**	2CSG321160R1161	**671800**	0.320	1
300	0.5-10	**CT-SM3/300**	2CSG321170R1161	**671909**	0.320	1

From cable (max. ø 25 mm - minimum distance between cables or bars = 45 mm)

200	0.5-5	**CT-SM4/200**	2CSG421150R1161	**672005**	0.320	1
250	0.5-6	**CT-SM4/250**	2CSG421160R1161	**672104**	0.320	1
300	0.5-6	**CT-SM4/300**	2CSG421170R1161	**672203**	0.320	1
400	0.5-10	**CT-SM4/400**	2CSG421180R1161	**672302**	0.320	1

From horizontal bar 15x5 - 20x5 - 25x5 - 25x6.5 mm or from vertical bar 15x5 - 20x5 mm (minimum distance between bars = 35 mm)

100	1-4	**CT-SM5/100**	2CSG521110R1161	**672401**	0.260	1
120	1-4	**CT-SM5/120**	2CSG521120R1161	**672500**	0.260	1
125	1-4	**CT-SM5/125**	2CSG521130R1161	**672609**	0.260	1
150	1-4	**CT-SM5/150**	2CSG521140R1161	**672708**	0.260	1
200	1-4	**CT-SM5/200**	2CSG521150R1161	**672807**	0.260	1
250	1-4	**CT-SM5/250**	2CSG521160R1161	**672906**	0.260	1
300	0.5-4	**CT-SM5/300**	2CSG521170R1161	**673002**	0.260	1

From cable (max. ø 32 mm-minimum distance between cables or bars = 45 mm)

300	0.5-5	**CT-SM6/300**	2CSG621170R1161	**673101**	0.320	1
400	0.5-6	**CT-SM6/400**	2CSG621180R1161	**673200**	0.320	1
500	0.5-10	**CT-SM6/500**	2CSG621190R1161	**673309**	0.320	1
600	0.5-10	**CT-SM6/600**	2CSG621200R1161	**673408**	0.320	1

From horizontal bar 29x9.5 - 29x10.5 - 30x5 - 30x6 - 30x8 - 30x10 - 2x30x5 - 2x32x5 mm or from vertical bar 32x5 mm (minimum distance between horizontal bars = 45 mm. between vertical bars = 35 mm)

200	1-5	**CT-SM7/200**	2CSG731150R1161	**673507**	0.320	1
250	1-5	**CT-SM7/250**	2CSG731160R1161	**673606**	0.320	1
300	0.5-5	**CT-SM7/300**	2CSG731170R1161	**673705**	0.320	1
400	0.5-5	**CT-SM7/400**	2CSG731180R1161	**673804**	0.320	1
500	0.5-10	**CT-SM7/500**	2CSG731190R1161	**673903**	0.320	1
600	0.5-10	**CT-SM7/600**	2CSG731200R1161	**674009**	0.320	1

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CT-SM

Primary rated current Iprim	Rating power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
From horizontal bar 30x30 - 30x45 - 37x9.5 - 37x13 - 50x10 - 55x9.5 - 55x13 - 63x35 - 2x50x5 2x50x10 2x63x5 - 3x50x5 mm (minimum distance between horizontal bars = 70 mm)								
200	1-5	**CT-SM8/200**	2CSG821150R1161	**674108**			0.410	1
250	1-5	**CT-SM8/250**	2CSG821160R1161	**674207**			0.410	1
300	0.5-5	**CT-SM8/300**	2CSG821170R1161	**674306**			0.410	1
400	0.5-5	**CT-SM8/400**	2CSG821180R1161	**674405**			0.410	1
500	0.5-10	**CT-SM8/500**	2CSG821190R1161	**674504**			0.410	1
600	0.5-10	**CT-SM8/600**	2CSG821200R1161	**674603**			0.410	1
800	0.5-10	**CT-SM8/800**	2CSG821220R1161	**674702**			0.410	1
1000	0.5-15	**CT-SM8/1000**	2CSG821230R1161	**674801**			0.410	1
1250	0.5-15	**CT-SM8/1250**	2CSG821240R1161	**674900**			0.410	1
1500	0.5-15	**CT-SM8/1500**	2CSG821250R1161	**675006**			0.410	1
From vertical bar 2x63x5 - 3x63x5 mm (minimum distance between bars = 45 mm)								
400	0.5-5	**CT-SM9/400**	2CSG931180R1161	**675105**			0.420	1
500	0.5-10	**CT-SM9/500**	2CSG931190R1161	**675204**			0.420	1
600	0.5-10	**CT-SM9/600**	2CSG931200R1161	**675303**			0.420	1
800	0.5-10	**CT-SM9/800**	2CSG931210R1161	**675402**			0.420	1
1000	0.5-15	**CT-SM9/1000**	2CSG931220R1161	**675501**			0.420	1
1250	0.5-15	**CT-SM9/1250**	2CSG931240R1161	**675600**			0.420	1
1500	0.5-15	**CT-SM9/1500**	2CSG931250R1161	**675709**			0.420	1

Protection type current transformer…/5 A



CTP1

With wound primary, primary and secondary current on terminals

5	4 (5P5)	**CTP1 5P5/5**	2CSG111010R1171	**675808**			0.390	1
10	4 (5P5)	**CTP1 5P5/10**	2CSG111020R1171	**675907**			0.390	1
15	4 (5P5)	**CTP1 5P5/15**	2CSG111030R1171	**676003**			0.390	1
20	4 (5P5)	**CTP1 5P5/20**	2CSG111040R1171	**676102**			0.390	1
25	4 (5P5)	**CTP1 5P5/25**	2CSG111050R1171	**676201**			0.390	1
40	4 (5P5)	**CTP1 5P5/40**	2CSG111060R1171	**676300**			0.390	1

With wound primary, primary and secondary current on terminals

5	2 (5P10)	**CTP1 5P10/5**	2CSG121010R1171	**676409**			0.390	1
10	2 (5P10)	**CTP1 5P10/10**	2CSG121020R1171	**676508**			0.390	1
15	2 (5P10)	**CTP1 5P10/15**	2CSG121030R1171	**676607**			0.390	1
20	2 (5P10)	**CTP1 5P10/20**	2CSG121040R1171	**676706**			0.390	1
25	2 (5P10)	**CTP1 5P10/25**	2CSG121050R1171	**676805**			0.390	1
40	2 (5P10)	**CTP1 5P10/40**	2CSG121060R1171	**676904**			0.390	1



CTP2

With wound primary, primary current from built-in central bar 25x3 mm up to 300 A, 25x5 mm from 400 to 500 A and secondary current on terminals

50	4 (5P5)	**CTP2 5P5/50**	2CSG211070R1171	**677000**			0.390	1
60	4 (5P5)	**CTP2 5P5/60**	2CSG211080R1171	**677109**			0.390	1
80	4 (5P5)	**CTP2 5P5/80**	2CSG211090R1171	**677208**			0.390	1
100	4 (5P5)	**CTP2 5P5/100**	2CSG211100R1171	**677307**			0.390	1
150	4 (5P5)	**CTP2 5P5/150**	2CSG211110R1171	**677406**			0.390	1
200	4 (5P5)	**CTP2 5P5/200**	2CSG211120R1171	**677505**			0.390	1
250	4 (5P5)	**CTP2 5P5/250**	2CSG211130R1171	**677604**			0.390	1
300	4 (5P5)	**CTP2 5P5/300**	2CSG211140R1171	**677703**			0.390	1
400	4 (5P5)	**CTP2 5P5/400**	2CSG211150R1171	**677802**			0.390	1
500	4 (5P5)	**CTP2 5P5/500**	2CSG211160R1171	**677901**			0.390	1

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CTP2

With wound primary, primary current from built-in central bar 25x3 mm up to 300 A, 25x5 mm from 400 to 500 A and secondary current on terminals

50	2 (5P10)	**CTP2 5P10/50**	2CSG221070R1171	**678007**	0.390	1
60	2 (5P10)	**CTP2 5P10/60**	2CSG221080R1171	**678106**	0.390	1
80	2 (5P10)	**CTP2 5P10/80**	2CSG221090R1171	**678205**	0.390	1
100	2 (5P10)	**CTP2 5P10/100**	2CSG221100R1171	**678304**	0.390	1
150	2 (5P10)	**CTP2 5P10/150**	2CSG221110R1171	**678403**	0.390	1
200	2 (5P10)	**CTP2 5P10/200**	2CSG221120R1171	**678502**	0.390	1
250	2 (5P10)	**CTP2 5P10/250**	2CSG221130R1171	**678601**	0.390	1
300	2 (5P10)	**CTP2 5P10/300**	2CSG221140R1171	**678700**	0.390	1
400	2 (5P10)	**CTP2 5P10/400**	2CSG221150R1171	**678809**	0.390	1
500	2 (5P10)	**CTP2 5P10/500**	2CSG221160R1171	**678908**	0.390	1



CTP5

For primary current from cable (max. ø 30 mm) or from horizontal bar 30x30 - 40x25 - 50x20 mm, vertical 30x10 mm

250	4 (5P5)	**CTP5 5P5/250**	2CSG311130R1171	**679004**	0.430	1
300	4 (5P5)	**CTP5 5P5/300**	2CSG311140R1171	**679103**	0.430	1
400	4 (5P5)	**CTP5 5P5/400**	2CSG311150R1171	**679202**	0.430	1
500	4 (5P5)	**CTP5 5P5/500**	2CSG311160R1171	**679301**	0.430	1
600	4 (5P5)	**CTP5 5P5/600**	2CSG311170R1171	**679400**	0.430	1

For primary current from cable (max. ø 30 mm) or from horizontal bar 30x30 - 40x25 - 50x20 mm, vertical 30x10 mm

800	4 (5P5)	**CTP5 5P5/800**	2CSG311180R1171	**679509**	0.430	1
1000	4 (5P5)	**CTP5 5P5/1000**	2CSG311190R1171	**679608**	0.430	1
1200	6 (5P5)	**CTP5 5P5/1200**	2CSG311200R1171	**679707**	0.430	1
1500	8 (5P5)	**CTP5 5P5/1500**	2CSG311220R1171	**679806**	0.430	1

For primary current from cable (max. ø 30 mm) or from horizontal bar 30x30 - 40x25 - 50x20 mm, vertical 30x10 mm

250	2 (5P10)	**CTP5 5P10/250**	2CSG321130R1171	**679905**	0.430	1
300	2 (5P10)	**CTP5 5P10/300**	2CSG321140R1171	**680000**	0.430	1
400	2 (5P10)	**CTP5 5P10/400**	2CSG321150R1171	**680109**	0.430	1
500	2 (5P10)	**CTP5 5P10/500**	2CSG321160R1171	**680208**	0.430	1
600	2 (5P10)	**CTP5 5P10/600**	2CSG321170R1171	**680307**	0.430	1
800	2 (5P10)	**CTP5 5P10/800**	2CSG321180R1171	**680406**	0.430	1
1000	2 (5P10)	**CTP5 5P10/1000**	2CSG321190R1171	**680505**	0.430	1
1200	3 (5P10)	**CTP5 5P10/1200**	2CSG321200R1171	**680604**	0.430	1
1500	4 (5P10)	**CTP5 5P10/1500**	2CSG321220R1171	**680703**	0.430	1



CTP6

For primary current from cable (max. ø 50 mm) or from horizontal bar 50x20 - 60x20 mm

250	6 (5P5)	**CTP6 5P5/250**	2CSG411130R1171	**680802**	0.460	1
300	6 (5P5)	**CTP6 5P5/300**	2CSG411140R1171	**680901**	0.460	1
400	5 (5P5)	**CTP6 5P5/400**	2CSG411150R1171	**681007**	0.460	1
500	5 (5P5)	**CTP6 5P5/500**	2CSG411160R1171	**681106**	0.460	1
600	5 (5P5)	**CTP6 5P5/600**	2CSG411170R1171	**681205**	0.460	1
800	15 (5P5)	**CTP6 5P5/800**	2CSG411180R1171	**681304**	0.460	1
1000	20 (5P5)	**CTP6 5P5/1000**	2CSG411190R1171	**681403**	0.460	1
1200	20 (5P5)	**CTP6 5P5/1200**	2CSG411200R1171	**681502**	0.460	1
1500	30 (5P5)	**CTP6 5P5/1500**	2CSG411220R1171	**681601**	0.460	1

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CTP6



CTP8

Primary rated current Iprim	Rating power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
For primary current from cable (max. ø 50 mm) or from horizontal bar 50x20 - 60x20 mm								
250	2 (5P10)	**CTP6 5P10/250**	2CSG421130R1171	**681700**			0.460	1
300	3 (5P10)	**CTP6 5P10/300**	2CSG421140R1171	**681809**			0.460	1
400	4 (5P10)	**CTP6 5P10/400**	2CSG421150R1171	**681908**			0.460	1
500	4 (5P10)	**CTP6 5P10/500**	2CSG421160R1171	**682004**			0.460	1
600	4 (5P10)	**CTP6 5P10/600**	2CSG421170R1171	**682103**			0.460	1
800	5 (5P10)	**CTP6 5P10/800**	2CSG421180R1171	**682202**			0.460	1
1000	6 (5P10)	**CTP6 5P10/1000**	2CSG421190R1171	**682301**			0.460	1
1200	6 (5P10)	**CTP6 5P10/1200**	2CSG421200R1171	**682400**			0.460	1
1500	10 (5P10)	**CTP6 5P10/1500**	2CSG421220R1171	**682509**			0.460	1
For primary current from two cables (max. ø 30 mm each) or from horizontal bar 60x30 - 80x30 mm								
300	5 (5P5)	**CTP8 5P5/300**	2CSG511140R1171	**682608**			0.500	1
400	6 (5P5)	**CTP8 5P5/400**	2CSG511150R1171	**682707**			0.500	1
500	15 (5P5)	**CTP8 5P5/500**	2CSG511160R1171	**682806**			0.500	1
600	20 (5P5)	**CTP8 5P5/600**	2CSG511170R1171	**682905**			0.500	1
800	20 (5P5)	**CTP8 5P5/800**	2CSG511180R1171	**683001**			0.500	1
1000	20 (5P5)	**CTP8 5P5/1000**	2CSG511190R1171	**683100**			0.500	1
1200	30 (5P5)	**CTP8 5P5/1200**	2CSG511200R1171	**683209**			0.500	1
1500	20 (5P5)	**CTP8 5P5/1500**	2CSG511220R1171	**683308**			0.500	1
2000	12 (5P5)	**CTP8 5P5/2000**	2CSG511230R1171	**683407**			0.500	1
2500	15 (5P5)	**CTP8 5P5/2500**	2CSG511240R1171	**683506**			0.500	1
For primary current from two cables (max. ø 30 mm each) or from horizontal bar 60x30 - 80x30 mm								
300	3 (5P10)	**CTP8 5P10/300**	2CSG521140R1171	**683605**			0.500	1
400	3 (5P10)	**CTP8 5P10/400**	2CSG521150R1171	**683704**			0.500	1
500	8 (5P10)	**CTP8 5P10/500**	2CSG521160R1171	**683803**			0.500	1
600	8 (5P10)	**CTP8 5P10/600**	2CSG521170R1171	**683902**			0.500	1
800	10 (5P10)	**CTP8 5P10/800**	2CSG521180R1171	**684008**			0.500	1
1000	10 (5P10)	**CTP8 5P10/1000**	2CSG521190R1171	**684107**			0.500	1
1200	15 (5P10)	**CTP8 5P10/1200**	2CSG521200R1171	**684206**			0.500	1
1500	6 (5P10)	**CTP8 5P10/1500**	2CSG521220R1171	**684305**			0.500	1
2000	6 (5P10)	**CTP8 5P10/2000**	2CSG521230R1171	**684404**			0.500	1
2500	8 (5P10)	**CTP8 5P10/2500**	2CSG521240R1171	**684503**			0.500	1
For primary current from two cables (max. ø 30 mm each) or from horizontal bar 60x30 - 80x30 mm								
300	1.5 (5P15)	**CTP8 5P15/300**	2CSG531140R1171	**684602**			0.500	1
400	1.5 (5P15)	**CTP8 5P15/400**	2CSG531150R1171	**684701**			0.500	1
500	4 (5P15)	**CTP8 5P15/500**	2CSG531160R1171	**684800**			0.500	1
600	4 (5P15)	**CTP8 5P15/600**	2CSG531170R1171	**684909**			0.500	1
800	6 (5P15)	**CTP8 5P15/800**	2CSG531180R1171	**685005**			0.500	1
1000	5 (5P15)	**CTP8 5P15/1000**	2CSG531190R1171	**685104**			0.500	1
1200	6 (5P15)	**CTP8 5P15/1200**	2CSG531200R1171	**685203**			0.500	1
1500	2 (5P15)	**CTP8 5P15/1500**	2CSG531220R1171	**685302**			0.500	1
2000	5 (5P15)	**CTP8 5P15/2000**	2CSG531230R1171	**685401**			0.500	1
2500	6 (5P15)	**CTP8 5P15/2500**	2CSG531240R1171	**685500**			0.500	1

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CTP8


CTP12

For primary current from two cables (max. ø 30 mm each) or from horizontal bar 60x30 - 80x30 mm

300	1 (5P20)	**CTP8 5P20/300**	2CSG541140R1171	**685609**	0.500	1
400	1 (5P20)	**CTP8 5P20/400**	2CSG541150R1171	**685708**	0.500	1
500	2 (5P20)	**CTP8 5P20/500**	2CSG541160R1171	**685807**	0.500	1
600	2 (5P20)	**CTP8 5P20/600**	2CSG541170R1171	**685906**	0.500	1
800	3 (5P20)	**CTP8 5P20/800**	2CSG541180R1171	**686002**	0.500	1
1000	2 (5P20)	**CTP8 5P20/1000**	2CSG541190R1171	**686101**	0.500	1
1200	3 (5P20)	**CTP8 5P20/1200**	2CSG541200R1171	**686200**	0.500	1
1500	1 (5P20)	**CTP8 5P20/1500**	2CSG541220R1171	**686309**	0.500	1
2000	3 (5P20)	**CTP8 5P20/2000**	2CSG541230R1171	**686408**	0.500	1
2500	4 (5P20)	**CTP8 5P20/2500**	2CSG541240R1171	**686507**	0.500	1

For primary current from two cables (max. ø 50 mm each) or from horizontal bar 80x50 - 100x50 - 125x50 mm

400	8 (5P5)	**CTP12 5P5/400**	2CSG611150R1171	**686606**	0.390	1
500	8 (5P5)	**CTP12 5P5/500**	2CSG611160R1171	**686705**	0.390	1
600	8 (5P5)	**CTP12 5P5/600**	2CSG611170R1171	**686804**	0.390	1
800	12 (5P5)	**CTP12 5P5/800**	2CSG611180R1171	**686903**	0.390	1
1000	15 (5P5)	**CTP12 5P5/1000**	2CSG611190R1171	**687009**	0.390	1
1200	20 (5P5)	**CTP12 5P5/1200**	2CSG611200R1171	**687108**	0.390	1
1500	20 (5P5)	**CTP12 5P5/1500**	2CSG611220R1171	**687207**	0.390	1
2000	25 (5P5)	**CTP12 5P5/2000**	2CSG611230R1171	**687306**	0.390	1
2500	30 (5P5)	**CTP12 5P5/2500**	2CSG611240R1171	**687405**	0.390	1
3000	40 (5P5)	**CTP12 5P5/3000**	2CSG611250R1171	**687504**	0.390	1
4000	50 (5P5)	**CTP12 5P5/4000**	2CSG611260R1171	**687603**	0.390	1

For primary current from two cables (max. ø 50 mm each) or from horizontal bar 80x50 - 100x50 - 125x50 mm

400	4 (5P10)	**CTP12 5P10/400**	2CSG621150R1171	**687702**	0.390	1
500	4 (5P10)	**CTP12 5P10/500**	2CSG621160R1171	**687801**	0.390	1
600	4 (5P10)	**CTP12 5P10/600**	2CSG621170R1171	**687900**	0.390	1
800	6 (5P10)	**CTP12 5P10/800**	2CSG621180R1171	**688006**	0.390	1
1000	8 (5P10)	**CTP12 5P10/1000**	2CSG621190R1171	**688105**	0.390	1
1200	10 (5P10)	**CTP12 5P10/1200**	2CSG621200R1171	**688204**	0.390	1
1500	10 (5P10)	**CTP12 5P10/1500**	2CSG621220R1171	**688303**	0.390	1
2000	12 (5P10)	**CTP12 5P10/2000**	2CSG621230R1171	**688402**	0.390	1
2500	15 (5P10)	**CTP12 5P10/2500**	2CSG621240R1171	**688501**	0.390	1
3000	20 (5P10)	**CTP12 5P10/3000**	2CSG621250R1171	**688600**	0.390	1
4000	25 (5P10)	**CTP12 5P10/4000**	2CSG621260R1171	**688709**	0.390	1

For primary current from two cables (max. ø 50 mm each) or from horizontal bar 80x50 - 100x50 - 125x50 mm

400	3 (5P15)	**CTP12 5P15/400**	2CSG631150R1171	**688808**	0.390	1
500	3 (5P15)	**CTP12 5P15/500**	2CSG631160R1171	**688907**	0.390	1
600	3 (5P15)	**CTP12 5P15/600**	2CSG631170R1171	**689003**	0.390	1
800	4 (5P15)	**CTP12 5P15/800**	2CSG631180R1171	**689102**	0.390	1
1000	6 (5P15)	**CTP12 5P15/1000**	2CSG631190R1171	**689201**	0.390	1
1200	6 (5P15)	**CTP12 5P15/1200**	2CSG631200R1171	**689300**	0.390	1
1500	6 (5P15)	**CTP12 5P15/1500**	2CSG631220R1171	**689409**	0.390	1
2000	8 (5P15)	**CTP12 5P15/2000**	2CSG631230R1171	**689508**	0.390	1
2500	10 (5P15)	**CTP12 5P15/2500**	2CSG631240R1171	**689607**	0.390	1
3000	15 (5P15)	**CTP12 5P15/3000**	2CSG631250R1171	**689706**	0.390	1
4000	15 (5P15)	**CTP12 5P15/4000**	2CSG631260R1171	**689805**	0.390	1

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CTP12



CTA



CTA1

Primary rated current Iprim	Rating power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
For primary current from two cables (max. ø 50 mm each) or from horizontal bar 80x50 - 100x50 - 125x50 mm								
400	2 (5P20)	**CTP12 5P20/400**	2CSG641150R1171	**689904**			0.390	1
500	2 (5P20)	**CTP12 5P20/500**	2CSG641160R1171	**690009**			0.390	1
600	2 (5P20)	**CTP12 5P20/600**	2CSG641170R1171	**690108**			0.390	1
800	3 (5P20)	**CTP12 5P20/800**	2CSG641180R1171	**690207**			0.390	1
1000	4 (5P20)	**CTP12 5P20/1000**	2CSG641190R1171	**690306**			0.390	1
1200	5 (5P20)	**CTP12 5P20/1200**	2CSG641200R1171	**690405**			0.390	1
1500	5 (5P20)	**CTP12 5P20/1500**	2CSG641220R1171	**690504**			0.390	1
2000	6 (5P20)	**CTP12 5P20/2000**	2CSG641230R1171	**690603**			0.390	1
2500	8 (5P20)	**CTP12 5P20/2500**	2CSG641240R1171	**690702**			0.390	1
3000	10 (5P20)	**CTP12 5P20/3000**	2CSG641250R1171	**690801**			0.390	1
4000	12 (5P20)	**CTP12 5P20/4000**	2CSG641260R1171	**690900**			0.390	1
Current transformer…/1 A with wound primary, primary and secondary current on terminals								
1	0.5-5 and 1-7	**CTA/1-1**	2CSG112010R1141	**691006**			0.290	1
5	0.5-5 and 1-7	**CTA/5-1**	2CSG112020R1141	**691105**			0.290	1
10	0.5-5 and 1-7	**CTA/10-1**	2CSG112030R1141	**691204**			0.290	1
15	0.5-5 and 1-7	**CTA/15-1**	2CSG112040R1141	**691303**			0.290	1
20	0.5-5 and 1-7	**CTA/20-1**	2CSG112050R1141	**691402**			0.290	1
25	0.5-5 and 1-7	**CTA/25-1**	2CSG112060R1141	**691501**			0.290	1
40	0.5-5 and 1-7	**CTA/40-1**	2CSG112080R1141	**691600**			0.290	1
50	0.5-5 and 1-7	**CTA/50-1**	2CSG112090R1141	**691709**			0.290	1
60	0.5-5 and 1-7	**CTA/60-1**	2CSG112100R1141	**691808**			0.290	1
80	0.5-5 and 1-7	**CTA/80-1**	2CSG112110R1141	**691907**			0.290	1
100	0.5-5 and 1-7	**CTA/100-1**	2CSG112120R1141	**692003**			0.290	1
1	0.5-10 and 1-20	**CTA1/1-1**	2CSG212010R1141	**692102**			0.440	1
5	0.5-10 and 1-20	**CTA1/5-1**	2CSG212020R1141	**692201**			0.440	1
10	0.5-10 and 1-20	**CTA1/10-1**	2CSG212030R1141	**692300**			0.440	1
15	0.5-10 and 1-20	**CTA1/15-1**	2CSG212040R1141	**692409**			0.440	1
20	0.5-10 and 1-20	**CTA1/20-1**	2CSG212050R1141	**692508**			0.440	1
25	0.5-10 and 1-20	**CTA1/25-1**	2CSG212060R1141	**692607**			0.440	1
40	0.5-10 and 1-20	**CTA1/40-1**	2CSG212080R1141	**692706**			0.440	1
50	0.5-10 and 1-20	**CTA1/50-1**	2CSG212090R1141	**692805**			0.440	1
60	0.5-10 and 1-20	**CTA1/60-1**	2CSG212100R1141	**692904**			0.440	1
80	0.5-10 and 1-20	**CTA1/80-1**	2CSG212110R1141	**693000**			0.440	1
100	0.5-10 and 1-20	**CTA1/100-1**	2CSG212120R1141	**693109**			0.440	1
150	0.5-10 and 1-20	**CTA1/150-1**	2CSG212130R1141	**693208**			0.440	1
200	0.5-10 and 1-20	**CTA1/200-1**	2CSG212140R1141	**693307**			0.440	1
250	0.5-10 and 1-20	**CTA1/250-1**	2CSG212150R1141	**693406**			0.440	1
300	0.5-10 and 1-20	**CTA1/300-1**	2CSG212160R1141	**693505**			0.440	1
400	0.5-10 and 1-20	**CTA1/400-1**	2CSG212170R1141	**693604**			0.440	1
500	0.5-10 and 1-20	**CTA1/500-1**	2CSG212180R1141	**693703**			0.440	1

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CTA2

1	0.5-10 and 1-35	**CTA2/1-1**	2CSG312010R1141	**693802**	0.440	1
5	0.5-10 and 1-35	**CTA2/5-1**	2CSG312020R1141	**693901**	0.440	1
10	0.5-10 and 1-35	**CTA2/10-1**	2CSG312030R1141	**694007**	0.440	1
15	0.5-10 and 1-35	**CTA2/15-1**	2CSG312040R1141	**694106**	0.440	1
20	0.5-10 and 1-35	**CTA2/20-1**	2CSG312050R1141	**694205**	0.440	1
25	0.5-10 and 1-35	**CTA2/25-1**	2CSG312060R1141	**694304**	0.440	1
40	0.5-10 and 1-35	**CTA2/40-1**	2CSG312080R1141	**694403**	0.440	1
50	0.5-10 and 1-35	**CTA2/50-1**	2CSG312090R1141	**694502**	0.440	1
60	0.5-10 and 1-35	**CTA2/60-1**	2CSG312100R1141	**694601**	0.440	1
80	0.5-10 and 1-35	**CTA2/80-1**	2CSG312110R1141	**694700**	0.440	1
100	0.5-10 and 1-35	**CTA2/100-1**	2CSG312120R1141	**694809**	0.440	1
150	0.5-10 and 1-35	**CTA2/150-1**	2CSG312130R1141	**694908**	0.440	1
200	0.5-10 and 1-35	**CTA2/200-1**	2CSG312140R1141	**695004**	0.440	1
250	0.5-10 and 1-35	**CTA2/250-1**	2CSG312150R1141	**695103**	0.440	1
300	0.5-10 and 1-35	**CTA2/300-1**	2CSG312160R1141	**695202**	0.440	1
400	0.5-10 and 1-35	**CTA2/400-1**	2CSG312170R1141	**695301**	0.440	1
500	0.5-10 and 1-35	**CTA2/500-1**	2CSG312180R1141	**695400**	0.440	1



CT3

40	3-2	**CT3/40-1**	2CSG122060R1101	**695509**	0.340	1
50	3-2	**CT3/50-1**	2CSG122070R1101	**695608**	0.340	1
60	3-2	**CT3/60-1**	2CSG122080R1101	**695707**	0.340	1
80	3-3	**CT3/80-1**	2CSG122090R1101	**695806**	0.340	1
100	1-3	**CT3/100-1**	2CSG122100R1101	**695905**	0.340	1
150	0.5-3	**CT3/150-1**	2CSG122110R1101	**696001**	0.340	1
200	0.5-3	**CT3/200-1**	2CSG122120R1101	**696100**	0.340	1
250	0.5-6	**CT3/250-1**	2CSG122130R1101	**696209**	0.340	1
300	0.5-6	**CT3/300-1**	2CSG122140R1101	**696308**	0.340	1
400	0.5-6	**CT3/400-1**	2CSG122150R1101	**696407**	0.340	1
500	0.5-6	**CT3/500-1**	2CSG122160R1101	**696506**	0.340	1
600	0.5-6	**CT3/600-1**	2CSG122170R1101	**696605**	0.340	1



CT4

100	1-3	**CT4/100-1**	2CSG222100R1101	**696704**	0.390	1
150	1-3	**CT4/150-1**	2CSG222110R1101	**696803**	0.390	1
200	0.5-4	**CT4/200-1**	2CSG222120R1101	**696902**	0.390	1
250	0.5-6	**CT4/250-1**	2CSG222130R1101	**697008**	0.390	1
300	0.5-6	**CT4/300-1**	2CSG222140R1101	**697107**	0.390	1
400	0.5-10	**CT4/400-1**	2CSG222150R1101	**697206**	0.390	1
500	0.5-10	**CT4/500-1**	2CSG222160R1101	**697305**	0.390	1
600	0.5-10	**CT4/600-1**	2CSG222170R1101	**697404**	0.390	1
800	0.5-10	**CT4/800-1**	2CSG222180R1101	**697503**	0.390	1
1000	0.5-10	**CT4/1000-1**	2CSG222190R1101	**697602**	0.390	1



CT5

250	0.5-3	**CT5/250-1**	2CSG322130R1101	**697701**	0.430	1
300	0.5-4	**CT5/300-1**	2CSG322140R1101	**697800**	0.430	1
400	0.5-6	**CT5/400-1**	2CSG322150R1101	**697909**	0.430	1
500	0.5-10	**CT5/500-1**	2CSG322160R1101	**698005**	0.430	1
600	0.5-10	**CT5/600-1**	2CSG322170R1101	**698104**	0.430	1
800	0.5-10	**CT5/800-1**	2CSG322180R1101	**698203**	0.430	1
1000	0.5-10	**CT5/1000-1**	2CSG322190R1101	**698302**	0.430	1
1200	0.5-10	**CT5/1200-1**	2CSG322200R1101	**698401**	0.430	1
1500	0.5-20	**CT5/1500-1**	2CSG322220R1101	**698500**	0.430	1

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Selection tables
Measurement devices
Accessories for analogue and digital instruments


CT6


CT8


CT8-V


CT12

Primary rated current Iprim	Rating power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
250	0.5-5	**CT6/250-1**	2CSG422130R1101	**698609**			0.430	1
300	0.5-5	**CT6/300-1**	2CSG422140R1101	**698708**			0.430	1
400	0.5-6	**CT6/400-1**	2CSG422150R1101	**698807**			0.430	1
500	0.5-6	**CT6/500-1**	2CSG422160R1101	**698906**			0.430	1
600	0.5-10	**CT6/600-1**	2CSG422170R1101	**699002**			0.430	1
800	0.5-10	**CT6/800-1**	2CSG422180R1101	**699101**			0.430	1
1000	0.5-20	**CT6/1000-1**	2CSG422190R1101	**699200**			0.430	1
1200	0.5-20	**CT6/1200-1**	2CSG422200R1101	**699309**			0.430	1
1500	0.5-30	**CT6/1500-1**	2CSG422220R1101	**699408**			0.430	1
2000	0.5-30	**CT6/2000-1**	2CSG422230R1101	**699507**			0.430	1
2500	0.5-30	**CT6/2500-1**	2CSG422240R1101	**699606**			0.430	1
300	0.5-5	**CT8/300-1**	2CSG522140R1101	**699705**			0.500	1
400	0.5-6	**CT8/400-1**	2CSG522150R1101	**699804**			0.500	1
500	0.5-10	**CT8/500-1**	2CSG522160R1101	**699903**			0.500	1
600	0.5-10	**CT8/600-1**	2CSG522170R1101	**700005**			0.500	1
800	0.5-10	**CT8/800-1**	2CSG522180R1101	**700104**			0.500	1
1000	0.5-10	**CT8/1000-1**	2CSG522190R1101	**700203**			0.500	1
1200	0.5-15	**CT8/1200-1**	2CSG522200R1101	**700302**			0.500	1
1500	0.5-20	**CT8/1500-1**	2CSG522220R1101	**700401**			0.500	1
2000	0.5-20	**CT8/2000-1**	2CSG522230R1101	**700500**			0.500	1
2500	0.5-20	**CT8/2500-1**	2CSG522240R1101	**700609**			0.500	1
3000	0.5-20	**CT8/3000-1**	2CSG522250R1101	**700708**			0.500	1
400	0.5-6	**CT8-V/400-1**	2CSG632150R1101	**700807**			0.500	1
500	0.5-10	**CT8-V/500-1**	2CSG632160R1101	**700906**			0.500	1
600	0.5-10	**CT8-V/600-1**	2CSG632170R1101	**701002**			0.500	1
800	0.5-10	**CT8-V/800-1**	2CSG632180R1101	**701101**			0.500	1
1000	0.5-10	**CT8-V/1000-1**	2CSG632190R1101	**701200**			0.500	1
1200	0.5-10	**CT8-V/1200-1**	2CSG632200R1101	**701309**			0.500	1
1500	0.5-10	**CT8-V/1500-1**	2CSG632220R1101	**701408**			0.500	1
2000	0.5-30	**CT8-V/2000-1**	2CSG632230R1101	**701507**			0.500	1
2500	0.5-30	**CT8-V/2500-1**	2CSG632240R1101	**701606**			0.500	1
500	0.5-10	**CT12/500-1**	2CSG722160R1101	**701705**			0.700	1
600	0.5-10	**CT12/600-1**	2CSG722170R1101	**701804**			0.700	1
800	0.5-15	**CT12/800-1**	2CSG722180R1101	**701903**			0.700	1
1000	0.5-20	**CT12/1000-1**	2CSG722190R1101	**702009**			0.700	1
1200	0.5-20	**CT12/1200-1**	2CSG722200R1101	**702108**			0.700	1
1500	0.5-20	**CT12/1500-1**	2CSG722220R1101	**702207**			0.700	1
2000	0.5-30	**CT12/2000-1**	2CSG722230R1101	**702306**			0.700	1
2500	0.5-40	**CT12/2500-1**	2CSG722240R1101	**702405**			0.700	1
3000	0.5-40	**CT12/3000-1**	2CSG722250R1101	**702504**			0.700	1
4000	0.5-50	**CT12/4000-1**	2CSG722260R1101	**702603**			0.700	1
5000	0.5-50	**CT12/5000-1**	2CSG722270R1101	**702702**			0.700	1
6000	0.5-50	**CT12/6000-1**	2CSG722280R1101	**702801**			0.700	1
800	0.5-10	**CT12-V/800-1**	2CSG832180R1101	**702900**			0.660	1
1000	0.5-10	**CT12-V/1000-1**	2CSG832190R1101	**703006**			0.660	1
1250	0.5-10	**CT12-V/1200-1**	2CSG832200R1101	**703105**			0.660	1
1200	0.5-10	**CT12-V/1250-1**	2CSG832210R1101	**703204**			0.660	1
1500	0.5-12	**CT12-V/1500-1**	2CSG832220R1101	**703303**			0.660	1
2000	0.5-15	**CT12-V/2000-1**	2CSG832230R1101	**703402**			0.660	1
2500	0.5-20	**CT12-V/2500-1**	2CSG832240R1101	**703501**			0.660	1
3000	0.5-20	**CT12-V/3000-1**	2CSG832250R1101	**703600**			0.660	1
4000	-	**CT12-V/4000-1**	2CSG832260R1101	**703709**			0.660	1

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CT1-M1


CT-M3


CT-M4


CT-M5


CT-M6

Compact type current transformer…/1 A with through primary

From cable ø 21 mm max.

40	3-2	**CT-M1/40-1**	2CSG122060R1151	**703808**	0.230	1
50	3-2	**CT-M1/50-1**	2CSG122070R1151	**703907**	0.230	1
60	3-2	**CT-M1/60-1**	2CSG122080R1151	**704003**	0.230	1
80	3-3	**CT-M1/80-1**	2CSG122090R1151	**704102**	0.230	1
100	1-3	**CT-M1/100-1**	2CSG122100R1151	**704201**	0.230	1
150	1-4	**CT-M1/150-1**	2CSG122110R1151	**704300**	0.230	1
200	0.5-3	**CT-M1/200-1**	2CSG122120R1151	**704409**	0.230	1
250	0.5-3	**CT-M1/250-1**	2CSG122130R1151	**704508**	0.230	1

From cable ø 23 mm max. or horizontal bar 20x12 - 25x15 - 30x10 mm

100	1-2	**CT-M3/100-1**	2CSG222100R1151	**704607**	0.230	1
150	1-3	**CT-M3/150-1**	2CSG222110R1151	**704706**	0.230	1
200	1-3	**CT-M3/200-1**	2CSG222120R1151	**704805**	0.230	1
250	0.5-2	**CT-M3/250-1**	2CSG222130R1151	**704904**	0.230	1
300	0.5-2	**CT-M3/300-1**	2CSG222140R1151	**705000**	0.230	1
400	0.5-3	**CT-M3/400-1**	2CSG222150R1151	**705109**	0.230	1

From cable ø 30 mm max. or horizontal/vertical bar 25x25 - 30x20 - 40x10 mm

100	1-3	**CT-M4/100-1**	2CSG322100R1151	**705208**	0.290	1
150	1-3	**CT-M4/150-1**	2CSG322110R1151	**705307**	0.290	1
200	0.5-4	**CT-M4/200-1**	2CSG322120R1151	**705406**	0.290	1
250	0.5-6	**CT-M4/250-1**	2CSG322130R1151	**705505**	0.290	1
300	0.5-6	**CT-M4/300-1**	2CSG322140R1151	**705604**	0.290	1
400	0.5-10	**CT-M4/400-1**	2CSG322150R1151	**705703**	0.290	1
500	0.5-10	**CT-M4/500-1**	2CSG322160R1151	**705802**	0.290	1
600	0.5-10	**CT-M4/600-1**	2CSG322170R1151	**705901**	0.290	1

From horizontal bar 50x12 mm

250	1-3	**CT-M5/250-1**	2CSG422130R1151	**706007**	0.290	1
300	0.5-4	**CT-M5/300-1**	2CSG422140R1151	**706106**	0.290	1
400	0.5-4	**CT-M5/400-1**	2CSG422150R1151	**706205**	0.290	1
500	0.5-6	**CT-M5/500-1**	2CSG422160R1151	**706304**	0.290	1
600	0.5-6	**CT-M5/600-1**	2CSG422170R1151	**706403**	0.290	1
800	0.5-10	**CT-M5/800-1**	2CSG422180R1151	**706502**	0.290	1
1000	0.5-10	**CT-M5/1000-1**	2CSG422190R1151	**706601**	0.290	1

From two cables (max. ø 22 mm) max. or from horizontal bar 50x23 - 60x20 mm

300	0.5-5	**CT-M6/300-1**	2CSG522140R1151	**706700**	0.380	1
400	0.5-6	**CT-M6/400-1**	2CSG522150R1151	**706809**	0.380	1
500	0.5-6	**CT-M6/500-1**	2CSG522160R1151	**706908**	0.380	1
600	0.5-6	**CT-M6/600-1**	2CSG522170R1151	**707004**	0.380	1
800	0.5-10	**CT-M6/800-1**	2CSG522180R1151	**707103**	0.380	1
1000	0.5-10	**CT-M6/1000-1**	2CSG522190R1151	**707202**	0.380	1
1200	0.5-15	**CT-M6/1200-1**	2CSG522200R1151	**707301**	0.380	1
1500	0.5-20	**CT-M6/1500-1**	2CSG522220R1151	**707400**	0.380	1

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CT-SM

Primary rated current Iprim	Rating power	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
Miniaturized type current transformer.../1 A with through primary								
From cable (max. ø 13 mm - minimum distance between cables = 27 mm)								
40	3-2	**CT-SM1/40-1**	2CSG122060R1161	**707509**			0.210	1
50	3-2	**CT-SM1/50-1**	2CSG122070R1161	**707608**			0.210	1
60	3-3	**CT-SM1/60-1**	2CSG122080R1161	**707707**			0.210	1
75	3-3	**CT-SM1/75-1**	2CSG122090R1161	**707806**			0.210	1
80	3-3	**CT-SM1/80-1**	2CSG122100R1161	**707905**			0.210	1
100	1-3	**CT-SM1/100-1**	2CSG122110R1161	**708001**			0.210	1
120	1-5	**CT-SM1/120-1**	2CSG122120R1161	**708100**			0.210	1
125	1-5	**CT-SM1/125-1**	2CSG122130R1161	**708209**			0.210	1
150	1-5	**CT-SM1/150-1**	2CSG122140R1161	**708308**			0.210	1
From cable (max. ø 11 mm) or horizontal bar 15x5 mm (minimum distance between cables or bars = 27 mm)								
60	3-3	**CT-SM2/60-1**	2CSG222080R1161	**708407**			0.210	1
75	3-3	**CT-SM2/75-1**	2CSG222090R1161	**708506**			0.210	1
80	3-3	**CT-SM2/80-1**	2CSG222100R1161	**708605**			0.210	1
100	1-3	**CT-SM2/100-1**	2CSG222110R1161	**708704**			0.210	1
120	1-5	**CT-SM2/120-1**	2CSG222120R1161	**708803**			0.210	1
125	1-5	**CT-SM2/125-1**	2CSG222130R1161	**708902**			0.210	1
150	1-5	**CT-SM2/150-1**	2CSG222140R1161	**709008**			0.210	1
From cable (max. ø 18 mm - minimum distance between cables or bars = 45 mm)								
40	3-3	**CT-SM3/40-1**	2CSG322060R1161	**709107**			0.320	1
50	3-4	**CT-SM3/50-1**	2CSG322070R1161	**709206**			0.320	1
60	3-5	**CT-SM3/60-1**	2CSG322080R1161	**709305**			0.320	1
75	3-5	**CT-SM3/75-1**	2CSG322090R1161	**747307**			0.320	1
80	3-5	**CT-SM3/80-1**	2CSG322100R1161	**709404**			0.320	1
100	1-5	**CT-SM3/100-1**	2CSG322110R1161	**709503**			0.320	1
120	1-3	**CT-SM3/120-1**	2CSG322120R1161	**709602**			0.320	1
125	1-3	**CT-SM3/125-1**	2CSG322130R1161	**709701**			0.320	1
150	0.5-5	**CT-SM3/150-1**	2CSG322140R1161	**709800**			0.320	1
200	0.5-5	**CT-SM3/200-1**	2CSG322150R1161	**709909**			0.320	1
250	0.5-10	**CT-SM3/250-1**	2CSG322160R1161	**710004**			0.320	1
300	0.5-10	**CT-SM3/300-1**	2CSG322170R1161	**710103**			0.320	1
From cable (max. ø 25 mm - minimum distance between cables or bars = 45 mm)								
200	0.5-5	**CT-SM4/200-1**	2CSG422150R1161	**710202**			0.320	1
250	0.5-6	**CT-SM4/250-1**	2CSG422160R1161	**710301**			0.320	1
300	0.5-6	**CT-SM4/300-1**	2CSG422170R1161	**710400**			0.320	1
400	0.5-10	**CT-SM4/400-1**	2CSG422180R1161	**710509**			0.320	1
From horizontal bar 15x5 - 20x5 - 25x5 - 25x6.5 mm or from vertical bar 15x5 - 20x5 mm (minimum distance between bars = 35 mm)								
100	1-4	**CT-SM5/100-1**	2CSG522110R1161	**710608**			0.260	1
120	1-4	**CT-SM5/120-1**	2CSG522120R1161	**710707**			0.260	1
125	1-4	**CT-SM5/125-1**	2CSG522130R1161	**710806**			0.260	1
150	1-4	**CT-SM5/150-1**	2CSG522140R1161	**710905**			0.260	1
200	1-4	**CT-SM5/200-1**	2CSG522150R1161	**711001**			0.260	1
250	1-4	**CT-SM5/250-1**	2CSG522160R1161	**711100**			0.260	1
300	0.5-4	**CT-SM5/300-1**	2CSG522170R1161	**711209**			0.260	1

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From cable (max. ø 32 mm - minimum distance between cables or bars = 45 mm)

300	0.5-5	**CT-SM6/300-1**	2CSG622170R1161	**711308**	0.320	1
400	0.5-6	**CT-SM6/400-1**	2CSG622180R1161	**711407**	0.320	1
500	0.5-10	**CT-SM6/500-1**	2CSG622190R1161	**711506**	0.320	1
600	0.5-10	**CT-SM6/600-1**	2CSG622200R1161	**711605**	0.320	1

From horizontal bar 29x9.5 - 29x10.5 - 30x5 - 30x6 - 30x8 - 30x10 - 2x30x5 - 2x32x5 mm or from vertical bar 32x5 mm (minimum distance between horizontal bars = 45 mm between vertical bars = 35 mm)

200	1-5	**CT-SM7/200-1**	2CSG732150R1161	**711704**	0.320	1
250	1-5	**CT-SM7/250-1**	2CSG732160R1161	**711803**	0.320	1
300	0.5-5	**CT-SM7/300-1**	2CSG732170R1161	**711902**	0.320	1
400	0.5-5	**CT-SM7/400-1**	2CSG732180R1161	**712008**	0.320	1
500	0.5-10	**CT-SM7/500-1**	2CSG732190R1161	**712107**	0.320	1
600	0.5-10	**CT-SM7/600-1**	2CSG732200R1161	**712206**	0.320	1

From horizontal bar 30x30 - 30x45 - 37x9.5 - 37x13 - 50x10 - 55x9.5 - 55x13 - 63x35 - 2x50x5 2x50x10 2x63x5 - 3x50x5 mm (minimum distance between horizontal bars = 70 mm)

200	1-5	**CT-SM8/200-1**	2CSG822150R1161	**712305**	0.410	1
250	1-5	**CT-SM8/250-1**	2CSG822160R1161	**712404**	0.410	1
300	0.5-5	**CT-SM8/300-1**	2CSG822170R1161	**712503**	0.410	1
400	0.5-5	**CT-SM8/400-1**	2CSG822180R1161	**712602**	0.410	1
500	0.5-10	**CT-SM8/500-1**	2CSG822190R1161	**712701**	0.410	1
600	0.5-10	**CT-SM8/600-1**	2CSG822200R1161	**712800**	0.410	1
800	0.5-10	**CT-SM8/800-1**	2CSG822220R1161	**712909**	0.410	1
1000	0.5-15	**CT-SM8/1000-1**	2CSG822230R1161	**713005**	0.410	1
1250	0.5-15	**CT-SM8/1250-1**	2CSG822240R1161	**713104**	0.410	1
1500	0.5-15	**CT-SM8/1500-1**	2CSG822250R1161	**713203**	0.410	1

From vertical bar 2x63x5 - 3x63x5 mm (minimum distance between bars = 45 mm)

400	0.5-5	**CT-SM9/400-1**	2CSG932180R1161	**713302**	0.420	1
500	0.5-10	**CT-SM9/500-1**	2CSG932190R1161	**713401**	0.420	1
600	0.5-10	**CT-SM9/600-1**	2CSG932200R1161	**713500**	0.420	1
800	0.5-10	**CT-SM9/800-1**	2CSG932210R1161	**713609**	0.420	1
1000	0.5-15	**CT-SM9/1000-1**	2CSG932220R1161	**713708**	0.420	1
1250	0.5-15	**CT-SM9/1250-1**	2CSG932240R1161	**713807**	0.420	1
1500	0.5-15	**CT-SM9/1500-1**	2CSG932250R1161	**713906**	0.420	1

Protection type current transformer…/1 A

With wound primary, primary and secondary current on terminals

5	4 (5P5)	**CTP1 5P5/5-1**	2CSG112010R1171	**714606**	0.390	1
10	4 (5P5)	**CTP1 5P5/10-1**	2CSG112020R1171	**714705**	0.390	1
15	4 (5P5)	**CTP1 5P5/15-1**	2CSG112030R1171	**714804**	0.390	1
20	4 (5P5)	**CTP1 5P5/20-1**	2CSG112040R1171	**714903**	0.390	1
25	4 (5P5)	**CTP1 5P5/25-1**	2CSG112050R1171	**715009**	0.390	1
40	4 (5P5)	**CTP1 5P5/40-1**	2CSG112060R1171	**715108**	0.390	1



CTP1

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CTP1



CTP2



CTP5

Primary rated current Iprim	Rating power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
With wound primary, primary and secondary current on terminals								
5	2 (5P10)	**CTP1 5P10/5-1**	2CSG122010R1171	**715207**			0.390	1
10	2 (5P10)	**CTP1 5P10/10-1**	2CSG122020R1171	**715306**			0.390	1
15	2 (5P10)	**CTP1 5P10/15-1**	2CSG122030R1171	**715405**			0.390	1
20	2 (5P10)	**CTP1 5P10/20-1**	2CSG122040R1171	**715504**			0.390	1
25	2 (5P10)	**CTP1 5P10/25-1**	2CSG122050R1171	**715603**			0.390	1
40	2 (5P10)	**CTP1 5P10/40-1**	2CSG122060R1171	**715702**			0.390	1
With wound primary, primary current from built-in central bar 25x3 mm up to 300 A, 25x5 mm from 400 to 500 A and secondary current on terminals								
50	4 (5P5)	**CTP2 5P5/50-1**	2CSG212070R1171	**715801**			0.390	1
60	4 (5P5)	**CTP2 5P5/60-1**	2CSG212080R1171	**715900**			0.390	1
80	4 (5P5)	**CTP2 5P5/80-1**	2CSG212090R1171	**716006**			0.390	1
100	4 (5P5)	**CTP2 5P5/100-1**	2CSG212100R1171	**716105**			0.390	1
150	4 (5P5)	**CTP2 5P5/150-1**	2CSG212110R1171	**716204**			0.390	1
200	4 (5P5)	**CTP2 5P5/200-1**	2CSG212120R1171	**716303**			0.390	1
250	4 (5P5)	**CTP2 5P5/250-1**	2CSG212130R1171	**716402**			0.390	1
300	4 (5P5)	**CTP2 5P5/300-1**	2CSG212140R1171	**716501**			0.390	1
400	4 (5P5)	**CTP2 5P5/400-1**	2CSG212150R1171	**716600**			0.390	1
500	4 (5P5)	**CTP2 5P5/500-1**	2CSG212160R1171	**716709**			0.390	1
With wound primary, primary current from built-in central bar 25x3 mm up to 300 A, 25x5 mm from 400 to 500 A and secondary current on terminals								
50	2 (5P10)	**CTP2 5P10/50-1**	2CSG222070R1171	**716808**			0.390	1
60	2 (5P10)	**CTP2 5P10/60-1**	2CSG222080R1171	**716907**			0.390	1
80	2 (5P10)	**CTP2 5P10/80-1**	2CSG222090R1171	**717003**			0.390	1
100	2 (5P10)	**CTP2 5P10/100-1**	2CSG222100R1171	**717102**			0.390	1
150	2 (5P10)	**CTP2 5P10/150-1**	2CSG222110R1171	**717201**			0.390	1
200	2 (5P10)	**CTP2 5P10/200-1**	2CSG222120R1171	**717300**			0.390	1
250	2 (5P10)	**CTP2 5P10/250-1**	2CSG222130R1171	**717409**			0.390	1
300	2 (5P10)	**CTP2 5P10/300-1**	2CSG222140R1171	**717508**			0.390	1
400	2 (5P10)	**CTP2 5P10/400-1**	2CSG222150R1171	**717607**			0.390	1
500	2 (5P10)	**CTP2 5P10/500-1**	2CSG222160R1171	**717706**			0.390	1
For primary current from cable (max. ø 30 mm) or from horizontal bar 30x30 - 40x25 - 50x20 mm vertical 30x10 mm								
250	4 (5P5)	**CTP5 5P5/250-1**	2CSG312130R1171	**717805**			0.430	1
300	4 (5P5)	**CTP5 5P5/300-1**	2CSG312140R1171	**717904**			0.430	1
400	4 (5P5)	**CTP5 5P5/400-1**	2CSG312150R1171	**718000**			0.430	1
500	4 (5P5)	**CTP5 5P5/500-1**	2CSG312160R1171	**718109**			0.430	1
600	4 (5P5)	**CTP5 5P5/600-1**	2CSG312170R1171	**718208**			0.430	1
For primary current from cable (max. ø 30 mm) or from horizontal bar 30x30 - 40x25 - 50x20 mm vertical 30x10 mm								
800	4 (5P5)	**CTP5 5P5/800-1**	2CSG312180R1171	**718307**			0.430	1
1000	4 (5P5)	**CTP5 5P5/1000-1**	2CSG312190R1171	**718406**			0.430	1
1200	6 (5P5)	**CTP5 5P5/1200-1**	2CSG312200R1171	**718505**			0.430	1
1500	8 (5P5)	**CTP5 5P5/1500-1**	2CSG312220R1171	**718604**			0.430	1

