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sälzer

Low Voltage Switchgear

Rotary Cam Switches



SÄLZER

Innovation. Technology. Quality.

Switchgear from Sälzer: Solutions for the future!
Since 1956 Sälzer has specialised in the development, manufacture and sale of low voltage switchgear.

The large selection of types, switching programmes and mounting forms mean that practical reliable solutions can be achieved quickly. Whatever the switch, all individual parts are optimally co-ordinated, easy to assemble and combine.
Whether in switching and automation systems, mechanical engineering and construction, in the heating, climatic and ventilation industry, environmental technology or other areas: Sälzer switches provide safety!
Product support, training and service as well as a Certified Quality Management to DIN EN ISO 9001 are an essential part of our daily work. Our switches comply with national and international standards (IEC / cUL) and are suitable for world-wide application.

Special requirements?

Call us, we'll help you find an individual solution for your switching needs.
Our Project Engineers are here to understand the special requirements of your project and assist to develop a solution as a partner.
Should your requirements not be covered by our extensive standard product range we have our own Design and Development Department for special switches in order to flexibly, promptly and cost effectively meet your individual requirements.

Rotary Cam Switches

as of p.6

Safe Switching and Controlling

SMD – Sälzer Modular Design

Faster delivery by SMD!

The SMD (Sälzer Modular Design) is based on a modular product idea so that very high flexibility in product options is possible.
SMD modules are individually prefabricated and tested complete modules. By combining these basic elements, different switch configurations can be realised within short time spans. The switches required by you, the customer, are available for despatch following the assembly of the basic switch module to the mounting form and operator modules (SMD Service).
Within 24 hours, the solution matched to your requirements is ready for despatch – worldwide.

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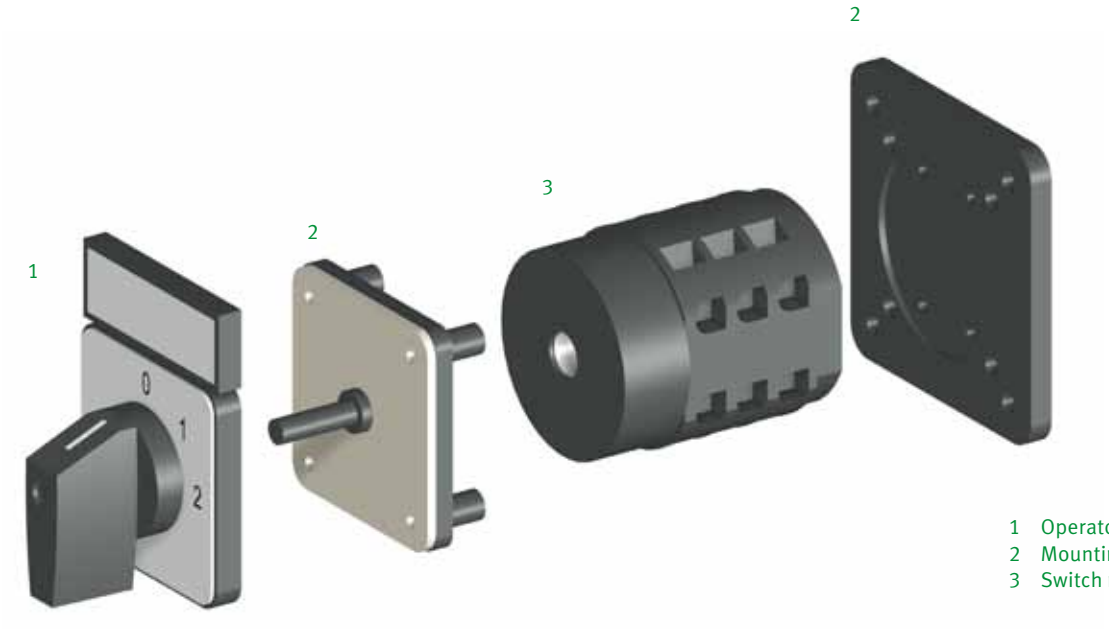
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Rotary Cam Switches





1 Operator module
2 Mounting form module
3 Switch module

Rotary Cam Switches

Safe Switching and Controlling

Rotary Cam Switches from Sälzer Electric are independently programmable, manually operated control switches for main and auxiliary circuits with up to 24 contacts and are offered with switching angles of 30°, 45°, 60° or 90°. Therefore a maximum of 12 switching positions can be provided.

Design and Function

- 30°, 45°, 60° or 90° switching angle
- forced open contacts
- finger protected (degree of protection up to IP20)
- short-circuit rating
- fulfills the load break requirements up to 690 V
- terminal screws in open position

Applications

Rotary Cam Switches offer ideal features for their use as:

- ON-OFF Switches
- Changeover Switches
- Multi-step Switches
- Code Switches
- Gang Switches
- Instrument Switches
- Motor Switches

Conformity

Our products are designed, manufactured and tested according to the following standards:

- IEC 60947
- IEC 60204-1
- EN 60947
- EN 60204-1
- cUL 508

Mounting options:






Front mounting

- Two hole mounting
- Four hole mounting
- Single hole mounting
- Flush wall mounting




Base mounting

- Snap-on mounting
  (DIN rail 35 mm DIN EN 60715)
- Four hole mounting



Enclosed switches

- Insulated enclosure

Our modular technology allows us to build custom switching solutions for up to 24 poles!

All products are available in different versions

Setup of order code number:

The 16 digit order code number for complete switches consists of the three ident numbers for type, switching programme and mounting form:

Type – Switching programme – Mounting form

- the **type** specifies the physical size and power rating of the switch
- the **switching programme** specifies the switching arrangement and the switching angle
- the **mounting form** specifies the mounting, types of handle and optional extras.

In addition to the order code number, each complete switch is assigned a machine readable 13 digit EAN Code.

Ordering example:



Order code number: M220 - 61040 - 003M1

- **Type M220**
  for a switch of the product line M200, operational current I_e = 20 A
- **Switching programme 61199**
  for a 4 pole Changeover Switch without OFF
- **Mounting form 003M1**
  for a front mounting switch with four hole mounting 36 × 36 mm
  and M-handle silver/black.

Additional switching programmes can be found from page 56 where the new order code number for the switching programme can be identified. Please note that the identification number of the switching programme must now be replaced by the new selection.

Rotary Cam Switches

Front mounting Two hole mounting 20 mm

Front mounting switches with two hole mounting 20 mm

- **10 A**
- 1 up to 16 contacts
- IP66 (front)



- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch

Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
2 pole Multi-Step Switch without OFF, 10 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
P110	61070	003M1
Order code no.	**P110-61070-003M1**	

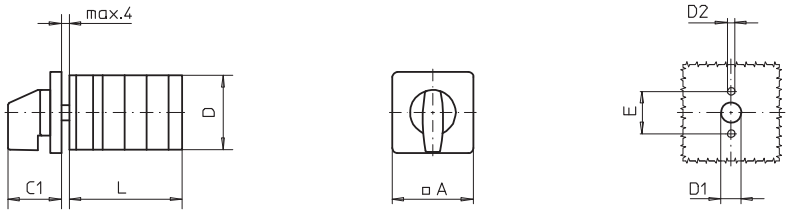
Type	Rated data (IEC 60947)			Degree of Protection	Terminal accessibility
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	Terminals	
P110	10	3	2.2	IP20	Terminals accessible from mounting direction

Switching programme	Stages	Contacts	Description
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61351	1	1	