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CTP5



CTP6



CTP8

For primary current from cable (max. ø 30 mm) or from horizontal bar 30x30 - 40x25 - 50x20 mm vertical 30x10 mm

250	2 (5P10)	**CTP5 5P10/250-1**	2CSG322130R1171	**718703**	0.430	1
300	2 (5P10)	**CTP5 5P10/300-1**	2CSG322140R1171	**718802**	0.430	1
400	2 (5P10)	**CTP5 5P10/400-1**	2CSG322150R1171	**718901**	0.430	1
500	2 (5P10)	**CTP5 5P10/500-1**	2CSG322160R1171	**719007**	0.430	1
600	2 (5P10)	**CTP5 5P10/600-1**	2CSG322170R1171	**719106**	0.430	1
800	2 (5P10)	**CTP5 5P10/800-1**	2CSG322180R1171	**719205**	0.430	1
1000	2 (5P10)	**CTP5 5P10/1000-1**	2CSG322190R1171	**719304**	0.430	1
1200	3 (5P10)	**CTP5 5P10/1200-1**	2CSG322200R1171	**719403**	0.430	1
1500	4 (5P10)	**CTP5 5P10/1500-1**	2CSG322220R1171	**719502**	0.430	1

For primary current from cable (max. ø 50 mm) or from horizontal bar 50x20 - 60x20 mm

250	6 (5P5)	**CTP6 5P5/250-1**	2CSG412130R1171	**719601**	0.460	1
300	6 (5P5)	**CTP6 5P5/300-1**	2CSG412140R1171	**719700**	0.460	1
400	5 (5P5)	**CTP6 5P5/400-1**	2CSG412150R1171	**719809**	0.460	1
500	5 (5P5)	**CTP6 5P5/500-1**	2CSG412160R1171	**719908**	0.460	1
600	5 (5P5)	**CTP6 5P5/600-1**	2CSG412170R1171	**720003**	0.460	1
800	15 (5P5)	**CTP6 5P5/800-1**	2CSG412180R1171	**720102**	0.460	1
1000	20 (5P5)	**CTP6 5P5/1000-1**	2CSG412190R1171	**720201**	0.460	1
1200	20 (5P5)	**CTP6 5P5/1200-1**	2CSG412200R1171	**720300**	0.460	1
1500	30 (5P5)	**CTP6 5P5/1500-1**	2CSG412220R1171	**720409**	0.460	1

For primary current from cable (max. ø 50 mm) or from horizontal bar 50x20 - 60x20 mm

250	2 (5P10)	**CTP6 5P10/250-1**	2CSG422130R1171	**720508**	0.460	1
300	3 (5P10)	**CTP6 5P10/300-1**	2CSG422140R1171	**720607**	0.460	1
400	4 (5P10)	**CTP6 5P10/400-1**	2CSG422150R1171	**720706**	0.460	1
500	4 (5P10)	**CTP6 5P10/500-1**	2CSG422160R1171	**720805**	0.460	1
600	4 (5P10)	**CTP6 5P10/600-1**	2CSG422170R1171	**720904**	0.460	1
800	5 (5P10)	**CTP6 5P10/800-1**	2CSG422180R1171	**721000**	0.460	1
1000	6 (5P10)	**CTP6 5P10/1000-1**	2CSG422190R1171	**721109**	0.460	1
1200	6 (5P10)	**CTP6 5P10/1200-1**	2CSG422200R1171	**721208**	0.460	1
1500	10 (5P10)	**CTP6 5P10/1500-1**	2CSG422220R1171	**721307**	0.460	1

For primary current from two cables (max. ø 30 mm each) or from horizontal bar 60x30 - 80x30 mm

300	5 (5P5)	**CTP8 5P5/300-1**	2CSG512140R1171	**721406**	0.500	1
400	6 (5P5)	**CTP8 5P5/400-1**	2CSG512150R1171	**721505**	0.500	1
500	15 (5P5)	**CTP8 5P5/500-1**	2CSG512160R1171	**721604**	0.500	1
600	20 (5P5)	**CTP8 5P5/600-1**	2CSG512170R1171	**721703**	0.500	1
800	20 (5P5)	**CTP8 5P5/800-1**	2CSG512180R1171	**721802**	0.500	1
1000	20 (5P5)	**CTP8 5P5/1000-1**	2CSG512190R1171	**721901**	0.500	1
1200	30 (5P5)	**CTP8 5P5/1200-1**	2CSG512200R1171	**722007**	0.500	1
1500	20 (5P5)	**CTP8 5P5/1500-1**	2CSG512220R1171	**722106**	0.500	1
2000	12 (5P5)	**CTP8 5P5/2000-1**	2CSG512230R1171	**722205**	0.500	1
2500	15 (5P5)	**CTP8 5P5/2500-1**	2CSG512240R1171	**722304**	0.500	1

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CTP8

Primary rated current Iprim	Rating power	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	-VA	**Type code**	Order code	**EAN**			kg	pc.
For primary current from two cables (max. ø 30 mm each) or from horizontal bar 60x30 - 80x30 mm								
300	3 (5P10)	**CTP8 5P10/300-1**	2CSG522140R1171	**722403**			0.500	1
400	3 (5P10)	**CTP8 5P10/400-1**	2CSG522150R1171	**722502**			0.500	1
500	8 (5P10)	**CTP8 5P10/500-1**	2CSG522160R1171	**722601**			0.500	1
600	8 (5P10)	**CTP8 5P10/600-1**	2CSG522170R1171	**722700**			0.500	1
800	10 (5P10)	**CTP8 5P10/800-1**	2CSG522180R1171	**722809**			0.500	1
1000	10 (5P10)	**CTP8 5P10/1000-1**	2CSG522190R1171	**722908**			0.500	1
1200	15 (5P10)	**CTP8 5P10/1200-1**	2CSG522200R1171	**723004**			0.500	1
1500	6 (5P10)	**CTP8 5P10/1500-1**	2CSG522220R1171	**723103**			0.500	1
2000	6 (5P10)	**CTP8 5P10/2000-1**	2CSG522230R1171	**723202**			0.500	1
2500	8 (5P10)	**CTP8 5P10/2500-1**	2CSG522240R1171	**723301**			0.500	1
For primary current from two cables (max. ø 30 mm each) or from horizontal bar 60x30 - 80x30 mm								
300	1.5 (5P15)	**CTP8 5P15/300-1**	2CSG532140R1171	**723400**			0.500	1
400	1.5 (5P15)	**CTP8 5P15/400-1**	2CSG532150R1171	**723509**			0.500	1
500	4 (5P15)	**CTP8 5P15/500-1**	2CSG532160R1171	**723608**			0.500	1
600	4 (5P15)	**CTP8 5P15/600-1**	2CSG532170R1171	**723707**			0.500	1
800	6 (5P15)	**CTP8 5P15/800-1**	2CSG532180R1171	**723806**			0.500	1
1000	5 (5P15)	**CTP8 5P15/1000-1**	2CSG532190R1171	**723905**			0.500	1
1200	6 (5P15)	**CTP8 5P15/1200-1**	2CSG532200R1171	**724001**			0.500	1
1500	2 (5P15)	**CTP8 5P15/1500-1**	2CSG532220R1171	**724100**			0.500	1
2000	5 (5P15)	**CTP8 5P15/2000-1**	2CSG532230R1171	**724209**			0.500	1
2500	6 (5P15)	**CTP8 5P15/2500-1**	2CSG532240R1171	**724308**			0.500	1
For primary current from two cables (max. ø 30 mm each) or from horizontal bar 60x30 - 80x30 mm								
300	1 (5P20)	**CTP8 5P20/300-1**	2CSG542140R1171	**724407**			0.500	1
400	1 (5P20)	**CTP8 5P20/400-1**	2CSG542150R1171	**724506**			0.500	1
500	2 (5P20)	**CTP8 5P20/500-1**	2CSG542160R1171	**724605**			0.500	1
600	2 (5P20)	**CTP8 5P20/600-1**	2CSG542170R1171	**724704**			0.500	1
800	3 (5P20)	**CTP8 5P20/800-1**	2CSG542180R1171	**724803**			0.500	1
1000	2 (5P20)	**CTP8 5P20/1000-1**	2CSG542190R1171	**724902**			0.500	1
1200	3 (5P20)	**CTP8 5P20/1200-1**	2CSG542200R1171	**725008**			0.500	1
1500	1 (5P20)	**CTP8 5P20/1500-1**	2CSG542220R1171	**725107**			0.500	1
2000	3 (5P20)	**CTP8 5P20/2000-1**	2CSG542230R1171	**725206**			0.500	1
2500	4 (5P20)	**CTP8 5P20/2500-1**	2CSG542240R1171	**725305**			0.500	1



CTP12

For primary current from two cables (max. ø 50 mm each) or from horizontal bar 80x50 - 100x50 - 125x50 mm								
400	8 (5P5)	**CTP12 5P5/400-1**	2CSG612150R1171	**725404**			0.390	1
500	8 (5P5)	**CTP12 5P5/500-1**	2CSG612160R1171	**725503**			0.390	1
600	8 (5P5)	**CTP12 5P5/600-1**	2CSG612170R1171	**725602**			0.390	1
800	12 (5P5)	**CTP12 5P5/800-1**	2CSG612180R1171	**725701**			0.390	1
1000	15 (5P5)	**CTP12 5P5/1000-1**	2CSG612190R1171	**725800**			0.390	1
1200	20 (5P5)	**CTP12 5P5/1200-1**	2CSG612200R1171	**725909**			0.390	1
1500	20 (5P5)	**CTP12 5P5/1500-1**	2CSG612220R1171	**726005**			0.390	1
2000	25 (5P5)	**CTP12 5P5/2000-1**	2CSG612230R1171	**726104**			0.390	1
2500	30 (5P5)	**CTP12 5P5/2500-1**	2CSG612240R1171	**726203**			0.390	1
3000	40 (5P5)	**CTP12 5P5/3000-1**	2CSG612250R1171	**726302**			0.390	1
4000	50 (5P5)	**CTP12 5P5/4000-1**	2CSG612260R1171	**726401**			0.390	1

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CTP12

For primary current from two cables (max. ø 50 mm each) or from horizontal bar 80x50 - 100x50 - 125x50 mm

400	4 (5P10)	**CTP12 5P10/400-1**	2CSG622150R1171	**726500**	0.390	1
500	4 (5P10)	**CTP12 5P10/500-1**	2CSG622160R1171	**726609**	0.390	1
600	4 (5P10)	**CTP12 5P10/600-1**	2CSG622170R1171	**726708**	0.390	1
800	6 (5P10)	**CTP12 5P10/800-1**	2CSG622180R1171	**726807**	0.390	1
1000	8 (5P10)	**CTP12 5P10/1000-1**	2CSG622190R1171	**726906**	0.390	1
1200	10 (5P10)	**CTP12 5P10/1200-1**	2CSG622200R1171	**727002**	0.390	1
1500	10 (5P10)	**CTP12 5P10/1500-1**	2CSG622220R1171	**727101**	0.390	1
2000	12 (5P10)	**CTP12 5P10/2000-1**	2CSG622230R1171	**727200**	0.390	1
2500	15 (5P10)	**CTP12 5P10/2500-1**	2CSG622240R1171	**727309**	0.390	1
3000	20 (5P10)	**CTP12 5P10/3000-1**	2CSG622250R1171	**727408**	0.390	1
4000	25 (5P10)	**CTP12 5P10/4000-1**	2CSG622260R1171	**727507**	0.390	1

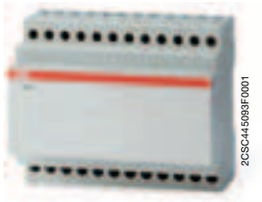
For primary current from two cables (max. ø 50 mm each) or from horizontal bar 80x50 - 100x50 - 125x50 mm

400	3 (5P15)	**CTP12 5P15/400-1**	2CSG632150R1171	**727606**	0.390	1
500	3 (5P15)	**CTP12 5P15/500-1**	2CSG632160R1171	**727705**	0.390	1
600	3 (5P15)	**CTP12 5P15/600-1**	2CSG632170R1171	**727804**	0.390	1
800	4 (5P15)	**CTP12 5P15/800-1**	2CSG632180R1171	**727903**	0.390	1
1000	6 (5P15)	**CTP12 5P15/1000-1**	2CSG632190R1171	**728009**	0.390	1
1200	6 (5P15)	**CTP12 5P15/1200-1**	2CSG632200R1171	**728108**	0.390	1
1500	6 (5P15)	**CTP12 5P15/1500-1**	2CSG632220R1171	**728207**	0.390	1
2000	8 (5P15)	**CTP12 5P15/2000-1**	2CSG632230R1171	**728306**	0.390	1
2500	10 (5P15)	**CTP12 5P15/2500-1**	2CSG632240R1171	**728405**	0.390	1
3000	15 (5P15)	**CTP12 5P15/3000-1**	2CSG632250R1171	**728504**	0.390	1
4000	15 (5P15)	**CTP12 5P15/4000-1**	2CSG632260R1171	**728603**	0.390	1

For primary current from two cables (max. ø 50 mm each) or from horizontal bar 80x50 - 100x50 - 125x50 mm

400	2(5P20)	**CTP12 5P20/400-1**	2CSG642150R1171	**728702**	0.390	1
500	2(5P20)	**CTP12 5P20/500-1**	2CSG642160R1171	**728801**	0.390	1
600	2(5P20)	**CTP12 5P20/600-1**	2CSG642170R1171	**728900**	0.390	1
800	3 (5P20)	**CTP12 5P20/800-1**	2CSG642180R1171	**729006**	0.390	1
1000	4 (5P20)	**CTP12 5P20/1000-1**	2CSG642190R1171	**729105**	0.390	1
1200	5 (5P20)	**CTP12 5P20/1200-1**	2CSG642200R1171	**729204**	0.390	1
1500	5 (5P20)	**CTP12 5P20/1500-1**	2CSG642220R1171	**729303**	0.390	1
2000	6 (5P20)	**CTP12 5P20/2000-1**	2CSG642230R1171	**729402**	0.390	1
2500	8 (5P20)	**CTP12 5P20/2500-1**	2CSG642240R1171	**729501**	0.390	1
3000	10 (5P20)	**CTP12 5P20/3000-1**	2CSG642250R1171	**729600**	0.390	1
4000	12 (5P20)	**CTP12 5P20/4000-1**	2CSG642260R1171	**729709**	0.390	1

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Summing current transformers

They are used for calculating the vector sum of currents of two or more lines of a single voltage system.
Installation on DIN rail.
The insulation reference voltage is 0.72 kV – 3kV.

Summing current transformers…/5 A (6 DIN modules)

Type	Power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	VA	**Type code**	Order code	**EAN**			kg	pc.
5+5=5A	6	**CTSM-5-5**	2CSM101010R1181	**610403**			0.300	1
5+5+5=5A	6	**CTSM-5-5-5**	2CSM101020R1181	**610502**			0.300	1
5+5+5+5=5A	6	**CTSM-5-5-5-5**	2CSM101030R1181	**610601**			0.300	1

Summing current transformers…/1 A

Type	Class/ power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	/VA	**Type code**	Order code	**EAN**			kg	pc.
1+1=1A	0.5-10	**CTSM-1-1**	2CSM202040R1181	**746508**			0.300	1
1+1+1=1A	0.5-10	**CTSM-1-1-1**	2CSM202050R1181	**746607**			0.300	1
1+1+1+1=1A	0.5-10	**CTSM-1-1-1-1**	2CSM202060R1181	**746706**			0.300	1

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Voltage transformers

They are used for transforming primary voltages up to 600 V into secondary voltages of…/100 V max. for indirect supply of analogue as well as digital measurement instruments.



Voltage transformers with self-extinguishing plastic housing, 1 rating

Primary/ secondary voltage	Power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
V/V	VA	**Type code**	Order code	**EAN**			kg	pc.
100/100	3	**TV-100/100**	2CSG112010R5021	**746805**			1.000	1
110/100	6	**TV-110/100**	2CSG112030R5021	**610700**			1.000	1
115/100	3	**TV-115/100**	2CSG112050R5021	**746904**			1.000	1
230/100	6	**TV-230/100**	2CSG112070R5021	**610809**			1.000	1
380/100	6	**TV-380/100**	2CSG112090R5021	**610908**			1.000	1
400/100	6	**TV-400/100**	2CSG112110R5021	**611004**			1.000	1
440/100	3	**TV-440/100**	2CSG112130R5021	**747000**			1.000	1
500/100	6	**TV-500/100**	2CSG112150R5021	**611103**			1.000	1
100/100	1.5	**TV-100R3/100**	2CSG111020R5021	**747604**			1.000	1
110/100	1.5	**TV-110R3/100**	2CSG111040R5021	**747703**			1.000	1
115/100	1.5	**TV-115R3/100**	2CSG111060R5021	**747802**			1.000	1
230/100	1.5	**TV-230R3/100**	2CSG111080R5021	**747901**			1.000	1
380/100	1.5	**TV-380R3/100**	2CSG111100R5021	**748007**			1.000	1
400/100	1.5	**TV-400R3/100**	2CSG111120R5021	**748106**			1.000	1
440/100	1.5	**TV-440R3/100**	2CSG111140R5021	**748205**			1.000	1
500/100	1.5	**TV-500R3/100**	2CSG111160R5021	**748304**			1.000	1

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Voltage transformers with metallic housing. 0.5 rating

Primary/ secondary voltage	Power	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
V/V	VA	**Type code**	Order code	**EAN**			kg	pc.
100/100	10	**TV2-100/100**	2CSG324010R5021	**729808**			2.100	1
110/100	10	**TV2-110/100**	2CSG324030R5021	**729907**			2.100	1
115/100	10	**TV2-115/100**	2CSG324050R5021	**730002**			2.100	1
230/100	10	**TV2-230/100**	2CSG324070R5021	**730101**			2.100	1
380/100	10	**TV2-380/100**	2CSG324090R5021	**730200**			2.100	1
400/100	10	**TV2-400/100**	2CSG324110R5021	**730309**			2.100	1
440/100	10	**TV2-440/100**	2CSG324130R5021	**730408**			2.100	1
500/100	10	**TV2-500/100**	2CSG324150R5021	**730507**			2.100	1
600/100	10	**TV2-600/100**	2CSG324170R5021	**730606**			2.100	1
100/100	5	**TV2-100R3/100**	2CSG323020R5021	**730705**			2.100	1
110/100	5	**TV2-110R3/100**	2CSG323040R5021	**730804**			2.100	1
115/100	5	**TV2-115R3/100**	2CSG323060R5021	**730903**			2.100	1
230/100	5	**TV2-230R3/100**	2CSG323080R5021	**731009**			2.100	1
380/100	5	**TV2-380R3/100**	2CSG323100R5021	**731108**			2.100	1
400/100	5	**TV2-400R3/100**	2CSG323120R5021	**731207**			2.100	1
440/100	5	**TV2-440R3/100**	2CSG323140R5021	**731306**			2.100	1
500/100	5	**TV2-500R3/100**	2CSG323160R5021	**731405**			2.100	1
600/100	5	**TV2-600R3/100**	2CSG323180R5021	**731504**			2.100	1
100/100	20	**TV3-100/100**	2CSG426010R5021	**731603**			2.200	1
110/100	20	**TV3-110/100**	2CSG426030R5021	**731702**			2.200	1
115/100	20	**TV3-115/100**	2CSG426050R5021	**731801**			2.200	1
230/100	20	**TV3-230/100**	2CSG426070R5021	**731900**			2.200	1
380/100	20	**TV3-380/100**	2CSG426090R5021	**732006**			2.200	1
400/100	20	**TV3-400/100**	2CSG426110R5021	**732105**			2.200	1
440/100	20	**TV3-440/100**	2CSG426130R5021	**732204**			2.200	1
500/100	20	**TV3-500/100**	2CSG426150R5021	**732303**			2.200	1
600/100	20	**TV3-600/100**	2CSG426170R5021	**732402**			2.200	1
100/100	10	**TV3-100R3/100**	2CSG424020R5021	**732501**			2.200	1
110/100	10	**TV3-110R3/100**	2CSG424040R5021	**732600**			2.200	1
115/100	10	**TV3-115R3/100**	2CSG424060R5021	**732709**			2.200	1
230/100	10	**TV3-230R3/100**	2CSG424080R5021	**732808**			2.200	1
380/100	10	**TV3-380R3/100**	2CSG424100R5021	**732907**			2.200	1
400/100	10	**TV3-400R3/100**	2CSG424120R5021	**733003**			2.200	1
440/100	10	**TV3-440R3/100**	2CSG424140R5021	**733102**			2.200	1
500/100	10	**TV3-500R3/100**	2CSG424160R5021	**733201**			2.200	1
600/100	10	**TV3-600R3/100**	2CSG424180R5021	**733300**			2.200	1
100/100	50	**TV4-100/100**	2CSG528010R5021	**733409**			2.400	1
110/100	50	**TV4-110/100**	2CSG528030R5021	**733508**			2.400	1
115/100	50	**TV4-115/100**	2CSG528050R5021	**733607**			2.400	1
230/100	50	**TV4-230/100**	2CSG528070R5021	**733706**			2.400	1
380/100	50	**TV4-380/100**	2CSG528090R5021	**733805**			2.400	1
400/100	50	**TV4-400/100**	2CSG528110R5021	**733904**			2.400	1
440/100	50	**TV4-440/100**	2CSG528130R5021	**734000**			2.400	1
500/100	50	**TV4-500/100**	2CSG528150R5021	**734109**			2.400	1
600/100	50	**TV4-600/100**	2CSG528170R5021	**734208**			2.400	1
100/100	25	**TV4-100R3/100**	2CSG527020R5021	**734307**			2.400	1
110/100	25	**TV4-110R3/100**	2CSG527040R5021	**734406**			2.400	1
115/100	25	**TV4-115R3/100**	2CSG527060R5021	**734505**			2.400	1
230/100	25	**TV4-230R3/100**	2CSG527080R5021	**734604**			2.400	1
380/100	25	**TV4-380R3/100**	2CSG527100R5021	**734703**			2.400	1
400/100	25	**TV4-400R3/100**	2CSG527120R5021	**734802**			2.400	1
440/100	25	**TV4-440R3/100**	2CSG527140R5021	**734901**			2.400	1
500/100	25	**TV4-500R3/100**	2CSG527160R5021	**735007**			2.400	1
600/100	25	**TV4-600R3/100**	2CSG527180R5021	**735106**			2.400	1

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100/100	100	**TV5-100/100**	2CSG629010R5021	**735205**	2.600	1
110/100	100	**TV5-110/100**	2CSG629030R5021	**735304**	2.600	1
115/100	100	**TV5-115/100**	2CSG629050R5021	**735403**	2.600	1
230/100	100	**TV5-230/100**	2CSG629070R5021	**735502**	2.600	1
380/100	100	**TV5-380/100**	2CSG629090R5021	**735601**	2.600	1
400/100	100	**TV5-400/100**	2CSG629110R5021	**735700**	2.600	1
440/100	100	**TV5-440/100**	2CSG629130R5021	**735809**	2.600	1
500/100	100	**TV5-500/100**	2CSG629150R5021	**735908**	2.600	1
600/100	100	**TV5-600/100**	2CSG629170R5021	**736004**	2.600	1

100/100	50	**TV5-100R3/100**	2CSG628020R5021	**736103**	2.600	1
110/100	50	**TV5-110R3/100**	2CSG628040R5021	**736202**	2.600	1
115/100	50	**TV5-115R3/100**	2CSG628060R5021	**736301**	2.600	1
230/100	50	**TV5-230R3/100**	2CSG628080R5021	**736400**	2.600	1
380/100	50	**TV5-380R3/100**	2CSG628100R5021	**736509**	2.600	1
400/100	50	**TV5-400R3/100**	2CSG628120R5021	**736608**	2.600	1
440/100	50	**TV5-440R3/100**	2CSG628140R5021	**736707**	2.600	1
500/100	50	**TV5-500R3/100**	2CSG628160R5021	**736806**	2.600	1
600/100	50	**TV5-600R3/100**	2CSG628180R5021	**736905**	2.600	1

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Current and voltage converters

They produce an output signal in direct current independent from the load that is directly proportional to the input current or voltage signal.
Their electronic circuit guarantees high reliability and accuracy of operation, extension of the measurement field, resistance to temperature changes and to vibrations, limited power absorption from the circuit to be measured.
Thanks to their centralized data acquisition speed, even at high distances, and thanks to the availability of different output types (that can be selected by means of the adjusting minidips) they are appropriate for plants requiring specific attention to production, distribution and use of electric energy.



Current converters with a.c. supply. with inputs 1 and 5 V a.c. and selectable outputs 1-5-10 V d.c. and 1-5-10-20-4…20 mA d.c.

Supply	Modules	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
VAC		Type code	Order code	EAN			kg	pc.
24	3	**CONV-I-1-24CA**	2CSG313000R5031	**740902**			0.800	1
48	3	**CONV-I-1-48CA**	2CSG333000R5031	**741008**			0.800	1
110	3	**CONV-I-1-110CA**	2CSG353000R5031	**741107**			0.800	1
230	3	**CONV-I-1-230CA**	2CSG373000R5031	**741206**			0.800	1
24	6	**CONV-I-2-24CA**	2CSG414000R5031	**741305**			0.800	1
48	6	**CONV-I-2-48CA**	2CSG434000R5031	**741404**			0.800	1
110	6	**CONV-I-2-110CA**	2CSG454000R5031	**741503**			0.800	1
230	6	**CONV-I-2-230CA**	2CSG474000R5031	**741602**			0.800	1

Current converters with d.c. supply with inputs 1 and 5 V a.c. and selectable outputs 1-5-10 V d.c. and 1-5-10-20-4…20 mA d.c.

Supply	Modules	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
VDC		Type code	Order code	EAN			kg	pc.
24	3	**CONV-I-1-24CC**	2CSG323000R5031	**741701**			0.800	1
48	3	**CONV-I-1-48CC**	2CSG343000R5031	**741800**			0.800	1
110	3	**CONV-I-1-110CC**	2CSG363000R5031	**741909**			0.800	1
24	6	**CONV-I-2-24CC**	2CSG424000R5031	**742005**			0.800	1
48	6	**CONV-I-2-48CC**	2CSG444000R5031	**742104**			0.800	1
110	6	**CONV-I-2-110CC**	2CSG464000R5031	**742203**			0.800	1

Current converters with a.c. supply. with inputs 120-300-500 V a.c. and selectable outputs 1-5-10 V d.c. and 1-5-10-20-4…20 mA d.c.

Supply	Modules	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
VAC		Type code	Order code	EAN			kg	pc.
24	3	**CONV-V-1-24CA**	2CSG111000R5031	**739500**			0.800	1
48	3	**CONV-V-1-48CA**	2CSG131000R5031	**739609**			0.800	1
110	3	**CONV-V-1-110CA**	2CSG151000R5031	**739708**			0.800	1
230	3	**CONV-V-1-230CA**	2CSG171000R5031	**739807**			0.800	1
24	6	**CONV-V-2-24CA**	2CSG212000R5031	**739906**			0.800	1
48	6	**CONV-V-2-48CA**	2CSG232000R5031	**740001**			0.800	1
110	6	**CONV-V-2-110CA**	2CSG252000R5031	**740100**			0.800	1
230	6	**CONV-V-2-230CA**	2CSG272000R5031	**740209**			0.800	1

Current converters with d.c. supply with inputs 120-300-500 V a.c. and selectable outputs 1-5-10 V d.c. and 1-5-10-20-4…20 mA d.c.

Supply	Modules	Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
VDC		Type code	Order code	EAN			kg	pc.
24	3	**CONV-V-1-24CC**	2CSG121000R5031	**740308**			0.800	1
48	3	**CONV-V-1-48CC**	2CSG141000R5031	**740407**			0.800	1
110	3	**CONV-V-1-110CC**	2CSG161000R5031	**740506**			0.800	1
24	6	**CONV-V-2-24CC**	2CSG222000R5031	**740605**			0.800	1
48	6	**CONV-V-2-48CC**	2CSG242000R5031	**740704**			0.800	1
110	6	**CONV-V-2-110CC**	2CSG262000R5031	**740803**			0.800	1

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Transducers for wattmeters, varmeters and power factor meters

They are necessary for the indirect insertion of wattmeters, varmeters and analogue power factor meters. They operate with a 230 V or 400 V supply and they are equipped with an electronic programming pushbutton for the selection of the more suitable output out of the eight available outputs (1, 5, 10 V d.c. and 1, 5, 10, 20, 4/20 mA d.c.). They have a galvanic type separation between inputs and outputs.

Phase	Description	**Order details** **Type code**	Order code	**Bbn 8012542** **EAN**	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
Transducers for wattmeters								
1	(2 wires)	**CNV-W-1**	2CSM110000R1131	**599203**			0.400	1
3	balanced without neutral (3 wires)	**CNV-W-2**	2CSM120000R1131	**599302**			0.400	1
3	imbalanced without neutral (3 wires)	**CNV-W-3**	2CSM130000R1131	**599401**			0.400	1
3+N	balanced with neutral (4 wires)	**CNV-W-4**	2CSM140000R1131	**599500**			0.400	1
3+N	imbalanced with neutral (4 wires)	**CNV-W-5**	2CSM150000R1131	**599609**			0.400	1
Transducers for varmeters								
1	(2 wires)	**CNV-V-1**	2CSM210000R1131	**599708**			0.400	1
3	balanced without neutral (3 wires)	**CNV-V-2**	2CSM220000R1131	**599807**			0.400	1
3	imbalanced without neutral (3 wires)	**CNV-V-3**	2CSM230000R1131	**599906**			0.400	1
3+N	balanced with neutral (4 wires)	**CNV-V-4**	2CSM240000R1131	**600008**			0.400	1
3+N	imbalanced with neutral (4 wires)	**CNV-V-5**	2CSM250000R1131	**600107**			0.400	1
Transducers for power factor meters 230/440 VAC supply								
1	(2 wires)	**CNV-C-1**	2CSM310000R1131	**600206**			0.400	1
3	balanced without neutral (3 wires)	**CNV-C-2**	2CSM320000R1131	**600305**			0.400	1

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TEPM0289

Shunts

Shunts have 60 mV and 150 mV voltage and must be used with a maximum load of 0.25 Ω in combination with measurement instruments in d.c. The included two-pole cable is 1 m long with a section of 1.4 mm^2, equal to a resistance of 0.026 Ω.

For an appropriate operation:

- both horizontal and vertical mounting are possible (the horizontal position enables a greater heat consumption)
- the faying surface must be completely used and clean; cover with specific grease after the connection
- screws and bolts must be perfectly tight
- shunts must be sufficiently ventilated; as they are not insulated, it is a good rule to protect them against accidental contacts.

Rated current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A	**Type code**	Order code	**EAN**			kg	pc.
60 mV shunts							
5	**SNT 1/5**	2CSM100010R1121	**047605**			1.300	1
6	**SNT 1/6**	2CSM100020R1121	**047704**			1.800	1
10	**SNT 1/10**	2CSM100030R1121	**047803**			1.800	1
15	**SNT 1/15**	2CSM100040R1121	**047902**			1.800	1
20	**SNT 1/20**	2CSM100050R1121	**048008**			1.800	1
25	**SNT 1/25**	2CSM100060R1121	**048107**			1.800	1
30	**SNT 1/30**	2CSM100070R1121	**048206**			1.300	1
40	**SNT 1/40**	2CSM100080R1121	**048305**			1.300	1
50	**SNT 1/50**	2CSM100090R1121	**048404**			2.200	1
60	**SNT 1/60**	2CSM100100R1121	**048503**			2.200	1
80	**SNT 1/80**	2CSM100110R1121	**048602**			1.300	1
100	**SNT 1/100**	2CSM100120R1121	**048701**			1.300	1
150	**SNT 1/150**	2CSM100130R1121	**048800**			1.300	1
200	**SNT 1/200**	2CSM100140R1121	**048909**			1.300	1
250	**SNT 1/250**	2CSM100150R1121	**049005**			1.900	1
400	**SNT 1/400**	2CSM100160R1121	**049104**			1.900	1
500	**SNT 1/500**	2CSM100170R1121	**049203**			1.900	1
600	**SNT 1/600**	2CSM100180R1121	**049302**			1.900	1
800	**SNT 1/800**	2CSM100190R1121	**049401**			2.200	1
1000	**SNT 1/1000**	2CSM100200R1121	**049500**			2.000	1
1500	**SNT 1/1500**	2CSM100210R1121	**049609**			2.200	1
2000	**SNT 1/2000**	2CSM100220R1121	**049708**			2.200	1
2500	**SNT 1/2500**	2CSM100230R1121	**049807**			2.200	1
4000	**SNT 1/4000**	2CSM100240R1121	**747109**			2.200	1
6000	**SNT 1/6000**	2CSM100250R1121	**747208**			2.300	1

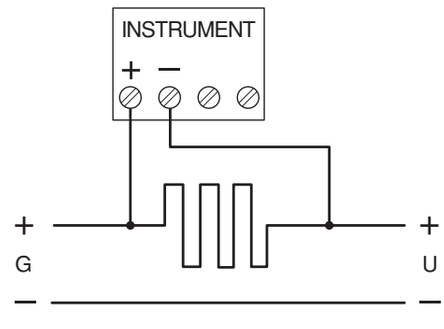
Technical features

Voltage	[mV]	60/150
Current rating	[A]	from 5 to 2500 (on request up to 8000)
Accuracy class		0.5 (from 10 to 30 °C)
Max. load	[Ω]	0.25
Overload for 5 sec.		from 10 to 500 A : 1xIn
		from 600 to 2000 A: 5xIn
		at 2500A: 2xIn

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150 mV shunts

5	**SNT1 1/5**	2CSM200010R1121	**737001**	1.800	1
6	**SNT1 1/6**	2CSM200020R1121	**737100**	1.800	1
10	**SNT1 1/10**	2CSM200030R1121	**737209**	1.800	1
15	**SNT1 1/15**	2CSM200040R1121	**737308**	1.800	1
20	**SNT1 1/20**	2CSM200050R1121	**737407**	1.800	1
25	**SNT1 1/25**	2CSM200060R1121	**737506**	1.800	1
30	**SNT1 1/30**	2CSM200070R1121	**737605**	3.000	1
40	**SNT1 1/40**	2CSM200080R1121	**737704**	3.000	1
50	**SNT1 1/50**	2CSM200090R1121	**737803**	3.000	1
60	**SNT1 1/60**	2CSM200100R1121	**737902**	1.800	1
80	**SNT1 1/80**	2CSM200110R1121	**738008**	3.000	1
100	**SNT1 1/100**	2CSM200120R1121	**738107**	3.000	1
150	**SNT1 1/150**	2CSM200130R1121	**738206**	3.000	1
200	**SNT1 1/200**	2CSM200140R1121	**738305**	3.600	1
250	**SNT1 1/250**	2CSM200150R1121	**738404**	3.600	1
400	**SNT1 1/400**	2CSM200160R1121	**738503**	3.600	1
500	**SNT1 1/500**	2CSM200170R1121	**738602**	3.600	1
600	**SNT1 1/600**	2CSM200180R1121	**738701**	3.600	1
800	**SNT1 1/800**	2CSM200190R1121	**738800**	3.800	1
1000	**SNT1 1/1000**	2CSM200200R1121	**738909**	3.800	1



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SK 0120 B 99

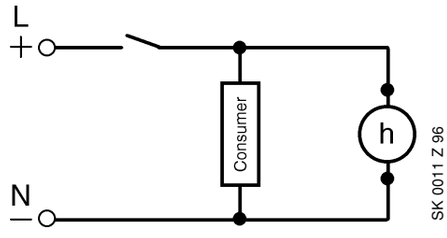
E 233 electro-mechanical hour counters

Hour counters are used to record operating times as well as to determine idle times and off times of industrial machinery and plant, for commercial purposes or in domestic installations. No reset functionality.

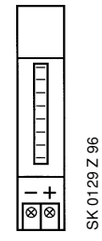
Rated voltage	Order details Type code	Order code	Bbn 4012233 EAN	Price 1 piece	Price group	Weight 1 piece kg	Pack unit pc.
AC 230 V/50 Hz	**E 233-230**	2CDE100000R1601	**63000 4**			0.05	10
AC 24 V/50 Hz	**E 233-24**	2CDE400000R1601	**63010 3**			0.05	10
DC 12 V ... 48 V	**E 233-12/48**	2CDE300010R1601	**63020 2**			0.05	10
AC 240 V/60 Hz	**E 233-240/60 Hz***	2CDE100021R1601	**36590 1** ①			0.05	10
AC 120 V/60 Hz	**E 233-120/60 Hz***	2CDE600021R1601	**36600 7** ①			0.05	10
AC 24 V/60 Hz	**E 233- 24/60 Hz***	2CDE400021R1601	**36610 6** ①			0.05	10

Other rated voltages upon request.
① Bbn No. 40 16779
* U_L approval

Wiring diagram



SK 0011 Z 96



SK 0129 Z 96

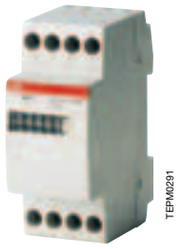
E 233-12/48 DC

Technical features

	AC equipment	DC equipment
Rated voltage	50 Hz: 24 V, 230 V 60 Hz: 24 V, 120 V, 240 V*	DC 12 V ... 48 V
Voltage tolerance	+ 6% – 10 %	w 10 %
Power consumption	1.5 VA	ca. 20 mW
Ambient temperature	– 15 °C/5 °F... + 50 °C/122 °F	– 10 °C/14 °F ... + 50 °C/122 °F
Counting capacity	100 000 h	100 000 h
Reading accuracy	0.01 h	0.1 h
Operation display	fast running	LED blinking
Protection against electric shock	according to DIN VDE 0106 Part 100 (BGV A2)	according to DIN VDE 0106 Part 100 (BGV A2)
Connection capacity	up to 10 mm^2	up to 10 mm^2

* U_L approval

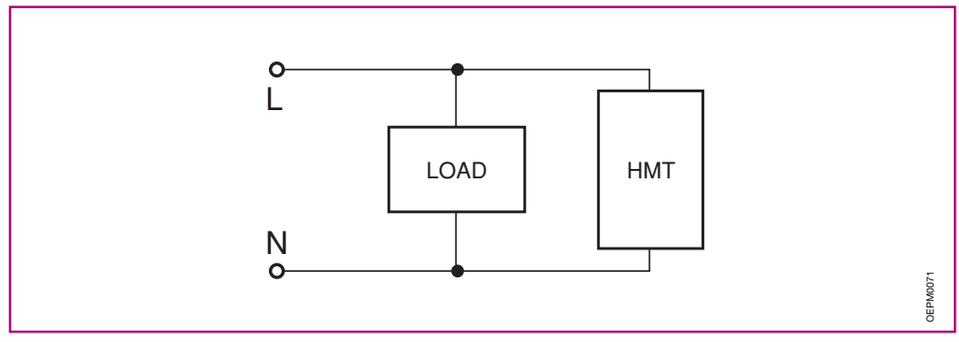
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HMT electro-mechanical hour counters

Equipped with 7-digit indicator (99.999,99) and available in two modules. They cannot be reset.

Rated voltage	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
V AC	**Type code**	Order code	**EAN**			kg	pc.
24	**HMT 1/24**	2CSM111000R1601	**030300**			0.200	6
110	**HMT 1/110**	2CSM121000R1601	**030409**			0.200	6
220	**HMT 1/220**	2CSM131000R1601	**030508**			0.200	6
230	**HMT 11**	2CSM133000R1601	**030607**			0.200	1



8

Technical features

Rated voltage Un	[V]	a.c. 24 a.c. 110 a.c. 230 d.c. 12...48
Displayed digits (in hours)	[n°]	99999.9 (for HMT1 and HMT11)
Accuracy class	[%]	0.5
Frequency	[Hz]	50
Power consumption	[W]	1.1...2.2
Modules	[n°]	2

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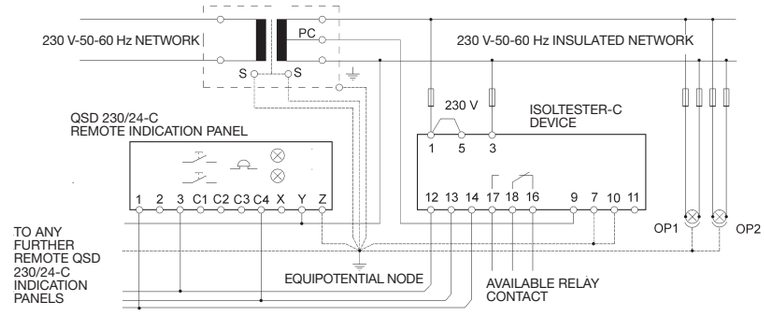


In compliance with IEC 64-4 Standard, it is necessary to insulate network electric circuits using insulation transformers in installations intended for environments with special needs. Insulation transformers protect from indirect contacts without breaking the circuit on the first fault to earth.

Isoltester-C

Using an internal microprocessor, this device enables the permanent insulation status testing between the active parts of an IT electric system and the available conductive parts made equipotential to the single earth system.

Rated voltage	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	**EAN**			kg	pc.
AC 230 V	**Isoltester-C**	2CSM144000R1501	**498407**			0.400	1



If the central socket is not available on the secondary of the insulation transformer (FC), the terminal 9 of the ISOLTESTER-C device must be connected to a phase of the secondary.

To insert control of capacitive component of insulation impedance to earth, bond the terminals 10 and 11 of the device.

OEPM0296

Technical features of Isoltester-C

Rated voltage U_n	[V]	a.c. 230 (±15%)
Rated frequency	[Hz]	50-60
Network voltage to be measured	[V]	a.c. 230
Alarm threshold	[kΩ]	adjustable 50-100-250
Measuring circuit voltage	[V]	15 V d.c
Load management current	[mA]	<0.6
Rated contact capacity I_n	[A]	5 A a 250 V (resistive)
Power consumption	[W]	3
Modules	[n°]	6
Standards		CEI 64-8, CEI 64-4

Additional technical features of Isoltester-C

Green LED	standard operation
Yellow LED	alarm (exceeded threshold)
Red LED	connection failure alarm (between PC and equipotential node)

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Selvtester-C for measurement and testing of insulated networks at 24 V a.c./d.c.

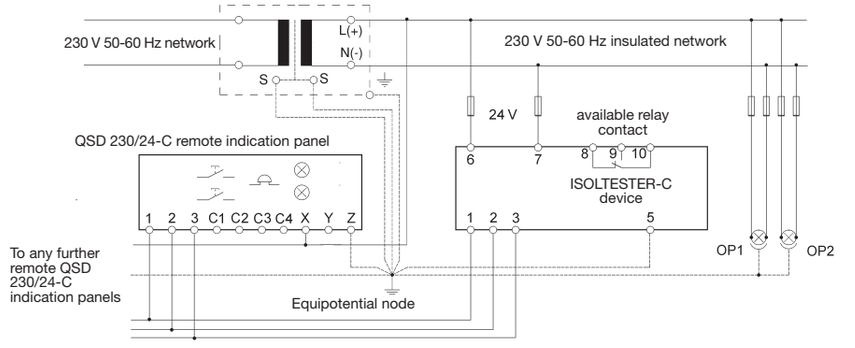
It is used to test permanently the insulation status of very low safety voltage circuits (up to 24V).

Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
Type code	Order code	**EAN**			kg	pc.
Selvtester-C	2CSM111000R1511	**498506**			0.200	1

QSD panels for remote signaling for flush mounting on E 503 boxes (already included) for Isoltester-C and Selvtester-C (one per product)

They are installed in combination with insulation testers to remotely report the signalling generated by these devices.

Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
Type code	Order code	**EAN**			kg	pc.
QSD 230/24-C	2CSM110000R1521	**498605**			0.300	1



8

Technical features of Selvtester-C

Rated voltage U_n	[V]	a.c./d.c. 24
Rated frequency	[Hz]	50-60
Network voltage to be measured	[V]	a.c. 24
Alarm threshold	[kΩ]	adjustable 10...60
Measuring circuit voltage	[V]	<d.c 24
Load management current	[mA]	<1
Rated contact capacity I_n	[A]	1 (125 V ohmic)
Power consumption	[W]	10
Modules	[n°]	3
Standards		CEI 64-8, CEI 64-4

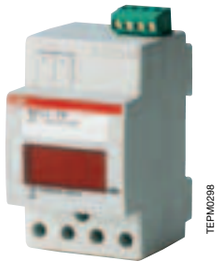
Additional technical features of Selvtester-C

Green LED	standard operation
Yellow LED	alarm

Technical features of QSD

Operating voltage	[V]	d.c. 24

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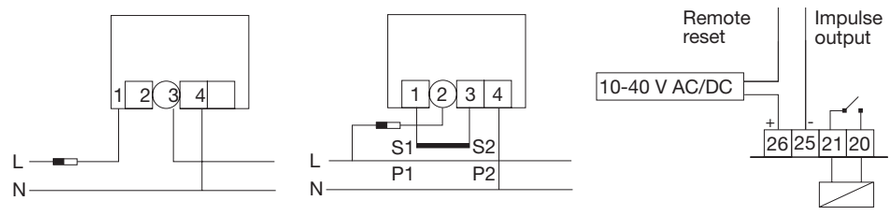
EE MINI-METER electronic single phase energy meters

Highly reliable single-phase meters for measuring active energy; they are ideal for all those applications that do not require certified devices.
Mini Meter allows direct connection and indirect connection through C.T. It is particularly strong and it is equipped with a 4-digit LED display to read energy consumption even in non-lightened environments.
The standard mode reads energy consumption in kWh without decimals, which can be viewed at any time by pressing a pushbutton.
Also EMT meters are suitable for direct connection or indirect connection through C.T. This series is equipped with local reset and analogue/digital microprocessor with 5 channels for current and voltage measurement.

Single phase energy meter 230 V for direct and C.T. connection

Description	**Order details**		**Bbn 7392696**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	**EAN**			kg	pc.
without reset	**EE 20**	KX 8630	**345651**			0.320	1
with local reset	**EE 20 R**	KX 8648	**345668**			0.320	1
impulsive output 10, 100, 1000; without reset	**EE 22**	KX 8655	**345675**			0.320	1
impulsive output 10, 100, 1000; with local reset	**EE 22 R**	KX 8663	**345682**			0.320	1
impulsive output 10, 100, 1000; with local and remote reset	**EE 22 Rr**	KX 8671	**345699**			0.320	1

EE2 wiring diagrams



Technical features

Rated voltage Un	[V]	a.c. 230 ±10% single-phase
Direct insertion current	[A]	up to 32
Indirect insertion current	[A]	through C.T. (by choice) /5 A
Protection fuse	[A]	max. 32
Rated frequency	[Hz]	50/60
Starting current	[mA]	35
Pulse output max frequency		1, 10, 100 alt.; 1000 imp/kWh
Pulse output max current	[mA]	100
Impulse amplitude	[ms]	100
Set transformation ratios		3, 10, 20, 30 ,40, 50, 60
Accuracy rating	[%]	2 (for EE)
Data storage		through internal EE PROM
Power consumption	[W]	1.7
Protection degree	[IP]	20
Operating temperature	[°C]	-40 +70 According to IEC 1036
Modules	[No]	3
Standards		IEC 66/110/DIS (1994), IEC 801-2-3-4

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ODIN METER electronic three-phase energy meters

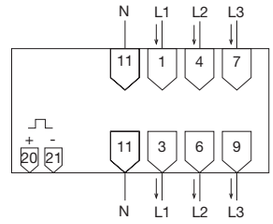
Odin Meter is a compact three-phase meter for measuring active energy, designed for mounting on DIN rail, on panel and for flush mounting in distribution switchboard or standard boxes.
It is designed and developed to offer extremely easy application and it is equipped with terminals with transparent scores and strong holding screws for connecting cables and terminal boards, phase bus connectors, easy to read 7-digit display, current direction indicator, clear mounting instructions with text and diagrams on the device.
Odin Meter is a highly reliable and strong meter that maintains the highest measuring accuracy in time.
Odin Meter energy meters are standardized according to the international Standards IEC 61036.
Accuracy class: 2

Active energy meter 3x230/400 (three-phase+N)

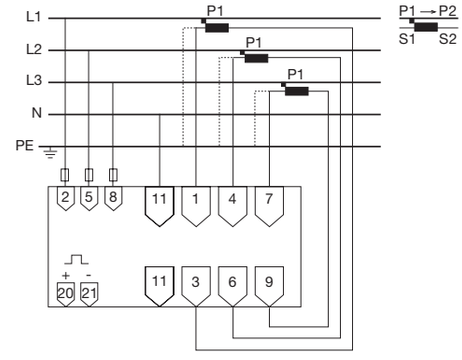
Description	Order details		Bbn 7392696	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
direct up to 65A, impulsive output 100Imp./kWh	**ODIN-65**	2CMA131024R1000	**310246**			0.320	1
indirect with AT/5A, impulsive output 100Imp./kWh	**ODIN-10**	2CMA131025R1000	**310253**			0.320	1

ODIN series wiring diagrams

- Direct connection



- Indirect connection (through C.T.)

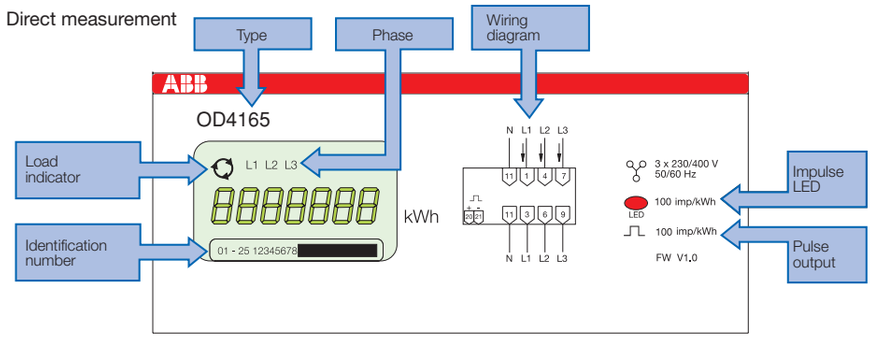


Technical features

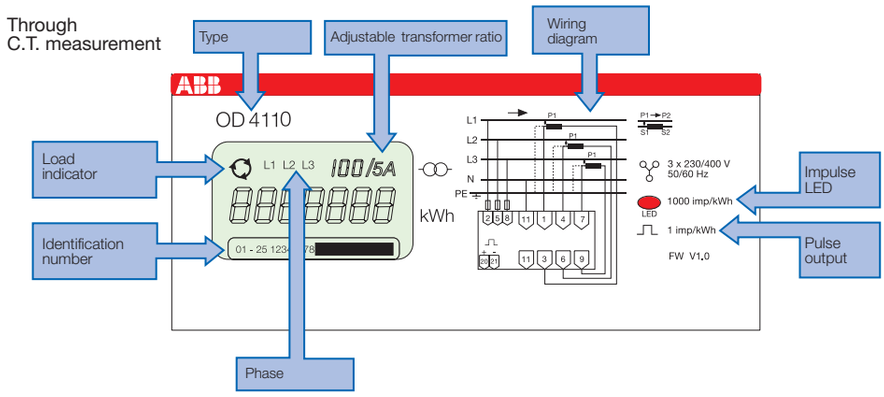
	Direct measuring/connection	Connection trough A.T.
Voltage	3x230/400 V (-20% to +15%)	3x230/400 V (-20% to +15%)
Current	65 A	10 A
Frequency	50/60 Hz	50/60 Hz
Selection of insertion currents through C.T.		5/5, 75/5, 100/5, 150/5, 200/5, 250/5, 300/5, 400/5, 500/5, 600/5, 700/5, 750/5, 800/5, 900/5 A
Starting current	25 mA	5 mA
Pulsive output max. voltage	5...40 V	...40 V
Pulsive output max. current	100 mA	100 mA
Accuracy	2 ±2% class	2 ±2% class
Display	7-digit LCD	7-digit LCD
Protection degree	IP 20	IP 20
Operating temperature	-25 + 55 °C	25 + 55 °C
Standards	IEC 61036	IEC 61036

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Direct measurement



Through C.T. measurement



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TEPM0408


TEPM0306

DELTA METER electronic three-phase energy meters

DELTA METER meters are designed to offer extremely easy and simple application. Suitable for mounting on DIN rail, lightweight and small, they are ideal for the installation on switchboards, feeder panels and tin boxes. The range includes devices for measuring active energy, reactive energy and the combination of active and reactive energy. All DELTA METER meters are standardized according to the international Standards IEC 1036 (for active energy) and IEC 1268 (for reactive energy), accuracy class 1 and 2 according to the type.

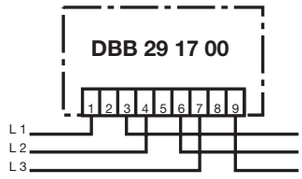
	Order details		Bbn 7392696	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	EAN			kg	pc.
Active energy meter for direct connection up to 65 A, class 2							
3 x 100-500 V AC	**DBB 22 00 0**	2CMA180802R1000	**808026**			0.320	1
3 x 100-500/57-288 V AC	**DBB 23 00 0**	2CMA180800R1000	**808002**			0.320	1
	DBB 23 00 0-105	2CMA139101R1000	**376181**			0.320	1
	DDB 13 00 0	2CMA180810R1000	**808101**			0.320	1
Active energy meter for direct connection through C.T. /5 A, class 2							
3 x 100-500 V AC	**DAB 12 00 0**	2CMA180807R1000	**808071**			0.320	1
3 x 100-500/57-288 V AC	**DAB 13 00 0**	2CMA180806R1000	**808064**			0.320	1
	DAB 13 00 0-105	2CMA139102R1000	**376143**			0.320	1
	DCB 13 00 0	2CMA180808R1000	**808088**			0.320	1
Auxiliary elements/accessories							
	DELTA/CPL	2CMA132633R1000	**326339**			0.320	1
	DELTA/DIN	2CMA132540R1000	**325400**			0.320	1
	DELTA/FRQ	2CMA132635R1000	**325417**			0.320	1

Technical features

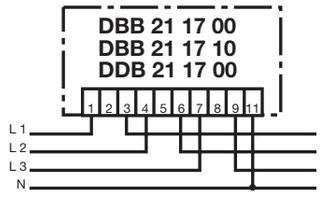
Voltage	[V]	3x400 basic version; other voltages on request
Current	[A]	≤65 (direct connection); >65 (indirect connection through C.T.)
Frequency	[Hz]	50/60
Starting current	[mA]	4
Pulse output frequency	[imp/kWh]	100 (direct connection); 1000 (in direct connection through C.T other frequencies available on request
Impulse amplitude	[ms]	100, basic version
Frequency of blinking of LED and LCD segments	[imp/kWh]	5000, basic version
Pulse output		
-max. current	[mA]	100
-max. voltage	[Va.c./d.c.]	40
-max. cable section	[mm2]	2.5
Accuracy		Class 2
Display		LCD (liquid crystal) with 7 digits, h=7mm
Terminal holder		10 mm^2 (insertion through C.T.); 25 mm^2 (direct insertion)
Protection degree		IP51 (IP20 on the terminal holder without cover)
Operating temperature	[°C]	-25 +70
Power consumption	[W]	1.5
Modules	[No]	7
Standards		IEC 1036 for active energy meters; IEC 1268 for reactive energy meters; DIN 4 for pulse output

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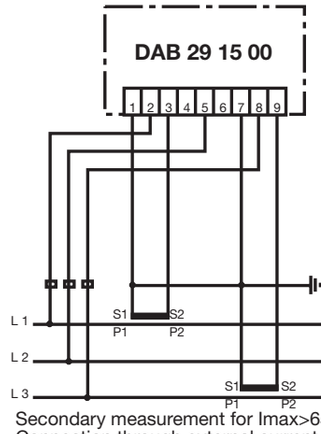
Wiring diagrams



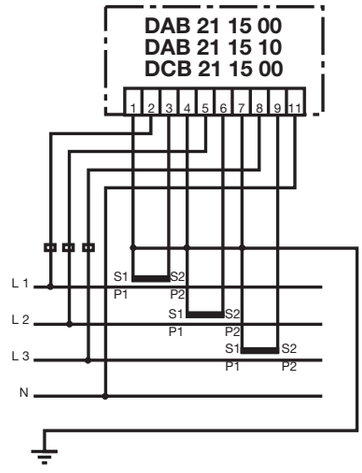
Direct measurement up to Imax=65A
Direct connection to the three-phase network without neutral (3 cables) 230/400V
Max. cable section: 25 mm²



Direct measurement up to Imax=65A
Direct connection to the three-phase network with neutral (4 cables) 230/400V
Max. cable section: 25 mm²

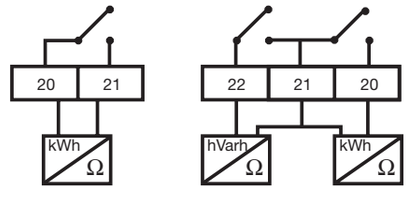


Secondary measurement for Imax>65A
Connection through external current transformer to the three-phase network without neutral (3 cables) 230/400V
Max. cable section: 10 mm²
Adjustable transformation ratio



Secondary measurement for Imax>65A
Connection through external current transformer to the three-phase network with neutral (4 cables) 230/400V
Max. cable section: 10 mm²
Adjustable transformation ratio

Notes
For connections through current transformer, C.T. must have 5¡ secondary and be connected according to correct polarities: P1->P2, S1->S2



2-pole balanced or 3-pole unbalanced output for sending to a personal computer information from energy meter, encoded as numerical signal. Some types enable to connect an external voltage to control teleset

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Other modular devices
Other functions



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TEPM0311


TEPM0312


TEPM0313


TEPM0314


TEPM0315

TM/TS bell transformers

These transformers with secondary in very low safety voltage for feeding bells (discontinuous use) are available in 4 series:
- failure-proof (TM series)
- non-inherently short-circuit proof (TS8 series)
- non-inherently short-circuit proof with switch 0-1 (TS8/SW series)
- non-inherently short-circuit proof (TS16/TS24 series).

Secondary rated voltage	Rated power (discontinuous)	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
V	VA	**Type code**	Order code	**EAN**			kg	pc.
TM series failsafe transformers								
4-8-12	3.33-6.66-10	**TM10/12**	2CSM101021R0801	**367109**			0.300	6
12-24	5-10	**TM10/24**	2CSM101041R0801	**367208**			0.300	6
4-8-12	5-10	**TM15/12**	2CSM151021R0801	**367307**			0.300	6
12-24	7.5-15	**TM15/24**	2CSM151041R0801	**367406**			0.300	6
4-8-12	10-20-30	**TM30/12**	2CSM301021R0801	**367505**			0.450	4
12-24	15-30	**TM30/24**	2CSM301041R0801	**367604**			0.450	4
4-8-12	13-27-40	**TM40/12**	2CSM401021R0801	**367703**			0.450	4
12-24	20-40	**TM40/24**	2CSM401041R0801	**367802**			0.450	4
TS8 series non-inherently short-circuit proof transformers								
8	8	**TS 8/8**	2CSM081301R0811	**36800 7**			0.355	6
12	8	**TS 8/12**	2CSM081401R0811	**36810 6**			0.355	6
24	8	**TS 8/24**	2CSM081501R0811	**36820 5**			0.355	6
TS8 series non-inherently short-circuit proof transformers with switch 0-1								
8	8	**TS 8/8 sw**	2CSM081302R0811	**36830 4**			0.277	6
12	8	**TS 8/12 sw**	2CSM081402R0811	**36840 3**			0.277	6
4-6-8	8	**TS 8/4-6-8 sw**	2CSM081012R0811	**36860 1**			0.280	6
4-8-12	8	**TS 8/4-8-12 sw**	2CSM081022R0811	**36870 0**			0.280	6
TS16 series non-inherently short-circuit proof transformers								
8	16	**TS 16/8**	2CSM061301R0811	**36880 9**			0.355	6
12	16	**TS 16/12**	2CSM061401R0811	**36890 8**			0.355	6
24	16	**TS 16/24**	2CSM061501R0811	**36900 4**			0.330	6
4-6-8	16	**TS 16/4-6-8**	2CSM061011R0811	**36910 3**			0.333	6
4-8-12	16	**TS 16/4-8-12**	2CSM061021R0811	**36920 2**			0.333	6
4-8-12	24	**TS 24/4-8-12**	2CSM041021R0811	**36930 1**			0.465	4
8-12-24	24	**TS 24/8-12-24**	2CSM041031R0811	**36940 0**			0.465	4

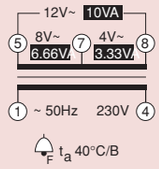
Technical features

Primary rated voltage U_n	[V]	a.c. 230
Secondary rated voltage U_n	[V]	4, 6, 8, 12, 24
Rated frequency	[Hz]	50/60
Rated power	[VA]	8, 10, 15, 16, 24, 30, 40 (discontinuous use)
Modules	[n°]	2, 3
Standards		IEC/EN 61558-2-8

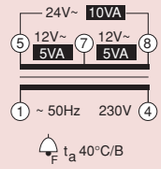
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Wiring diagram and marking information

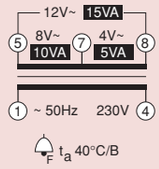
TM10/12



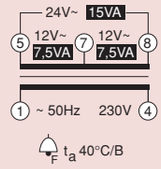
TM10/24



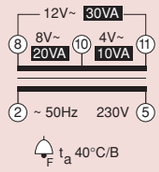
TM15/12



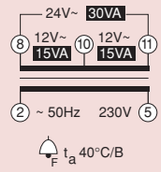
TM15/24



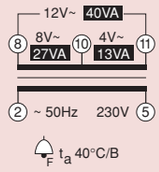
TM30/12



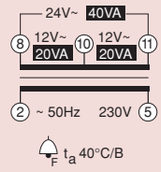
TM30/24



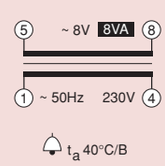
TM40/12



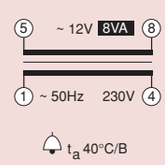
TM40/24



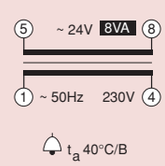
TS8/8



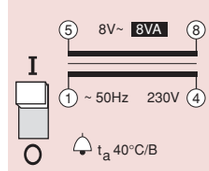
TS8/12



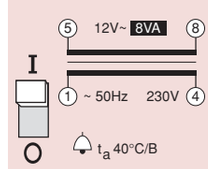
TS8/24



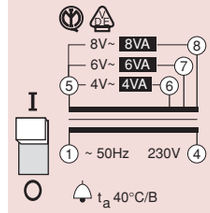
TS8/8 SW



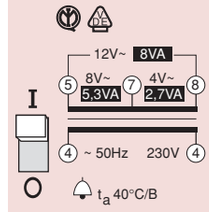
TS8/12 SW



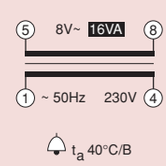
TS8/4-6-8 SW



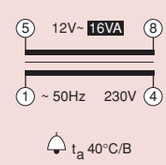
TS8/4-8-12 SW



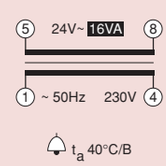
TS16/8



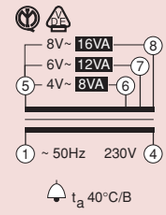
TS16/12



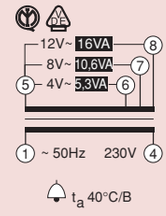
TS16/24



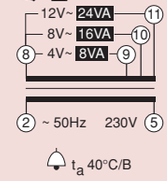
TS16/4-6-8



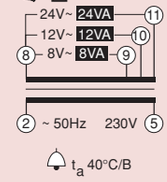
TS16/4-8-12



TS24/4-8-12



TS24/8-12-24



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TEPM0316

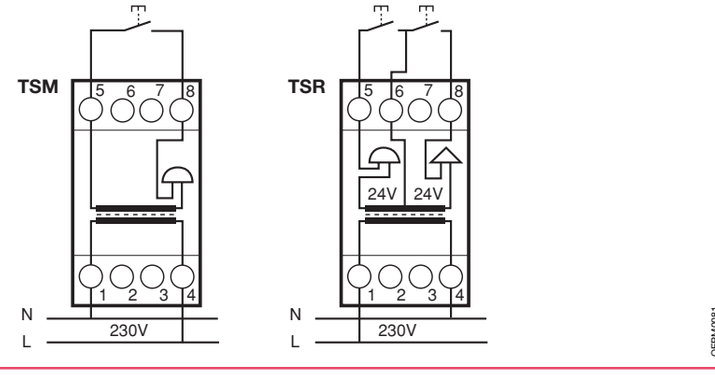

TEPM0317


TEPM0451

Bells and buzzers

Characterized by discontinuous use through one or more pushbuttons, bells and buzzers are suitable for public and tertiary acoustic signalling.

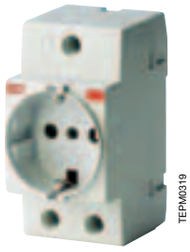
Rated voltage	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
V AC	**Type code**	Order code	**EAN**			kg	pc.
SM-1 electro-mechanical modular bells in 1 module							
12	**SM1/12**	2CSM111000R0821	**886204**			0.100	12
230	**SM1/230**	2CSM131000R0821	**886303**			0.100	12
RM-1 modular buzzers in 1 module							
12	**RM1/12**	2CSM211000R0821	**886419**			0.100	12
230	**RM1/230**	2CSM231000R0821	**886518**			0.100	12
TSM modular electronic bell + 10 VA transformer (two-tones), 2 modules							
12	**TSM**	2CSM100000R0841	**007005**			0.300	6
TSR bell + buzzer + transformer, 2 modules							
24	**TSR**	2CSM100000R0831	**369608**			0.300	1

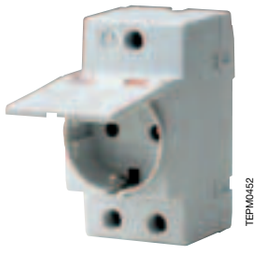


Technical features

Rated voltage U_n	V	12, 230
Rated frequency	Hz	50
Power consumption	W	3.6 (12 V) ; 5.5 (230 V); 6 (24 V)
Modules	n°	1, 2
Approvals		IMQ (for TSR)

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Modular sockets

These modular sockets can be installed in electric control panels. They are available in the following types: Italian standard M1173, French standard M1174 and Schuko standard E1175.

Rated current	Standard	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
A		**Type code**	Order code	**EAN**			kg	pc.
10/16	Italian	**M1173**	2CSM110000R0701	**004103**			0.200	4
10	French	**M1174**	2CSM110000R0711	**006602**			0.200	4
10/16	Schuko	**E1175**	2CSM110000R0721	**334705**			0.200	4
10/16	Schuko*	**E1175-C**	2CSM111000R0721	**342502**			0.200	4

*With cover

Technical features

Rated voltage U_n	[V]	a.c. up to 250
Rated current I_n	[A]	10...16
Rated frequency	[Hz]	50/60
Power consumption	[W]	0.6
Modules	[n°]	2.5
Standards		DIN VDE 0620; IEC 884-1; NF C61-303

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M9100 modular housing for CBK pushbuttons

Through an appropriate kit, this housing makes control and signalling units ø 22 CBK series for industrial use (pushbuttons, indicators, selectors, etc.) uniform to modular devices according to DIN rail.

Kit for modular housing (2 modules)

Order details		Bbn 8012542	Price 1 piece	Price group	Weight 1 piece	Pack unit
Type code	Order code	**EAN**			kg	pc.
M9100	2CSM100000R2001	**058403**			0.050	5

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SK 0163 B 00

NT/S power supply units

Two universally applicable power supply units for auxiliary power supply in SELV applications. The compact devices of the System Pro *M* design have a regulated output voltage of 12 V DC or 24 V DC with a maximum output current of 1.6 A or 0.8 A. The devices are protected against overload and the output is steady-shortcircuit-proof. The status of the supply voltage and the output voltage is indicated by 2 LEDs. Connection is made with screw clamps.

Rated output voltage/current	**Order details**		**Bbn 8012542**	Price 1 piece	Price group	Weight 1 piece	Pack unit
	Type code	Order code	**EAN**			kg	pc.
12 VDC/1.6 A	**NT/S 12.1600**	GHQ6050056R0002	**514675**			0.200	1
24 VDC/0.8 A	**NT/S 24.800**	GHQ6050057R0002	**514682**			0.200	1

Technical features

Supply	Rated voltage	230 V AC (+10/ -15%), 50 60 Hz
	Power consumption	max. 30 VA
Output	Rated voltage	12 V DC or, as the case may be, 24 V DC (±1%), SELV
	Ripple voltage	max. 0.15 Vss
	Rated current	1.6 A or 0.8 A, steady-short-circuit-proof
	Current limitation	12 V DC max. 2.2 ; A 24 VDC max. 1.1 A
	Power loss	max. 5 W
Operating and indication elements	2 LEDs	green state of 230 V AC supply and DC output voltage
	Degree of protection	IP 20 according to EN 60529
	Operating temperature range	-5 °C/23 °F to + 45 °C/113 °F
	Connection	clamp screws, connection capacity 0.2-2.5 mm^2
	Installation	on mounting rails 35 mm, DIN EN 60715

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Technical details

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Tripping characteristics

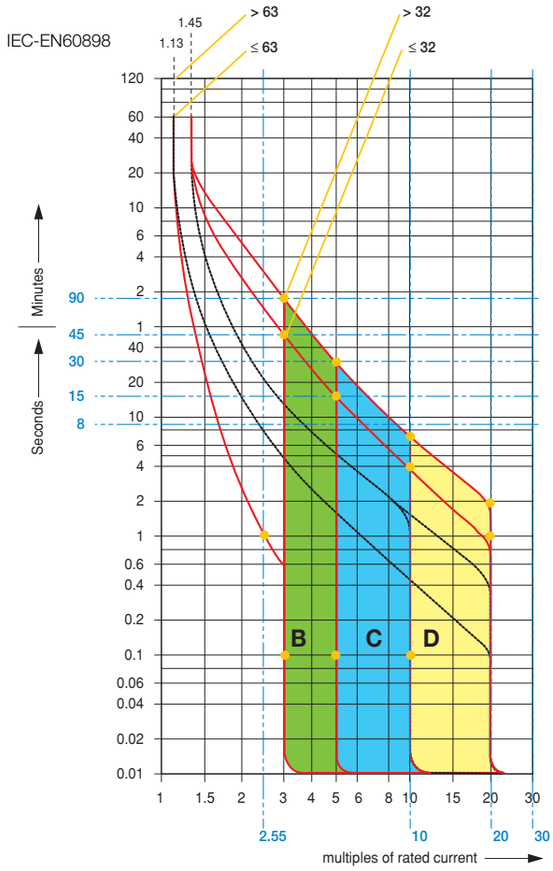
Acc. to	Tripping characteristic and rated current		Thermal release ② Current: conventional non-tripping c.	conventional tripping c.	Tripping time	Electromagnetic release ① Currents: hold current surges	trip at least at	Tripping time
IEC/EN 60898	**B**	6 to 63 A	1.13 · I_n		> 1 h	3 · I_n		> 0.1 s
				1.45 · I_n	< 1 h		5 · I_n	< 0.1 s
	C	0.5 to 63 A	1.13 · I_n		> 1 h	5 · I_n		> 0.1 s
				1.45 · I_n	< 1 h		10 · I_n	< 0.1 s
	D	0.5 to 63 A	1.13 · I_n		> 1 h	10 · I_n		> 0.1 s
				1.45 · I_n	< 1 h		20 · I_n	< 0.1 s
DIN VDE 0660/9.82	**K**	0.5 to 63 A	1.05 · I_n		> 1 h			
				1.2 · I_n	< 1 h	not applicable		
IEC/EN 60947-2 DIN VDE 0660 8/69 Part 101			1.05 · I_n		> 2 h	8 · I_n		> 0.2 s
				1.2 · I_n	< 1 h ③		12 · I_n	< 0.2 s
				1.5 · I_n	< 2 min. ③			
				6.0 · I_n	> 2 s (T1)			
DIN VDE 0660/9.82	**Z**	0.5 to 63 A	1.05 · I_n		> 1 h			
				1.2 · I_n	< 1 h	not applicable		
IEC/EN 60947-2 DIN VDE 0660 8/69 Part 101			1.05 · I_n		> 2 h	2 · I_n		> 0.2 s
				1.2 · I_n	< 1 h ③		3 · I_n	< 0.2 s
				1.5 · I_n	< 2 min. ③			
				6.0 · I_n	> 2 s (T1)			

① The indicated tripping values of electromagnetic tripping devices apply to a frequency range of 16 2/3...60 Hz. In the case of diverging frequencies or direct current, see paragraph "Variation of tripping threshold of MCBs, according to network frequency" (page 6/7)

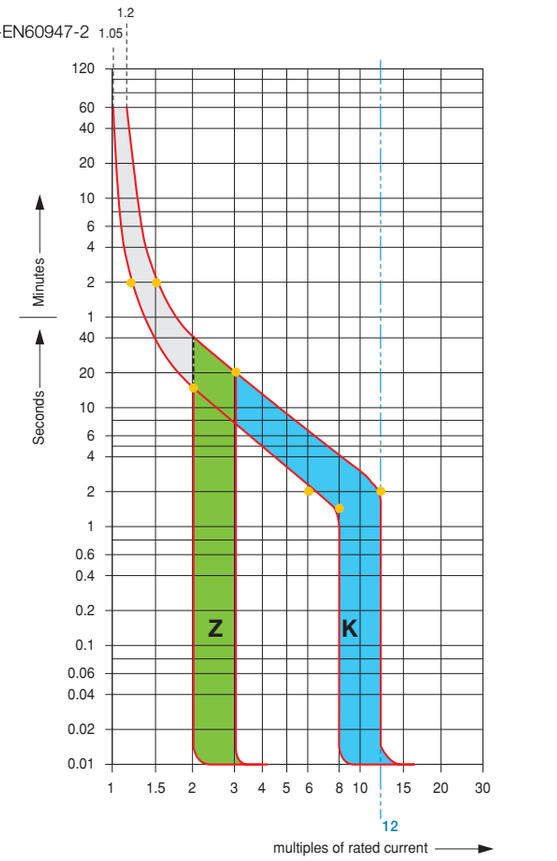
② The thermal releases are calibrated to a nominal reference ambient temperature; for Z and K, the value is 20 °C, for B and C = 30 °C. In the case of higher ambient temperatures, the current values fall by ca. 6 % for each 10 K temperature rise.

③ As from operating temperature (after I_1 > 1 h or, as applicable, 2 h).

Characteristcs B, C, D



Characteristcs K, Z



10

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Internal resistance and power loss of the miniature circuit-breakers

Internal resistance per pole in mΩ, power loss per pole in W

Type	Rated current	Device series B, C, D ①		K		Z	
	I_n A	mΩ	W	mΩ	W	mΩ	W
S 200 and S 200 M	0.5	5500	1.4	6340	1.6	10100	2.5
	1	1440	1.4	1550	1.6	2270	2.3
	1.6	630	1.6	695	1.8	1100	2.8
	2	460	1.8	460	1.9	619	2.5
	3	150	1.3	165	1.5	202	1.8
	4	110	1.8	120	2.0	149	2.4
	6	55	2.0	52	1.9	104	3.7
	8	15	1.0	38	2.5	53.9	3.45
	10	13.3	1.3	12.6	1.26	17.5	1.7
	13	13.3	2.3	12.6	1.26	–	–
	16	7.0	1.8	7.7	2.0	10.9	2.8
	20	6.25	2.5	6.7	2.7	6.0	2.4
	25	5.0	3.2	4.6	2.9	4.1	2.6
	32	3.6	3.7	3.5	3.6	2.8	2.9
	40	3.0	4.8	2.8	4.5	2.5	4.1
	50	1.3	3.25	1.25	2.9	1.8	4.4
	63	1.2	4.8	0.7	5.2	1.3	5.2

① Current intensities 0.5 – 4 apply exclusively to C-type trip characteristics.

Maximum permissible earth-fault loop impedance ZS at U_0 = 230 V~ ②
to ensure compliance with the operation conditions pursuant to IEC 60364-4.
Operating time < 0.4 s at 400 V~ < 0.2 s at > 400 V~ < 0.1 s
The instantaneous release of the MCB ensures an operating time of ≤ 0.1 s.

Determined according to DIN VDE 0100-520 sheet 2:2002-11(source impedance = 300 mΩ, c = 0.95 and conductor temperature 70 °C = factor 0.8). The internal resistance of the MCB is already included.

S 200 and S 200 M

Rated current I_n A	B max. Z_s Ω	C max. Z_s Ω	D max. Z_s Ω	K max. Z_s Ω	Z max. Z_s Ω
0.5	–	46	33.0	38.3	153.3
1	–	23	16.5	19.2	76.7
1.6	–	14.4	10.3	12.0	47.9
2	–	11.5	8.2	9.6	38.3
3	–	7.7	5.5	6.4	25.6
4	–	5.8	4.1	4.8	19.2
6	7.7	3.8	2.7	3.2	12.8
8	–	2.8	2.1	2.4	9.5
10	4.6	2.2	1.6	1.9	7.7
13	3.5	1.7	1.2	–	–
16	2.9	1.4	1.0	1.2	4.8
20	2.3	1.2	0.8	1.0	3.8
25	1.8	0.9	0.7	0.8	3.1
32	1.4	0.7	0.5	0.6	2.4
40	1.1	0.6	0.4	0.5	1.9
50	0.9	0.5	0.3	0.4	1.5
63	0.7	0.4	0.3	0.3	1.2

② U_0 = rated voltage against earthed conductor; for U_0 = 240 V~ is $Z_S \cdot 1.04$; for U_0 = 127 V~ is $Z_S \cdot 0.55$

Take into account the voltage drop:
e.g. in the case of a 1.5 mm² conductor, protected by a B 16 circuit-breaker, the maximum cable length is 82 m.
If the voltage drop is below 3%, this would result in a maximum cable length (2-strand) of 17 m.
For more details on this topic, get your own copy of the technical information leaflet “Maximum cable lengths”.

Maximum cable lengths in the case of different voltages and cross sections on request.

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Internal resistance and power loss of the miniature circuit-breakers

Internal resistance per pole in mΩ, power loss per pole in W

Type	Rated current	Device series B, C, D ①		K		Z	
	I_n A	mΩ	W	mΩ	W	mΩ	W
S 200 P	0.2	–	–	42500	1.7	–	–
	0.3	–	–	20000	1.8	–	–
	0.5	5500	1.4	6340	1.6	10100	2.5
	0.75	–	–	2500	1.4	–	–
	1	1440	1.4	1400	1.4	2270	2.3
	1.6	630	1.6	625	1.6	1100	2.8
	2	460	1.8	460	1.8	619	2.5
	3	211	1.9	211	1.9	211	1.9
	4	150	2.4	163	2.6	163	2.6
	6	61	2.2	67	2.4	104	3.7
	8	45	2.9	45	2.9	55	3.5
	10	14	1.4	19	1.9	21	2.1
	13	13.3	2.3	–	–	–	–
	16	9.7	2.5	8.2	2.1	10.9	2.8
	20	7.3	2.9	7.3	2.9	7.3	2.9
	25	5.6	3.5	5.6	3.5	5.6	3.5
	32	4.1	4.2	4.1	4.2	4.1	4.2
	40	4.0	6.4	4.0	6.4	4.0	6.4
	50	1.2	3.0	1.2	3.0	1.8	4.4
	63	1.4	5.6	1.3	5.2	1.3	5.2

① Current intensities 0.5 – 4 apply exclusively to C-type trip characteristics.

Maximum permissible earth-fault loop impedance ZS at U_0 = 230 V~ ②
to ensure compliance with the operation conditions pursuant to IEC 60364-4.
Operating time < 0.4 s at 400 V~ < 0.2 s at > 400 V~ < 0.1 s
The instantaneous release of the MCB ensures an operating time of ≤ 0.1 s.

Determined according to DIN VDE 0100-520 sheet 2:2002-11(source impedance = 300 mΩ, c = 0.95 and conductor temperature 70 °C = factor 0.8). The internal resistance of the MCB is already included.

S 200 P

Rated current I_n A	B max. Z_s Ω	C max. Z_s Ω	D max. Z_s Ω	K max. Z_s Ω	Z max. Z_s Ω
0.2	–	–		40	–
0.3	–	–		34.8	–
0.5	–	46	27.4	26.5	143
0.75	–	–		19.4	–
1	–	23	15	15	74.4
1.6	–	14.4	9.6	9.6	47.9
2	–	11.5	7.8	7.8	38.3
3	–	7.7	11.8	5.3	25.3
4	–	5.8	8.8	4.1	19.1
6	7.6	3.8	5.9	2.7	12.7
8	–	2.8	5.7	2.0	9.5
10	4.6	2.3	3.5	1.6	7.6
13	3.5	1.7	2.7	–	–
16	2.9	1.4	2.2	1.0	4.7
20	2.3	1.1	1.7	0.8	3.8
25	1.8	0.9	1.4	0.6	3.0
32	1.4	0.7	1.1	0.5	2.4
40	1.1	0.6	0.9	0.4	1.9
50	0.9	0.5	0.7	0.3	1.5
63	0.7	0.4	0.6	0.25	1.1

② U_0 = rated voltage against earthed conductor; for U_0 = 240 V~ is $Z_S \cdot 1.04$; for U_0 = 127 V~ is $Z_S \cdot 0.55$

Take into account the voltage drop (page 6/3)

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Derating of load capability of MCBs

Derating of MCBs load capability takes in consideration 3 factors:
- ambient temperature
- continuity (duration) of the load
- influence of adjacent devices

The **3** rules to obtain the effective value of I_n are the following:

1. Deviating ambient temperature:

The rated value of the current of a miniature circuit-breaker refers to a temperature of 20 °C for circuit-breakers with characteristics K and Z and 30 °C for characteristics B, C and D.
The following tables contain the derating of load capability of S 200/M/P MCBs* with temperature from -40 °C to 70 °C for the curves B, C, D and K, Z.

Max. operating current depending on the ambient temperature of a circuit-breaker in load circuit of characteristics type B, C and D

B, C and D	**Ambient temperature T (°C)**											
I_n (A)	- 40	- 30	- 20	- 10	0	10	20	30	40	50	60	70
0.5	0.67	0.65	0.62	0.60	0.58	0.55	0.53	0.50	0.47	0.44	0.41	0.37
1.0	1.33	1.29	1.25	1.20	1.15	1.11	1.05	1.00	0.94	0.88	0.82	0.75
1.6	2.13	2.07	2.00	1.92	1.85	1.77	1.69	1.60	1.51	1.41	1.31	1.19
2.0	2.67	2.58	2.49	2.40	2.31	2.21	2.11	2.00	1.89	1.76	1.63	1.49
3.0	4.0	3.9	3.7	3.6	3.5	3.3	3.2	3.0	2.8	2.6	2.4	2.2
4.0	5.3	5.2	5.0	4.8	4.6	4.4	4.2	4.0	3.8	3.5	3.3	3.0
6.0	8.0	7.7	7.5	7.2	6.9	6.6	6.3	6.0	5.7	5.3	4.9	4.5
8.0	10.7	10.3	10.0	9.6	9.2	8.8	8.4	8.0	7.5	7.1	6.5	6.0
10.0	13.3	12.9	12.5	12.0	11.5	11.1	10.5	10.0	9.4	8.8	8.2	7.5
13.0	17.3	16.8	16.2	15.6	15.0	14.4	13.7	13.0	12.3	11.5	10.6	9.7
16.0	21.3	20.7	20.0	19.2	18.5	17.7	16.9	16.0	15.1	14.1	13.1	11.9
20.0	26.7	25.8	24.9	24.0	23.1	22.1	21.1	20.0	18.9	17.6	16.3	14.9
25.0	33.3	32.3	31.2	30.0	28.9	27.6	26.4	25.0	23.6	22.0	20.4	18.6
32.0	42.7	41.3	39.9	38.5	37.0	35.4	33.7	32.0	30.2	28.2	26.1	23.9
40.0	53.3	51.6	49.9	48.1	46.2	44.2	42.2	40.0	37.7	35.3	32.7	29.8
50.0	66.7	64.5	62.4	60.1	57.7	55.3	52.7	50.0	47.1	44.1	40.8	37.3
63.0	84.0	81.3	78.6	75.7	72.7	69.6	66.4	63.0	59.4	55.6	51.4	47.0

Max. operating current depending on the ambient temperature of a circuit-breaker in load circuit of characteristics type K and Z

K and Z	**Ambient temperature T (°C)**											
I_n (A)	- 40	- 30	- 20	- 10	0	10	20	30	40	50	60	70
0.5	0.66	0.64	0.61	0.59	0.56	0.53	0.50	0.47	0.43	0.40	0.35	0.31
1.0	1.32	1.27	1.22	1.17	1.12	1.06	1.00	0.94	0.87	0.79	0.71	0.61
1.6	2.12	2.04	1.96	1.88	1.79	1.70	1.60	1.50	1.39	1.26	1.13	0.98
2.0	2.65	2.55	2.45	2.35	2.24	2.12	2.00	1.87	1.73	1.58	1.41	1.22
3.0	4.0	3.8	3.7	3.5	3.4	3.2	3.0	2.8	2.6	2.4	2.1	1.8
4.0	5.3	5.1	4.9	4.7	4.5	4.2	4.0	3.7	3.5	3.2	2.8	2.4
6.0	7.9	7.6	7.3	7.0	6.7	6.4	6.0	5.6	5.2	4.7	4.2	3.7
8.0	10.8	10.2	9.8	9.4	8.9	8.5	8.0	7.5	6.9	6.3	5.7	4.9
10.0	13.2	12.7	12.2	11.7	11.2	10.6	10.0	9.4	8.7	7.9	7.1	6.1
13.0	17.2	16.6	15.9	15.2	14.5	13.8	13.0	12.2	11.3	10.3	9.2	8.0
16.0	21.2	20.4	19.6	18.8	17.9	17.0	16.0	15.0	13.9	12.6	11.3	9.8
20.0	26.5	25.5	24.5	23.5	22.4	21.2	20.0	18.7	17.3	15.8	14.1	12.2
25.0	33.1	31.9	30.6	29.3	28.0	26.5	25.0	23.4	21.7	19.8	17.7	15.3
32.0	42.3	40.8	39.2	37.5	35.8	33.9	32.0	29.9	27.7	25.3	22.6	19.6
40.0	52.9	51.0	49.0	46.9	44.7	42.4	40.0	37.4	34.6	31.6	28.3	24.5
50.0	66.1	63.7	61.2	58.6	55.9	53.0	50.0	46.8	43.3	39.5	35.4	30.6
63.0	83.3	80.3	77.2	73.9	70.4	66.8	63.0	58.9	54.6	49.8	44.5	38.6

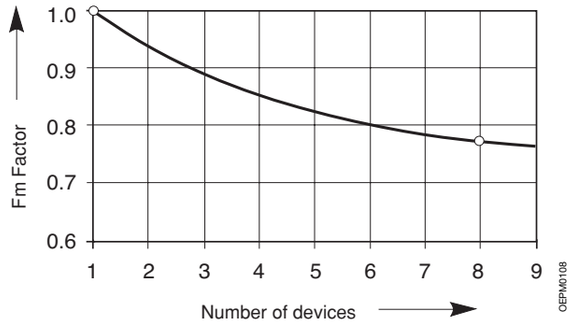
* the same tables contain derating of FS 201 and DS 200 RCBOs with temperature from -25 °C to 55 °C for the curves B, C and K.

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2. Multiply the rated current (equivalent) referring to the new temperature by another factor 0.9 only for loads that last for more than an hour.

3. Multiply the rated current (equivalent) referring to the new temperature by another factor only in case of presence of several devices installed alongside each other; see table.

Influence of adjacent devices



Influence of adjacent devices
Correction factor Fm

No. of adjacent devices	Fm
1	1
2	0.95
3	0.9
4	0.86
5	0.82
6	0.795
7	0.78
8	0.77
9	0.76
>9	0.76

Example: S 202 C 16 with T=35 °C

Type of use	Values to use	Formula	Calculation	Result
Load less than an hour	In (amb. t°) -see tables-			In=15.43 A
Load more than an hour	In (amb. t°) -see tables-, 0.9	In (amb. t°)x0.9	15.43x0.9	In=13.9 A
Load over an hour with 8 adj.devices	In (amb. t°) -see tables-, 0.9, Fm (0.77)	In (amb. t°)x0.9x0.77	15.43x0.9x0.77	In=10.7 A

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Performance in altitude of MCBs

Up to the height of 2000 m, MCBs do not undergo any alterations in their rated performances. Over this height the properties of the atmosphere change in terms of composition, dielectric capacity, cooling capacity and pressure, therefore the performances of the MCBs undergo derating, which can basically be measured in terms of variations in significant parameters, such as the maximum operating voltage and the rated current.

S 200/M/P			
Altitude[m]	2000	3000	4000
Rated service voltage **Ue[V]**	440	380	380
Rated current **In**	In	0.96xIn	0.93xIn

Variation of tripping thresholds of MCBs according to network frequency

The circuit-breakers are calibrated for a current with a frequency range between 50 and 60 Hz.

For other frequency values, the electro-magnetic tripping current varies according to the multiplication factor H.

	D.C.	**100 Hz**	**200Hz**	**400Hz**
H	1.5	1.1	1.2	1.5

For the thermal trip, on the other hand, there is no variation because it is independent of the network frequency.

Example:
S 202 C10 supplied at 50-60 Hz, the electro-magnetic tripping current is: 50 A≤I_m≤100 A;
S 202 C10 supplied at 400 Hz, the electro-magnetic tripping current is: 75 A≤I_m≤150 A.

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Lighting circuit protection

Selection of circuit-breakers for the protection of lighting circuit and calculation of their rated current

To select the correct circuit-breaker for use in the protection of lighting circuits you need to know the type of load based on which you will work out the breaker's rated current. The protection circuit utilization current can be calculated simply starting with the rated power and the lighting voltage, or it may be supplied directly by the device manufacturer.

Considering the utilization current, it is important to select the version of the breaker with a rated current just above the value calculated, defining the cable cross-section accordingly.

The tables below show the rated current values of the circuit-breakers to be used according to the type and power of the device connected.

Table 1 High pressure discharge lamps

230 V and 400 VAC three-phase with or without power factor correcting capacitors, star or delta connection

Mercury vapour fluorescent lamp	Pw [W]	<700	<1000	<2000
	I [A]	6	10	16
Mercury vapour metal halogen lamp	Pw [W]	<375	<1000	<2000
	I [A]	6	10	16
High pressure sodium discharge lamp	Pw [W]	<400		<1000
	I [A]	6		16

Table 2 Fluorescent lamps

230 VAC single-phase/three-phase with neutral (400 V), with star connection.

The tables indicate the rated current of the circuit-breakers according to the lamp power and type of power supply.

Example of calculation

- Starter dissipated power: 25% of lamp power
- Reference temperature: 30 and 40 °C according to circuit-breaker
- Power factor: lamp without capacitors cosφ=0.6
  lamp with capacitors cosφ=0.86

Method of calculation

- IB = (PL * n°L * KST * KC) / (Un * cosφ) where:
  - Un = rated voltage 230 V
  - cosφ = power factor
  - PL = lamp power
  - n°L = number of lamps per phase
  - KST = 1.25
  - KC = 1 for star connection and 1.732 for delta connection

Type of lamp	Tube diss. pwr. [W]	Number of lamps per phase													
Single without capacitors	18	4	9	14	29	49	78	98	122	157	196	245	309	392	490
	36	2	4	7	14	24	39	49	61	78	98	122	154	196	245
	58	1	3	4	9	15	24	30	38	48	60	76	95	121	152
Single with capacitors	18	7	14	21	42	70	112	140	175	225	281	351	443	562	703
	36	3	7	10	21	35	56	70	87	112	140	175	221	281	351
	58	2	4	6	13	21	34	43	54	69	87	109	137	174	218
Double with capacitors	2x18=36	3	7	10	21	35	56	70	87	112	140	175	221	281	351
	2x36=72	1	3	5	10	17	28	35	43	56	70	87	110	140	175
	2x58=116	1	2	3	6	10	17	21	27	34	43	54	68	87	109
In [A] - 2P and 4P circuit-breakers		1	2	3	6	10	16	20	25	32	40	50	63	80	100

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Fluorescent lamps. 230 VAC three-phase – Delta connection

Type of lamp	Tube diss. pwr. [W]	Number of lamps per phase													
Single without capacitors	18	2	5	8	16	28	45	56	70	90	113	141	178	226	283
	36	1	2	4	8	14	22	28	35	45	56	70	89	113	141
	58	0	1	2	5	8	14	17	21	28	35	43	55	70	87
Single with capacitors	18	4	8	12	24	40	64	81	101	127	162	203	255	324	406
	36	2	4	6	12	20	32	40	50	64	81	101	127	162	203
	58	1	2	3	7	12	20	25	31	40	50	63	79	100	126
Double with capacitors	2x18=36	2	4	6	12	20	32	40	50	64	81	101	127	162	203
	2x36=72	1	2	3	6	10	16	20	25	32	40	50	63	81	101
	2x58=116	0	1	1	3	6	10	12	15	20	25	31	39	50	63
In [A] - 3P circuit-break.		1	2	3	6	10	16	20	25	32	40	50	63	80	100

Transformer protection

Insertion current

When the LV/LV transformers are powered up, very strong currents occur, which must be considered when selecting the protective device. The peak value of the first current wave often reaches a value between 10 and 15 times the transformer's effective rated current.

For power ratings below 50 kVA, it may reach between 20 and 25 times the rated current. This transient current decreases very rapidly with a time constant T varying from several ms to 10, 20 ms.

Main protection on the primary side

The tables below are the result of a set of tests on co-ordination between circuit-breakers and BT/BT transformers. The transformers used in the tests are normalized. The table, referring to a primary supply voltage of 230 or 400 V and to single-phase and three-phase transformers, indicate which circuit-breaker should be used according to the transformer power rating.

The transformers considered have the primary winding outside the secondary winding.

The circuit-breakers suggested allow:
- transformer protection in the event of maximum short-circuit;
- prevention of unwanted tripping when the primary winding is powered up using
  1. modular circuit-breakers with a high magnetic threshold, curve D or K
  2. circuit-breakers with magnetic only releaser;
- guaranteed circuit-breaker electrical life.

Protection on the secondary side

Due to the transformer's high insertion current, the circuit-breaker on the primary winding may not guarantee thermal protection for the transformer and its feeder line on the primary side.

This is typical of modular circuit-breakers which must have a higher rated current than the transformers. In such cases, in the event of a single-phase short-circuit at the transformer's primary terminals (minimum Icc at end of line), check that the circuit-breaker's magnetic releaser is tripped. In the normal application in distribution panels, this condition is always satisfied provided that the length of the feeder lines is reduced.

The transformer can be provided with thermal protection by installing a circuit-breaker with a rated current less than or equal to that of the transformer secondary winding immediately downstream of the LV/LV transformer.

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In lighting systems protection against overloads is not necessary if the number of light points is clearly defined (no overloads).

Moreover, the Standard in force for these systems recommends the omission of protection against overloads in circuits in which unwanted tripping may prove hazardous, e.g.: circuits which supply fire-fighting equipment.

Single-phase transformer (primary voltage 230 V)-1P and 1P+N MCBs

Pn [kVA]	In [A]	ucc (%)	Circuit-breaker on primary side (1) and (2)
0.1	0.4	13	S 2* D1 o K1
0.16	0.7	10.5	S 2* D2 o K2
0.25	1.1	9.5	S 2* D3 o K3
0.4	1.7	7.5	S 2* D4 o K4
0.63	2.7	7	S 2* D6 o K6
1	4.2	5.2	S 2* D10 o K10
1.6	6.8	4	S 2* D16 o K16
2	8.4	2.9	S 2* D16 o K16
2.5	10.5	3	S 2* D20 o K20
4	16.9	2.1	S 2* D40 o K40
5	21.1	4.5	S 2* D50 o K50
6.3	27	4.5	S 2* D63 o K63
8	34	5	S 290 D80
10	42	5.5	S 290 D100
12.5	53	5.5	S 290 D100

Single-phase transformer (primary voltage 400 V)-2P MCBs

Pn [kVA]	In [A]	ucc (%)	Circuit-breaker on primary side (1) and (2)
1	2.44	8	S 2* D6 o K6
1.6	3.9	8	S 2* D10 o K10
2.5	6.1	3	S 2* D16 o K16
4	9.8	2.1	S 2* D20 o K20
5	12.2	4.5	S 2* D32 o K32
6.3	15.4	4.5	S 2* D40 o K40
8	19.5	5	S 2* D50 o K50
10	24	5	S 2* D63 o K63
12.5	30	5	S 2* D63 o K63
16	39	5	S 290 D80
20	49	5	S 290 D100

Three-phase transformer (primary voltage 400 V)-3P, 3P+N and 4P MCBs

Pn [kVA]	In [A]	ucc (%)	Circuit-breaker on primary side (1) and (2)
5	7	4.5	S 2* D20 o K20
6.3	8.8	4.5	S 2* D20 o K20
8	11.6	4.5	S 2* D32 o K32
10	14	5.5	S 2* D32 o K32
12.5	17.6	5.5	S 2* D40 o K40
16	23	5.5	S 2* D63 o K63
20	28	5.5	S 2* D63 o K63
25	35	5.5	S 290 D80
31.5	44	5	S 290 D80
40	56	5	S 290 D80
50	70	4.5	S 290 D100

S 2*.. = S 200, S 200 M, S 200 P

(1) With modular or magnetic only circuit-breakers, without thermal adjustment, thermal protection is required for the transformer's secondary winding.

(2) Breaking capacity selected according to estimated Icc at the point where the breaker is installed.

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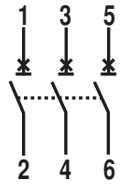
S 201



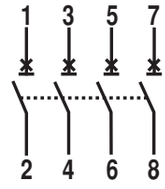
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S 203



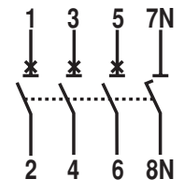
S 204



S 201 Na



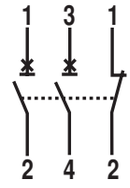
S 203 Na



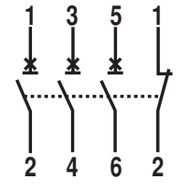
S 201-H10



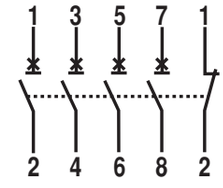
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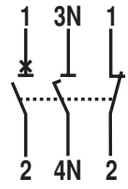
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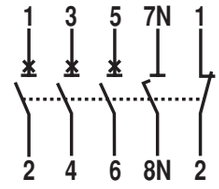
S 204-H10



S 201-H10 Na



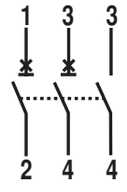
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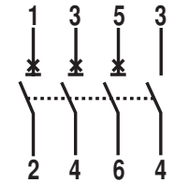
S 201-H01



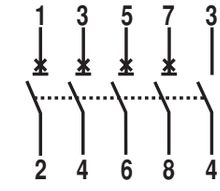
S 202-H01



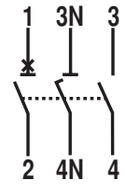
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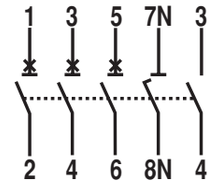
S 204-H01



S 201-H01 Na



S 202-H01 Na



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RCCBs



RCD-blocks



RCBOs

Functions and classification criteria for RCDs

A residual current operated circuit-breaker is an amperometric protection device which is tripped when the system leaks a significant current to earth.

This device continuously calculates the vector sum of the single-phase or three-phase system line currents and while the sum is equal to zero allows electricity to be supplied. This supply is rapidly interrupted if the sum exceeds a value preset according to the sensitivity of the device.

Residual current operated circuit-breakers can be classed according to four parameters:
- type of construction
- detectable wave form
- tripping sensitivity
- tripping time.

Depending on the type of construction, RCDs may be classed as:
- RCBOs (magnetothermic with overcurrent protection)
- RCCBs (without overcurrent protection releaser incorporated)
- RCD blocks.

RCBOs combine, in a single device, the residual current function and the overcurrent protection function typical of MCBs. RCBOs are tripped by both current leakage to earth and overloads and short-circuits and they are self-protecting up to a maximum short-circuit current value indicated on the label.

RCCBs are only sensitive to current leakage to earth. They must be used in series with an MCB or fuse which protects them from the potentially damaging thermal and dynamic stresses of any overcurrents.

These devices are used in systems already equipped with MCBs which preferably limit the specific energy passing through, also acting as the main disconnecting switches upstream of any derived MCBs (e.g.: domestic consumer unit).

RCD blocks are residual current devices suitable for assembly with a standard MCB. IEC/EN 61009 app. G only allows assembly of RCBOs once on site, that is to say outside the factory, using adaptable RCD blocks and the appropriate MCBs. Any subsequent attempts to separate them must leave permanent visible damage. The residual current operated circuit-breaker obtained in this way maintains both the electrical characteristics of the MCB and those of the RCD block.

According to the wave form of the earth leakage currents they are sensitive to, the RCDs may be classed as:
- AC type (for alternating current only)
- A type (for alternating and/or pulsating current with DC components)
- B type (for alternating and/or pulsating current with DC components and continuous fault current).

AC type RCDs are suitable for all systems where users have sinusoidal earth current.

They are not sensitive to impulsive leakage currents up to a peak of 250 A (8/20 wave form) such as those which may occur due to overlapping voltage impulses on the mains (e.g.: insertion of fluorescent bulbs, X-ray equipment, data processing systems and SCR controls).

A type RCDs are not sensitive to impulsive currents up to a peak of 250 A (8/20 wave form).

They are particularly suitable for protecting systems in which the user equipment has electronic devices for rectifying the current or phase cutting adjustment of a physical quantity (speed temperature, light intensity, etc.) supplied directly by the mains without the insertion of transformers and insulated in class I (class II is, by definition, free of faults to earth). These devices may generate a pulsating fault current with DC components which the A type RCD can recognise.

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B type RCDs are recommended for use with drives and inverters for supplying motors for pumps, lifts, textile machines, machine tools, etc., since they recognise a continuous fault current with a low level ripple.

Type AC and type A RCDs comply with IEC/EN 61008/61009, whilst type B RCDs are not yet covered by any reference Standard for the industrial or residential sector.

According to tripping sensitivity ($I\Delta n$ value), RCDs may be divided into the following categories:

- low-sensitivity ($I\Delta n$ >0.03 A), not suitable for protection against direct contacts; co-ordinated with the earth system according to the formula $I\Delta n$ <50/R, to provide protection against indirect contacts;
- high-sensitivity ($I\Delta n$: 0.01…0.03 A), or "physiologically sensitivity" for protection against indirect contacts, with simultaneous additional protection against direct contacts.

Residual current sensitivity and environment

Household and special environments



$I\Delta n$
≤30 mA

High-sensitivity or physiologically sensitive RCDs

IEC/EN 60364 make the use of these devices mandatory in all bathrooms, showers and private and public swimming pools and environments in which plugs and sockets may be installed without insulating or low safety voltage transformers.

Laboratories, service industry and small industry



$I\Delta n$
from 30 mA
to 500 mA

Low-sensitivity RCDs

Large service industry and industrial complex



$I\Delta n$
from 500 mA
to 1000 mA

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According to their tripping time, RCDs can be classed as:

- instantaneous or rapid or general
- type S selective, or - incorrectly - delayed.

Selective RCDs (RCBOs - RCCBs or RCD-blocks) have a delayed tripping action and are installed upstream of other rapid residual current operated circuit-breakers to guarantee selectivity and limit the power out only to the portion of the system affected by a fault.

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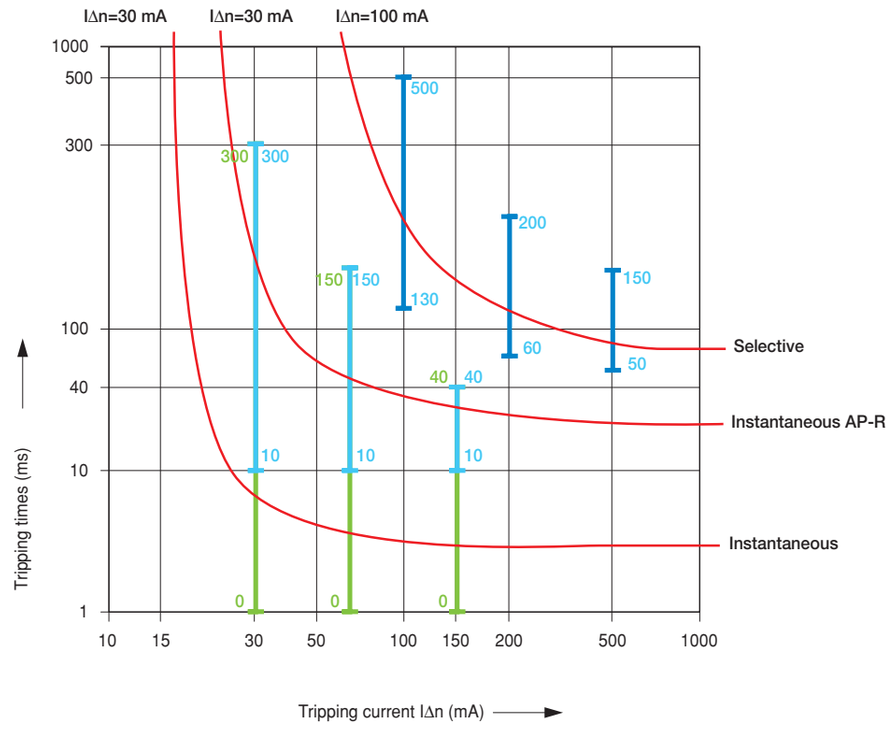
The tripping time is not adjustable. It is set according to a predetermined time – current characteristic with an intrinsic delay for small currents, tending to disappear as the current grows.

IEC/EN 61008 and 61009 establish the tripping times relative to the type of RCD and the IΔn.

Type	In [A]	IΔ [A]	Tripping times (s)xcurrents			
			1xIΔ	2xIΔ	5xIΔ	500A
Generic	Any	Any	0.3	0.15	0.04	0.04
S (selective)	≥25	>0.030	0.13-0.5	0.06-0.2	0.05-0.15	0.04-0.15

The range of ABB RCDs also includes AP-R (anti-disturbance) devices which trip according to the limit times allowed by the Standards for instantaneous RCDs. This function is due to the slight tripping delay (approx. 10 ms) relative to the standard instantaneous ones.

The graph shows the comparison of the qualitative tripping curves for:
- a 30 mA instantaneous RCD
- a 30 mA AP-R instantaneous RCD
- a 100 mA selective RCD



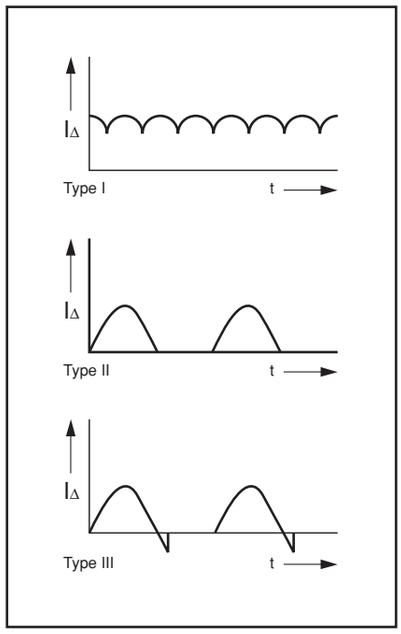
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For many years the manufacturers of electrical appliances and other electrical equipment have been using electronic components to improve the performance of their products, increase comfort and save energy.

Loads such as washing machines with variations in spin speed, variable-speed tools, thermostats and dimmers operate at currents with varying wave shapes (pulsating currents with DC components, inverted currents, levelled currents).

There are three different types of current (fig. A).

Figure A



OEPM/0116

Type I Inverted current with DC components, with value continuously greater than zero, caused by:
- three-phase current
- median point and three-phase current
- jumper connection
- unidirectional rectification with inductive and capacitive levelling
- Villard type voltage doubling.

Type II Pulsating current with DC components sometimes with zero value, caused by ohmic load with:
- unidirectional rectification without levelling
- single-phase jumper connection with or without levelling
- regulation of the symmetrical and asymmetrical phase operating angle (dimmers, RPM meters).

Type III Pulsating current with DC components passing through zero caused by inductive loads with:
- unidirectional rectification without levelling
- single-phase jumper connection with or without levelling
- symmetrical and asymmetrical regulation of the phase operating angle (dimmers, RPM meters).

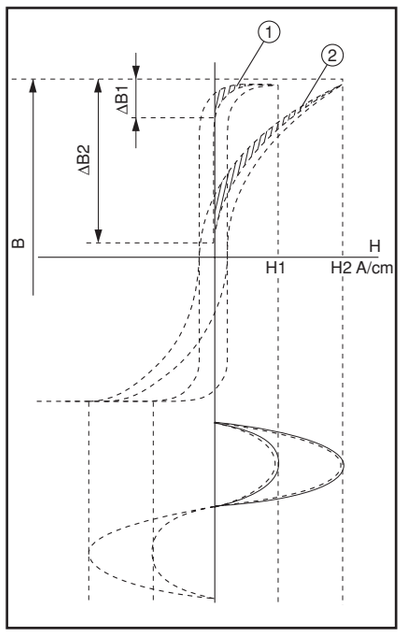
If there is a fault current to earth after an insulation fault on live parts supplied with rectified current, the contact voltages are the same size as in alternating current.

Standard RCDs, which are designed to operate with alternating current at 50-60 Hz, are insensitive to fault currents with DC components.

Non-tripping of a RCD when there are fault currents with DC components may have two consequences:

- it is dangerous for people and equipment (electrocution or fire)
- it causes desensitivation of RCD due to excessive polarization of the transformer core that is no longer able to send the necessary power supply to the releaser (figure B - hysteresis cycle 1).

Figure B



To avoid this problem, type A RCDs must be used. Thanks to the specific technology of the residual current transformer toroidal cores, the supply level is increased to a value sufficient to trigger the releaser or tripping mechanism (figure B - hysteresis cycle 2).

The sensitivity of the tripping mechanism is further increased by its connection to an electrical circuit sensitive to the wave shape of the current.

In this way the tripping of the RCD is assured for any unidirectional pulsating wave shape even in case of overlapping of a DC component up to 6 mA.

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Selectivity

RCDs raise similar issue to those surrounding the installation of MCBs, and in particular the need to reduce to a minimum the parts of the system out of order in the event of a fault.

For RCBOs the problem of selectivity in the case of short-circuit currents may be handled with the same specific criteria as for MCBs.

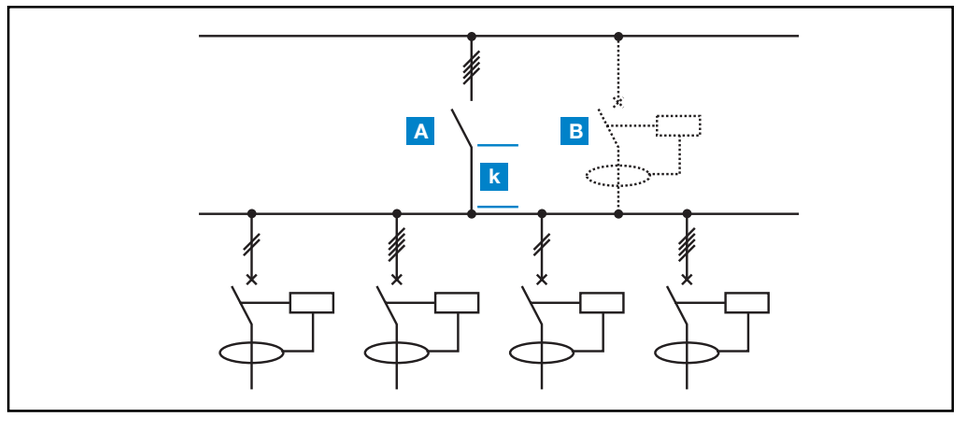
However, for correct residual current protection, the more important aspects are linked to tripping times. Protection against contact voltages is only effective if the maximum times indicated on the safety curve are not exceeded.

If an electrical system has user devices with earth leakage currents which exceed the normal values (e.g.: presence of capacitor input filters inserted between the device phase and earth cables) or if the system consists of many user devices, it is good practice to install various RCDs, on the main branches, with an upstream main residual current or non-residual current device instead of a single main RCD.

Horizontal selectivity

The non-residual current main circuit-breaker provides “horizontal selectivity”, preventing an earth fault at any point on the circuit or small leakage from causing unwanted main circuit-breaker tripping, which would put the entire system out of order.

However, in this way, section k of the circuit between the main circuit-breaker and the RCDs remains without “active” protection. Using a main RCD to protect it would lead to problems with “vertical selectivity”, which require tripping of the various devices to be co-ordinated, so that service continuity and system safety are not compromised. In this case, selectivity may be amperometric (partial) or chronometric (total).



Vertical selectivity

Vertical selectivity may also be established for residual current tripping, bearing in mind that in working back from system peripheral branches to the main electrical panels the risk of unskilled persons coming into contact with dangerous parts is significantly reduced.

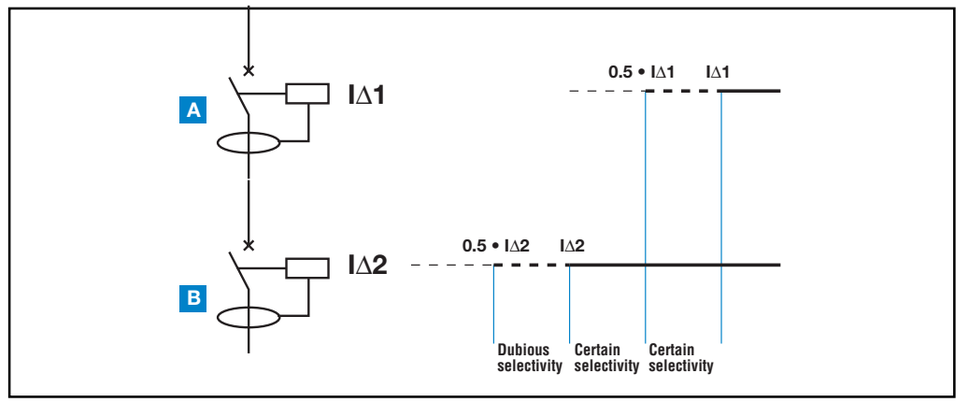
Amperometric (partial) selectivity

Selectivity may be created by placing low-sensitivity RCDs upstream and higher-sensitivity RCDs downstream.

An essential condition which must be satisfied in order to achieve selective co-ordination is that the IΔ1 value of the breaker upstream (main breaker) is more than double the IΔ2 value of the breaker downstream.

In this case, selectivity is partial and only the downstream breaker trips for earth fault currents IΔ2< IΔm<0.5*IΔ1.

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Chronometric (total) selectivity

To achieve total selectivity, delayed or selective RCDs must be installed.

The tripping times of the two devices connected in series must be co-ordinated so that the total interruption time t2 of the downstream breaker is less than the upstream breaker's no-response limit time t1, for any current value. In this way, the downstream breaker completes its opening before the upstream one.

To completely guarantee total selectivity, the IΔ value of the upstream device must also be more than double that of the downstream device in accordance with IEC 64-8/563.3, comments.

For safety reasons, the delayed tripping times of the upstream breaker must always be below the safety curve.

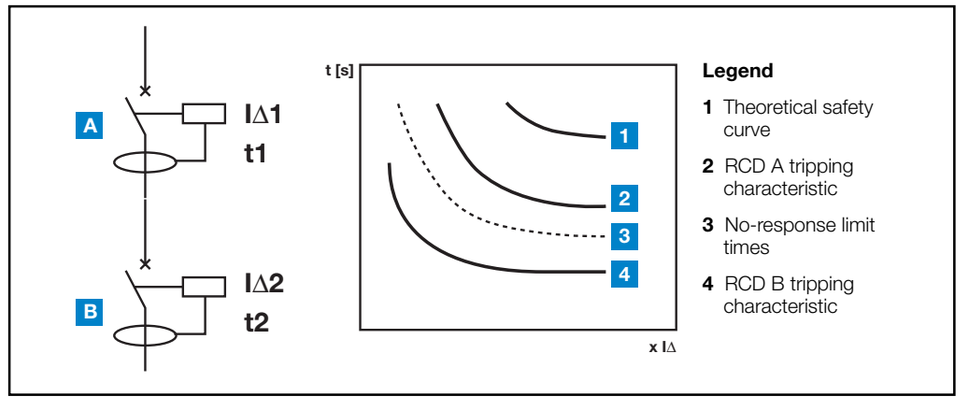


Table of RCD selectivity

	Upstream IΔn [mA]	10	30	100	300	300	500	500	1000	1000
Downstream IΔn [mA]		inst	inst	inst	inst	S	inst	S	inst	S
10	inst		■	■	■	■	■	■	■	■
30	inst			■	■	■	■	■	■	■
100	inst				■	■	■	■	■	■
300	inst								■	■
300	S								■	■
500	inst									
500	S									
1000	inst									
1000	S									

inst=instantaneous S=selective ■=amperometric (partial) selectivity ■=chronometric (total) selectivity

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Power loss of RCDs

RCCBs F200 series

Rated Current In [A]	Power loss W [W]	
	2P	4P
16	1.5	-
25	1	1.3
40	2.4	3.2
63	3.2	4.4

RCD-Blocks DDA200 series

Rated current Ib [A]	Power loss W_{lb}* [W]	
	2P	3P,4P
25	2	3
40	3.2	4.8
63	5	7.6

*The power loss W_{lb} shown in the table refers to Ib. For use with circuit-breakers with lower rated current In the power loss n W must be determined using the formula: $W = (I / Ib) \bullet W_{lb}$

RCBO FS201-DS200 series

Rated current In [A]	Power loss W [W]		
	1P+N	2P	3P,4P
1	1.8	-	-
2	1.8	-	-
4	1.8	-	-
6	2	4.1	6.2
10	2.1	2.9	4.4
13	3.7	5.1	7.7
16	4.5	4.4	6.6
20	4.8	6.3	9.4
25	6.3	8.4	12.6
32	8.8	9.4	14.2
40	9.9	12.8	19.2
50	-	9.7	14.5
63	-	14.6	22

Derating of load capability of RCBOs FS 201 and DS 200

For FS 201 and DS 200 see tables for S 200 MCBs in technical details MCBs, within the range of temperatures from -25 °C to +55 °C.

Performance in altitude of RCDs

Up to the height of 2000 m, ABB RCDs do not undergo any alterations in their rated performances. Over this height the properties of the atmosphere change in terms of composition, dielectric capacity, cooling capacity and pressure, therefore the performances of the RCDs undergo derating, which can basically be measured in terms of variations in significant parameters, such as the maximum operating voltage and the rated current.

F 200/DDA 200/FS 201/DS 200

Altitude [m]	2000	3000	4000
Rated service voltage Ue [V]	400	380	380
Rated current In	In	0.96xIn	0.93xIn

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Emergency stop using DDA 200 AE series RCD blocks

The AE series RCD block combines the protection supplied by the RCBOs with a positive safety emergency stop function for remote tripping.

In the AE version, the DDA 200 AE series RCD blocks are available.

Operating principle (patented)

Two additional primary circuits powered with the same voltage and equipped with the same resistance have been added to the transformer; under normal conditions the same current would flow through, but since they are wound by the same number of coils in opposite directions they cancel each other out and do not produce any flow.

One of these two windings acts as the remote control circuit: the emergency stop is obtained by interrupting the current flow in this circuit.

The positive safety is therefore obvious: an accidental breakage in the circuit is equivalent to operating an emergency control button.

Advantages

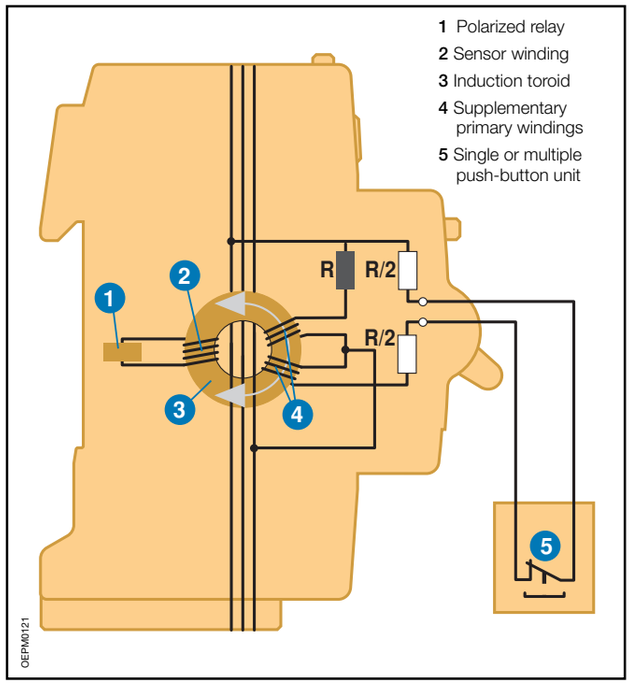
Compared with the devices which are normally used in emergency circuits, DDA 200 AE blocks have the following advantages:

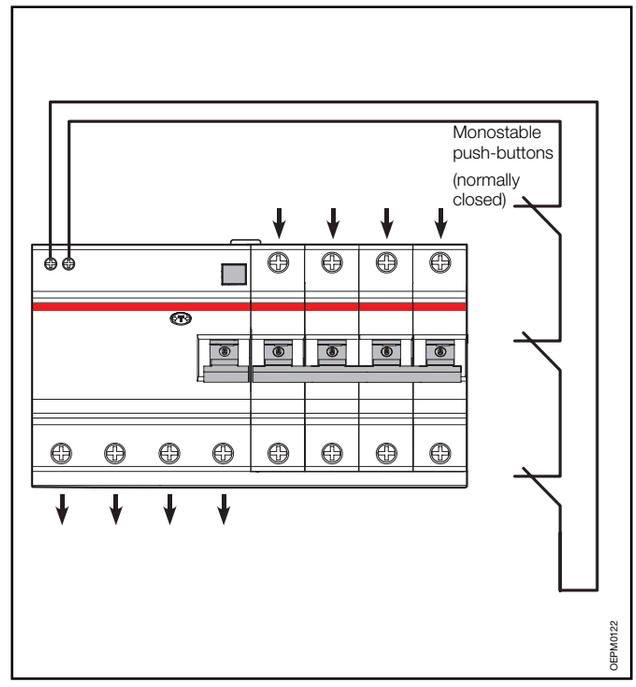
- positive safety
- no undesirable tripping if there is a temporary reduction or interruption of the mains voltage
- efficient immediate operating even after long off-service periods of the installation.

Use

Application of the DDA 200 AE blocks complies with the requirements of IEC/EN 60364-8. They are therefore suitable, for example, for escalators, lifts, hoists, electrically operated gates, machine tools, car washes and conveyor belts.

No more than one DDA 200 AE can be controlled using the same control circuit. Each DDA 200 AE requires a dedicated control circuit.





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Unwanted tripping

In the event of disturbance in the mains, the RCDs normally present in the system are tripped, breaking the circuit even in the absence of a true earth fault.

Disturbances of this kind are most often caused by:

- operation overvoltages caused by inserting or removing loads (opening or closing protection of control devices, starting and stopping motors, switching fluorescent lighting systems on and off, etc.)
- overvoltages of atmospheric origin, caused by direct or indirect discharges on the electrical line.

Under these circumstances, breaker tripping is unwanted, since it does not satisfy the need to avoid the risks due to direct and indirect contacts. On the contrary, the sudden and unjustified interruption of the power supply may result in very serious problems.

AP-R RCDs

The ABB range of AP-R anti-disturbance residual current circuit-breakers and blocks was designed to overcome the problem of unwanted tripping due to overvoltages of atmospheric or operation origin.

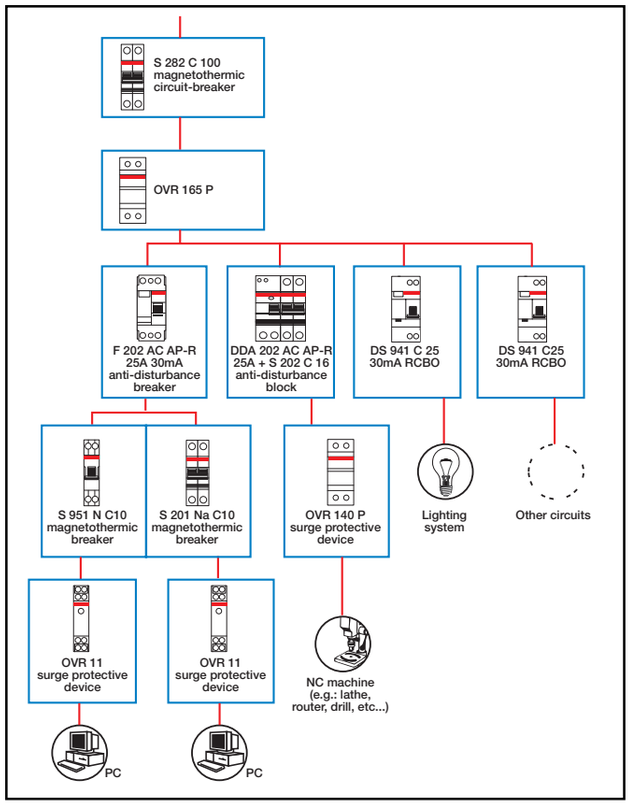
The electronic circuit in these devices can distinguish between temporary leakage caused by disturbances on the mains and permanent leakage due to actual faults, only breaking the circuit in the latter case.

AP-R residual current circuit-breakers and blocks have a slight delay into the tripping time, but this does not compromise the safety limits set by the Standards in force (release time at 2 IΔn=150 ms).

Guaranteeing conventional residual current protection, their installation in the electrical circuit therefore allows any unwanted tripping to be avoided in domestic and industrial systems in which service continuity is essential.

For continuous service of priority circuits and simultaneous protection of user devices and systems from transient overvoltage peaks, combine RCCBs and AP-R blocks with overvoltage surge protective devices OVR.

To make protection more effective and widespread, it may be useful to create a cascade system extending over several levels, like the one illustrated below.



Provisions of the Standards

IEC/EN 61008 and IEC/EN 61009 check RCD resistance to operation overvoltages, envisaging the use of the 0.5 µs/100 kHz ring wave. All RCDs must pass the test with a current peak value of 200 A.

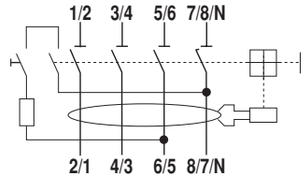
For overvoltages of atmospheric origin, IEC 61008 and IEC 61009 establish the resistance to a 8/20 µs surge with 3000A peak current, but limit the provision to RCDs classed as selective. No test is required for other types of RCDs.

ABB AP-R anti-disturbance RCDs pass the general resistance test at 0.5 µs/100 kHz, also resisting the 8/20 µs surge with the same peak current of 3000 A prescribed for the selective RCDs.

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Use of a 4P RCCB in a 3-phase circuit without neutral

The test button circuit of these RCCBs 4P F 200 is wired inside the device between terminal 5/6 and 7/8/N as indicated below, and has been sized for an operating voltage between 110 and 254 V.

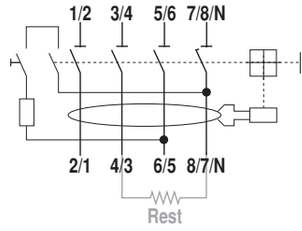


In case of installation in a 3 phase circuit without neutral, if the concatenate voltage is between 110 and 254 V for the correct working of the test button there are two possible solutions:

1) To connect the 3 phases to the terminals 3/4 5/6 7/8/N and the terminals 4/3 6/5 8/7/N (supply and load side respectively)

2) To connect the 3 phases normally (supply to terminals 1/2 3/4 5/6 and load to terminals 2/1 4/3 6/5) and to bridge terminal 1/2 and 7/8/N in order to bring to the terminal 7/8/N the potential of the first phase. In this way the test button is supplied with the phases' concatenate voltage.

If the circuit is supplied with a concatenate voltage higher than 254 V, as in the typical case of 3 phase net with concatenate voltage of 400 V (and voltage between phase and neutral of 230 V), it is not possible to use these connections because the circuit of the test button will be supplied at 400 V and could be damaged by this high voltage.



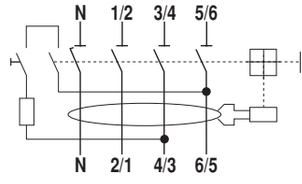
IΔn [A]	Rest [Ω]
0.03	3300
0.1	1000
0.3	330
0.5	200

In order to allow the correct operation of the test button also in 3 phase nets at 400 V (concatenate voltage) it is necessary to connect normally the phases (supply to terminals 1/2 3/4 5/6 and load to terminals 2/1 4/3 6/5) and to bridge terminal 4/3 and 8/7/N by mean of an electric resistance as indicated above.
In this way the test button circuit is fed at 400 V but for example in an RCCB with IΔn=0.03 A there will be the R_{est}=3.3 kOhm resistance in series to the test circuit resistance. R_{est} will cause a voltage drop that leaves in the test circuit a voltage less than 254 V. R_{est} resistance must have a loosable power higher than 4 W.

In the normal operation of the RCCB (test circuit opened) the R_{est} resistance is not fed so it does not cause any power loss.

The solution RCCBs with neutral pole on left side

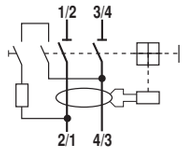
The test button circuit of these RCCBs is wired inside the device between terminal 3/4 and 5/6 as indicated below, and it has been sized for an operating voltage between 195 V and 440 V. In case of a three phase system without neutral with concatenate voltage between phases of 230 V or 400 V it is enough to connect the 3 phases normally (supply to terminals 1/2 3/4 5/6 and load to terminals 2/1 4/3 6/5) without any bridge.



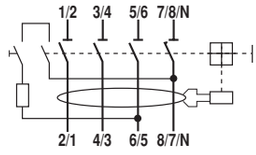
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RCDs

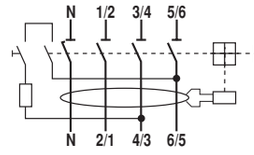
F 202



F 204

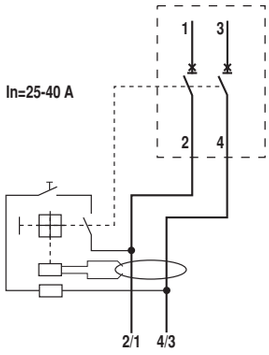


F 204 Left neutral

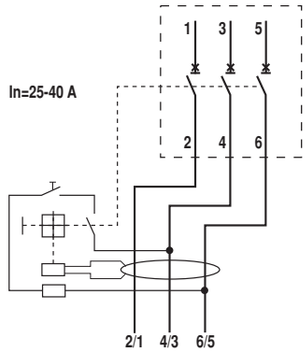


RCD-blocks

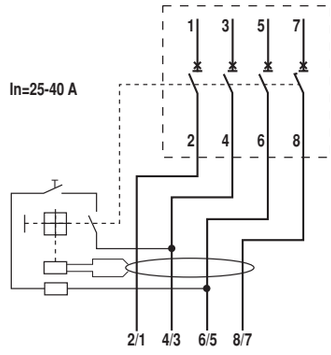
DDA 202



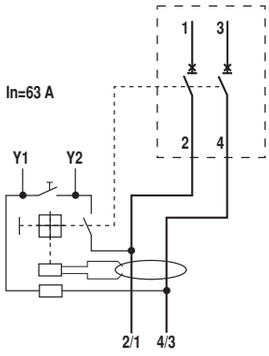
DDA 203



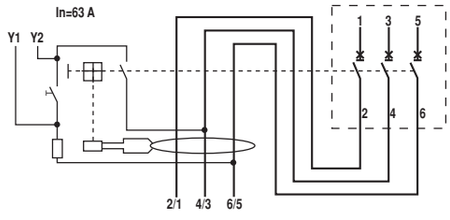
DDA 204



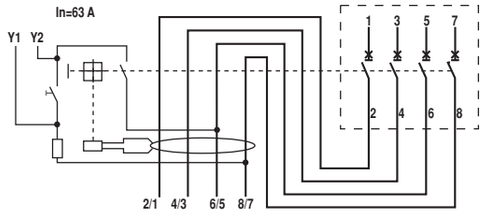
DDA 202



DDA 203



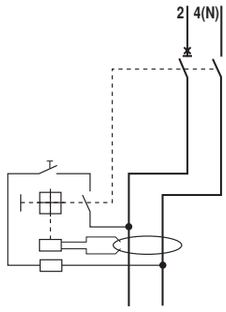
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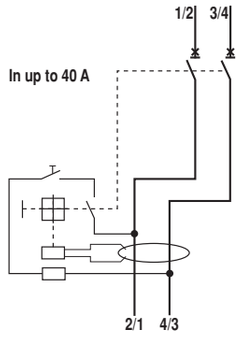
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RCBOs

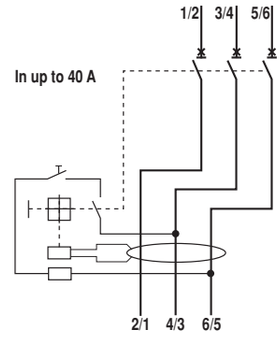
FS 201



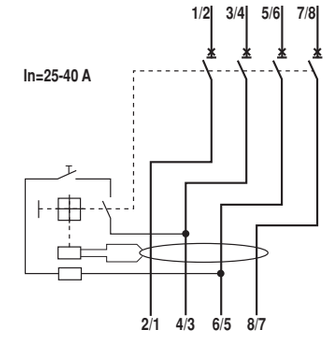
DS 202



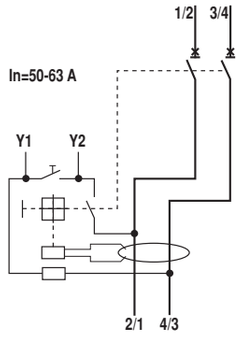
DS 203



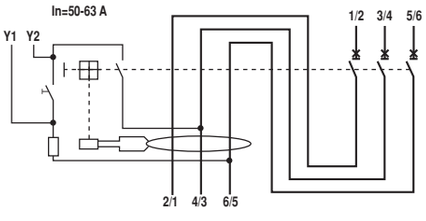
DS 204



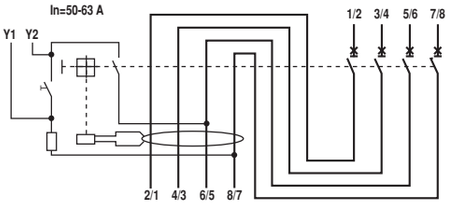
DS 202



DS 203



DS 204



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RD2 RESIDUAL CURRENT MONITORS

They operate combined with appropriate toroidal transformers (in 9 different diameters) which perform the sum of line currents; any current leakage in the monitored circuit causes, in the secondary of the toroidal transformer, a signal detected by the relay which intervenes.

The relay can command the tripping of the protection circuit-breaker release, thus breaking the circuit.

According to the IEC 1008 or IEC 755 Standard, these relays are sensitive to leakage sinusoidal currents and to leakage pulsating currents with direct components. Thus they can be defined as “A type”.

Some electric circuits allow to adjust sensitivity and time; the values can be selected through appropriate minidips.

More technical characteristics

Calibration tolerances		- sensitivity	+0% -50%
		- time	10%
Power consumption	[W]	0.45 at 48 V AC/DC 1.2 at 110 V AC/DC 3.4 at 230 V AC 11 at 400 V AC	
Dielectric test voltage at ind. freq. for 1 min.	[kV]	2.5	
Max. peak current with 8/20 μs wave	[A]	5000	
Installation position		any	
Terminal protection class according to DIN 40050		IP20	



TEPM0270

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Toroidal transformers

More technical characteristics

		TRM	TR1	TR2	TR3	TR4	TR4A	TR160	TR160A	TR5	TR5A
Core		closed	closed	closed	closed	closed	open	closed	open	closed	open
Available internal diameter	[mm]	29	35	60	80	110	110	160	160	210	210
Weight	[kg]	0.17	0.22	0.28	0.45	0.52	0.6	1.35	1.6	1.45	1.85
Minimum measurable current	[mA]	25	25	25	100	100	250	250	500	250	500
Installation position		Any									
Operating temperature	[°C]	-10…+70									
Storage temperature	[°C]	-20…+80									
Transformation ratio		500/1									
Dielectric test voltage at industrial freq. for 1 min.	[kV]	2.5									
Max. permanent overload	[A]	1000									
Max. thermal overload	[kA]	40/1 sec.									
Connections		Screw terminal boards, max. section 2.5 mm^2									
Protection degree		IP20									

Generality

They must be mounted with residual current monitors upstream the lines or loads to be protected; all active conductors (phases and neutral) of single-phase as well as of three-phases lines must pass through them.
In this way these devices perform the vector sum of line currents detecting the possible homopolar differential currents that leak to earth: their core of sheet iron has high magnetic properties that allow to detect even very low leakage currents.
The choice of a toroidal transformer depends on the conductor or on the bar to be used.
It is suggested to use the openable versions in case of revamping or upgrading of an existing installation.

Installation

All active conductors can be introduced in the toroidal transformers without the need of respecting any specific sense of introduction (P1-P2 or P2-P1). The output signal must be picked up from terminals 1 (S1) and 2 (S2) and connected to the residual current monitor, while terminals 3 and 4 must be connected to the test output of those relays of MFPP range with this function. With RD2 they must remain disconnected. For this connection it is better to use twisted or shielded cables, possibly far from busbars. The minimum recommended section of connection cables should have a maximum resistance of 3 Ω; anyway consider a maximum length of connection of 20 m for 0.5 mm^2 and of 100 m for 2.5 mm^2.

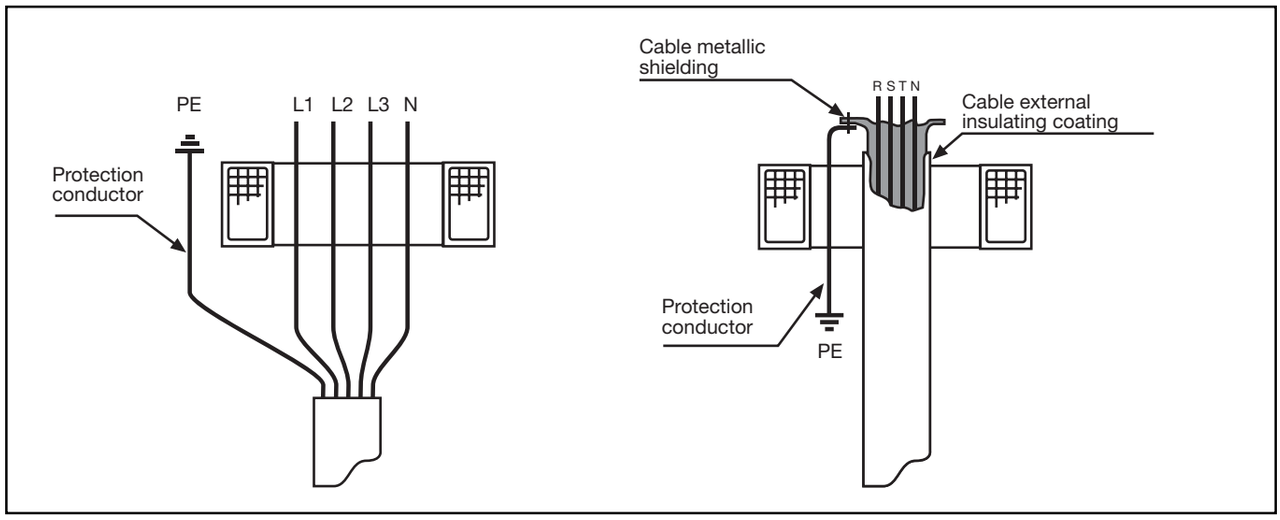
For versions with openable core it is necessary to control that the contact surface of the two semi-cores is clean, that bolts are tight and that connection cables connections on both sides are intact.

Connection cables with metallic shielding or armor must be earthed downstream the toroidal transformer; if they run within the transformer they must be earthed in the opposite direction.

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In presence of line overcurrents (for ex. motor operation, energizing of transformers, etc.):

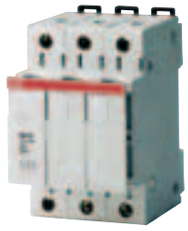
- install the toroidal transformer on a straight cable segment



- center cable position within the transformer
- use transformers with a diameter wider than minimum requirements, if necessary with a diameter up to 2 times wider than that of cables.

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E 930 FUSE HOLDERS

More technical characteristics

Breaking capacity		that of the cartridge
Dielectric test voltage at ind. freq. for 1 min.		2.5 kV
Terminals		
	up to 32 A	10 mm^2
	up to 50 A	25 mm^2
	up to 125 A	35 mm^2
Protection degree		IP20
Rated voltage Un		
	E930/32 (10.3x38 fuses)	400 V*

* E930/32 fuse holders comply with IEC EN 60269-3 Standard (fuse for domestic applications) and they have been released with Un=400 V; by construction, they can be used up to 500 V.

Power consumption in Watt at rated current

Fuse rating In [A]	Fuses 10.3x38 gL	Fuses 14x51 gL	Fuses 22x58 gL
1	0.272	0.50	0.80
4	1.05	0.95	1.45
6	1.10	1.30	1.60
8	1.20	1.60	2.15
10	1.30	1.90	2.50
12	1.50	2.10	2.70
16	1.80	2.20	2.75
20	2.00	2.30	2.90
25	2.30	3.00	3.40
32	2.60	3.30	3.60
40		3.60	4.50
45		4.10	4.80
50		5.00	5.50
63			6.35
80			7.35
100			8.75
125			12.50

Power consumption in Watt at rated current

Fuse rating In [A]	Fuses 10.3x38 aM	Fuses 14x51 aM	Fuses 22x58 aM
1	0.08		
2	0.12		
4	0.17	0.25	0.30
6	0.30	0.30	0.45
8	0.35	0.40	0.55
10	0.40	0.50	0.60
12	0.45	0.65	0.75
16	0.70	0.90	0.90
20	1.00	1.00	1.10
25	1.20	1.20	1.35
32	1.50	1.55	1.60
40		2.10	1.90
45		2.15	2.20
50		2.50	3.00
63			4.10
80			5.20
100			6.50
125			7.80

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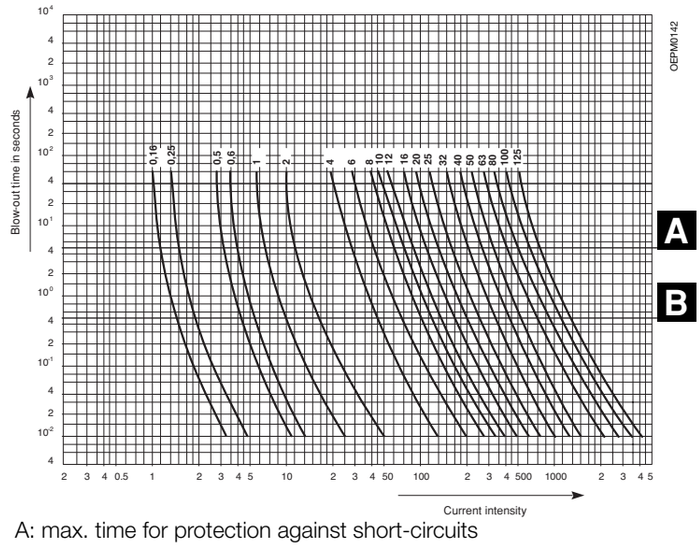
Maximum values of specific let-through energy in A^2s

In [A]	gL fuses	
	Pre-arc	Total
1	3	15
2	5	30
4	15	110
6	60	200
8	80	330
10	130	400
12	250	700
16	450	1500
20	800	2700
25	1400	4500
32	2200	7000
40	3500	11000
45	4000	15000
50	4500	17000
63	9300	27000
80	20000	65000
100	40000	100000
125	70000	160000

Maximum values of specific let-through energy in A^2s

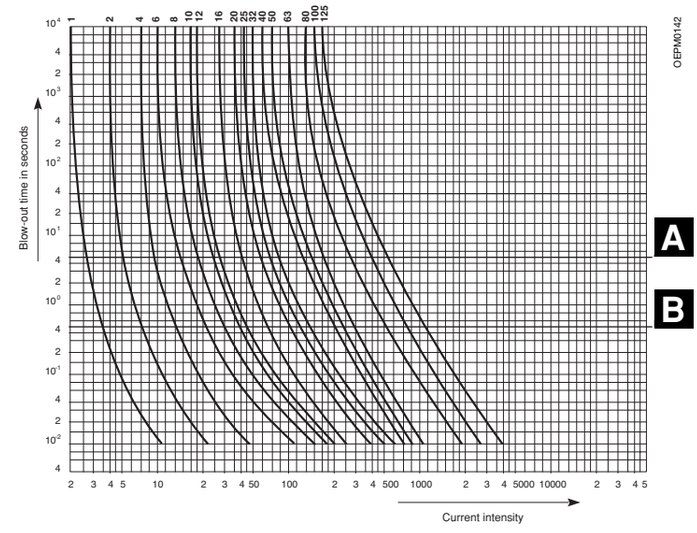
In [A]	aM fuses	
	Pre-arc	Total
1	10	20
2	35	60
4	110	270
6	200	600
8	400	1100
10	800	2000
12	1000	2800
16	1200	4500
20	1700	7000
25	2700	11000
32	5000	19000
40	9000	28000
45	14000	37000
50	19000	45000
63	30000	70000
80	50000	110000
100	80000	170000
125	100000	185000

gL type cylindrical fuses



A: max. time for protection against short-circuits
B: max. time for protection against indirect contact for m=1

Type aM cylindrical fuses



10

M2160 - M2060 FUSE SWITCHES

Additional technical features

Type	Power consumption [W]	Type	Power consumption [W]	Type	Power consumption [W]	Type	Power consumption [W]
M2161	3.18	M2163	9.54	M2061 Na	4.38	M2063	9.54
M2161 Na	4.38	M2163 Na	16.00	M2062	6.38	M2063 Na	16.00
M2162	6.38	M2061	3.18				

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E 259 INSTALLATION RELAYS

Information about lamp insertion between phase and neutral

Incandescent lamps

Power [W]	[Number of lamps]
15	120
25	72
40	45
60	30
75	24
100	18
150	12
200	9
300	6
500	3

Fluorescent lamps without power factor capacitors

Power [W]	[Number of lamps]
15	
18	50
20	45
30	30
36	25
40	23
58	16
65	13

Twin-lamps

Power [W]	[Number of lamps]
2x18	50
2x20	45
2x30	30
2x36	25
2x40	23
2x58	16
2x65	13

Parallel fluorescent lamps without power factor capacitors

Power [W]	[Number of lamps]
18	17
20	17
30	14
36	13
40	12
58	8
65	7

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Max. number of lamps, 16 A latching relays

Power [W]	Number of switchable lamps
Incandescent lamps	
15 W	200
25 W	120
40 W	75
60 W	50
75 W	40
100 W	30
150 W	20
200 W	15
300 W	9
500 W	5
Fluorescent lamps without power factor capacitors	
18 W	81
36 W	44
40 W	38
58 W	29
65 W	26
Fluorescent twin-lamps	
2x18 W	82
2x36 W	41
2x40 W	35
2x58 W	23
2x65 W	22
Parallel fluorescent lamps with power factor capacitors	
18 W	103
36 W	63
40 W	40
58 W	41
65 W	37
230 V halogen lamps	
150 W	20
250 W	12
300 W	10
400 W	7
500 W	6
1000 W	3

Max. number of lamps, 16 A latching relays

Power [W]	Number of switchable lamps
High pressure sodium vapor lamps	
70 W	15
150 W	8
250 W	4
400 W	3
1000 W	1
Low pressure sodium vapor lamps	
37 W	
55 W	27
56 W	
90 W	16
91 W	
135 W	11
180 W	8
185 W	8
High pressure mercury vapor lamps	
50 W	30
80 W	18
125 W	12
250 W	6
400 W	3
1000 W	1
Lamps with electronic reactor	
18 W	83
36 W	46
58 W	31
Very low voltage halogen lamps	
20 W	116
50 W	46
75 W	31
100 W	24
150 W	15
200 W	12
300 W	7

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E 250 LATCHING RELAYS

Use of lighted pushbuttons

Latching relays can be controlled through lighted pushbuttons, without any limitations in terms of connection of three-terminal types.

In two-terminals pushbuttons the current that flows through pushbutton lamps can trigger an unwanted activation; in order to avoid this there is the E 250 CP compensation module, installed in parallel on the coil.

Number of E 250 CP compensation modules	Number of connectable lighted pushbuttons	
	1P – 2P types	3P – 4P types
0	8	9
1	18	22
2	45	38

Maximum length of very low voltage connections

Too long feeding cables can reduce voltage so that it is no more enough for guaranteeing standard operating conditions of latching relays, in particular for very low voltage types.

For this reason the wiring must comply with the total lengths (outward and return) shown in the table.

U_N	0.5 mm²	0.75 mm²	1 mm²	1.5 mm²
8 V~	28 m	41 m	55 m	90 m
12 V~	68 m	102 m	136 m	224 m
24 V~	272 m	412 m	548 m	896 m
48 V~	1096 m	1640 m	2184 m	3584 m

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Connection rules (from right to left)

- Far right: motor unit
- On its left the main contacts unit
- On the left side the centralized control unit
- At the end, on the left side, the auxiliary contacts unit

Neither screws nor additional connections are required.

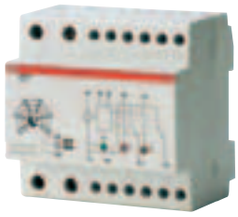
Additional modules or units can be associated with motor units as shown in the table.

Description	Pole number	Motor units							Main contact units		Centralized control units		Max. auxiliary contacts	Total module number
		E 251/E 252/ E 256/E 256 1P	2P	E 257 C 1P	2P	3P	E 259 1P	2P	E250 CM	E259 CM	E 257 CM	1P		
E 250 latching relays														
Latching	1	1											2	2
	2		1										2	2
	3	1							1				1	2 1/2
	4		1						1				1	2 1/2
Maintained control	1	1									1		1	2
	2		1								1		1	2
	3	1							1		1		-	2 1/2
	4		1						1		1		-	2 1/2
Same voltage centralized control	1			1									2	2
	2				1								1	2
	3					1							1	2 1/2
Different voltage centralized control	1	1											1	2 1/2
	2		1										1	2 1/2
	3		1									1	1	2 1/2
E 259 installation relays (contactors)														
	1						1						2	2
	2							1					2	2
	3						1			1			1	2 1/2
	4							1		1			1	2 1/2

The 2 exchange contact unit E 259 CM002 (code EA 663 3) can be used only with E259 R001 and E 259 R002 motor units.

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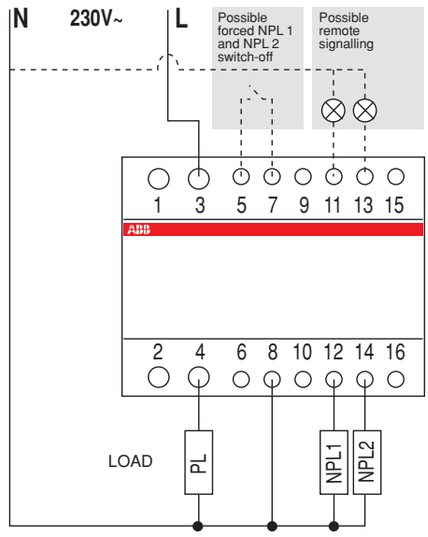


LSS1/2 LOAD SHEDDING SWITCHES

The LSS1/2 switch intervenes when the total power consumption exceeds the threshold set through the switch placed on the front of the device. After a preset time the switch verifies the possibility to reset disabled not primary loads; the attempt is repeated until a standard situation is established again.

Particularly suitable in applications where load total power is higher than the one indicated in the contract and the average power consumption in a long time interval (dozen minutes) is lower, the LSS1/2 switch can be used in public and industrial single-phase networks and for three-phase networks if they are symmetrical and balanced.

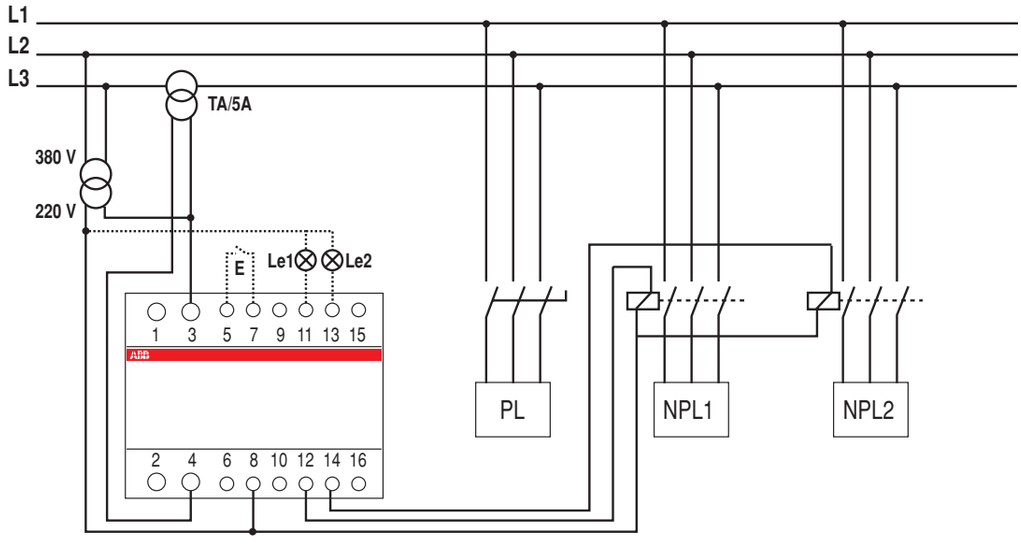
Single-phase electric diagram



The device must be inserted into the network downstream of main circuit-breaker. The E not primary load OFF contact must be without voltage.

PL=Primary Load
NPL=Not Primary Load

Three-phase electric diagram



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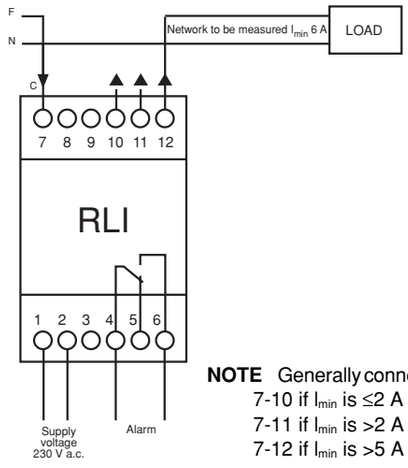
MAX./MIN. CURRENT/VOLTAGE AMMETRIC AND VOLTMETRIC RELAYS

Example of MINIMUM CURRENT relay (RLI) operating principle

Testing a load with the following marking

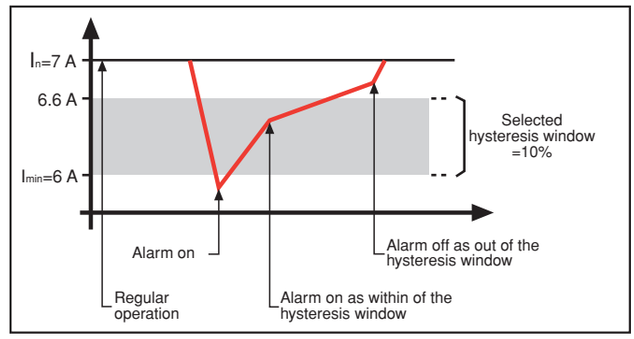
I_n	=	7 A	(standard operation rated current)
V_n	=	230 V a.c.	(standard operation rated voltage)
I_{min}	=	6 A	(RLI relay intervention)

1. Connect according to the diagram (as I_{min}=6A).



NOTE Generally connect terminals:
7-10 if I_{min} is ≤2 A
7-11 if I_{min} is >2 A and ≤5 A
7-12 if I_{min} is >5 A and ≤10 A

2. Set the "Current %" trimmer to 60%, as:
$$I\% = \frac{6\ (I_{min.})}{10\ (I_{set})} \quad x100=60\%$$
being the terminals 7-12 wired.
3. Set the "Hysteresis %" trimmer; choosing 10% you get an intervention range from 6 to 6.6 A (6 A+10%=6.6 A).
The relay intervention will be 6 A and the return to the standard operation 6.6 A.
4. Set the "Delay" trimmer. This allows to delay the relay intervention time (1…30 sec).
During the delay the "Power ON" LED blinks; at the end of the delay the "Alarm" LED is permanently lighted and the relay intervenes.

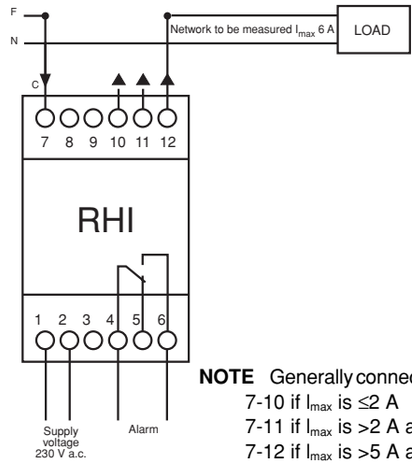


Example of MAXIMUM CURRENT relay (RHI) operating principle

Testing a load with the following marking

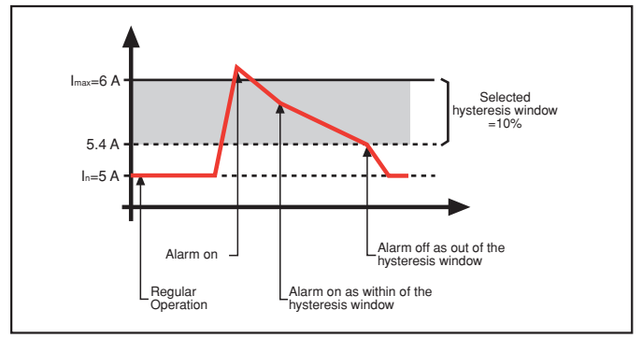
I_n	=	5 A	(standard operation rated current)
V_n	=	230 V a.c.	(standard operation rated voltage)
I_{max}	=	6 A	(RHI relay intervention)

1. Connect according to the diagram (as I_{max}=6 A).



NOTE Generally connect terminals:
7-10 if I_{max} is ≤2 A
7-11 if I_{max} is >2 A and ≤5 A
7-12 if I_{max} is >5 A and ≤10 A

2. Set the "Current %" trimmer to 60% as:
$$I\% = \frac{6\ (I_{max})}{10\ (I_{set})} \quad x100=60\%$$
being the terminal 7-12 wired.
3. Set the "Hysteresis %" trimmer; choosing 10% you get an intervention range from 5.4 to 6 A (6 A-10%=5.4 A).
The relay intervention will be 6 A and the return to the standard operation 5.4 A.
4. Set the "Delay" trimmer. This allows to delay the relay intervention time (1…30 sec).
During the delay the "Power ON" LED blinks; at the end of the delay the "Alarm" LED is permanently lighted and the relay intervenes.



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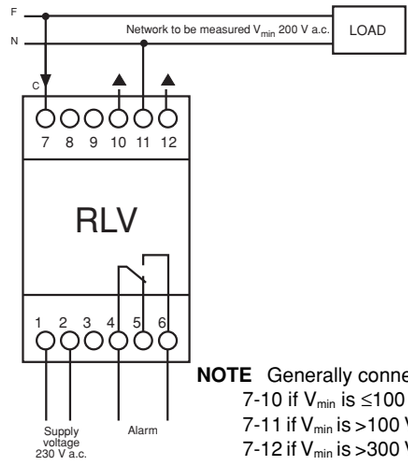
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Example of MINIMUM VOLTAGE relay (RLV) operating principle

Managing a load with the following marking

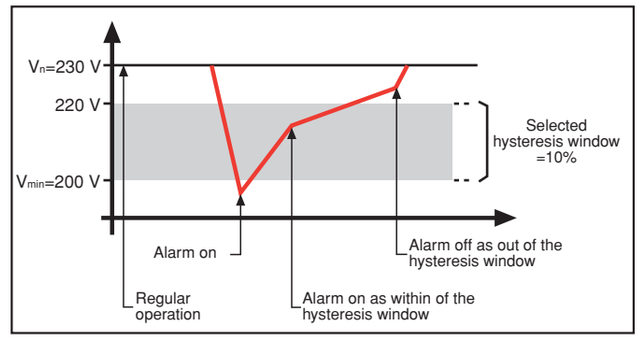
I_n = 5 A (standard operation rated current)
V_n = 230 V a.c. (standard operation rated voltage)
V_{min} = 200 V a.c. (RLV relay intervention)

1. Connect according to the diagram (as V_{min}=200 V).



NOTE Generally connect terminals:
7-10 if V_{min} is ≤100 V
7-11 if V_{min} is >100 V and ≤300 V
7-12 if V_{min} is >300 V and ≤500 V

2. Set the "Voltage %" trimmer to 66.7%, as:
$V\% = \frac{200\ (V_{min.})}{300\ (V_{set})}$ x100=66.7%
being the terminal 7-11 wired.
3. Set the "Hysteresis %" trimmer; choosing 10% you get an intervention range from 200 to 220 V (200+10%=220 V).
The relay intervention will be 200 V and the return to the standard operation 220 V.
4. Set the "Delay" trimmer. This allows to delay the relay intervention time (1…30 sec).
During the delay the "Power ON" LED blinks. At the end of the delay the "Alarm" LED is permanently lighted and the relay intervenes.

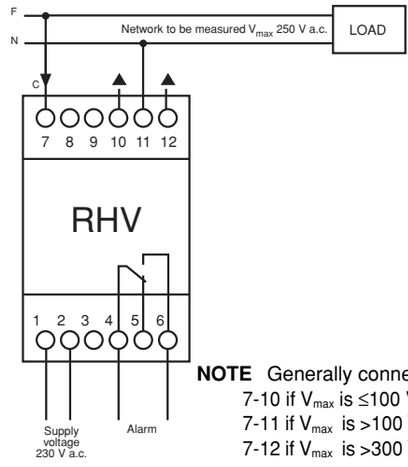


Example of MAXIMUM VOLTAGE relay (RHV) operating principle

Managing a load with the following marking

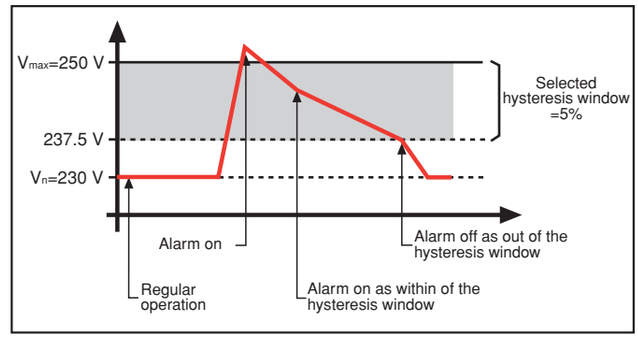
I_n = 5 A (standard operation rated current)
V_n = 230 V a.c. (standard operation rated voltage)
V_{max} = 250 V a.c. (RHV relay intervention)

1. Connect according to the diagram (as V_{max}=250 V).



NOTE Generally connect terminals:
7-10 if V_{max} is ≤100 V
7-11 if V_{max} is >100 V and ≤300 V
7-12 if V_{max} is >300 V and ≤500 V

2. Set the "Voltage%" trimmer to 83.33%, as:
$V\% = \frac{250\ (V_{max})}{300\ (V_{set})}$ x100=83.33%
being terminal 7-11 wired.
3. Set the "Hysteresis %" trimmer; choosing 5% you get an intervention range from 237.5 to 250 V (250-5%=237.5 V).
The relay intervention will be 250 V and the return to the standard operation 237.5 V.
4. Set the "Delay" trimmer. This allows to delay the relay intervention time (1…30 sec).
During the delay the "Power ON" LED blinks; at the end of the delay the "Alarm" LED is permanently lighted and the relay intervenes.



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ANALOGUE MEASUREMENT INSTRUMENTS

As regards the insertion of wattmeters and varmeters, they are to be used in combination with the suitable transducers both on single-phase and on three-phase lines.

The following table shows the measurement scale (or full scale) in relation to the voltage and to the current transformers used.

	SINGLE-PHASE			THREE-PHASE		
C.T.	**100 V**	**230 V**	**400 V**	**100 V**	**230 V**	**400 V**
5/5	500 W	1000 W	2000 W	1000 W	2000 W	4000 W
10/5	1000 W	2000 W	2000 W	2000 W	4000 W	8000 W
15/5	1500 W	3000 W	2000 W	3000 W	6000 W	12000 W
20/5	2000 W	4000 W	2000 W	4000 W	8000 W	16000 W
25/5	2500 W	5000 W	10 kW	5000 W	10 kW	20 kW
30/5	3000 W	6000 W	12 kW	6000 W	12 kW	24 kW
40/5	4000 W	8000 W	16 kW	8000 W	16 kW	32 kW
50/5	5000 W	10 kW	20 kW	10 kW	20 kW	40 kW
60/5	6000 W	12 kW	24 kW	12 kW	24 kW	48 kW
80/5	8000 W	16 kW	32 kW	16 kW	32 kW	64 kW
100/5	10 kW	20 kW	40 kW	20 kW	40 kW	80 kW
150/5	15 kW	30 kW	60 kW	30 kW	60 kW	120 kW
200/5	20 kW	40 kW	80 kW	40 kW	80 kW	160 kW
250/5	25 kW	50 kW	100 kW	50 kW	100 kW	200 kW
300/5	30 kW	60 kW	120 kW	60 kW	120 kW	240 kW
400/5	40 kW	80 kW	160 kW	80 kW	160 kW	320 kW
500/5	50 kW	100 kW	200 kW	100 kW	200 kW	400 kW
600/5	60 kW	120 kW	240 kW	120 kW	240 kW	480 kW
800/5	80 kW	160 kW	320 kW	160 kW	320 kW	640 kW
1000/5	100 kW	200 kW	400 kW	200 kW	400 kW	800 kW
1500/5	150 kW	300 kW	600 kW	300 kW	600 kW	1200 kW
2000/5	200 kW	400 kW	800 kW	400 kW	800 kW	1600 kW
2500/5	250 kW	500 kW	1000 kW	500 kW	1000 kW	2000 kW

Note
This table also applies to varmeters: replace watt with var and kilowatt with kilovar.
100 V voltage has been inserted for those cases where higher voltages are used with 100 V voltage transformers on the secondary; in this case the full-scale value shall be increased according to the ratio between the voltages of the V.T. used.
C.T. shall have a 0.5 rating.
It is possible the use without C.T. up to 5 A (direct insertion).

How to read the table
With a single-phase wattmeter or varmeter at 400 V and a 300/5 A ammetric current the requested full-scale value amounts to 120 kW.

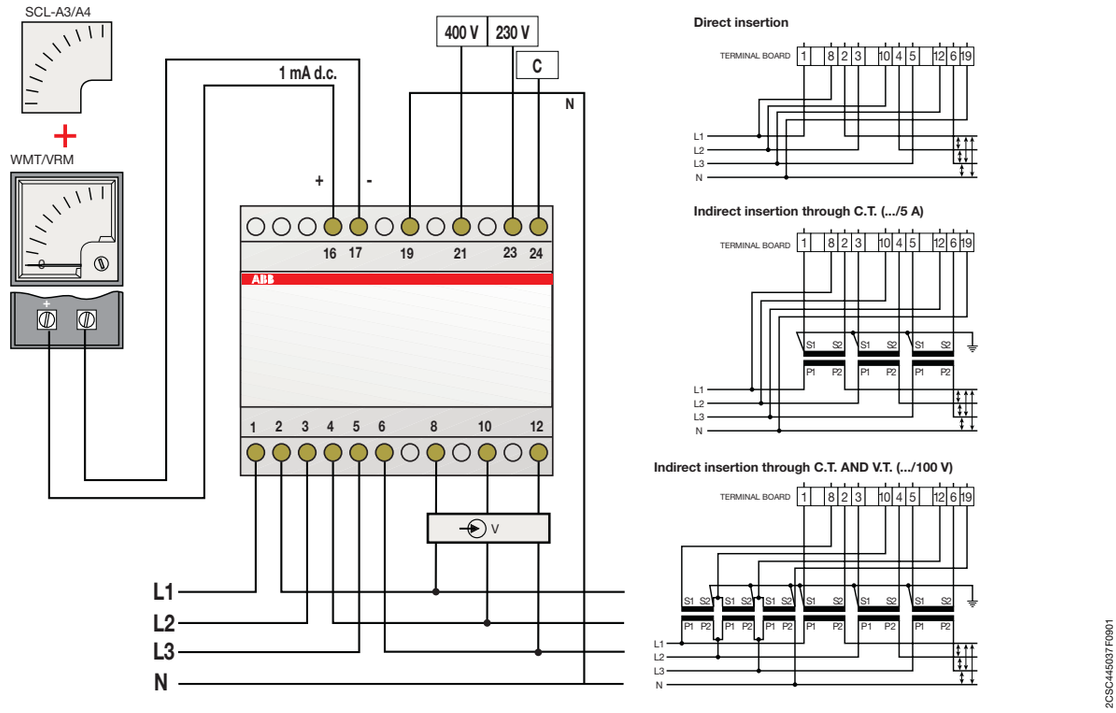
Additional technical features

Test voltage	2000 V for 1' at 50 Hz
Operating temperature	- according to accuracy class: 0 °C ±10 °C
	- with guaranteed operation but outside accuracy rating: from -25 °C to +75 °C
Resistance to vibrations	±0.25 mm amplitude at 50 Hz
Installation position	- horizontal and vertical
	- versions for different angles on request
Reading scales	at full scale values according to DIN 43802 Standard
Ammeter power loss	5 A: 0.3 VA; 10 A: 0.6 VA; 25 A: 1 VA; 30 A: 1.2 VA
Voltmeter power loss	300 V: 1.5 VA; 500 V: 4 VA
Frequency meter power loss	<1.5 VA

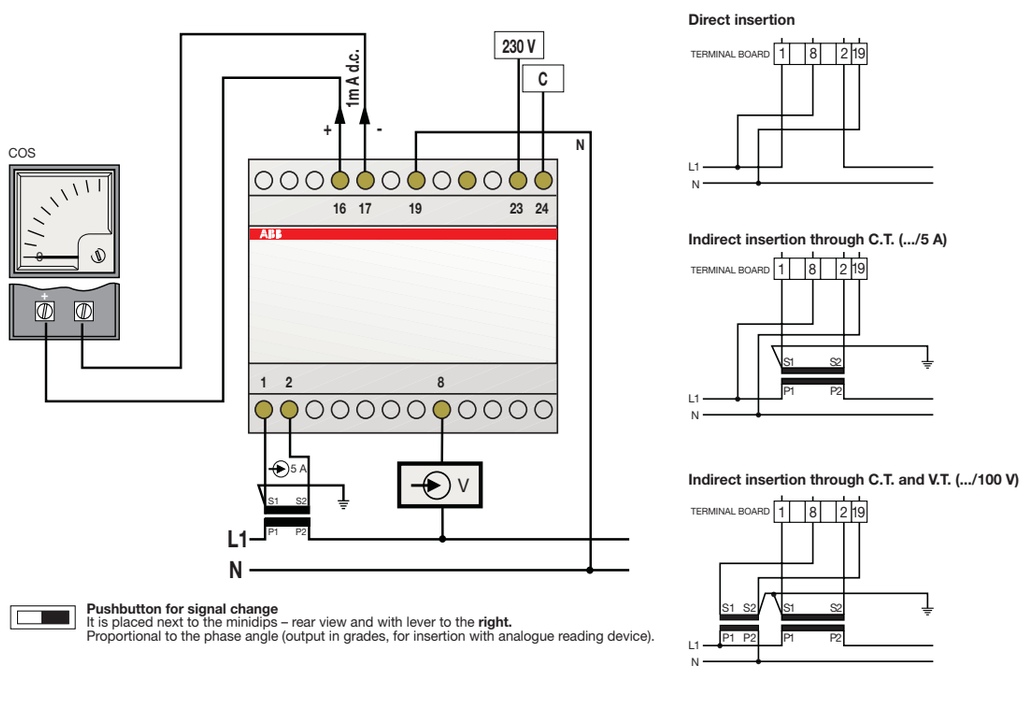
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Wiring diagrams

Alternated current wattmeters and varmeters – Three-phase line with neutral (4 wires)



Power factor meters with alternated current – Single-phase line

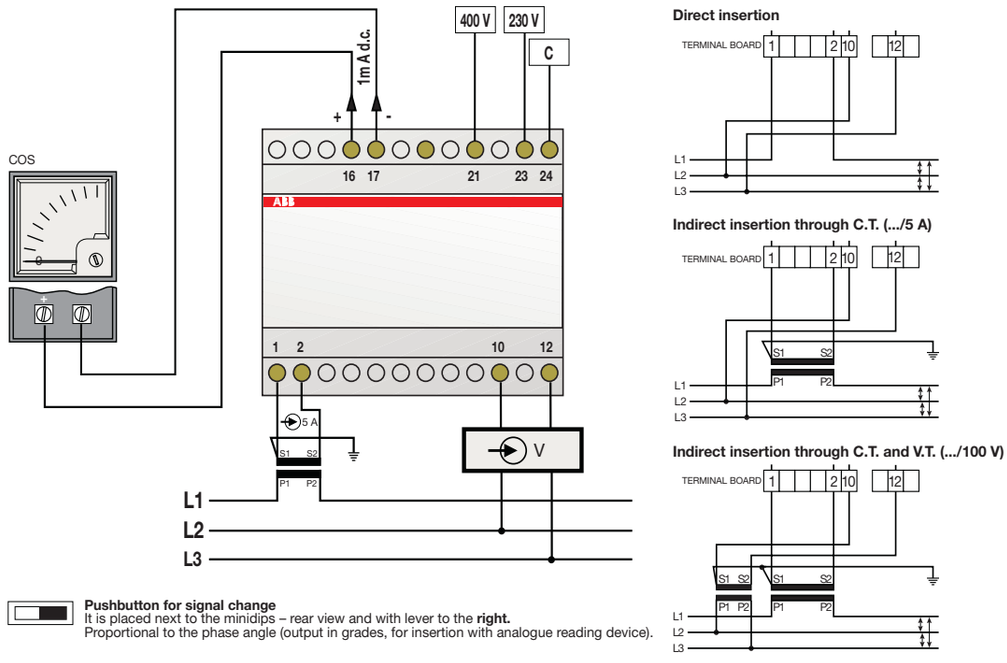


Pushbutton for signal change
It is placed next to the minidips – rear view and with lever to the **right.**
Proportional to the phase angle (output in grades, for insertion with analogue reading device).

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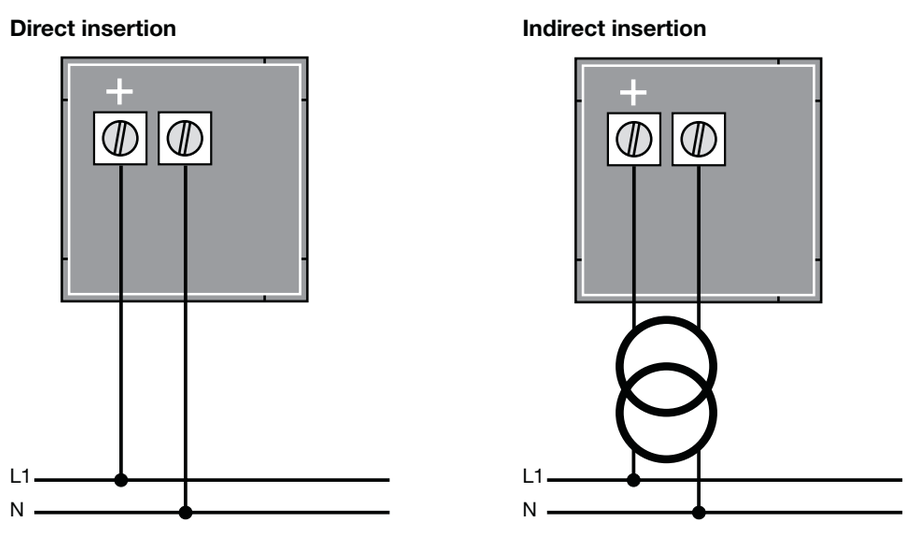
Alternated current power factor meters – Three-phase line without neutral (3 wires)



Pushbutton for signal change
It is placed next to the minidips – rear view and with lever to the **right.**
Proportional to the phase angle (output in grades, for insertion with analogue reading device).

2CSC445016F0901

Frequency meters for alternated current – Single-phase line

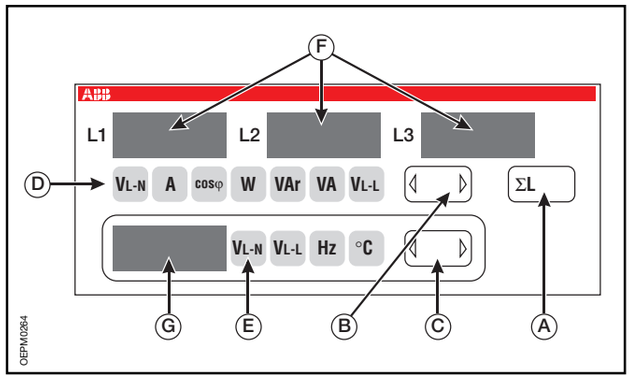


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MTM MULTIMETERS



A Pushbutton for three-phase system (∑L) quantities and peak values (PEAK) displaying:

• pressing A pushbutton for less than 3 seconds you access to three-phase values (∑L) displaying of the measurement selected by B pushbutton;

• pressing A pushbutton for more than 3 seconds you access to peak values displaying on the F display, while viewing “PEAK” on the G display.

B Pushbutton for selecting the measure to view on the F display.

C Pushbutton for selecting the measure to view on the G display.

D LED bar to indicate the measure viewed on F displays.

E LED bar to indicate the measure viewed on the G display.

F 3 displays for viewing measurements divided by phases.

G Display for viewing the measurement indicated by the LED E bar. The voltage value refers to three-phase system.

The selection of elements to be measured and the transformation ratio setting are performed through the 3 keys A, B and C. The measurements are shown on F and G 3-digit and 8-segment red LED displays.

To set the transformation ratio (C.T.):

- press A and C pushbutton simultaneously until viewing “SET” on the G display and “CT 001” on the F display;
- replace the “001” value by setting the appropriate C.T. transformation ratio (i.e.: C.T. 800/5 A=160);
- press B or C pushbutton to increase or decrease respectively the transformation ratio values to be set;
- press A pushbutton to confirm the datum.

Measurable quantities

Quantity		View
Voltages between lines	[V, kV]	VL1-VL2, VL2-VL3, VL3-VL1
Phase voltage	[V, kV]	VL1-N, VL2-N, VL3-N
Phase currents	[A, kA]	I1, I2, I3
Active phase power	[W, kW]	P1, P2, P3
Reactive phase power	[VAr, kVAr]	QL1, QL2, QL3
Apparent phase power	[VA, kVA]	S1, S2, S3
Phase power factors	[ψ]	PF1, PF2, PF3
Temperature	[°C]	probe within the multimeter
Temperature	[°C]	from 0 to 60
Average value summation	[∑]	VL-L, VL-N, I, P, Q
Peak value summation	[∑]	I, P

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CURRENT TRANSFORMERS

Standard type

TYPE		CT-3			CT-4			CT-5			CT-6		CT-8		CT-12	CT-8V	CT-12V
OPERATION		Through primary															
CENTRAL SECTION	HORIZ. BAR	20x10 30x10			30x10			30x30 40x25 - 50x20			50x20 60x20		60x30 80x30		80x50 100x50 125x50		
	CABLE	21			25			30			50		2x30		2x50	2x35	3x35
	VERT. BAR	20x10			30x10			30x10								min. 80x30 ÷ max. 3x80x5	min. 100x10 ÷ max. 4x125x5
Primary current (A)		Power (VA)			Power (VA)			Power (VA)			Power (VA)		Power (VA)		Power (VA)	Power (VA)	Power (VA)
		Rating			Rating			Rating			Rating		Rating		Rating	Rating	Rating
		0.5	1	3	0.2	0.5	0.2S	0.5	1	0.2S	0.2	0.5	0.5	0.2S	0.5	0.5	0.5
1 **5** **10** **15** **20** **25** **30**																	
40				2													
50				2													
60				2													
80				3													
100			3			3											
150		3			4	5	3										
200		3			4	6	3		4								
250		5			5	10	3	3				5					
300		5			5	10		4				5	5				
400		6				10		6			5	6	6			6	
500		6				10		10		5	5	6	10		10	10	
600		6				10		10		5	5	10	10		10	10	
800								10			5	10	10	7,5	15	10	10
1000								10			5	20	10	10	20	10	10
1200								10				20	15	10	20	10	10
1500								20				30	20	10	20	10	10
2000												30	20	10	30	20	12
2500												30	20		40	20	15
3000													20		40		20
4000															50		20
DIMENSIONS	Height	75			87			100			110		120		175	119	165
	Width	58			75			85			105		125		180	109	109
	Depth	44			44			45			61		61.5		68.5	41	41

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Compact type

Miniaturized type

TYPE		CT-M1	CT-M3	CT-M4	CT-M5	CT-M6	CT-SM1	CT-SM2	CT-SM3	CT-SM4	CT-SM5	CT-SM6	CT-SM7	CT-SM8	CT-SM9
OPERATION		Through primary					Through primary								
CENTRAL SECTION	HORIZ. BAR		20x12 25x15 30x10	25x25 30x20 40x10	50x12	50x23 63x20		15x5			min 25x5 max 25x6,5		min. 29x5 max. 2x32x5	min. 30x5 max. 2x63x5	
	CABLE	21	23	30		2x22	13	11	18	25		32			
	VERT. BAR			25x25 30x20 40x10							15x5 20x5		32x5	50x5 2x50x5 2x50x10 3x50x5	2x63x5 3x63x5
Primary current (A)		Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)	Power (VA)
		Rating 0.5 / 1 / 3	Rating 0.5 / 1	Rating 0.5 / 1	Rating 0.5 / 1	Rating 0.5	Rating 1 / 3	Rating 1 / 3	Rating 0.5 / 1 / 3	Rating 0.5	Rating 0.5 / 1	Rating 0.5	Rating 0.5 / 1	Rating 0.5 / 1	Rating 0.5
40		/ / 2	/	/	/		/ 2	/	/ / 3						
50		/ / 2	/	/	/		/ 2	/	/ / 4						
60		/ / 2	/	/	/		/ 3	/ 3	/ / 5						
75		/ /	/	/	/		/ 3	/ 3	/ / 5						
80		/ / 3	/	/	/		/ 3	/ 3	/ / 5						
100		/ 3 /	/ 2	/ 3	/		3 /	3 /	/ 5 /		/ 4				
120		/ /	/	/	/		5 /	5 /	/ 5 /		/ 5				
125		/ /	/	/	/		5 /	5 /	/ 5 /		/ 5				
150		/ 4 /	/ 3	/ 3	/		5 /	5 /	5 / /		/ 5				
200	3 / /	/ 3	4 /	/			/	/	5 / /	5	/ 5		/ 5	/ 5	
250	3 / /	2 /	6 /	/	/ 3		/	/	10 / /	6	/ 5		/ 5	/ 5	
300	/ /	2 /	6 /	/	4 /	5	/	/	10 / /	6	5 /	5	5 /	5 /	
400	/ /	3 /	10 /	/	4 /	6	/	/	/ /	10	/	6	6 /	5 /	5
500	/ /	/	10 /	/	6 /	6	/	/	/ /	/	/	10	10 /	10 /	10
600	/ /	/	10 /	/	6 /	6	/	/	/ /	/	/	10	10 /	10 /	10
800	/ /	/	/	/	10 /	10	/	/	/ /	/	/	/	/	10 /	10
1000	/ /	/	/	/	10 /	10	/	/	/ /	/	/	/	/	15 /	15
1200	/ /	/	/	/	/	15	/	/	/ /	/	/	/	/	/	/
1250	/ /	/	/	/	/	/	/	/	/ /	/	/	/	/	15 /	15
1500	/ /	/	/	/	/	20	/	/	/ /	/	/	/	/	15 /	/
2000	/ /	/	/	/	/	/	/	/	/ /	/	/	/	/	/	/
2500	/ /	/	/	/	/	/	/	/	/ /	/	/	/	/	/	/
3000	/ /	/	/	/	/	/	/	/	/ /	/	/	/	/	/	/
4000	/ /	/	/	/	/	/	/	/	/ /	/	/	/	/	/	/
DIMENSIONS	Height	65	65	81,5	81,5	106	58	58	90.5	90.5	72	90.5	90.5	116	119
	Width	52	52	70	70	101	34.5	34.5	56	56	44	56	56	87	70
	Depth	27	27	44	44	44	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3	53.3
Min. distance betw. centers							27	27	45	45	35	45	45-35	70-50	45

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Self-consumption of copper cables between the device and the transformer

For 5 A secondary

Cable section mm²	Power (two-pole cable) VA VA					
	Distance					
	1 m	2 m	4 m	6 m	8 m	10 m
1.5	0.58	1.15	2.31	3.46	4.62	5.77
2.5	0.36	0.71	1.43	2.14	2.86	3.57
4	0.22	0.45	0.89	1.34	1.79	2.24
6	0.15	0.30	0.60	1.89	1.19	1.49
10	0.09	0.18	0.36	0.54	0.71	0.89

For 1A secondary

Cable section mm²	Power (two-pole cable) VA VA					
	Distance					
	10 m	20 m	40 m	60 m	80 m	100 m
1	0.36	0.71	1.43	2.14	2.85	3.57
1.5	0.23	0.46	0.92	1.39	1.85	2.31
2.5	0.14	0.29	0.57	0.86	1.14	1.43
4	0.09	0.18	0.36	0.54	0.71	0.89
6	0.06	0.12	0.24	0.36	0.48	0.60
10	0.04	0.07	0.14	0.21	0.29	0.36

Maximum load (A) on copper bars according to DIN 43670 and 43671

Bar dimensions mm	Rated current (In) A		
	1 bar	2 bars	3 bars
20x5	325	560	
20x10	427	925	1180
30x5	379	672	896
30x10	573	1060	1480
40x5	482	836	1090
40x10	715	1290	1770
50x10	852	1510	2040
60x10	985	1720	2300
80x10	1240	2110	2790
100x10	1490	2480	3260

Rating	Ratio fault limit in %			
	0.05 In	0.2 In	In	1.2 In
0.5	±1	±0.75	±0.5	±0.5
1	±2	±1.5	±1	±1
3	From 0.5 In to 1.2 In = ± 3			

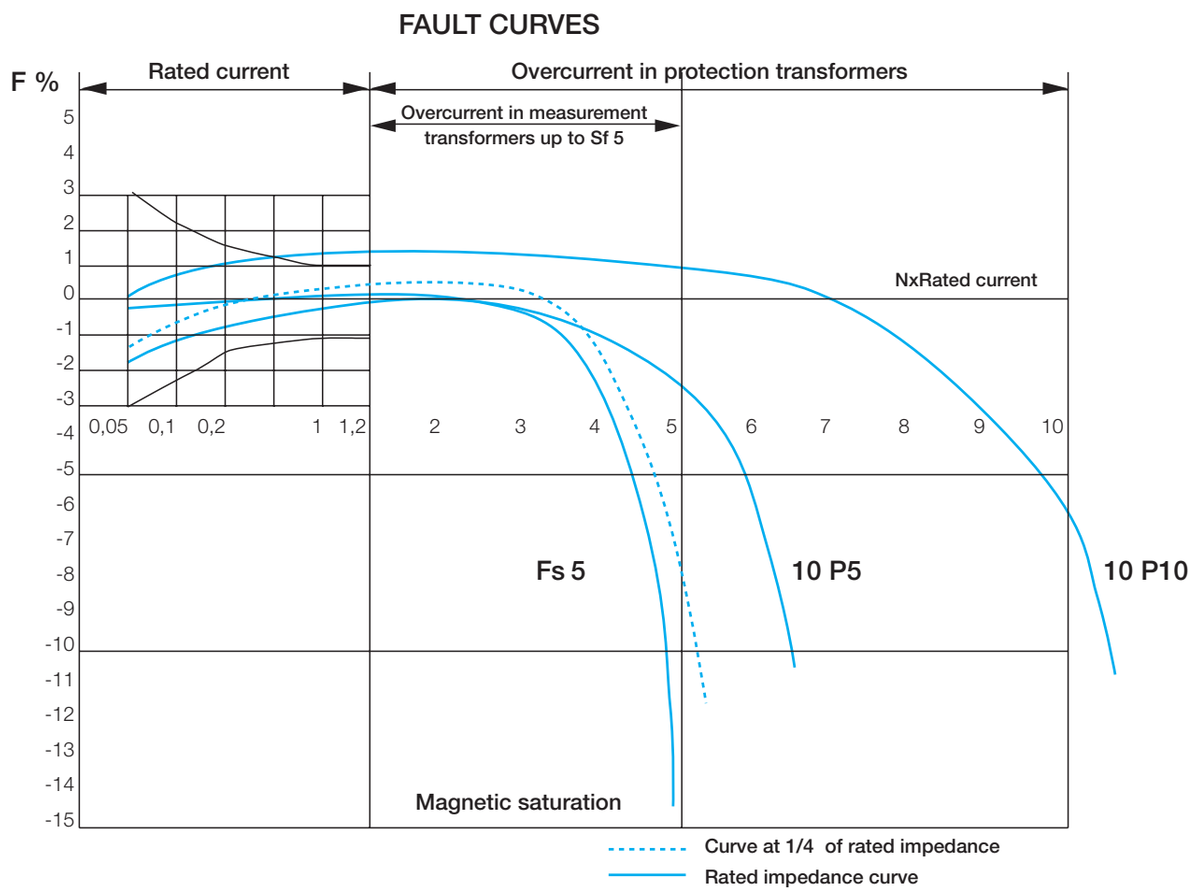
Rating	Angle fault limit in %			
	0.05 In	0.2 In	In	1.2 In
0.5	±1.8	±1.35	±0.9	±0.9
1	±3.6	±2.7	±1.8	±1.8
3	No prescriptions			

Accuracy rating

- 0.5 rating is required for power meters.
- 1 rating is required for unofficial power measures and power meters (measurements within the firm).
- 3 rating is required for relays and protection devices.

According to DIN 185, VDE-0414 and UNIE-21028 current and angle fault limits shall comply with the value shown in the table.

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Cable diameter calculation

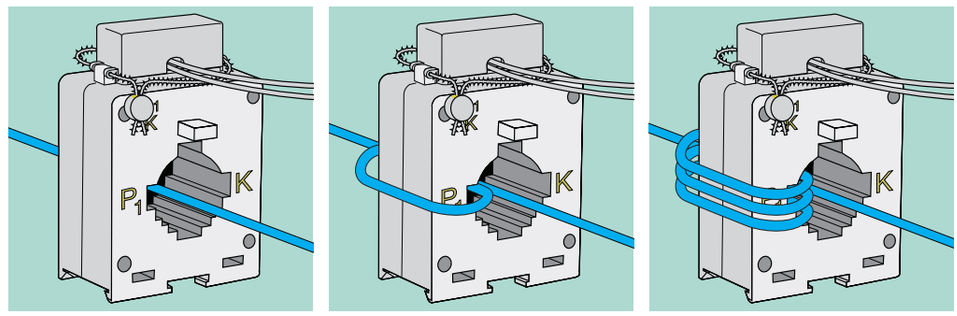
The following formula applies for determining the diameters of a 95 mm^2 cable:

- section=rxrx3.14 that is r^{2}x3.14 from which r=√ section/3.14 r=√ 95/3.14=30.25=5.5 mm, so the radius is 5.5 mm
- diameter=r+r so the diameter is 5.5+5.5 mm=11 mm (copper diameter to be added to the insulating material thickness, total ø about 20 mm).

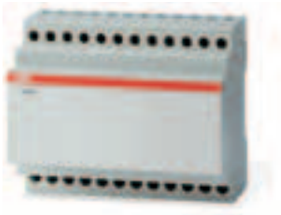
With many insertion of the cable into the current transformer it is possible to halve the primary current while performance and rating values remain unaltered.

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Example



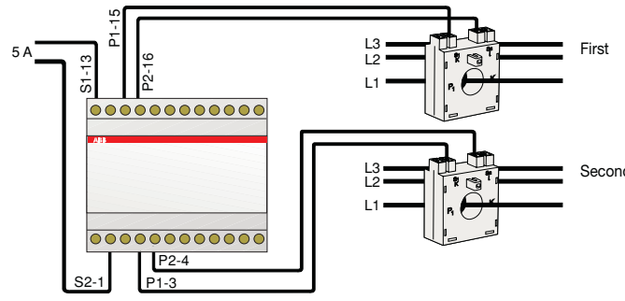
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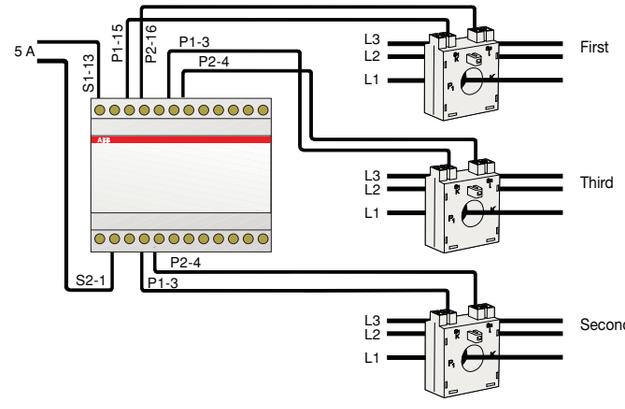
SUMMING CURRENT TRANSFORMERS

The examples shown in the drawings refer to the connection to an ammetric phase. For the connection to two systems (ARON) it is necessary to use two summing transformers and two ammetric transformers (respectively for phase L1 and for phase L3).
For the connection to three systems it is necessary to use two summing transformers and three ammetric transformers (respectively for phase L1, for phase L2 and for phase L3).

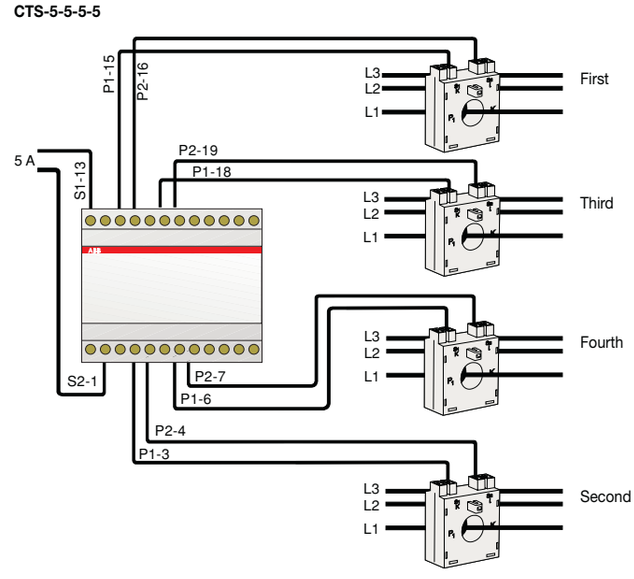
CTS-5- wiring diagram



CTS-5-5-5 wiring diagram



CTS-5-5-5-5



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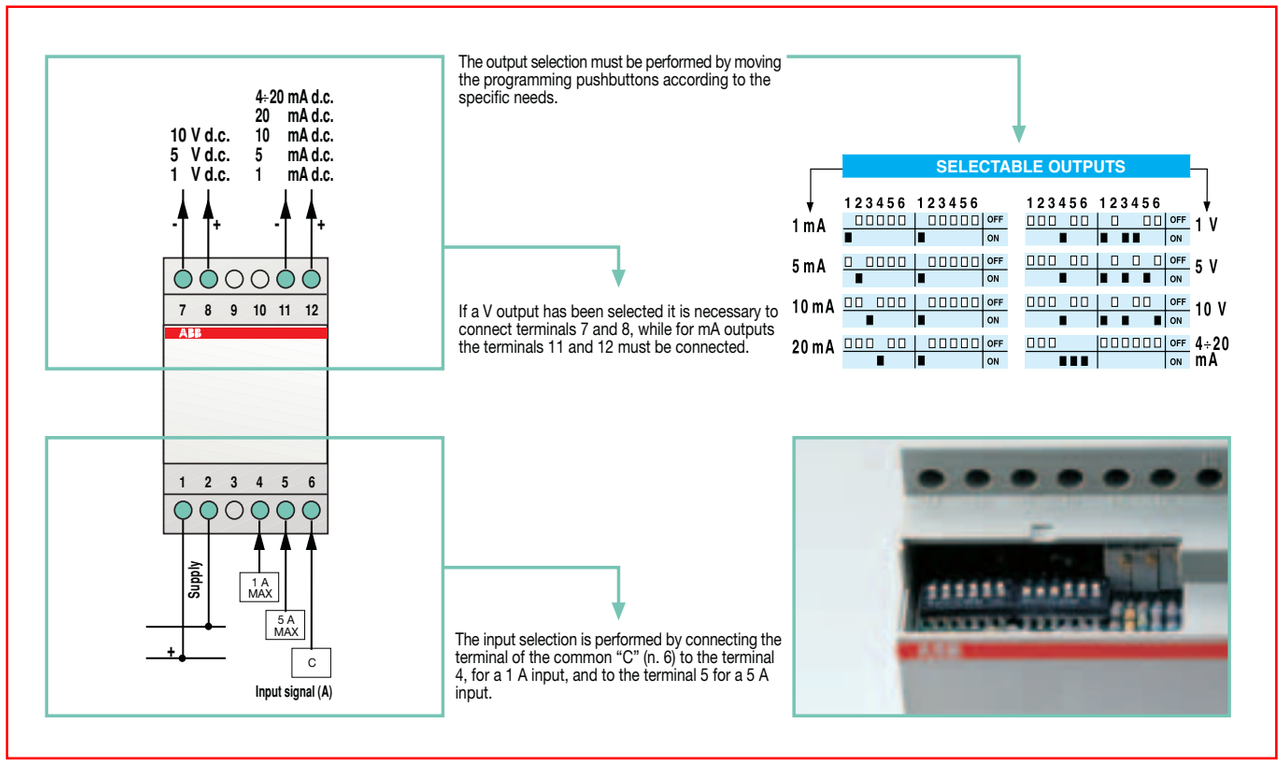
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CURRENT AND VOLTAGE CONVERTERS

Technical characteristics

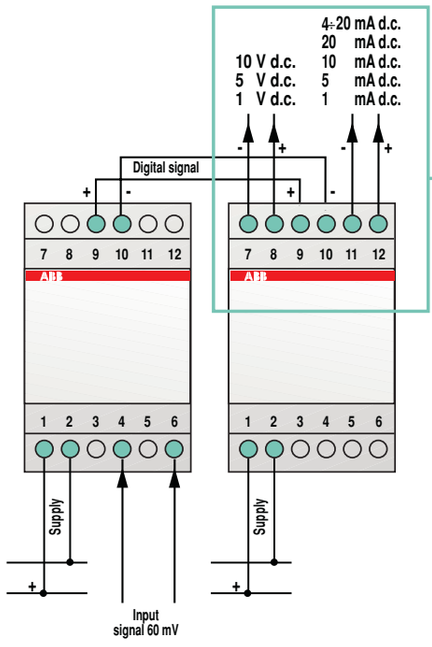
		Ammetric converters in a.c./d.c.	Voltmetric converters in a.c./d.c.
Auxiliary supply (separated)	[V]	a.c. 230	a.c. 230
Input rated values		1-5 A	120-300-500 V
Output rated values	[V d.c.]	1-5-10	1-5-10
	[mA d.c.]	1-5-10-4…20	1-5-10-4…20
Ohmic load	[mΩ]	700	700
Measurement field		0±In	0±Un
Accuracy rating		0.5	0.5
Overload			
Permanent		2 In	2 Un
Instantaneous		10 In/1 sec.	10 Un/1 sec.
Frequency	[Hz]	50/60	50/60
Time delay	[ms]	≤300	≤300
Alternated residue		≤1%	≤1%
Self-consumption		current ≤0,8 VA	voltage ≤1 VA
		aux. supply ≤4 VA	aux. supply ≤4 VA
Input/output galvanic separation			
Input/output insulation, aux. supply		2 kV/50 Hz -1 min	2 kV/50 Hz -1 min
Circuit/mass insulation		4 kV/50 Hz -1 min	4 kV/50 Hz -1 min
Operating temperature	[°C]	0…+55	0…+55
Dimensions		3-6 DIN modules	3-6 DIN modules
Weight	[kg]	0.30	0.30

Current converters (a.c. input)



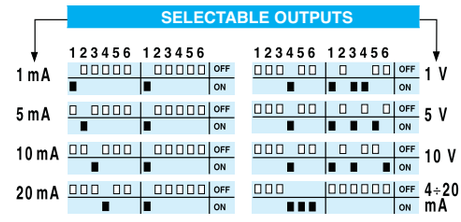
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Current converters (d.c. input)



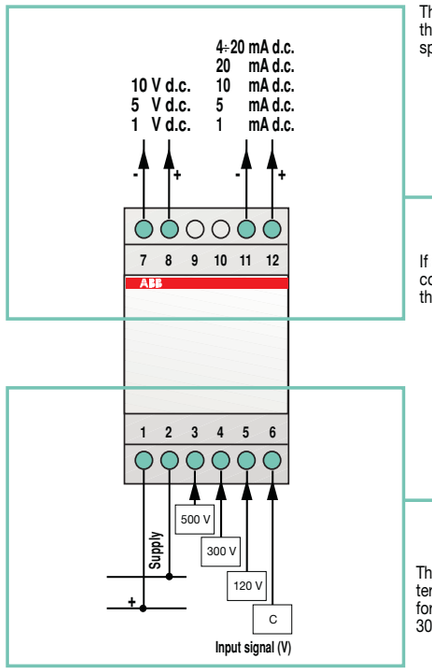
The output selection must be performed by moving the programming pushbuttons according to the specific needs.

If a V output has been selected it is necessary to connect terminals 7 and 8, while for mA outputs the terminals 11 and 12 must be connected.



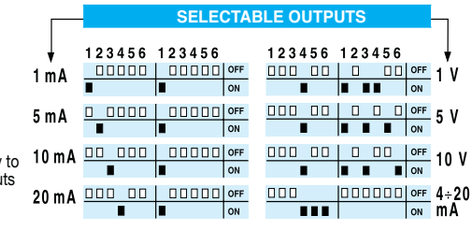


Voltage converters (a.c. input)



The output selection must be performed by moving the programming pushbuttons according to the specific needs.

If a V output has been selected it is necessary to connect terminals 7 and 8, while for mA outputs the terminals 11 and 12 must be connected.



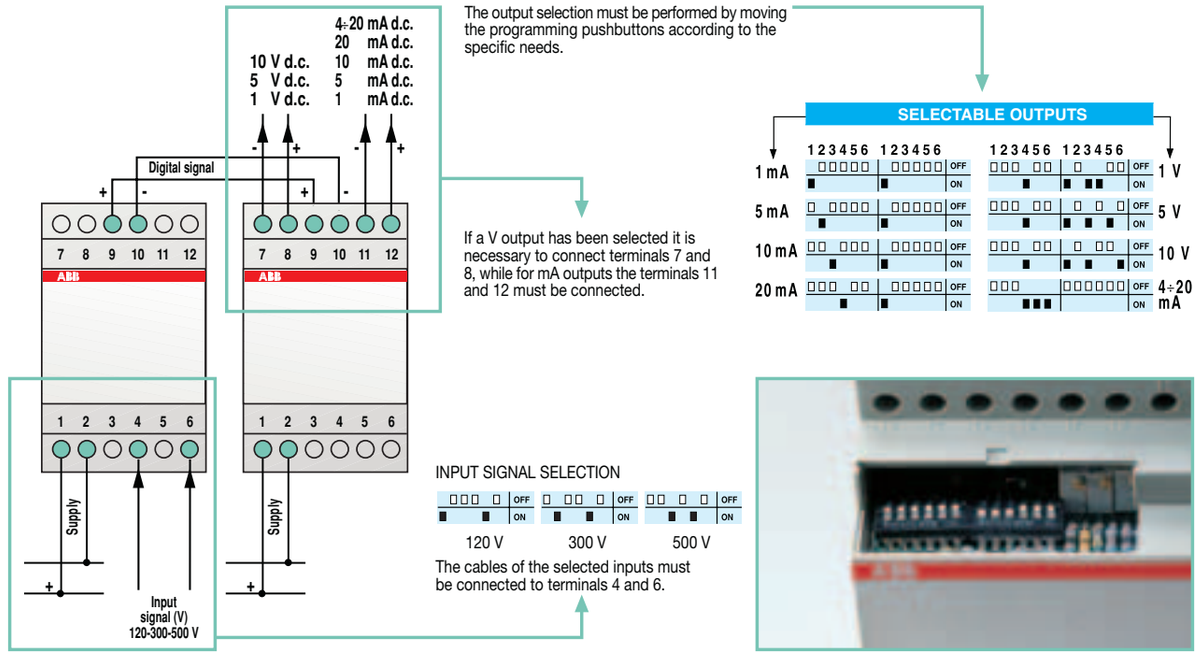
The input selection is performed by connecting the terminal of the common "C" (6) to the terminal 5, for a 120 V input, or to the terminal 4 for a 300 V input or to the terminal 3 for a 500 V input.



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Voltage converters (d.c. input)



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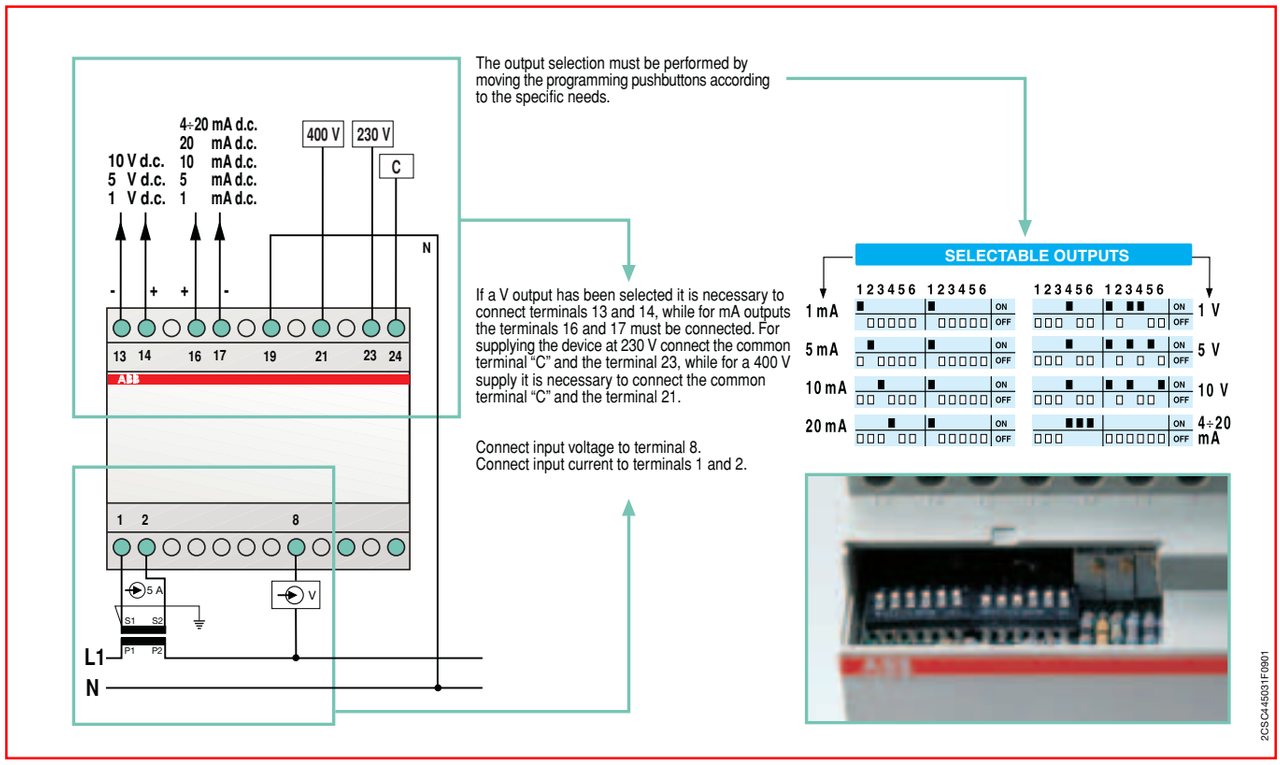


TRANSDUCERS FOR WATTMETERS AND VARMETERS

Technical characteristics

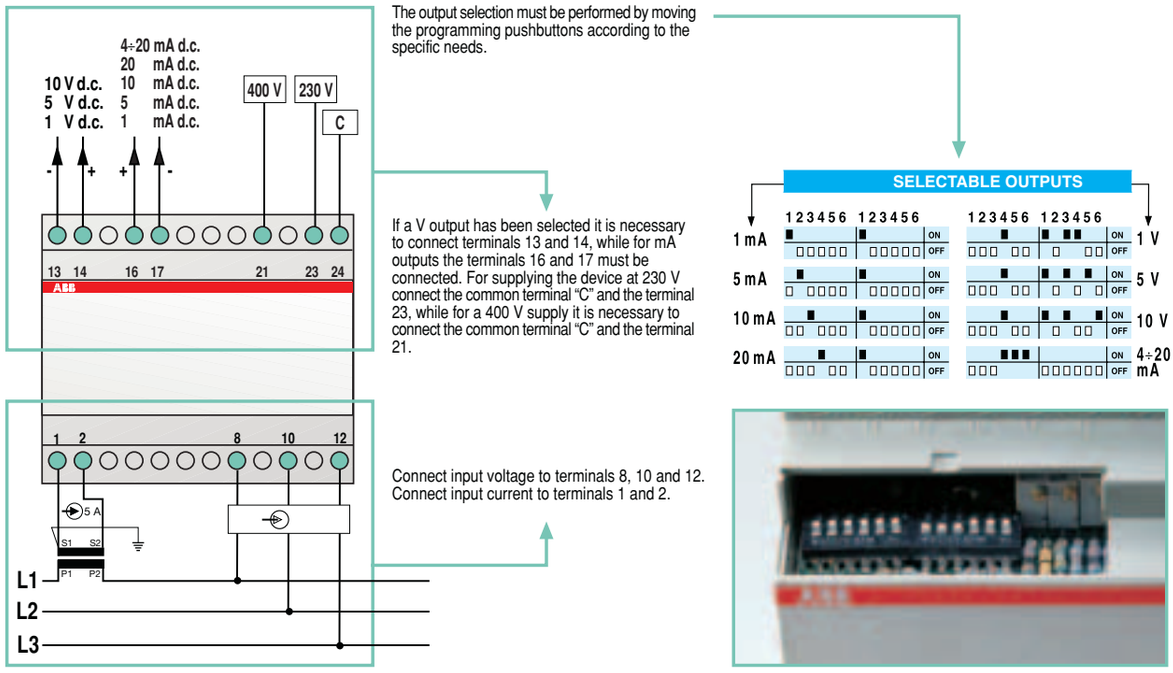
		Transducers for single-phase line	Transducers for three-phase line
Separated auxiliary supply	V	a.c. 230/400	a.c. 230/400
Input voltage rated values	V	230 a.c. (5 A)	400 a.c. (5 A)
Output rated values (selectable)		1, 5, 10 V d.c.	1, 5, 10 V d.c.
		1, 5, 10, 20, 4/20 mA d.c.	1, 5, 10, 20, 4/20 mA d.c.
Ohmic load	Ohm	700	700
Measurement field		0÷Pn (0÷Qn)	0÷Pn (0÷Qn)
Standard calibration		100 V, 5 A=500 W (Var)	100 V, 5 A=1000 W (Var)
		230 V, 5 A=1000 W (Var)	230 V, 5 A=2000 W (Var)
		400 V, 5 A=2000 W (Var)	400 V, 5 A=4000 W (Var)
Accuracy rating		0.5	0.5
Permanent overload		2 In/1.2 Un	2 In/1.2 Un
Instantaneous overload		10 In/2 Un for 1 sec.	10 In/2 Un for 1 sec.
Operating frequency	Hz	50/60	50/60
Time delay	ms	300	300
Alternated residue		1%	1%
Self-consumption		voltage = 1 VA curr. = 0.8 VA aux. supply = 4 VA	voltage = 1 VA curr. = 0.8 VA aux. supply = 4 VA
Input/output galvanic separation		input/output insulation, aux. supply 2 kV for 1 min./50 Hz	input/output insulation, aux. supply 2 kV for 1 min./50 Hz
		circuit/mass insulation 4 kV for 1 min./50 Hz	circuit/mass insulation 4 kV for 1 min./50 Hz
Operating temperature	°C	0...55	0...55
Input waves		OS – OSD	OS – OSD
Dimensions		6 DIN modules	6 DIN modules
Weight	kg	0.49	0.49

Single-phase transducer

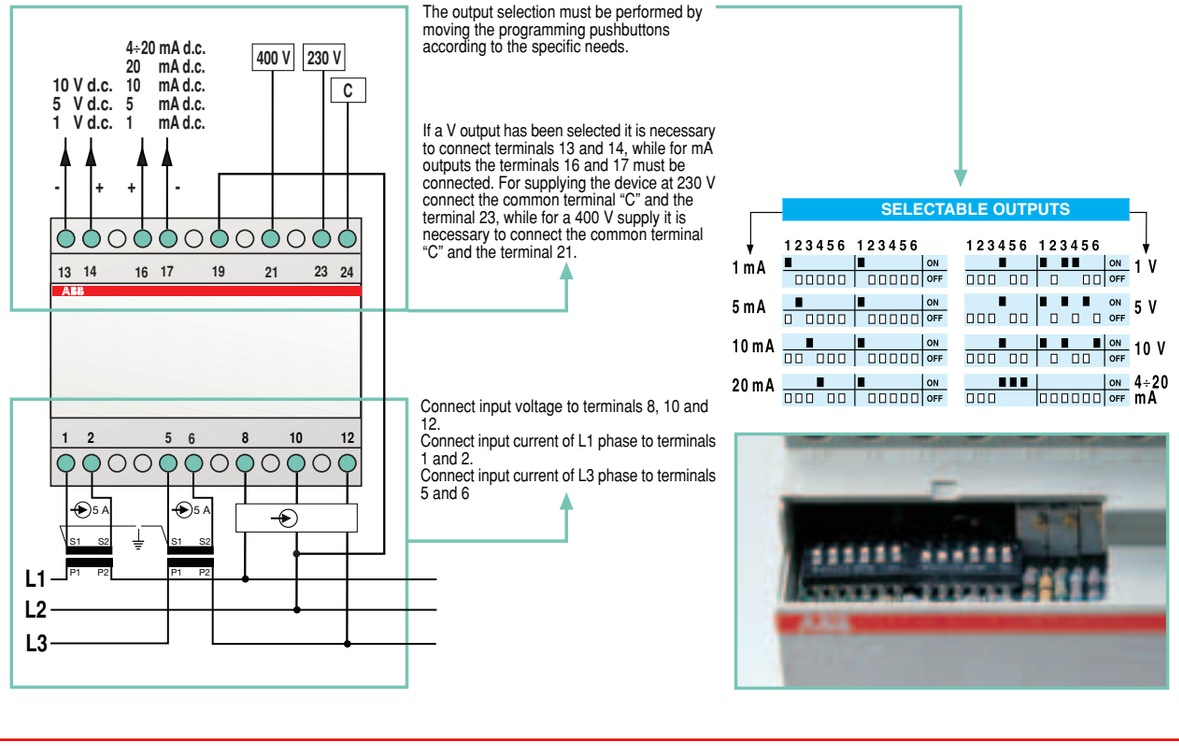


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Balanced three-phase line without neutral (3 wires)



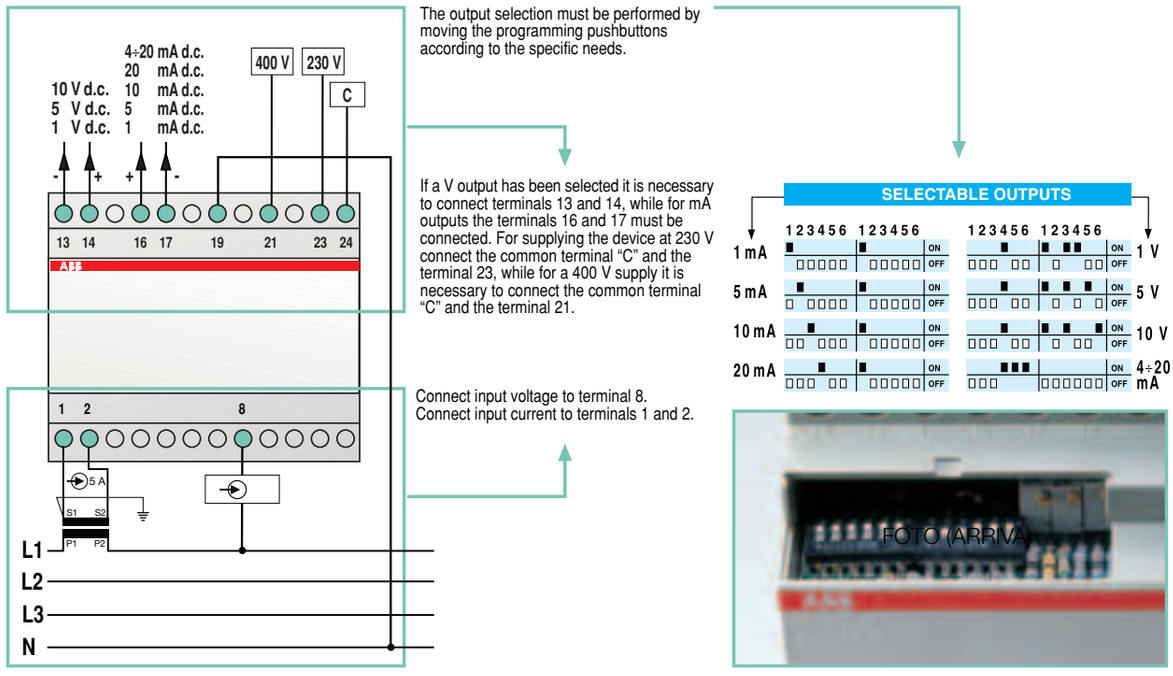
Imbalanced three-phase line without neutral (3 wires)



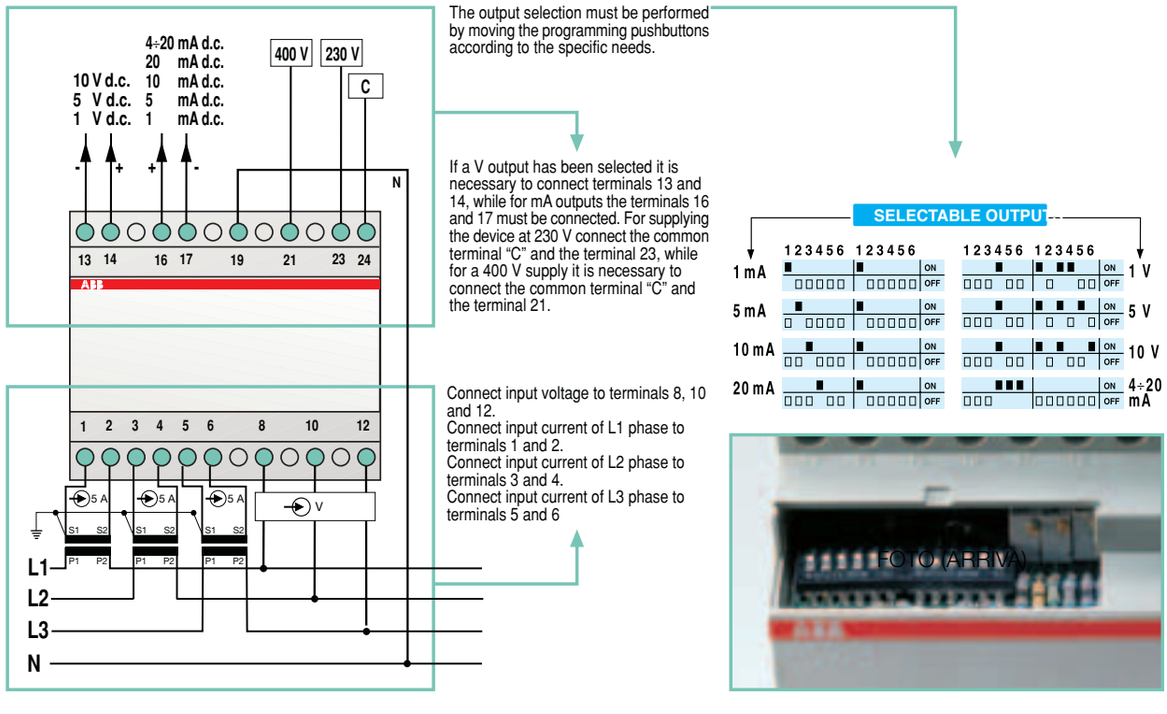
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Balanced three-phase line with neutral (4 wires)



Imbalanced three-phase line with neutral (4 wires)



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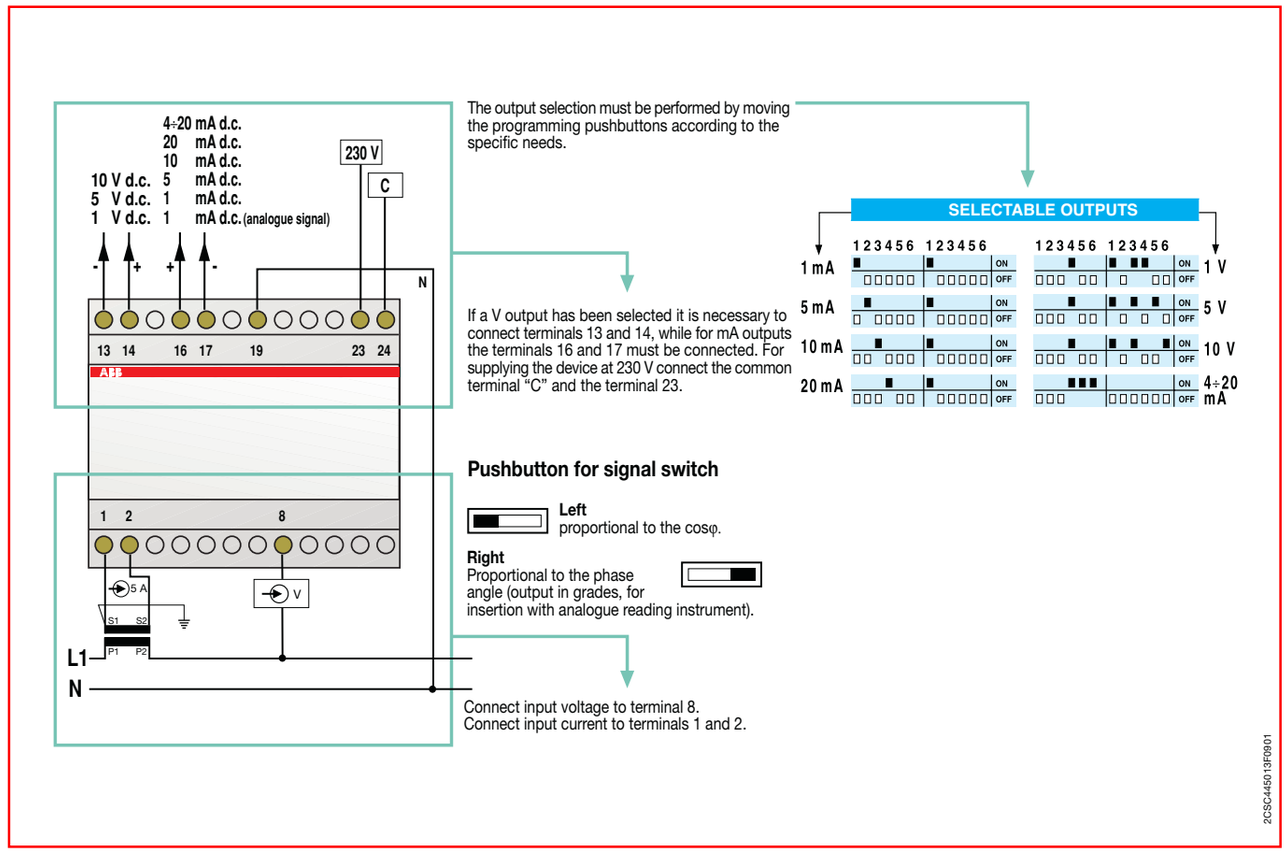


TRANSDUCERS FOR POWER FACTOR METERS

Technical characteristics

Separated auxiliary supply	V	a.c. 230/400
Input rated values	V	a.c. 230/400 (5 A)
Output rated values (selectable)		1, 5, 10 V d.c.
		1, 5, 10, 20, 4/20 mA d.c.
Ohmic load	Ohm	700
Measurement field		0÷Pn (0÷Qn)
Conversion type		proportional to phase angle or to cosφ
Accuracy rating		0.5
Permanent overload		2 In/1.2 Un
Instantaneous overload		10 In/2 Un for 1 sec.
Operating frequency	Hz	50/60
Time delay	ms	300
Alternated residue		1%
Self-consumption		voltage=1 VA/curr.=0.8 VA/aux. supply=4 VA
Input/output galvanic separation		input/output insulation, aux. supply 2 kV for 1 min./50 Hz
		circuit/mass insulation 4 kV for 1 min./50 Hz
Operating temperature	°C	0...55
Dimensions		6 DIN modules
Weight	kg	0.49

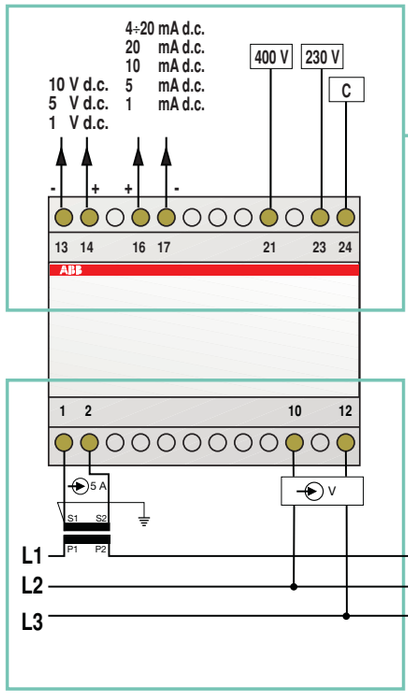
Single-phase line and input and output selection



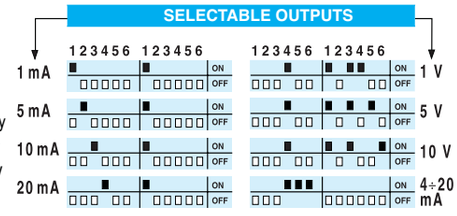
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Balanced three-phase line without neutral (3 wires)



The output selection must be performed by moving the programming pushbuttons according to the specific needs.



If a V output has been selected it is necessary to connect terminals 13 and 14, while for mA outputs the terminals 16 and 17 must be connected. For supplying the device at 230 V connect the common terminal "C" and the terminal 23, while for a 400 V supply it is necessary to connect the common terminal "C" and the terminal 21.

Pushbutton for signal switch

Left
Proportional to the cosφ.

Right
Proportional to the phase angle (output in grades, for insertion with analogue reading instrument).

Connect input voltage to terminals 10 and 12. Connect input current of L1 phase to terminals 1 and 2.

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INSULATION MONITORS

The insulation transformers provide protection from indirect contacts without breaking the circuit at the first indirect contact. They are used mostly in systems where miniature circuit-breaking is not allowed because a sudden service breaking could cause serious inconveniences.

The Standards define strict safety rules; in particular, the active parts of the separate circuit must not have shared parts, nor connections to earth. In addition, an appropriate device for the permanent testing of the insulation status must be provided in order to detect, signal and remove the circuit first fault.

Isoltester-C

This device operates generating a test voltage which is applied between the circuit leading to the insulation transformer secondary and earth system. The current that is generated is made up by an Ir (ohmic earth leakage) and an Ic (capacitive earth leakage) component. It closes between the insulated system and the earth allowing to detect the leakage.

If passing through the sensing electronic device the ohmic/capacitive global leakage exceeds the one preset, the alarm is activated and the device yellow lighted indicator switches on.

The alarm status is then reported on the appropriate QSD acoustic/lighted signalling panel, that can be placed remotely from the switchboard.

Selvtester-C

Designed according to an operating principle similar to Isolterster-C with which can be coupled, this device signals the first indirect contact in SELV circuits shunted from insulated network with transformer (i.e. in systems for operating theatres where scialytic lamps are connected).

In addition to this insulation control basic function, Selvtester-C enables to view through green and yellow LED respectively the operating status and any indirect contact.

A specific pushbutton enables to perform periodic self-test operations.

QSD 230/24 C panels for remote signalling

Each panel is equipped with a green indicator to signal the standard operation and with a yellow indicator reporting the alarms triggered by devices.

In case of alarm an appropriate acoustic signalling buzzer is also provided which can be switched off by switching the silencing relay (green pushbutton). The lighted signal is active until the cause of the alarm stops.

In order to perform periodic alarm test with simulation of indirect contact, press the red pushbutton.

The panels are provided along with the relative support, plate and flush-mounting box already assembled.

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TM/TS BELL TRANSFORMERS

The strict design criteria and the quality of materials used guarantee a high reliability of these devices. Windings are completely separated and insulated, so that the transfer of dangerous voltages on the secondary is prevented even in the case of operation faults

Voltage values on the secondary with a rated load (according to IEC-EN 61558-2-8 Standard) can deviate by 15% from the rated value.

These safety transformers are available in 4 series.

- Failure-proof (TM series)

Following a possible anomalous use they do not operate any more, but they do not pose any danger for the user or for adjacent electric parts: the series includes 8 models with 10, 15, 30 and 40 VA power and 4, 8, 12 and 24 V output voltages.

- Short-circuit proof not by construction (TS8 series)

Even after a short-circuit they maintain the temperature below the specified limits and can operate; TS8 series includes 3 models with 8 VA power and output voltage of 8, 12, 24 V.

- Short-circuit proof not by construction (TS8/SW series)

Unlike the previous version this is equipped with an ON-OFF pushbutton on the frontal part that allows the insertion or the disinsertion of the transformer in the line; TS8/SW series includes 4 models with 8 VA power and output voltages of 4, 6, 8 and 12 V.

- Short-circuit proof not by construction (TS16/TS24 series)

Even after a short-circuit they maintain a temperature below the specified limits. Moreover they are equipped with a thermal cutoff device with automatic closing that automatically restores the current when the relevant transformer part is cold enough or when the load has been removed; TS16/TS24 series includes 7 models with power of 16 and 24 VA and output voltages of 4, 6, 8, 12 and 24 V.

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Application sheets

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MRDCs

E 259 installation relays **11**/4
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DTS digital time switches **11**/7
DTS-TWS twilight switches with built-in time switches **11**/8
RAL overload alarms **11**/10
LSS1/2 load shedding switches **11**/11
SQZ3 phase and sequemce relays **11**/12

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Examples of applications

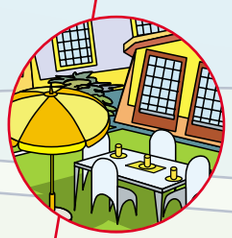
Residential buildings

Public buildings

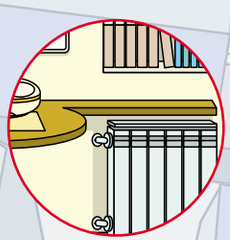
Commercial buildings

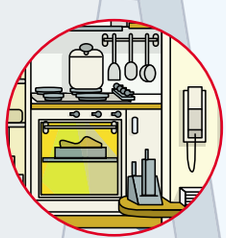
Industry

Handicraft

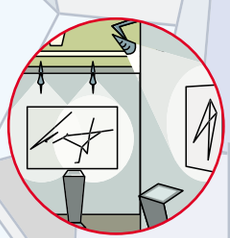








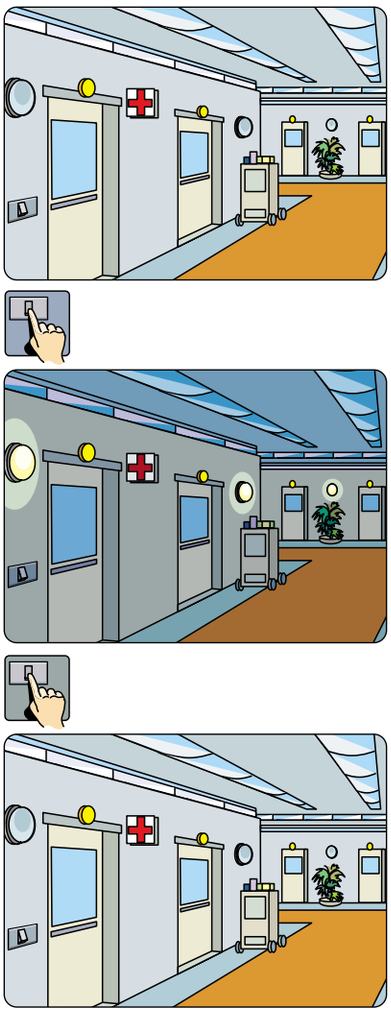






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Operating principle

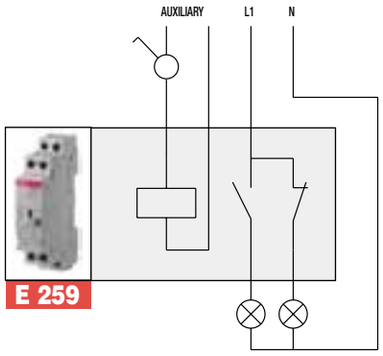
The E 259 installation relays, suitable for residential and commercial applications, are available in three versions: with NO contact, with NO and NC contacts, and with two NO contacts.

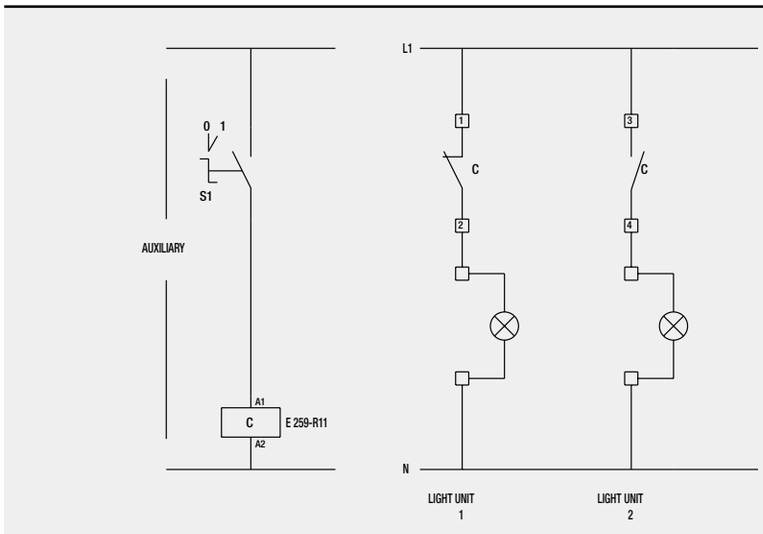
Application environments

The E 259 installation relays are particularly indicated in any environment and situation where it is necessary to control considerable power loads (i.e. lighting systems).

Example of installation

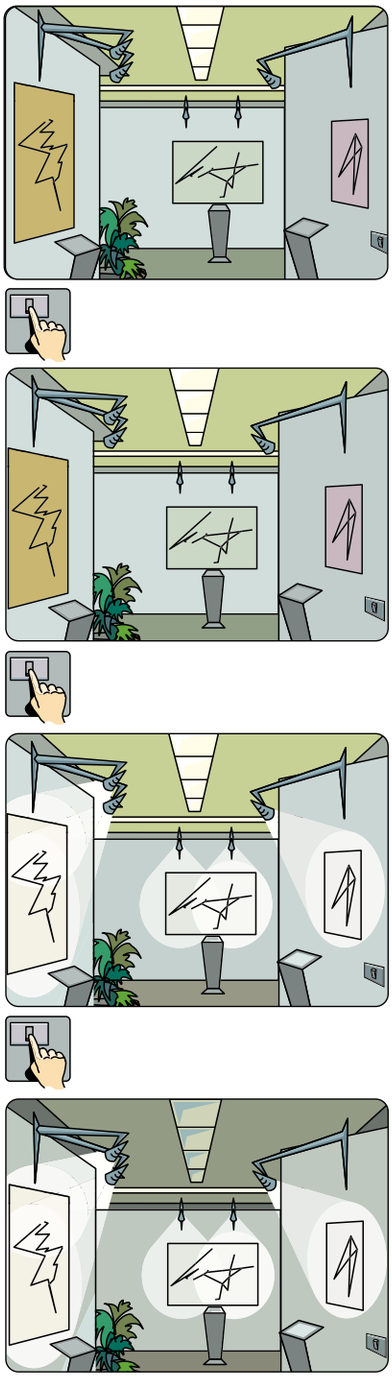
As shown in the diagrams, one of the possible applications is to mount the E 259 R11 installation relay with a NO and a NC contact inside the electric system of a hospital ward. The first control sent through pushbutton to the lighting circuit will switch off the ceiling lights and switch on the corridor lamps, while the second impulse returns to the previous state.





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Operating principle

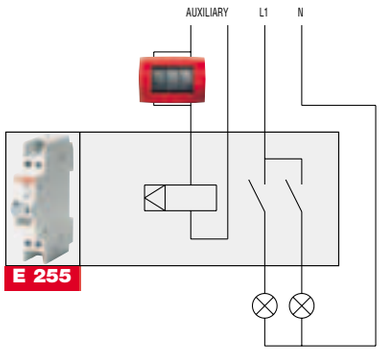
The two contacts of the E 255 latching relays switch the position (open/closed) at each impulse according to a sequence programmed by the control pushbutton circuit.

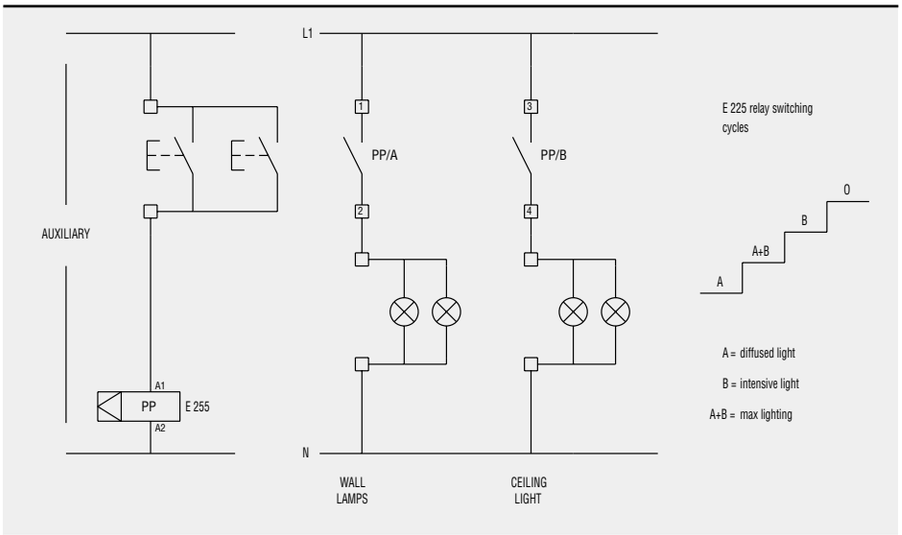
Application environments

The E 255 latching relays are particularly
indicated in environments and situations requiring the load sequential control through a single pushbutton circuit (offices, restaurants, etc.)

Example of installation

As shown in the diagrams, one of the possible applications is to mount the E 255 latching relays inside the lighting system of an art gallery. The first pushbutton impulse will switch on the ceiling lights, the second triggers the wall lamps, the third switches off the ceiling lights and the fourth switches off the wall lamps.



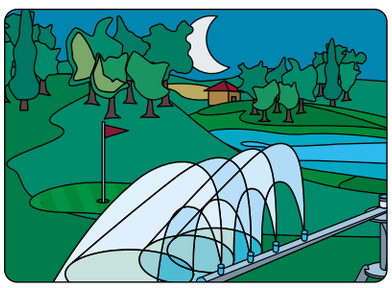


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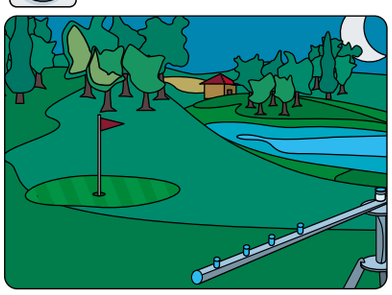
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Operating principle

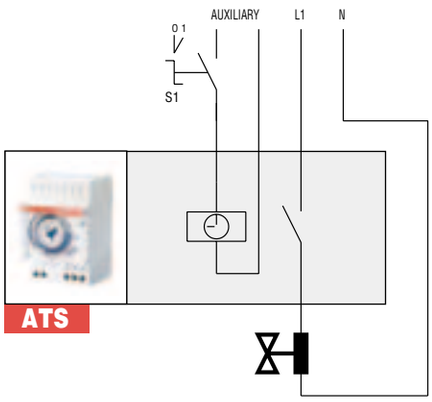
The ATS electro-mechanical time switches enable to control the circuit opening/closing according to a daily or weekly program or to manually set permanent ON/OFF operation.

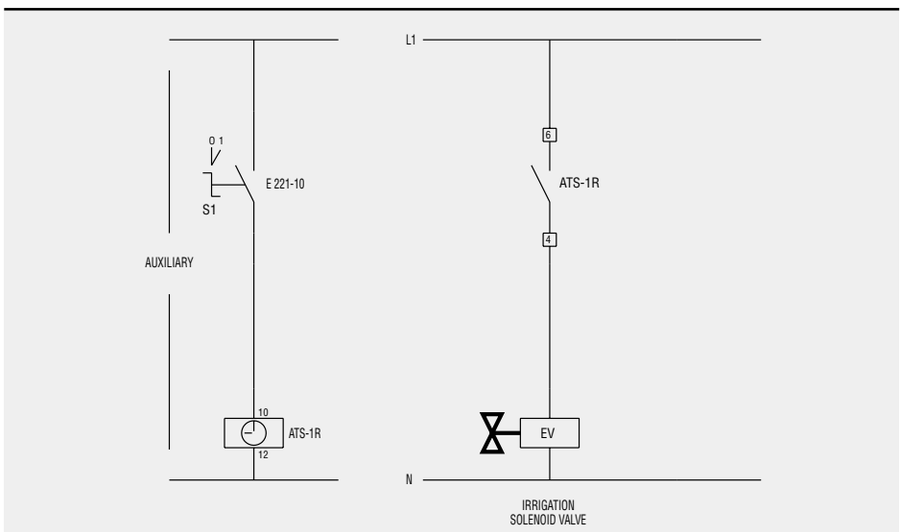
Application environments

The ATS electro-mechanical time switches are particularly indicated in any environment and situation where it is necessary to program system load operation according to a daily or weekly frequency (shop lighting system, public buildings, heating systems, irrigation systems, etc.).

Example of installation

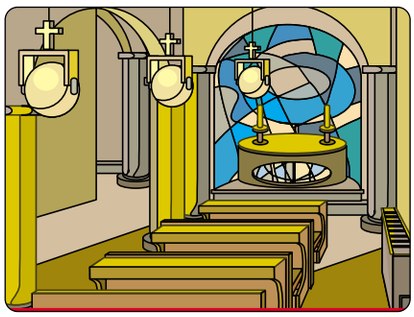
As shown in the diagrams, one of the possible applications is to mount the ATS electro-mechanical time switches inside the power supply circuit of a golf field. In this case the device programming enables the daily activation of the irrigation system at a preset time.

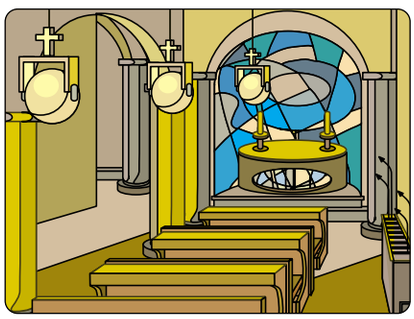


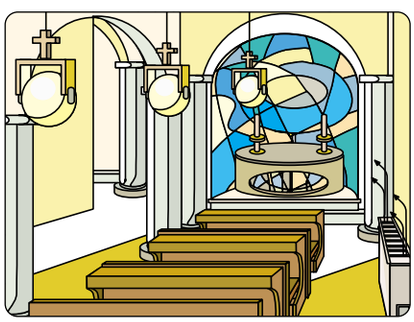


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Operating principle

The DTS two-channel digital time switches enable to open and close circuits according to a daily or weekly program, controlling single loads or group of loads even when they require different time controls with a common time reference.

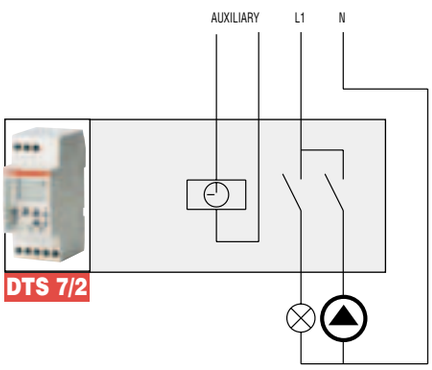
In this example, the digital time switch DTS 7/2 allows the operation of heating as well as lighting systems of a church when services are performed; while when no service is performed the device only controls the heating system.

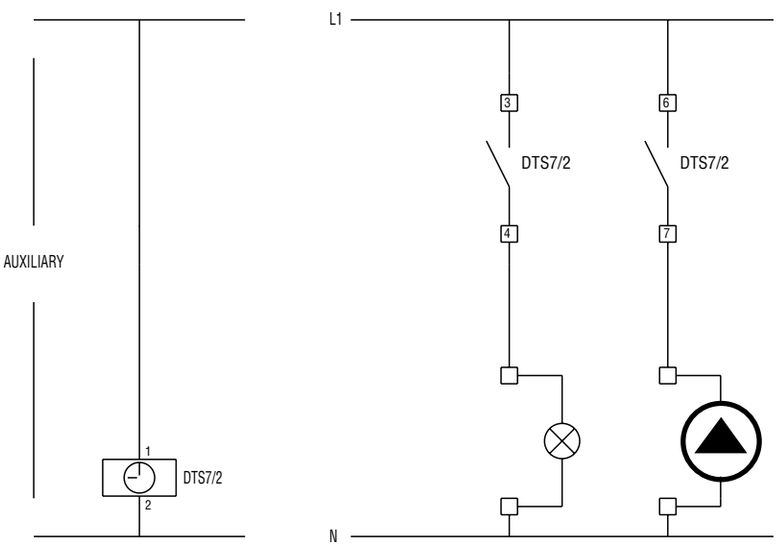
Application environments

The DTS 7/2 two-channel digital time switches are particularly indicated in environments and situations requiring the management of multiple loads according to a time program flexible enough to include or exclude their application based on the day of the week (offices, schools, public areas, etc.).

Example of installation

As shown in the diagrams, one of the possible applications is to mount the DTS 7/2 two-channel digital time switch inside the power supply circuit of a church, where in the days when no service is performed only the heating system is activated (programmed on one of the two channels) at a preset time, while on Sundays and when services are performed the lighting system is also switched on (through a program on the second channel). According to the controlled system power, the activation is performed by an ESB contactor.



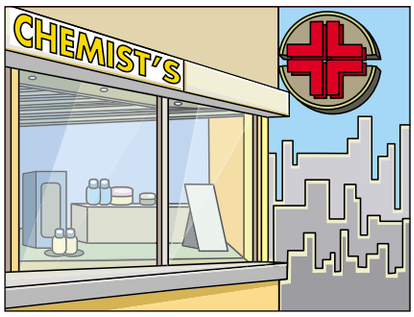


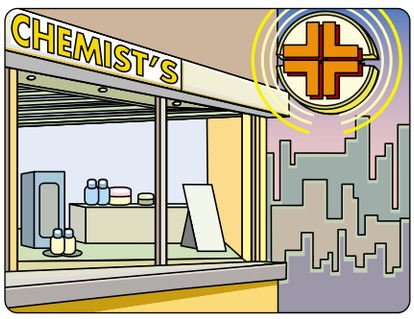
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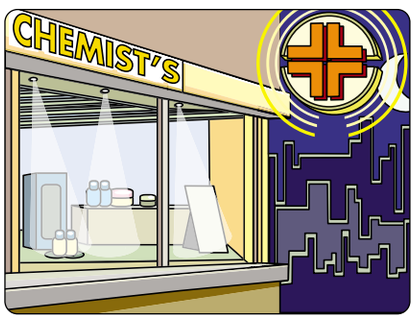
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DTS 7/2-TWS twilight switches with built-in time switches







Operating principle

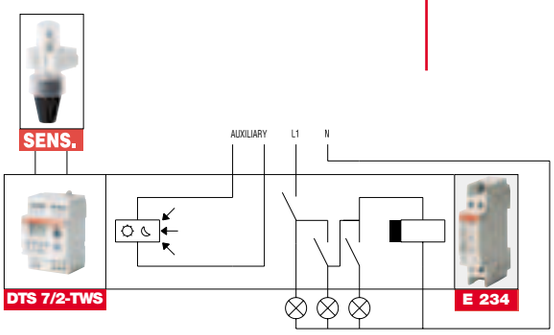
The diagram shows the installation of the DTS 7/2-TWS twilight switches with built-in time switches in the lighting system of a chemist's. When the external light decreases below a certain level (i.e. shop opening during evening hours), the device controls the lighting of windows and sign. When the chemist's is opened during the night, the switch-on of all lights is set through time programming

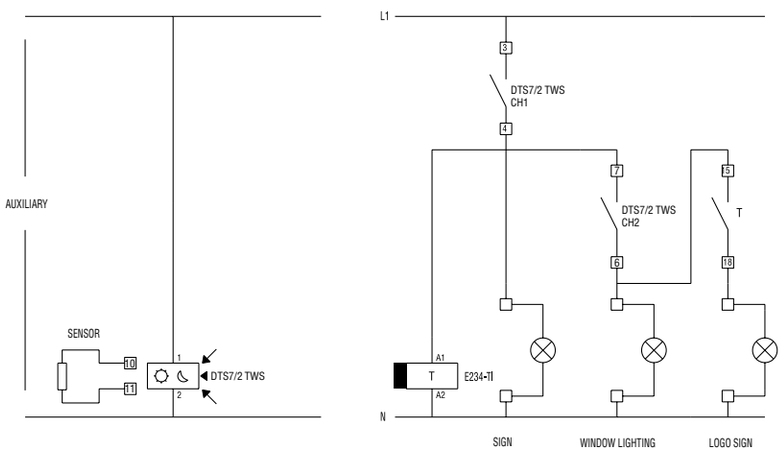
Application environments

The installation of DTS 7/2-TWS twilight switches with built-in time switches is suitable for any environment and situation needing the rationalization of power consumption (shops, offices and public passage areas, parking, parks, etc.).

Example of installation

As shown in the diagrams, one of the possible applications is the installation of the DTS 7/2-TWS twilight switches with built-in time switches in the lighting system of a chemist's. When the external light decreases below a certain level (i.e. shop opening during evening hours), the twilight switch controls the lighting of windows, sign and cross sign. The last one can have an intermittent switch-on/off because of E 234 TI time delay relay installation. When the chemist's is opened during the night, the switch-on of all lights (using the twilight switch) is set through date and time programming using time switch. When the chemist's is closed, the time switch programming switches off the windows and cross sign lights independently from twilight switch (sign ON).

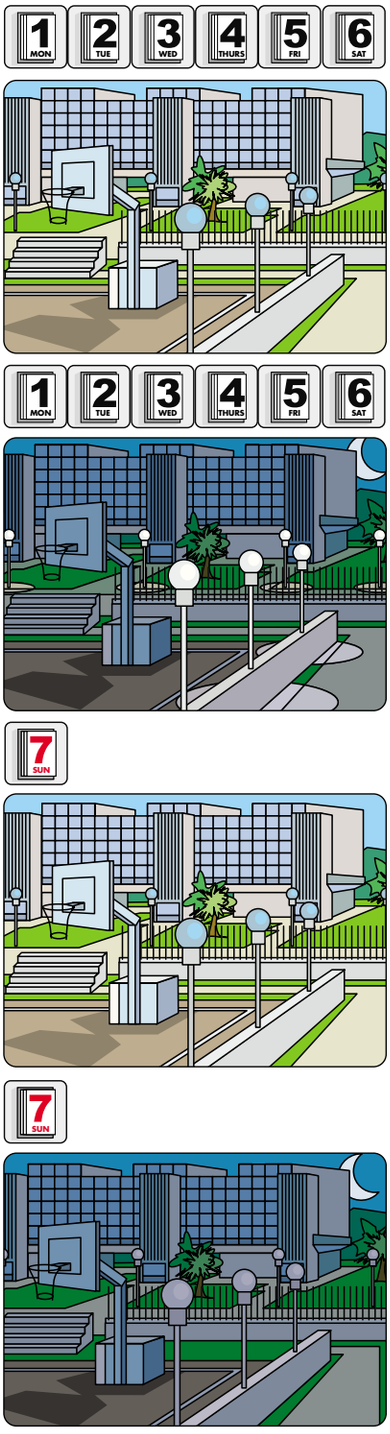




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DTS 7/1-TWS twilight switches with built-in time switches



Operating principle

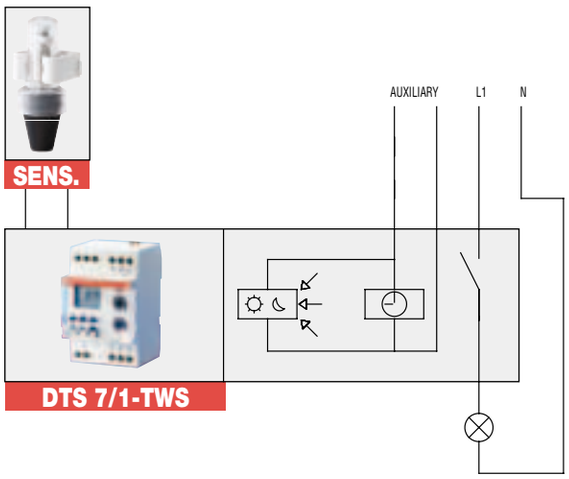
DTS 7/1-TWS twilight switches with built-in time switches enable to control lighting system switch-on according to ambient lighting level and to specific time programming (daily or weekly).

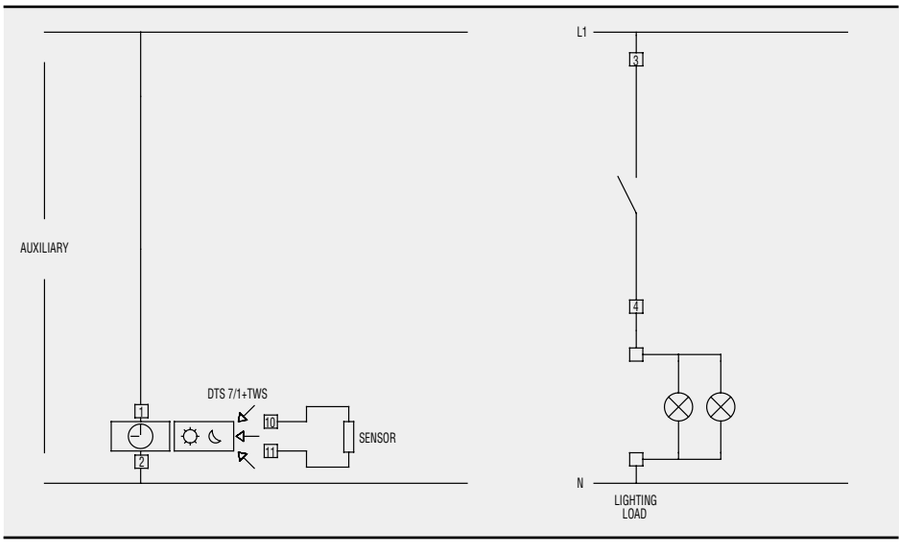
Application environments

The installation of DTS 7/1-TWS twilight switches with built-in time switches is suitable for any environment and situation needing the rationalization of power consumption (shops, offices and public passage areas, parking, parks, etc.).

Example of installation

As shown in the diagrams, one of the possible applications is the installation of the DTS 7/1-TWS twilight switches with built-in time switches in an office district system.
The external light switch-on depends on ambient lighting level during working days; otherwise, no lighting element control is programmed during non-working days.

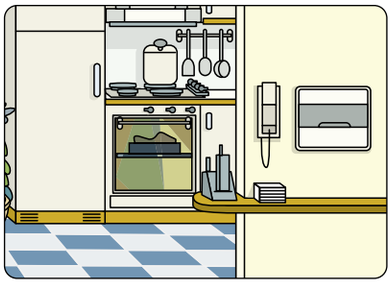




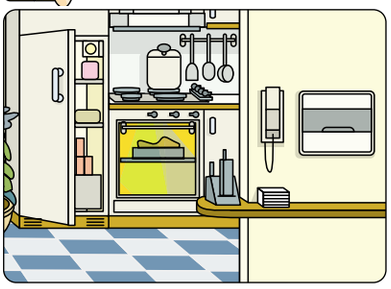
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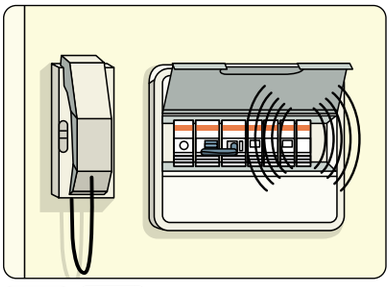






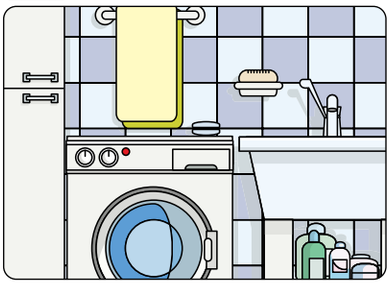












Operating principle

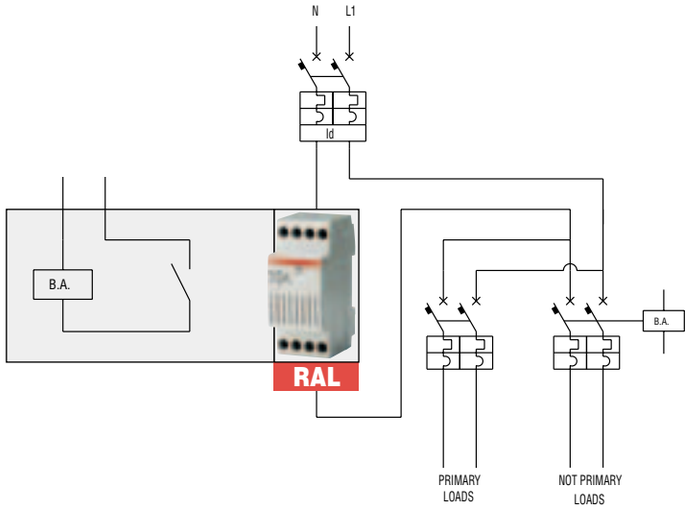
The RAL overload alarms constantly compare the maximum preset power consumption value to effective system power consumption.
Approaching allowed threshold, they signal to disconnect one of the loads through acoustic alarm avoiding the main circuit breaker tripping.
Connecting the S 9-T415 undervoltage release to the appropriate contact, the RAL overload alarms provide an acoustic alarm and simultaneously opens the circuit-breaker protecting one or more not primary loads.

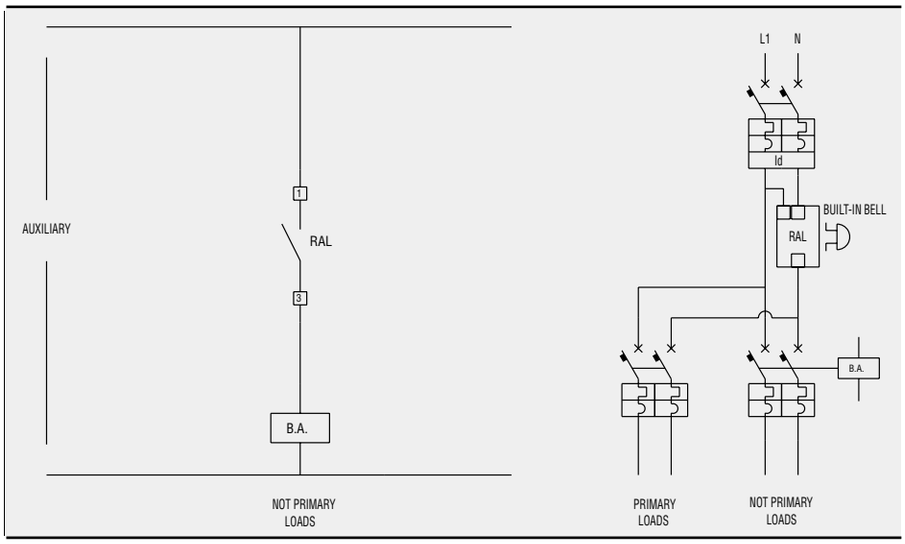
Application environments

The installation of the RAL overload alarms is suitable for any environment and situation in order to avoid power consumption which could trip the limiting circuit breaker of the system.

Example of installation

As shown in the diagrams, one of the possible applications is the installation of the RAL overload alarms in the domestic system where
the electric oven and washing machine are simultaneously switched on increasing the power consumption. When the power consumption approaches the preset threshold values, an acoustic alarm is activated and the washing machine switches off automatically through an undervoltage release.



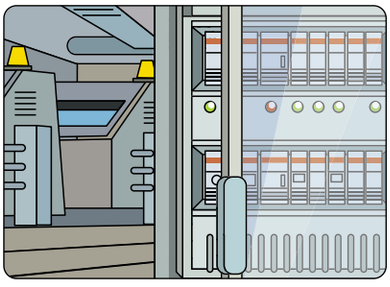


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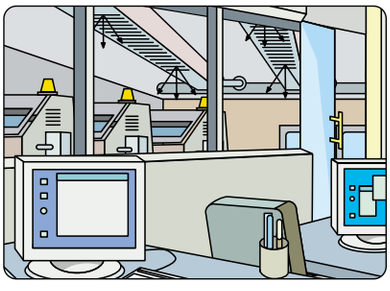
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Operating principle

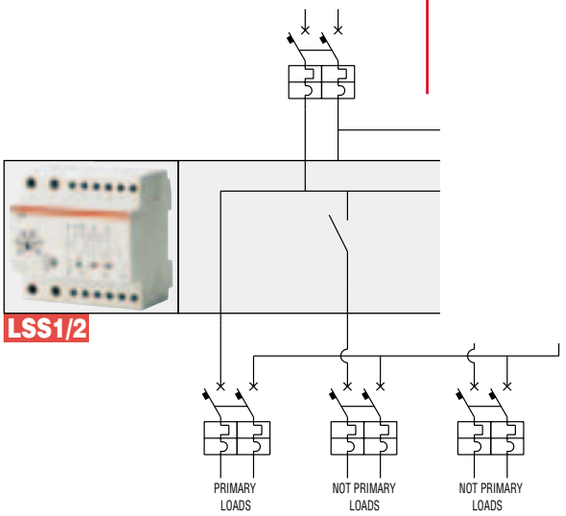
LSS1/2 load shedding switches are used in case of exceeding of consumption threshold allowed in the system by switching off in sequence one or two loads, if necessary. At preset intervals and until current consumption is not below the reference level, the switch tries to reset the disconnected loads.

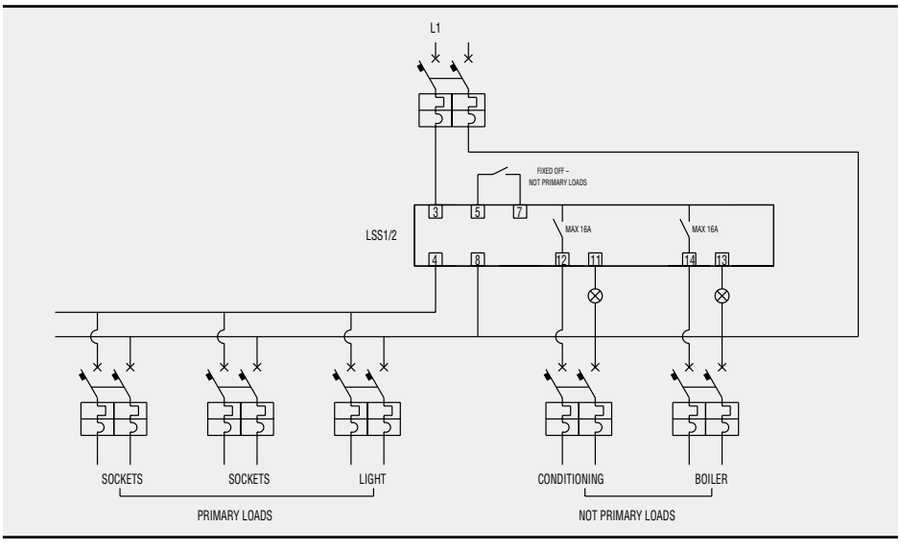
Application environments

The installation of the LSS1/2 load shedding switches is suitable for any environment and situation where it is necessary to control electric energy consumption within consumption limits allowed in the system.

Example of installation

As shown in the diagrams, one of the possible applications is the installation of the LSS1/2 load shedding switches in a printing office system, where the conditioning switch-on causes the exceeding of the energy consumption threshold defined with the supplying company by contract. The LSS1/2 load shedding switch preserves printing machines operation by switching off one or two primary loads automatically (i.e. night conditioning and lighting), where ON red leds indicate temporary OFF. After a preset interval, the switch checks that current consumption values fall within the limits again trying to reset the previously disconnected loads.

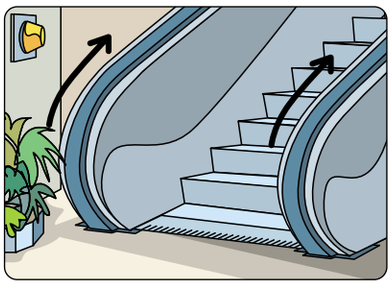


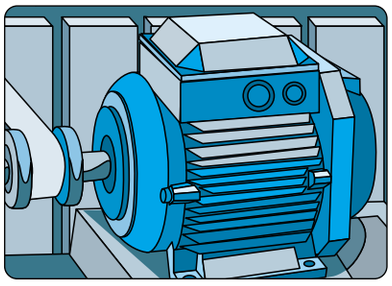


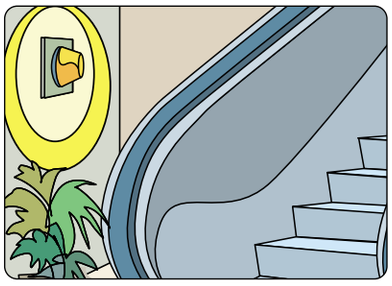
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Operating principle

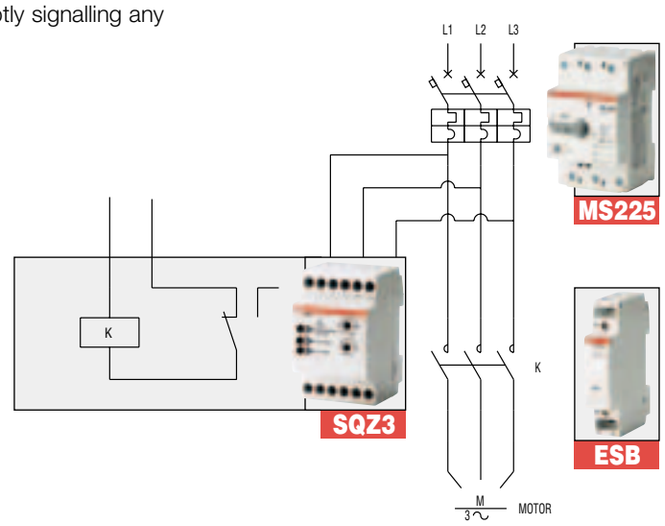
Through an output relay with contact in safety switching, the SQZ3 phase and sequence presence devices for 400 V a.c. three-phase networks enable the phase and sequence presence management monitoring also the minimum voltage (adjustable up to 70% of Vn). In case of any defect, the device operates within a range from 2 to 20 seconds, with the opportunity to control the appropriate acoustic signals, motor controlling contactors or circuit breakers.

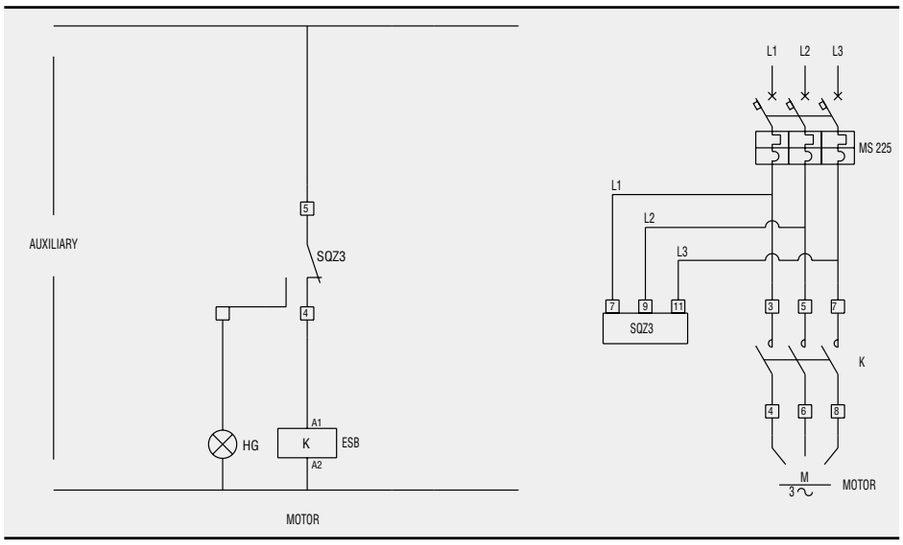
Application environments

The installation of the SQZ3 phase and sequence presence relays are particularly suitable for any environment and situation where it is necessary to control the three-phase network operation promptly signalling any defect.

Example of installation

As shown in the diagrams, one of the possible applications is the installation of the SQZ3 phase and sequence presence relays in a department store, where the escalator supply circuit has a phase variation determining the SQZ3 relay intervention on the ESB contactor and causing the motor block and the alarm lighting indication.





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Insulation monitors **12**/39
EE MINI METER electronic single phase energy meters **12**/40
ODIN METERS electronic three-phase energy meters **12**/40
DELTA METER electronic three-phase energy meters **12**/40

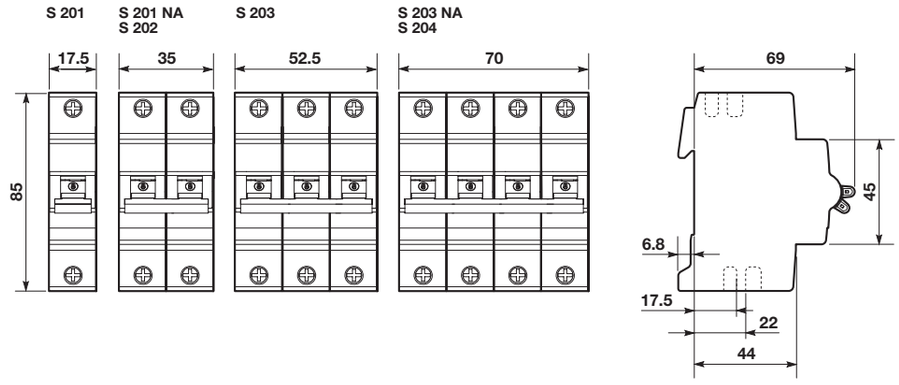
Other modular devices
TM/TS bell transformers **12**/41
Bells and buzzers **12**/41
Modular sockets **12**/41
M9100 modular housing for CBK pushbuttons **12**/42
NT/S power supply units **12**/42

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Overall dimensions
S 200 and S 200 H

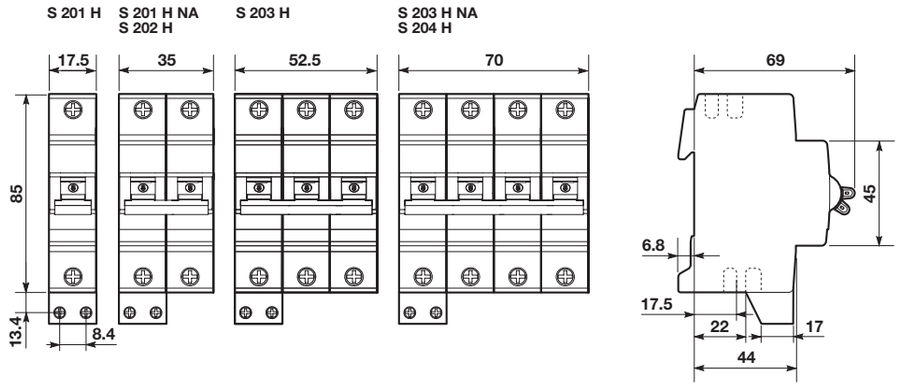


S 200





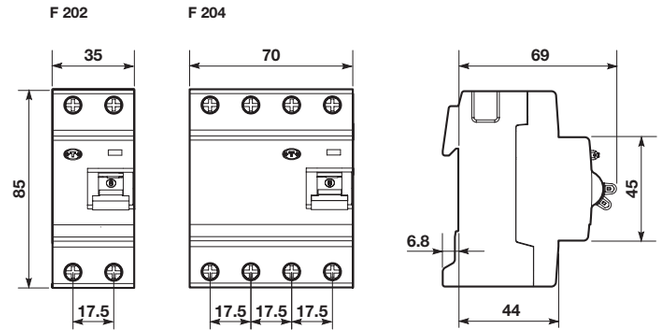
S 200 H



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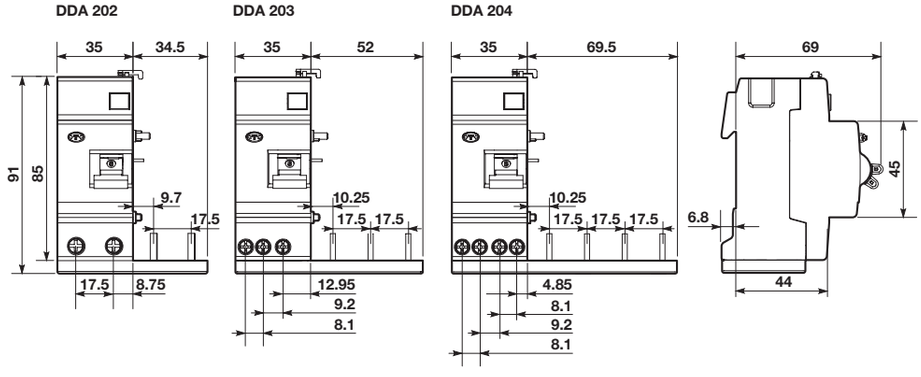
F 200



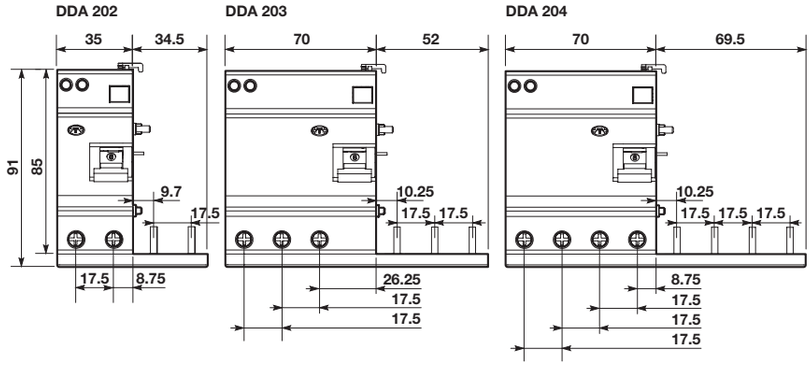


DDA 200

In=25-40 A



In=63 A

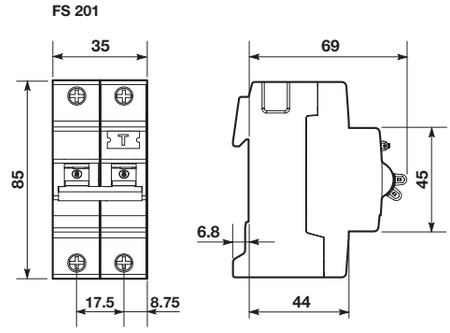


12

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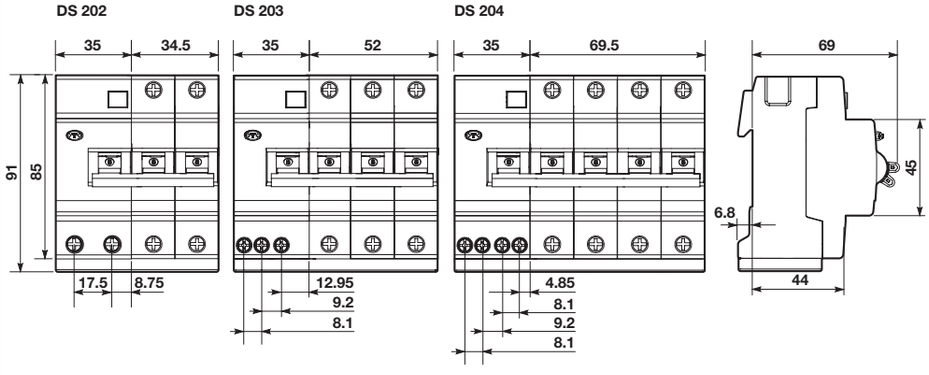
FS 201



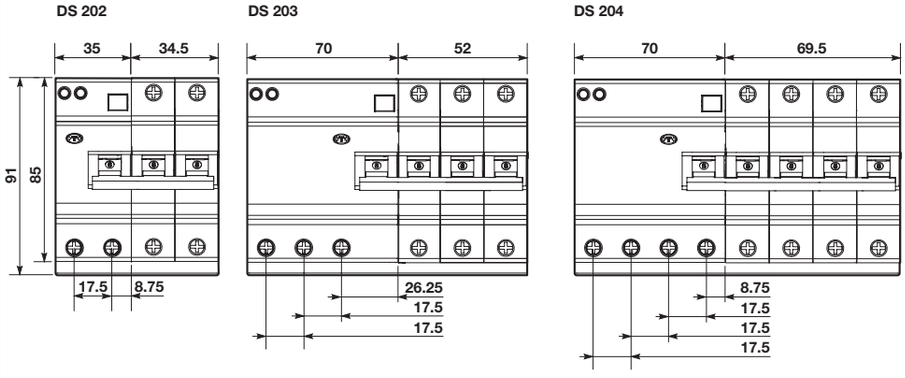


DS 200

In up to 40 A



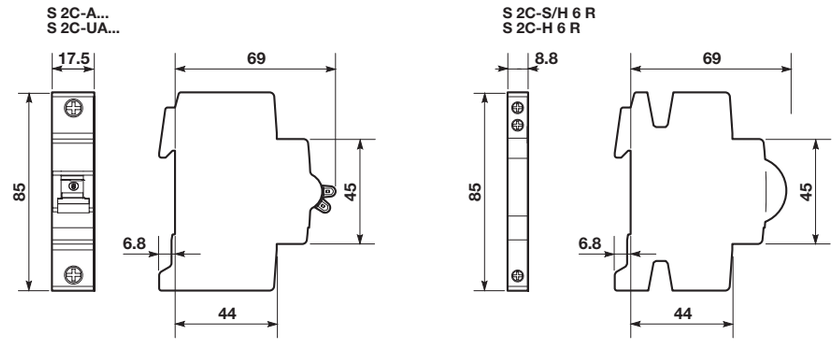
In=50-63 A



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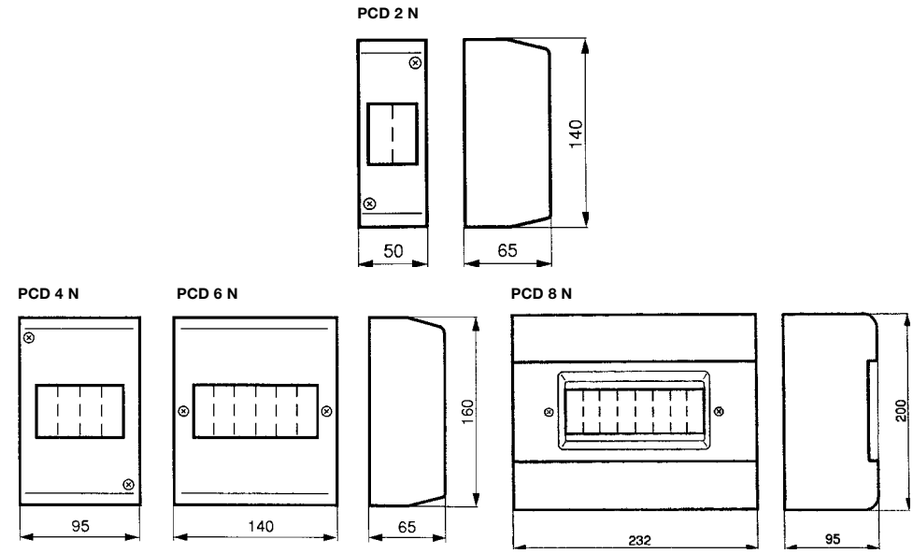


Auxiliary elements

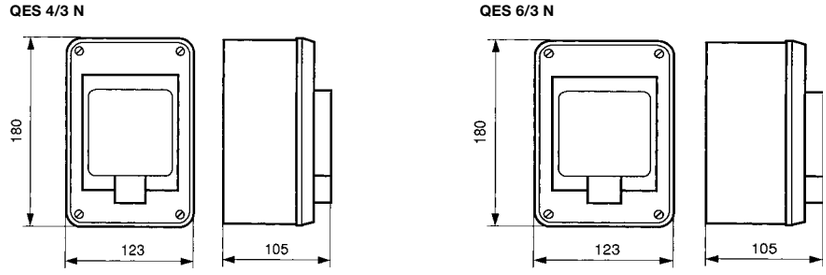




Terminal covers



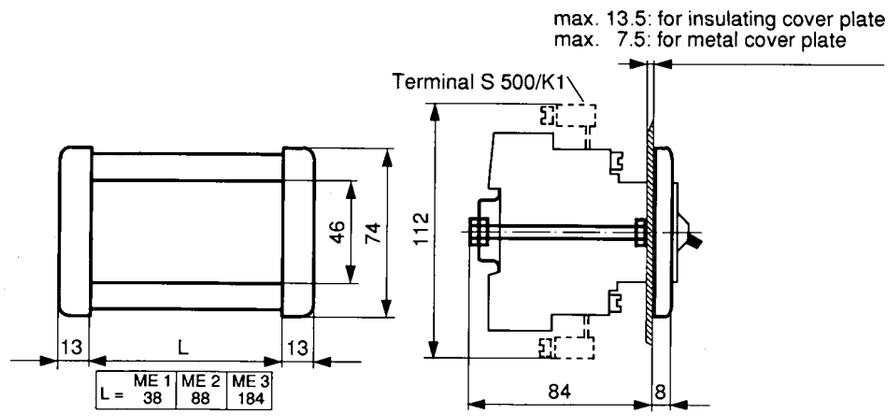
Enclosures of moulded-plastic



12

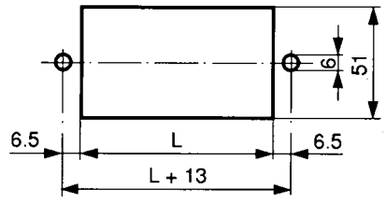
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Flush frame



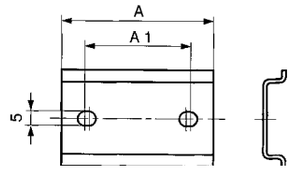
Type	Dim. L	Max. No. of modules (1 module=17.5 mm)
S 500 - ME 1	38 mm	for 2 module
S 500 - ME 2	88 mm	for 5 module
S 500 - ME 3	184 mm	for 10 module

Drill holes



Mounting rails

① In the case of DSW 1, the drill holes are vertical



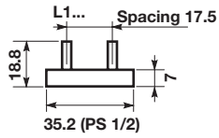
Name	A	A1
DSW	17.5	15
DSW 2	35	20
DSW 3	52.5	37.5
DSW 4	70	55
DSW 6	105	90

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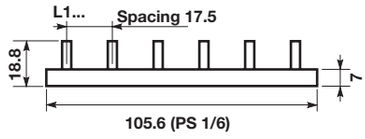


Busbars

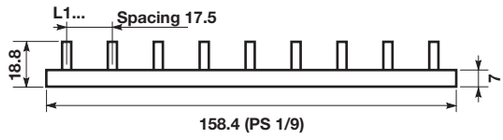
PS 1/2



PS 1/6



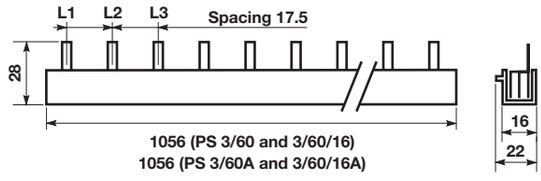
PS 1/9



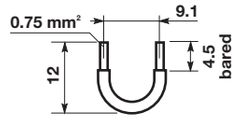
PS 1/12



PS 3/60



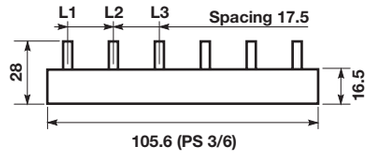
Auxiliary contact bridge HKB



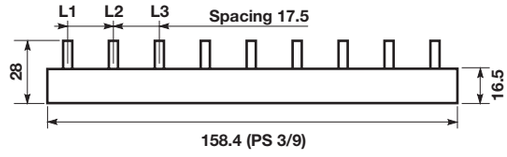
12

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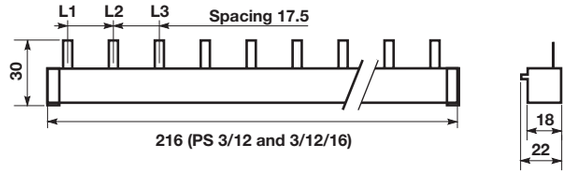
PS 3/6



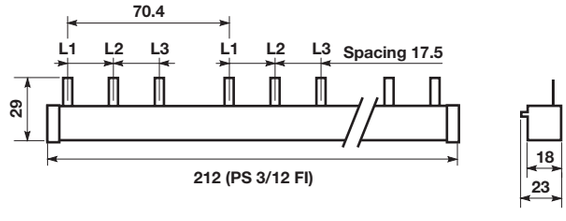
PS 3/9



PS 3/12

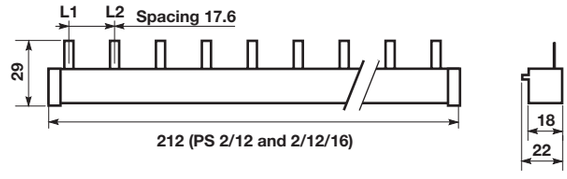


PS 3/12 FI

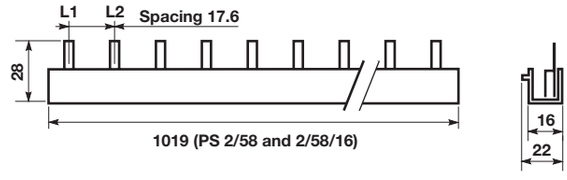


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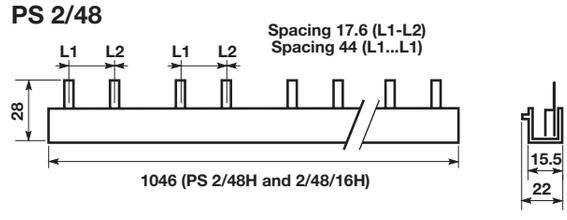
PS 2/12



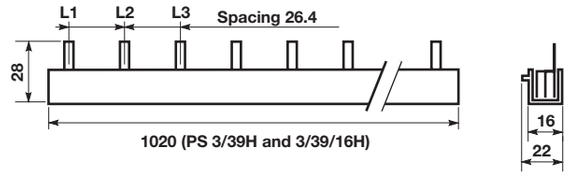
PS 2/58



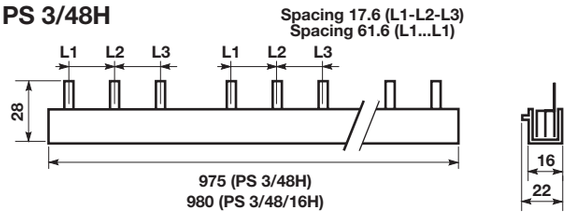
PS 2/48



PS 3/39H

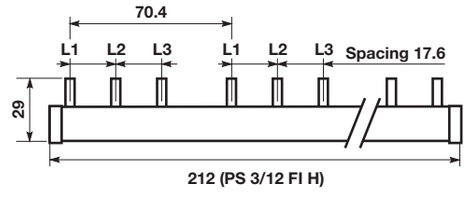


PS 3/48H

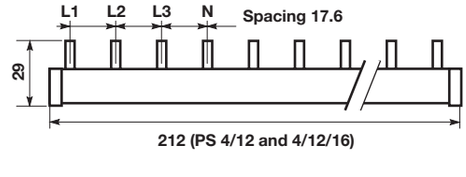


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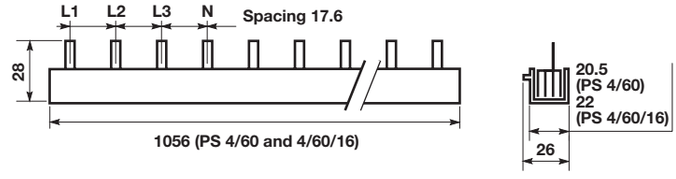
PS 3/12 FI H



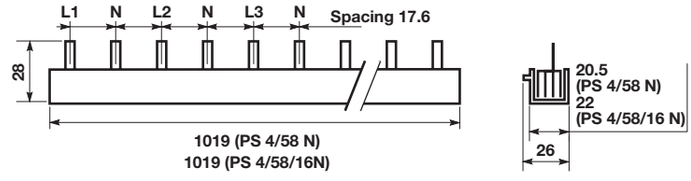
PS 4/12



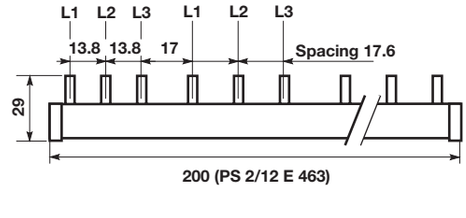
PS 4/60



PS 4/58 N



PS 3/12 E 463



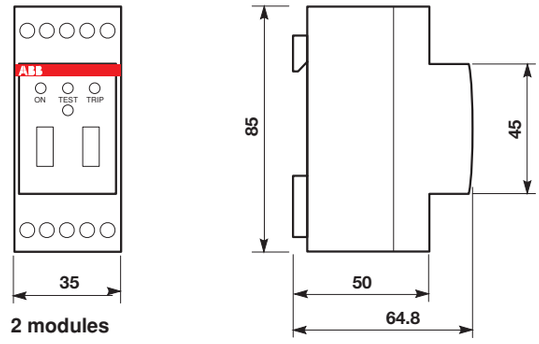
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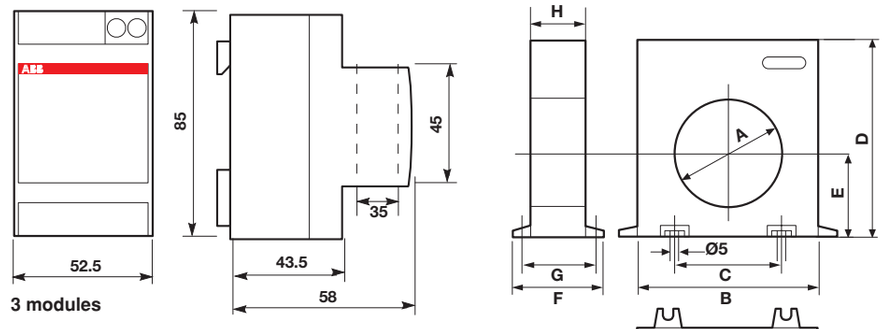


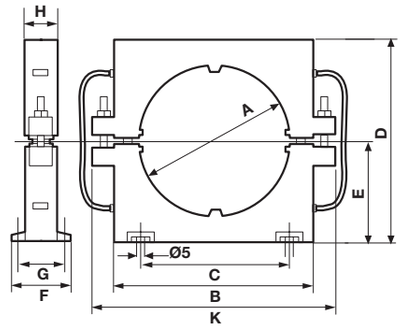


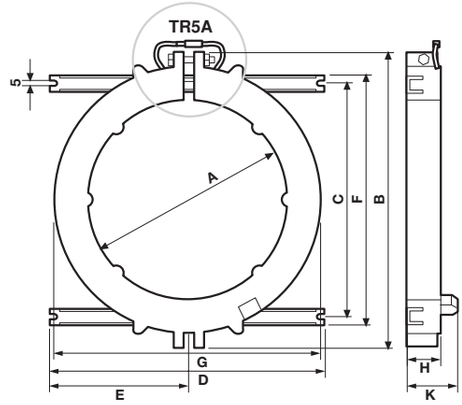


RD2 residual current monitors and toroidal transformers



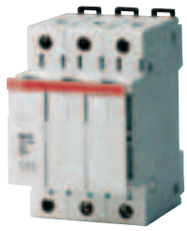




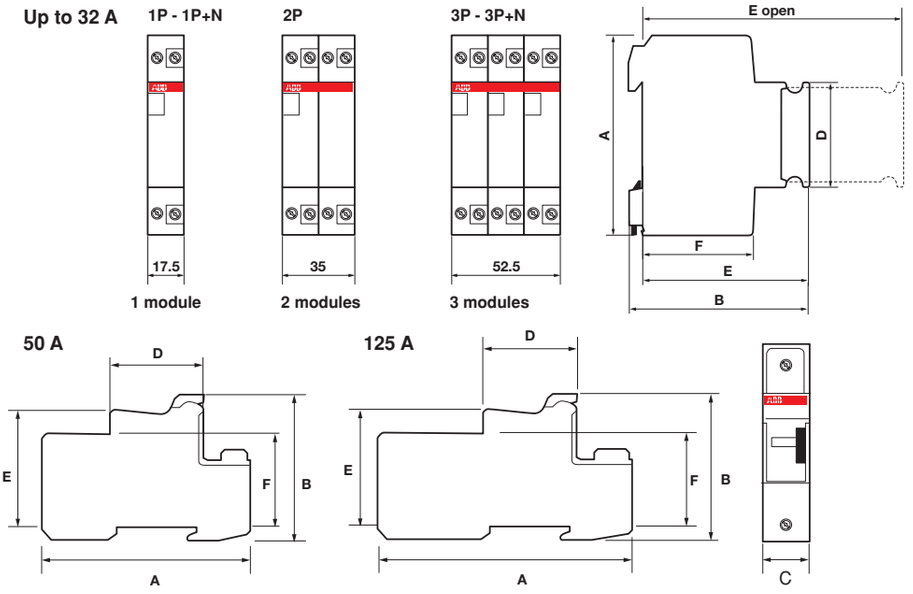


Type	Dimensions (mm)								
	A	B	C	D	E	F	G	H	K
TR1	35	100	60	110	47	50	43	30	–
TR2	60	100	60	110	47	50	43	30	–
TR3	80	150	110	160	70	50	43	30	–
TR4	110	150	110	160	70	50	43	30	–
TR4A	110	145	110	150	75	45	38	25	180
TR160	160	220	156	236	110	64	50	34	–
TR160A	160	220	156	236	110	64	50	34	–
TR5	210	310	240	290	145	260	280	36	55
TR5A	210	310	240	290	145	260	280	36	55

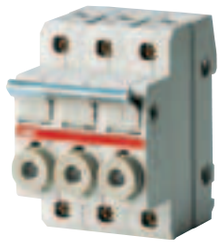
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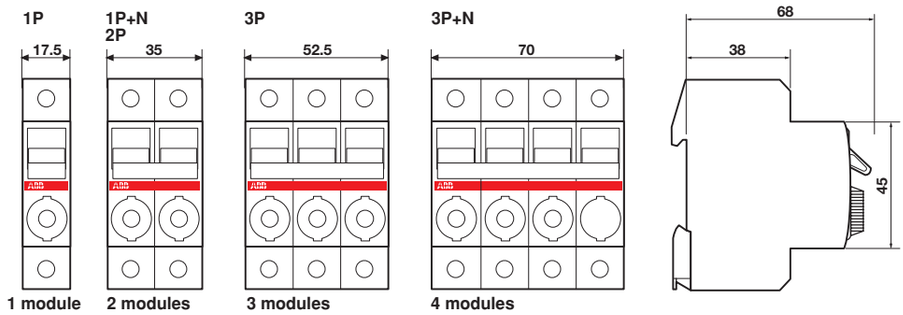
E 930 fuse holders



Type	No. poles	Dimensions of fuse	A	B/B open	C	D	E/E open	F
E 931/20-32	1	8.5x31.5 (32 A: 10.3x38)	83	72/117	17.5	45	66/111	44
E 931N/20-32	1+N	8.5x31.5 (32 A: 10.3x38)	83	72/117	17.5	45	66/111	44
E 932/20-32	2	8.5x31.5 (32 A: 10.3x38)	83	72/117	35	45	66/111	44
E 933/20-32	3	8.5x31.5 (32 A: 10.3x38)	83	72/117	52.5	45	66/111	44
E 933N/20-32	3+N	8.5x31.5 (32 A: 10.3x38)	83	72/117	52.5	45	66/111	44
E 931/50	1	14x51	107	76.5/101.5	26.5	45	60	50
E 931N/50	1+N	14x51	107	76.5/101.5	53	45	60	50
E 932/50	2	14x51	107	76.5/101.5	53	45	60	50
E 933/50	3	14x51	107	76.5/101.5	79.5	45	60	50
E 933N/50	3+N	14x51	107	76.5/101.5	106	45	60	50
E 931/125	1	22x58	126.5	76.5/103.5	35	45	60	50
E 931N/125	1+N	22x58	126.5	76.5/103.5	70	45	60	50
E 932/125	2	22x58	126.5	76.5/103.5	70	45	60	50
E 933/125	3	22x58	126.5	76.5/103.5	105	45	60	50
E 933N/125	3+N	22x58	126.5	76.5/103.5	140	45	60	50



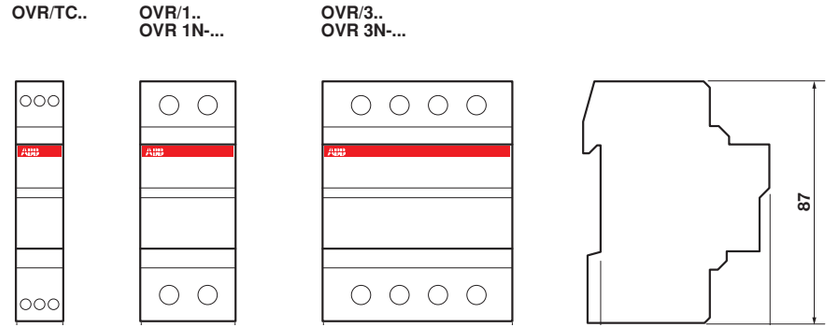
M2160 - M2060 fuse switches



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OVR surge protection devices

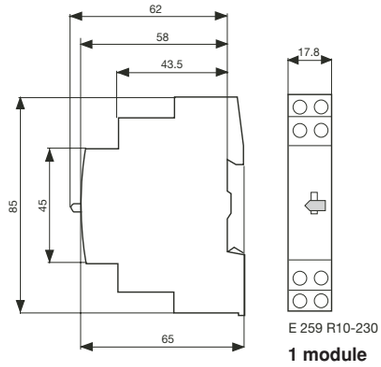


12

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E 259 installation relays



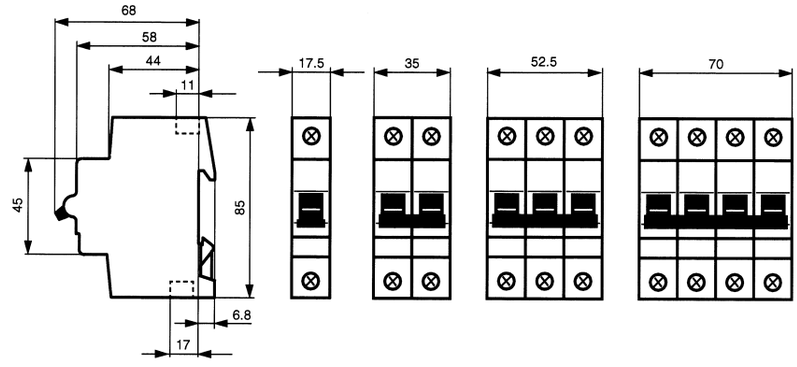


E 259 R10-230

1 module

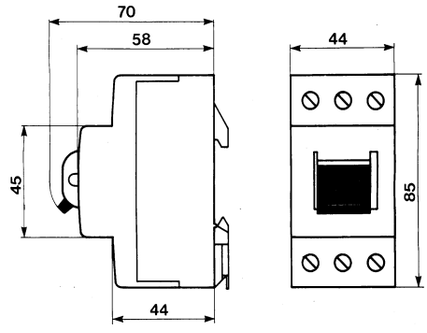
E 200i switches





E 463/3-KB, E 480/-KB, E 463/3-SL switches

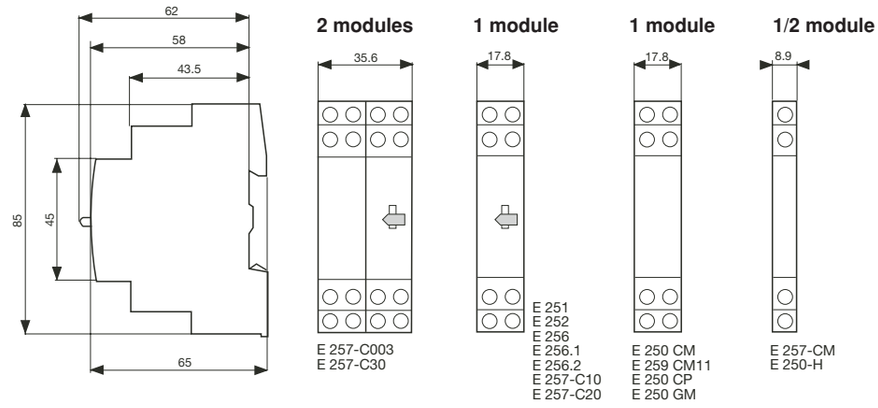




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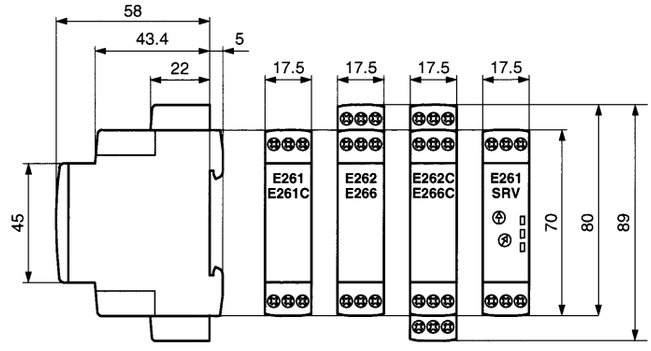


E 250 latching relays



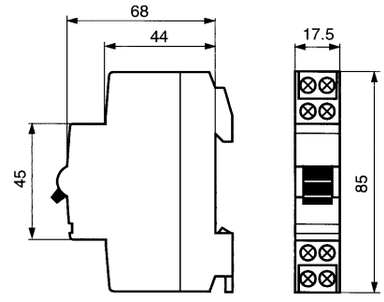


E 260 latching relays





E 220 switches

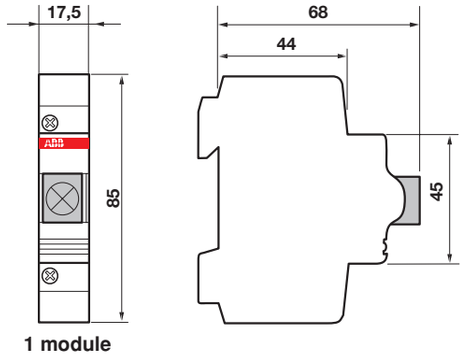


12

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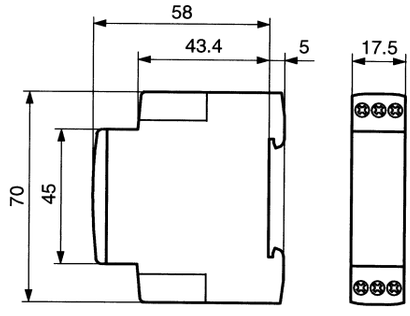
E 220 pushbuttons and indicator lamps





E 234 time delay relays

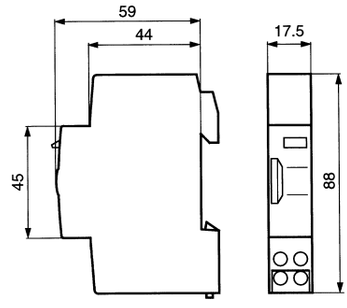




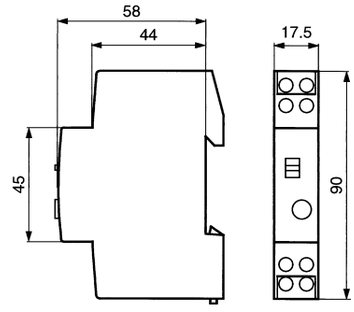
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E 232 staircase lighting time delay relays



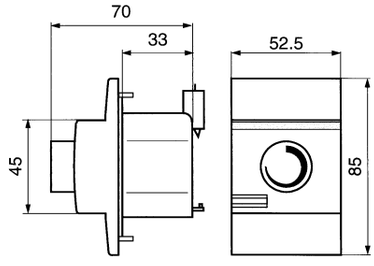
E 232-230



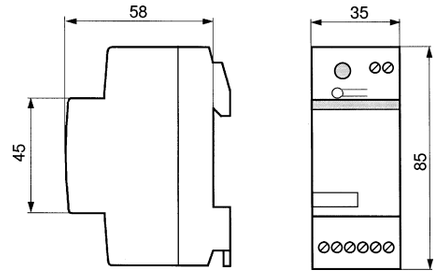
E 232 E
E 232 HLM



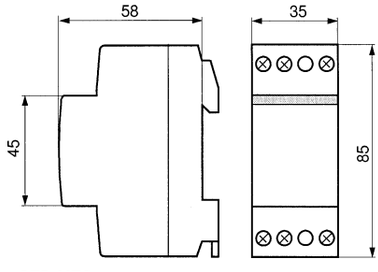
STD dimmers



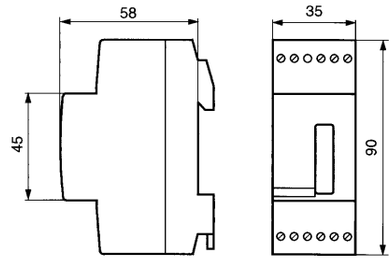
STD 50
STD-EP



STD-500 MA



STD-MTS



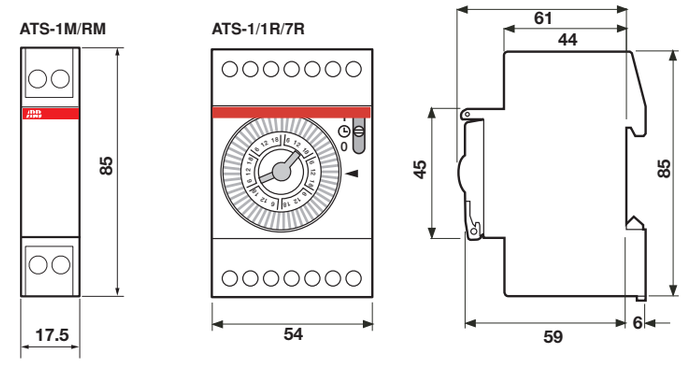
STD-SBS

12

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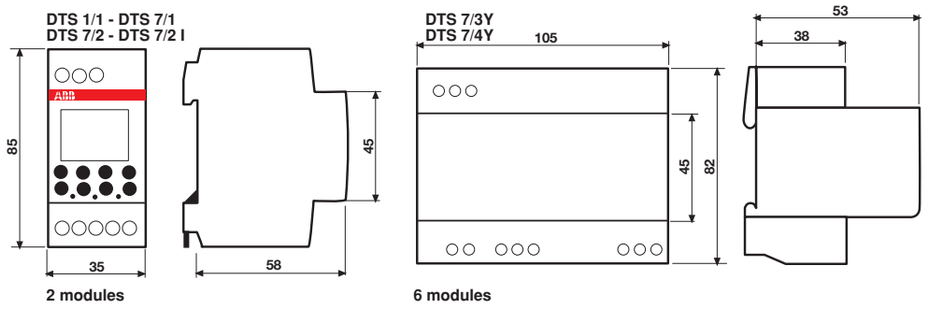


ATS electro-mechanical time switches





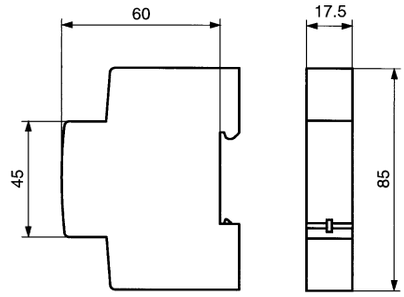
DTS digital time switches



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E 450 priority switches

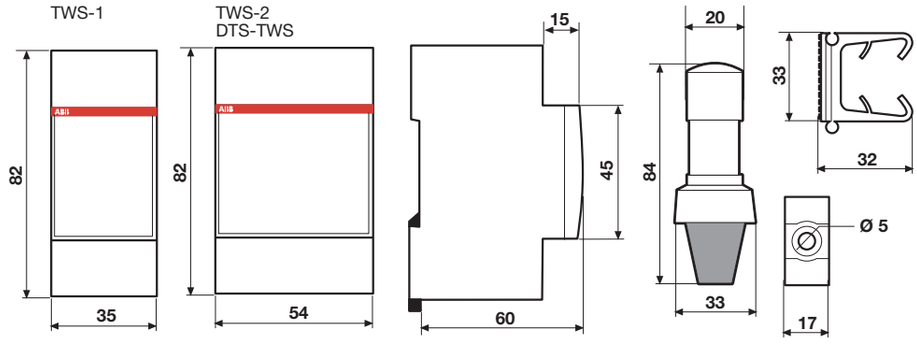




E 451 ...
E 452 ...

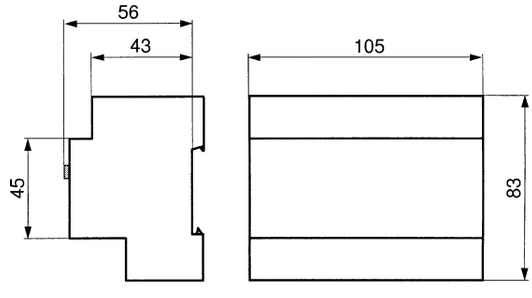
TWS twilight switches





STL light level switches





STL-101
STL-103

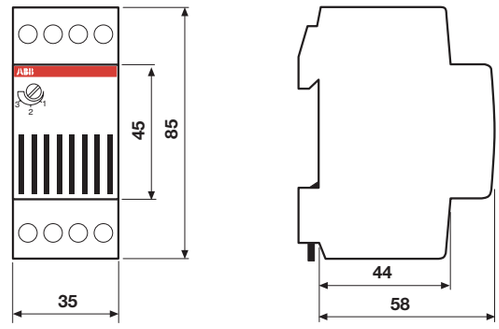
SK 0134 Z 97

12

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RAL overload alarms

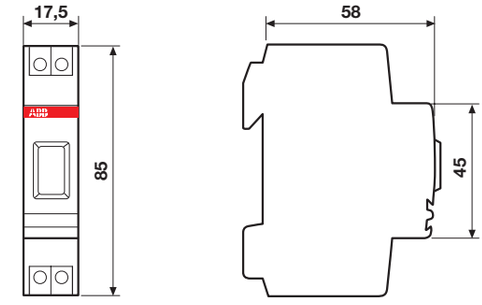




2 modules

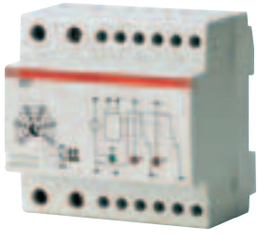
E 228 WM alarm indicators

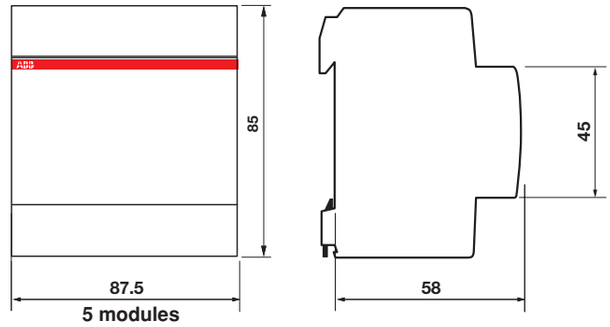




1 modulo

LSS1/2 load shedding switches



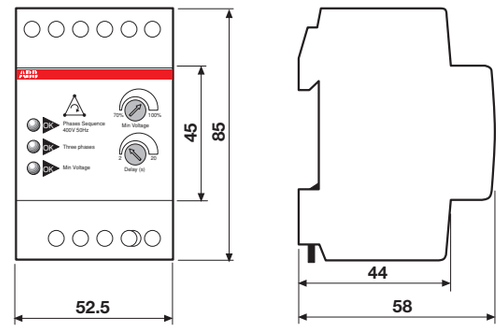


5 modules

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SQZ3 phase and sequence relays

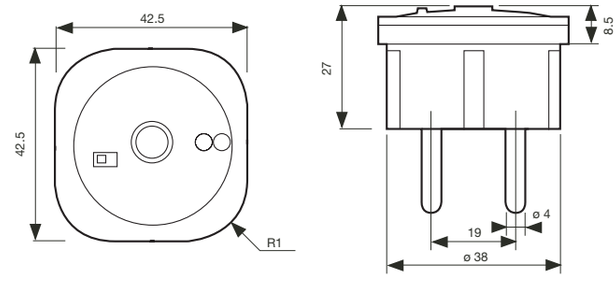




3 modules

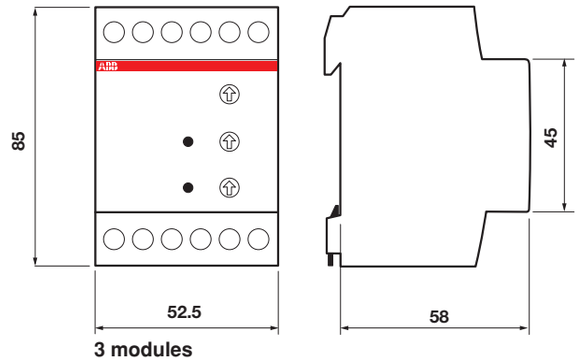
LEE 230 power failure signalling lamp





Max./min. current/voltage ammetric and voltmetric relays





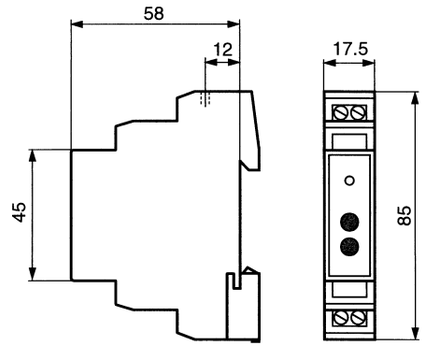
3 modules

12

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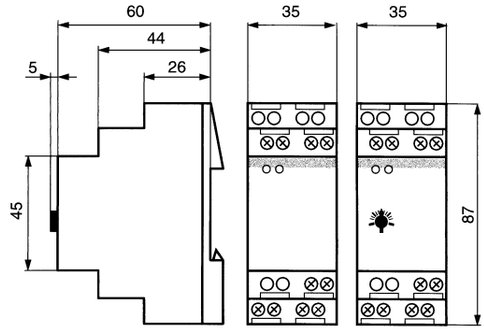
E 235 mains disconnection relays





E 236 undervoltage monitoring relays

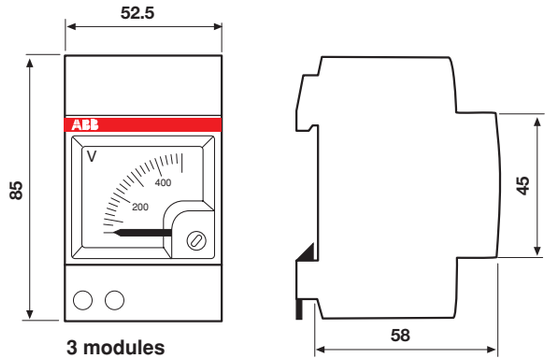




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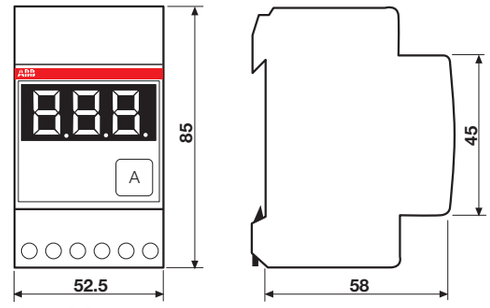


Analogue measurement instruments





Digital measurement instruments (VLM-D, AMT-D)

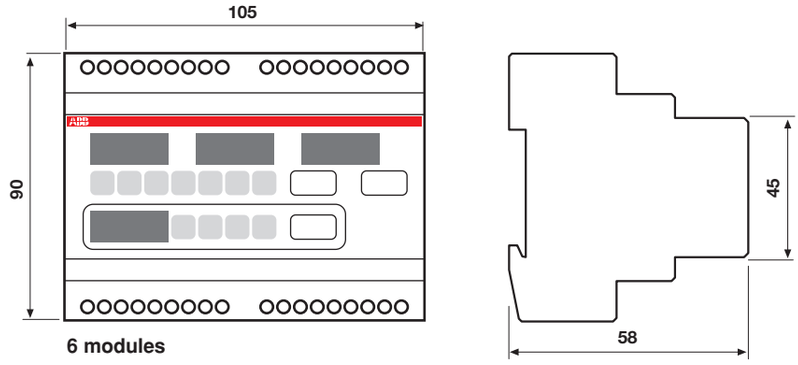


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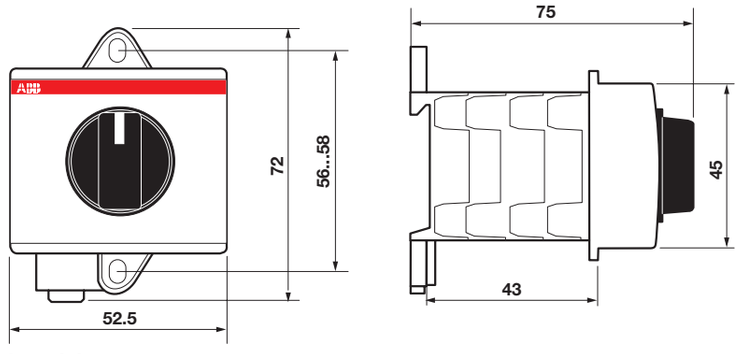
MTM multimeters





MCV - MCA voltmetric and ammetric switches

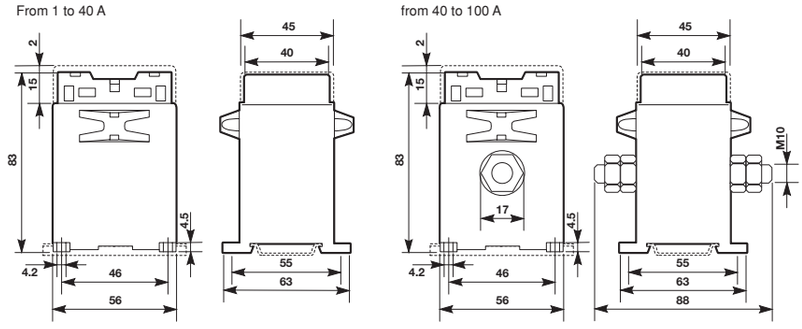




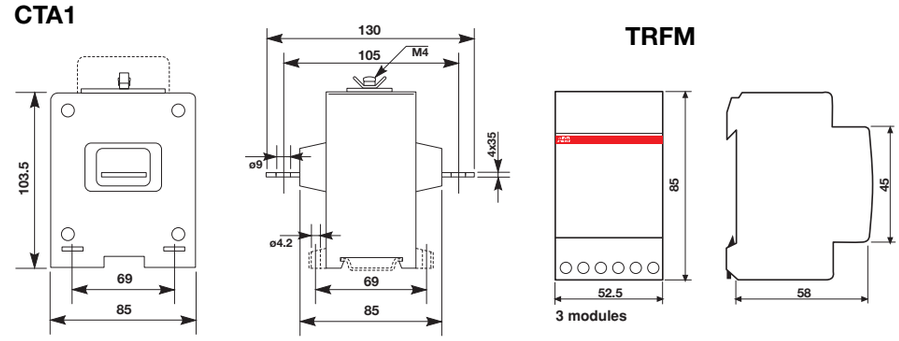
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Standard type current transformers

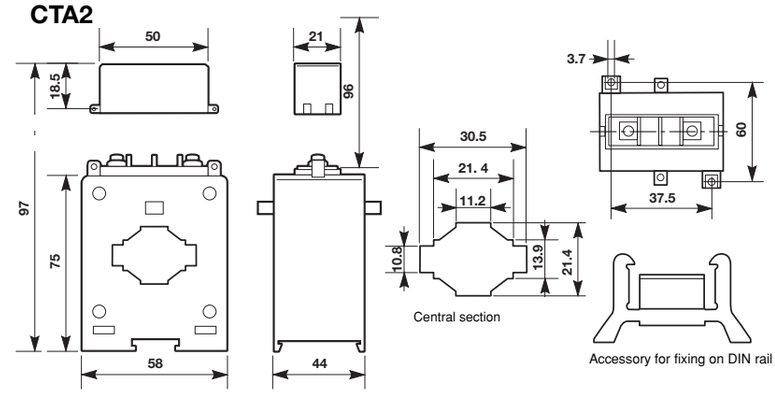
CTA



CTA1



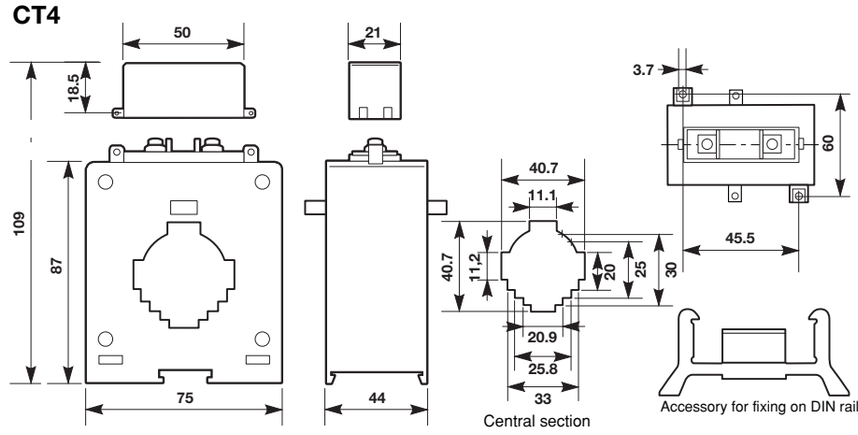
CTA2



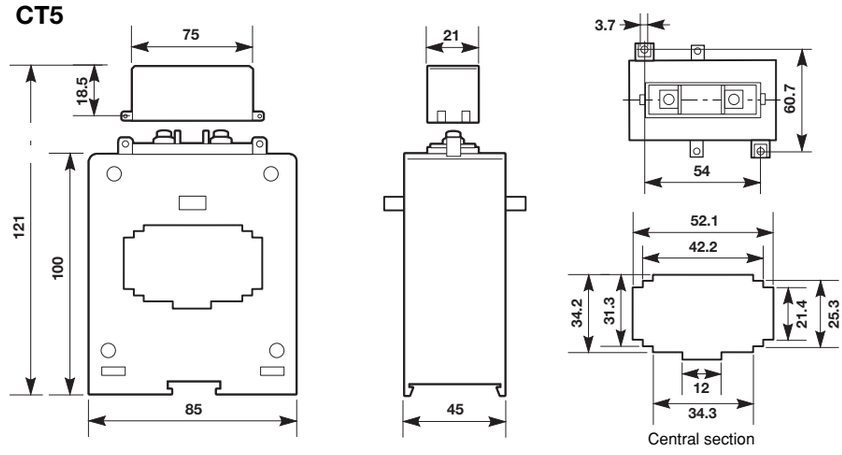
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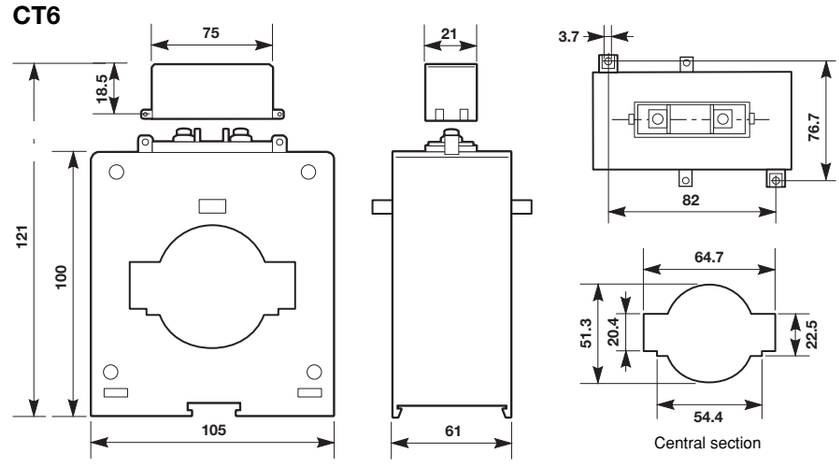
CT4



CT5



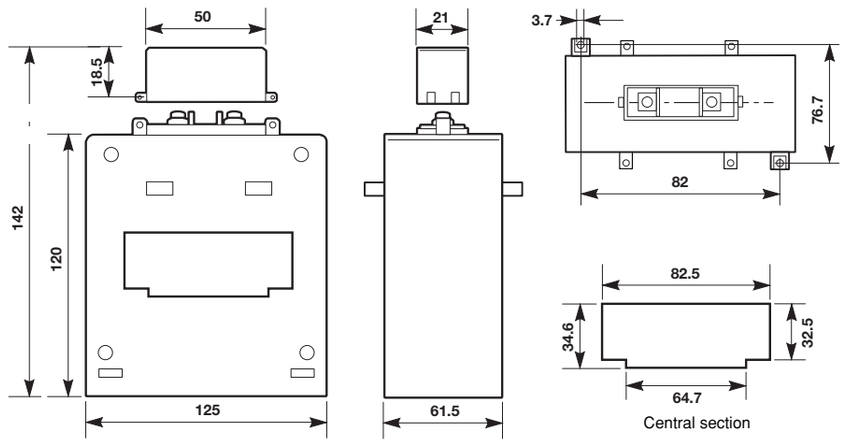
CT6



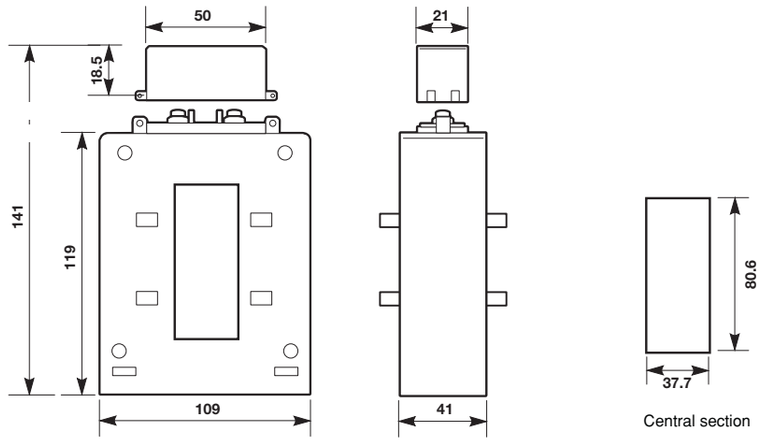
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CT8



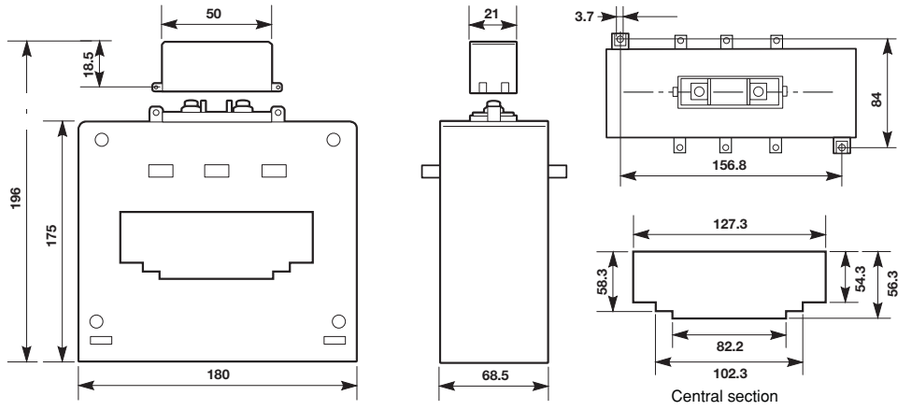
CT8-V



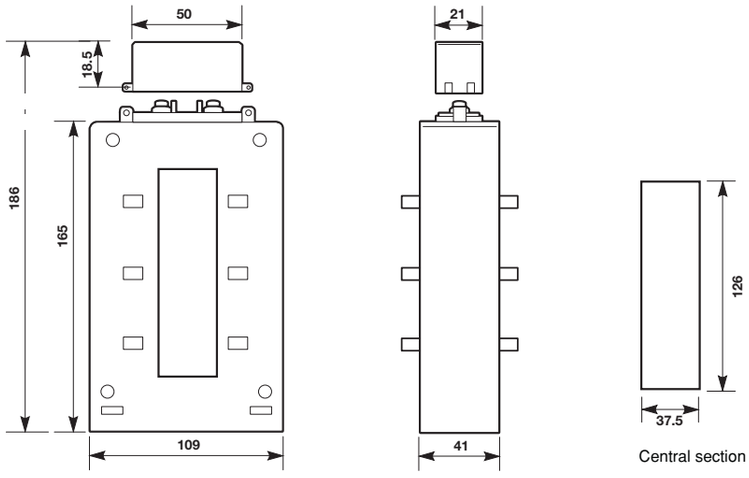
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CT12



CT12-V

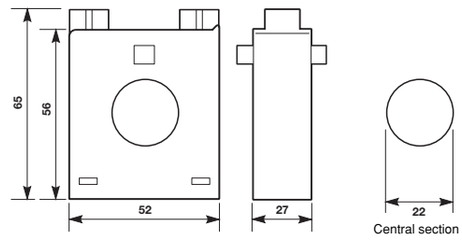


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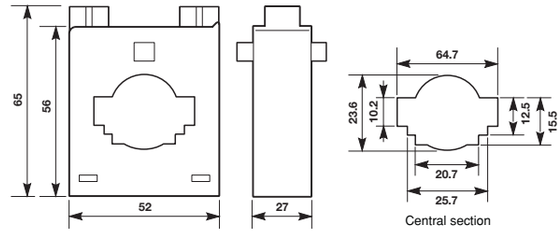
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Compact type current transformers

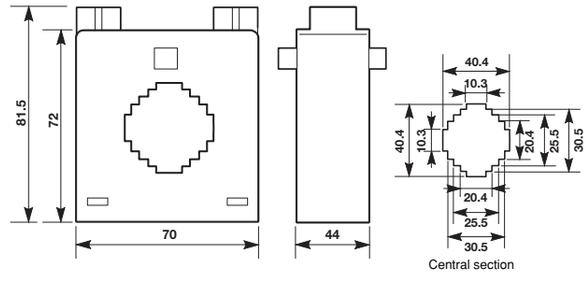
CT-M1



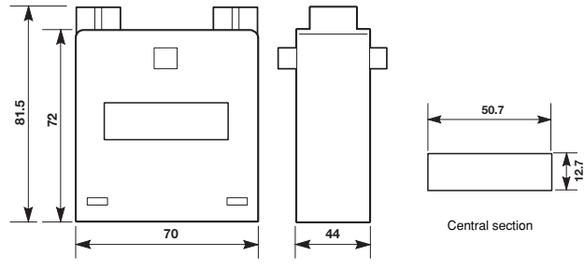
CT-M3



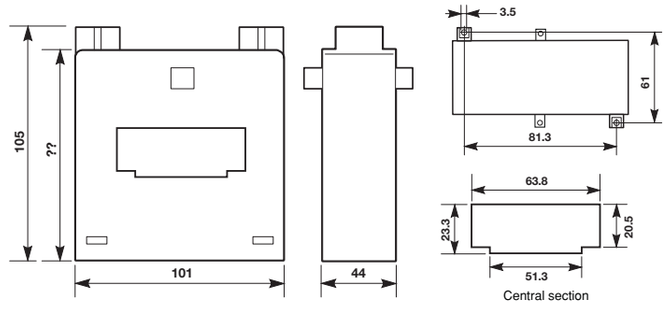
CT-M4



CT-M5



CT-M6

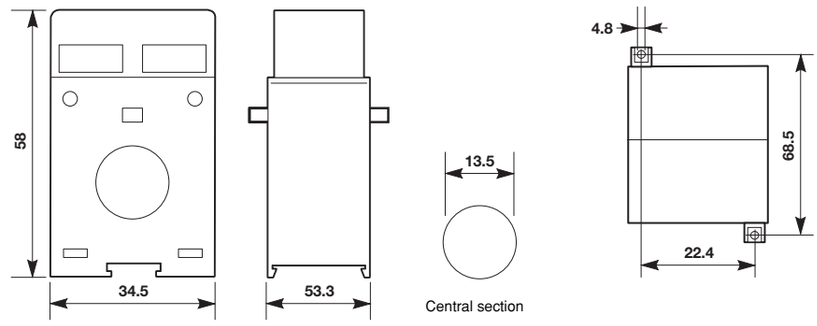


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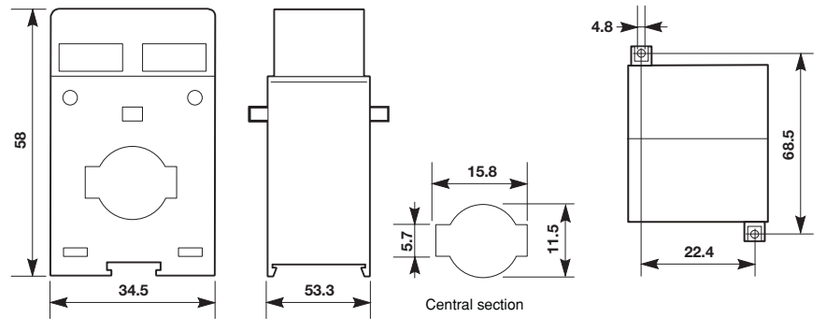
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Miniaturized type current transformers

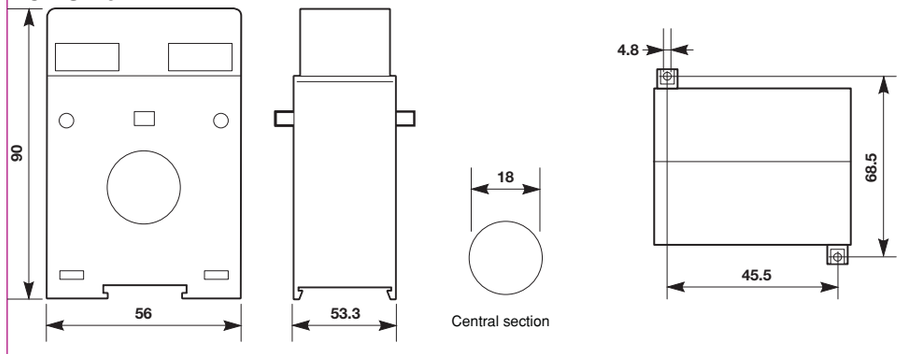
CT-SM1



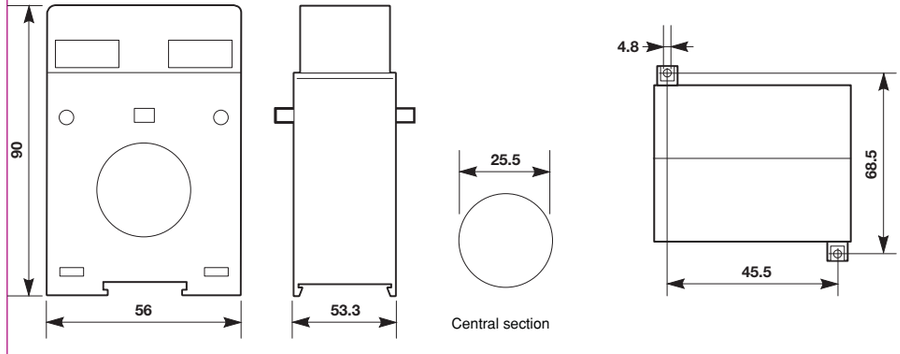
CT-SM2



CT-SM3

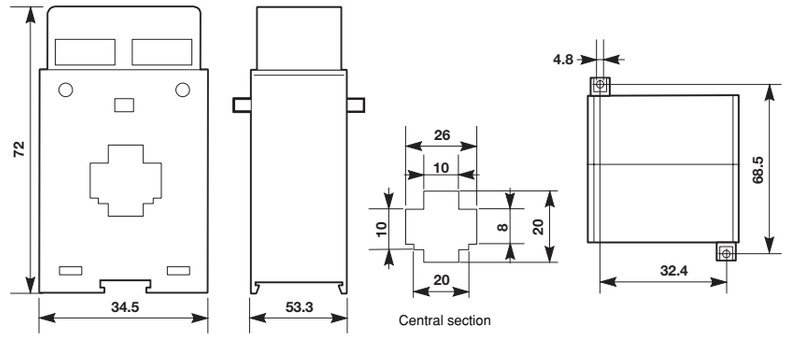


CT-SM4

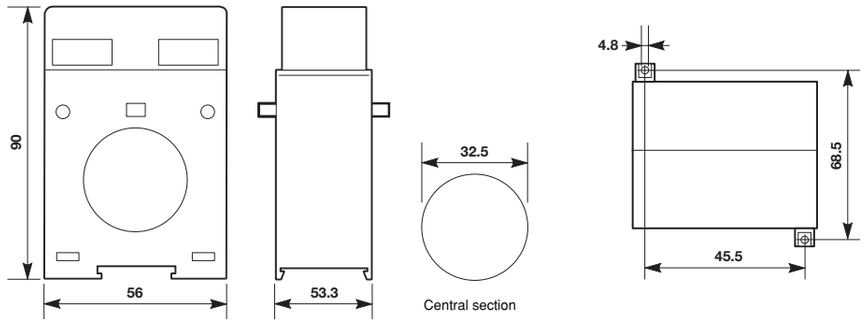


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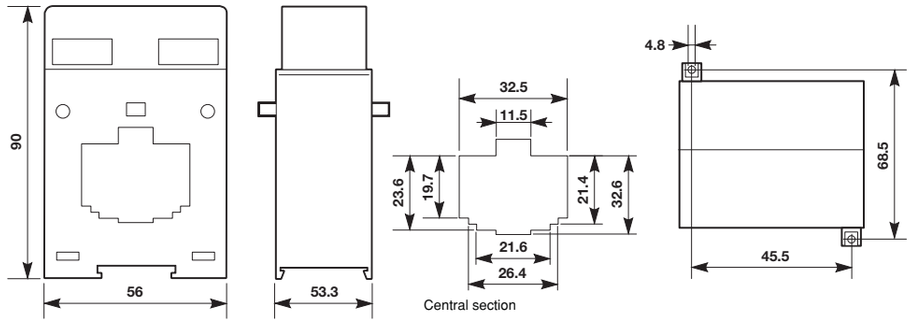
CT-SM5



CT-SM6



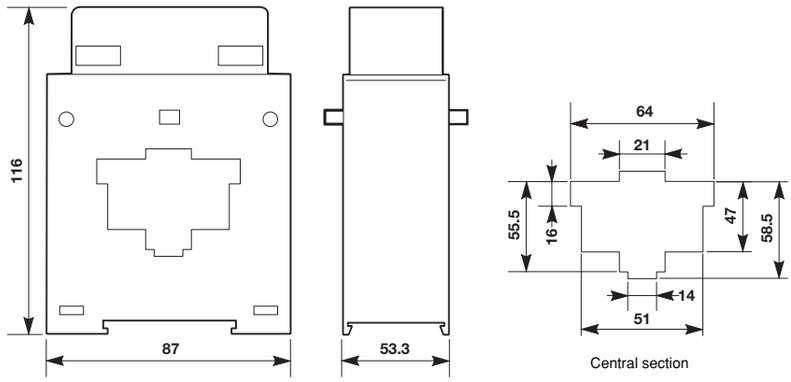
CT-SM7



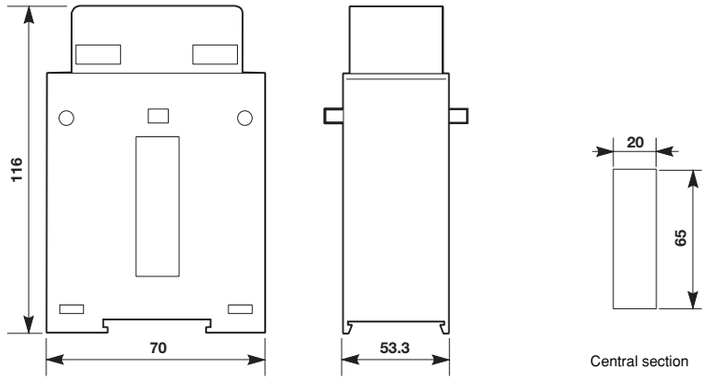
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CT-SM8



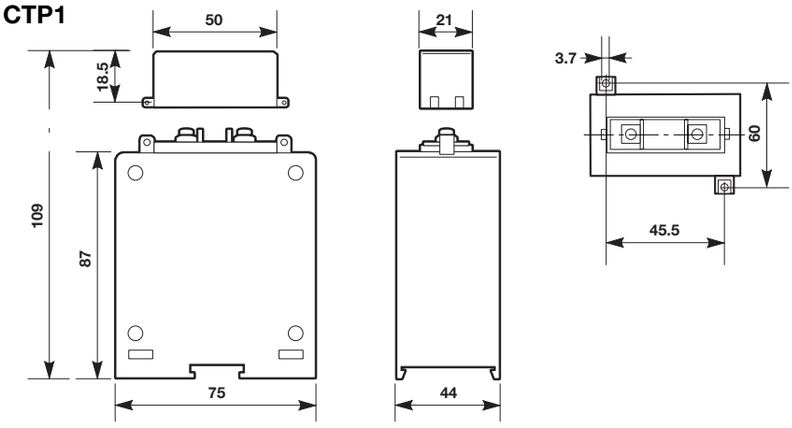
CT-SM9



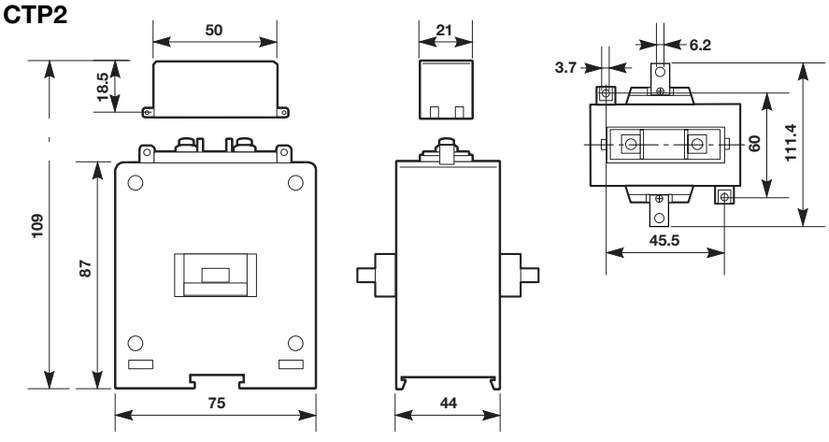
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Protection type current transformers

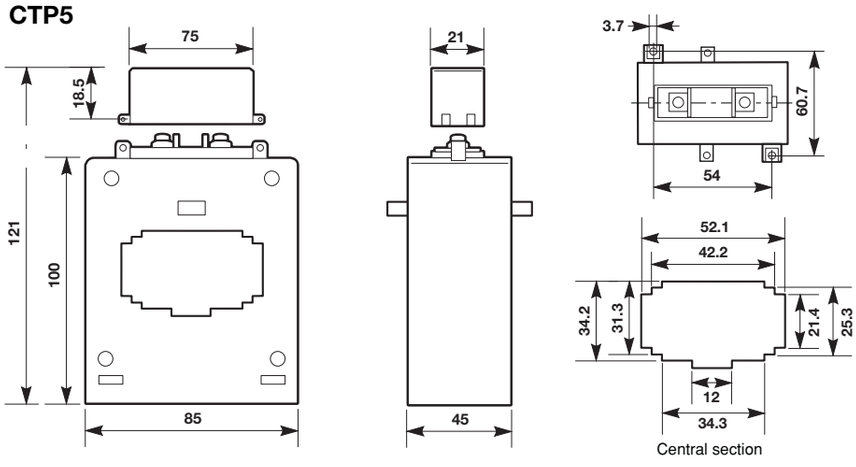
CTP1



CTP2



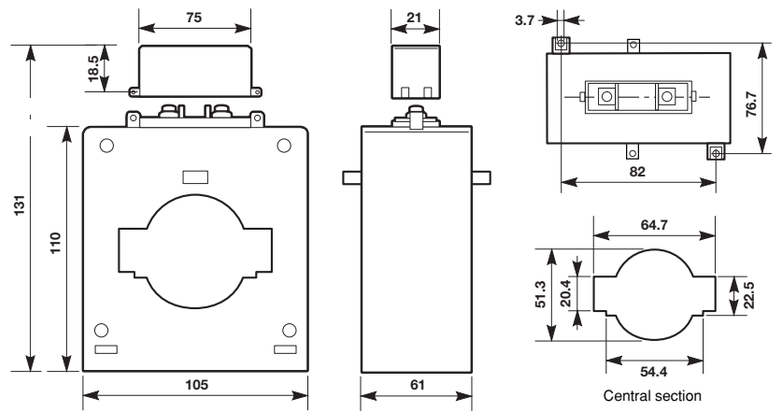
CTP5



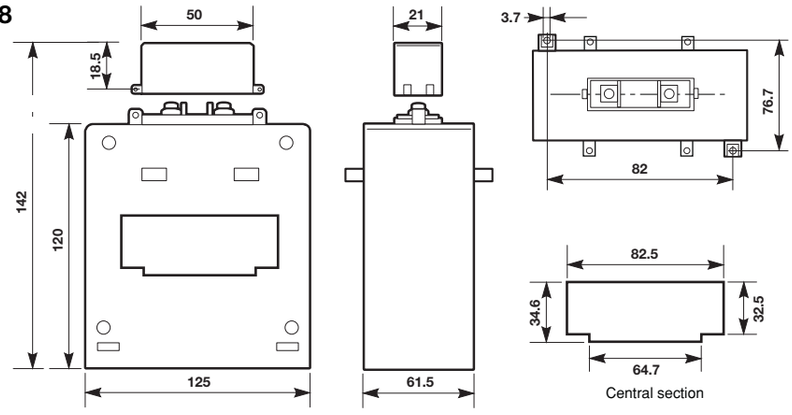
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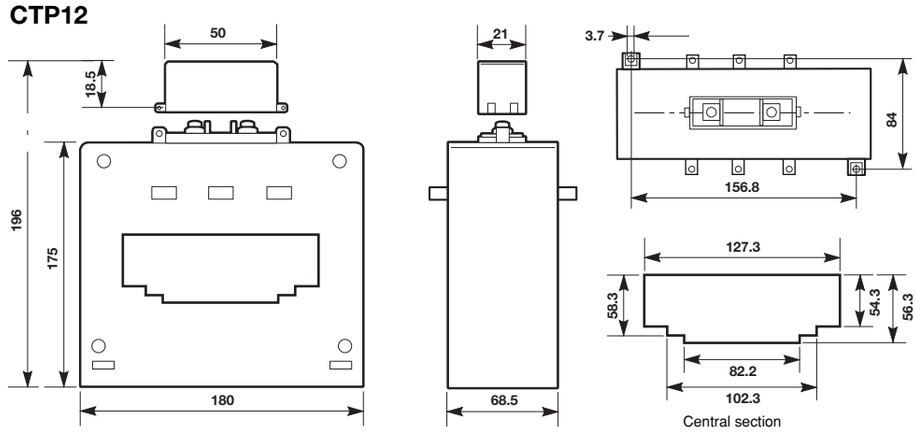
CTP6



CTP8

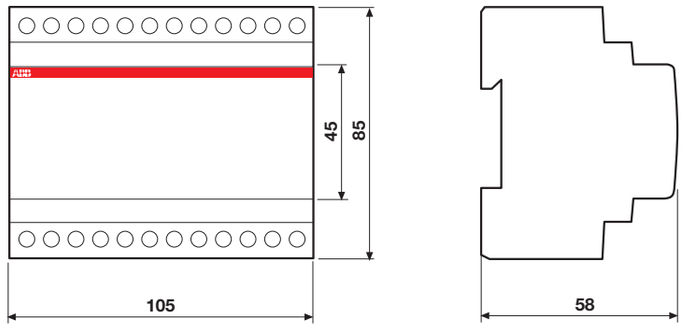


CTP12



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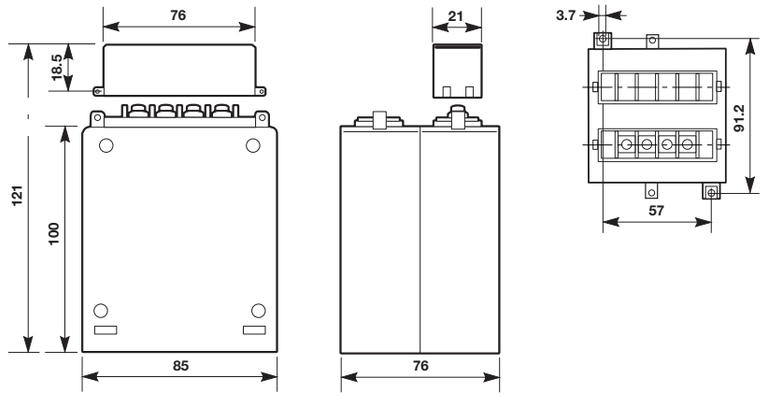
Summing current transformers



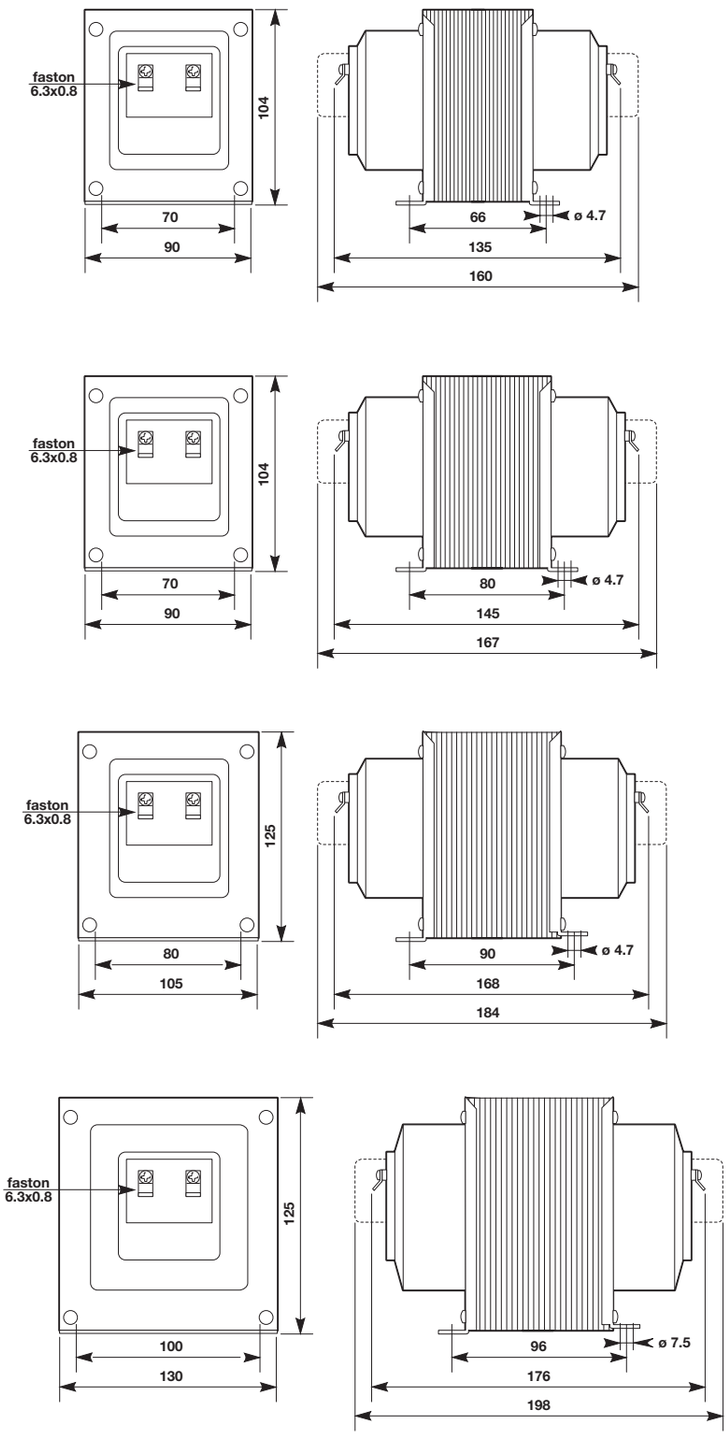
6 modules

Voltage transformers

TV1

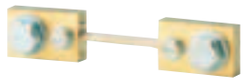


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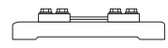
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Shunts

SNT1 ÷ 25 A/60 mV



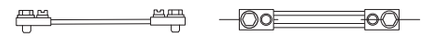
SNT1 ÷ 25 A/150 mV



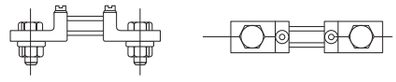
SNT30 ÷ 200 A/60 mV



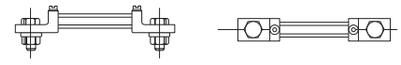
SNT30 ÷ 200 A/150 mV



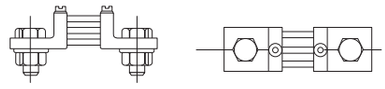
SNT250 ÷ 350 A/60 mV



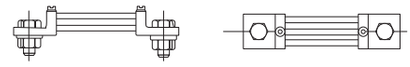
SNT200 ÷ 350 A/150 mV



SNT400 ÷ 700 A/60 mV



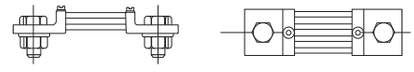
SNT400 ÷ 700 A/150 mV



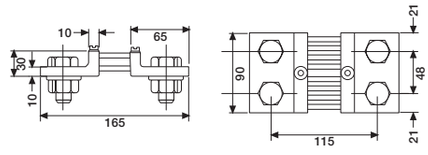
SNT750 ÷ 1000 A/60 mV



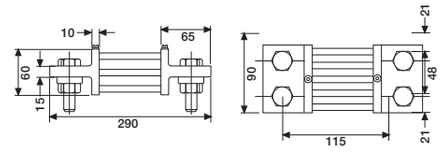
SNT750 ÷ 1000 A/150 mV



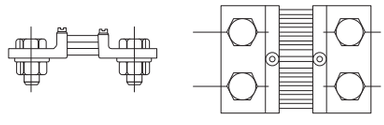
SNT1200 ÷ 1500 A/60 mV



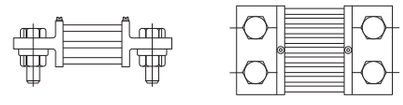
SNT1200 ÷ 1500 A/150 mV



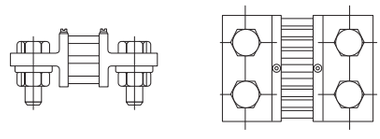
SNT2000 ÷ 2500 A/60 mV



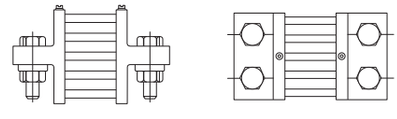
SNT2000 ÷ 2500 A/150 mV



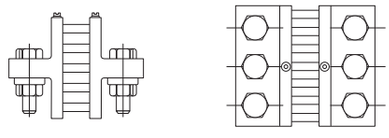
SNT4000 A/60 mV



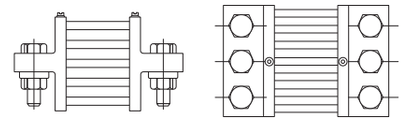
SNT4000 A/150 mV



SNT5000 ÷ 6000 A/60 mV



SNT5000 ÷ 6000 A/150 mV

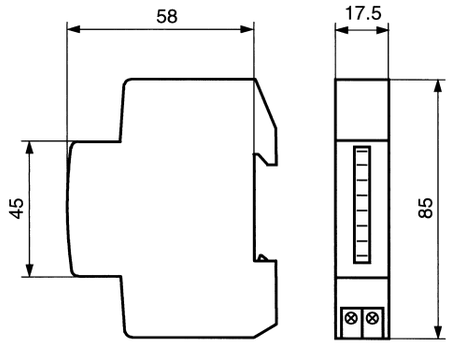


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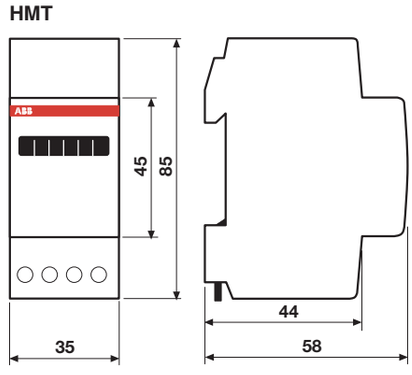
E 233 electro-mechanical hour counters





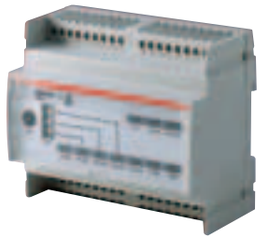
HMT electro-mechanical hour counters

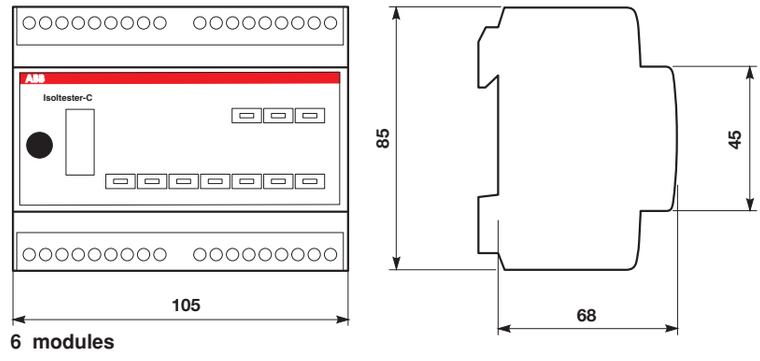




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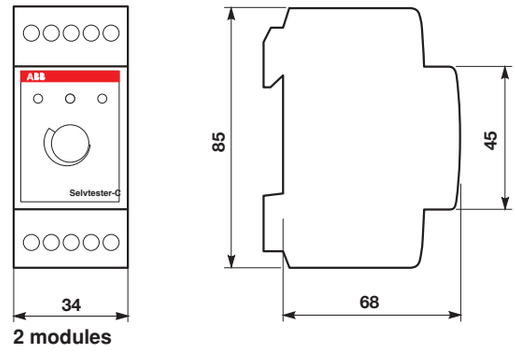
Isoltester-C





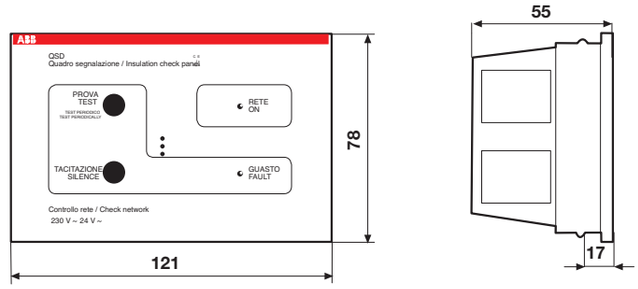
Selvtester-C





QSD panels for remote signalling



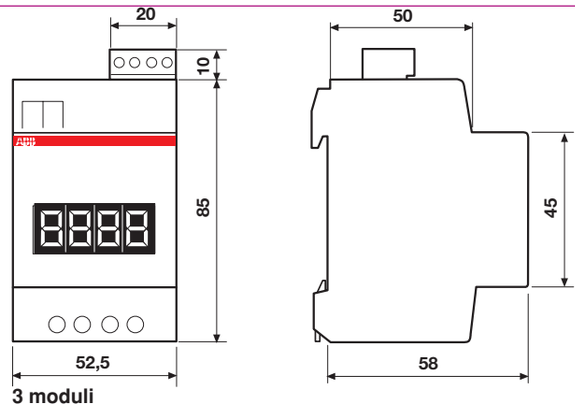


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EE MINI METER electronic single phase energy meters

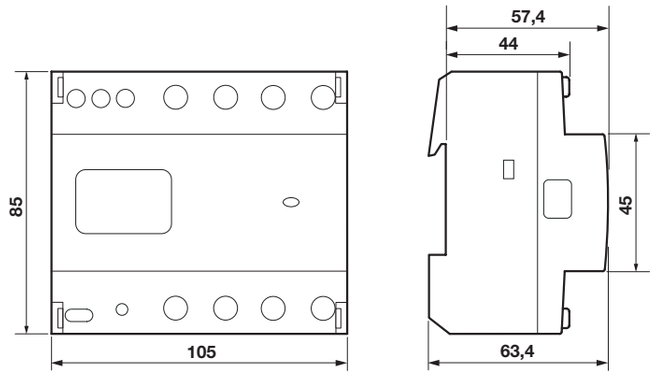




3 moduli

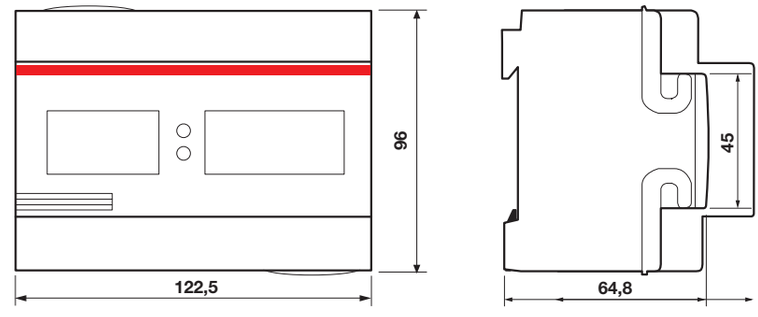
ODIN METER electronic three-phase energy meters





DELTA METER electronic three-phase energy meters





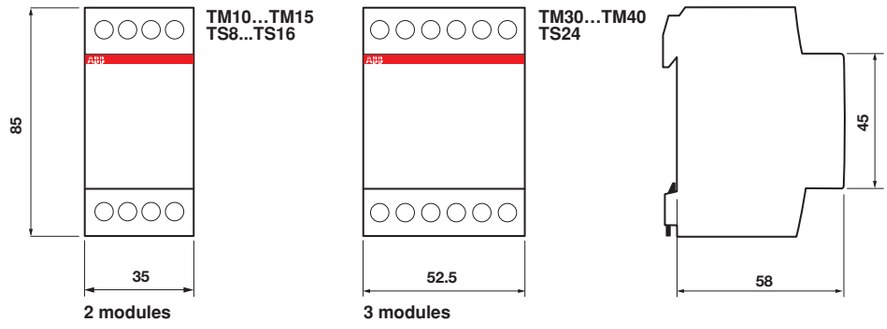
7 moduli

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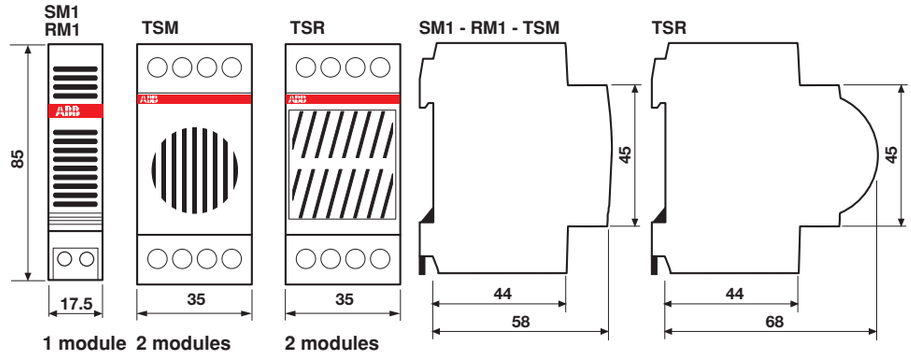


TM/TS bell transformers



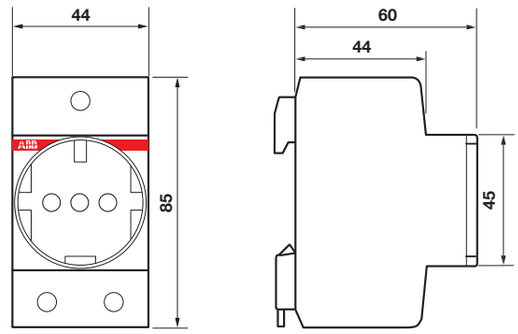


Bells and buzzers





Modular sockets

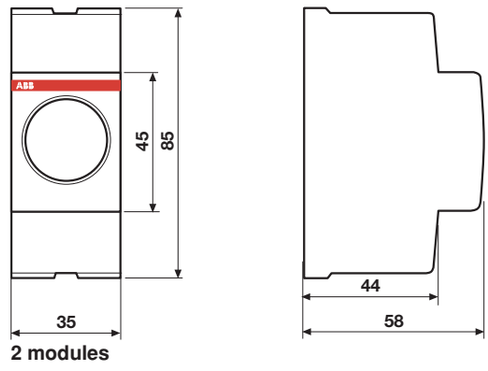


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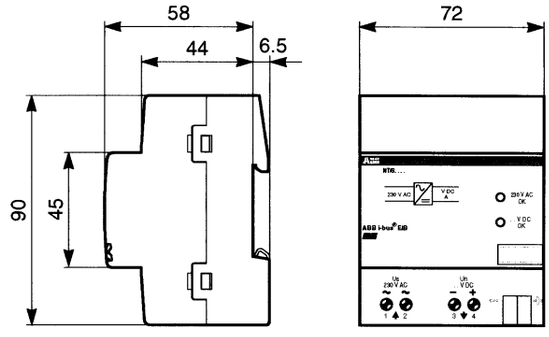


M9100 modular housing for CBK pushbuttons





NT/S power supply



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Worldwide marks and approvals

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Worldwide marks and approvals **13**/2

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Worldwide marks and approvals

This is the present situation regarding worldwide marks and approvals for ABB System pro *M* compact range devices. Since at the moment we are still in the launching phase of the range, some certification procedures are still in course of completion.
Although some products already obtained some approvals or certificates, they don't necessarily bear the related marks on the product.

	AENOR Spain	**APCER** Portugal	**BBJ** Poland	**CCC** China
S 200	●	■	■	
S 200 M	●	■	■	
S 200 P	●	●	●	●
F 200 *	●	●		●
DDA 200				
FS 201	●	■	■	
DS 200				
DS 200 M				

	GOST Russia	**IMQ** Italy	**KEMA** Netherland	**LCIE** France
S 200	■	■	■	■
S 200 M	■	■	■	■
S 200 P	●	●	●	●
F 200 *	●	■	●	●
DDA 200		●	●	●
FS 201	■	■	■	■
DS 200		●		
DS 200 M		●		

	SIQ Slovenia	**SIRIM** Malaysia	**TICK** Australia	**UL** USA
S 200				■
S 200 M				
S 200 P	●	●	●	●
F 200 *		●	●	●
DDA 200				
FS 201				
DS 200				
DS 200 M				

■ APPROVED
● SUBMITTED FOR APPROVAL

* contact your LSO to know which are the approvals obtained for each F 200 version

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Worldwide marks and approvals

	CEBEC	CSA	DEMKO	EVPU	EZU	FIMKO
	Belgium	Canada	Denmark	Slovakia	Czech Rep.	Finland
	■	●	■	■	■	■
	■		■		■	■
	●	●	●			●
	●	●	●			●
	●					
	■		■		■	■

	NEMKO	OVE	PSB	SABS	SEMKO	SEV
	Norway	Austria	Singapore	South Africa	Sweden	Switzerland
	■	■			■	■
	■	■			■	■
	●	●		●	●	●
	●	■	●	●	●	●
	■	■			■	■

Ship Classification Association

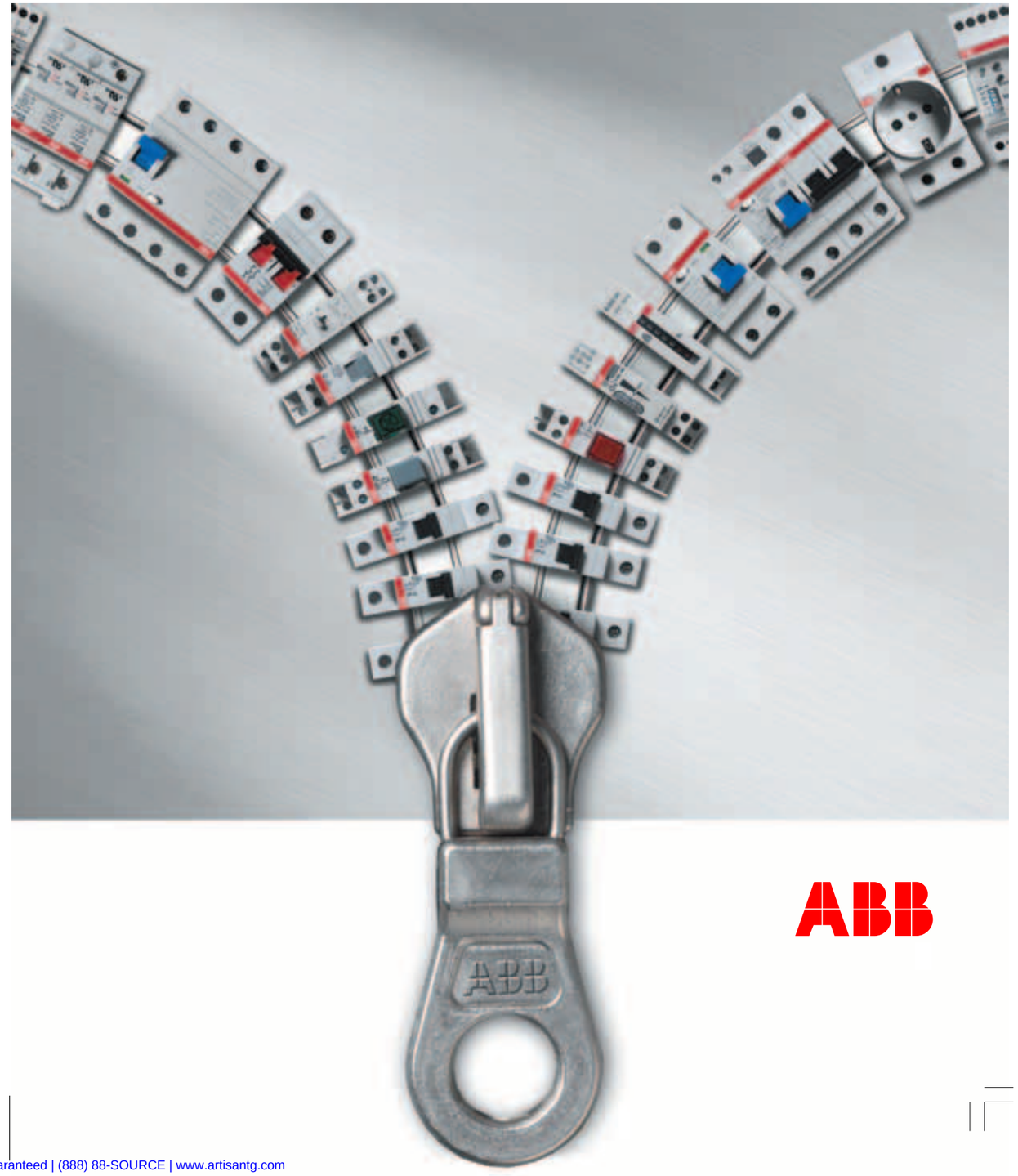
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	Germany	France	Norway	Germany	Great Britain	Italy
	■	●	■	●	●	●
	■	●	■	●	●	●
	●	●	●	●	●	●
	■					
	●					
	■	●	●	●	●	
	●					
	●					

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Technical catalogue

System pro *M* compact®

2CSC400002D0203



System pro *M* compact®

In consideration of modifications to Standards and materials, the characteristics and overall dimensions indicated in this catalogue may be considered binding only following confirmation by ABB SACE

2CSC400002D0203 - August '04
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10.000 - Caleidografi

ABB SACE S.p.A.
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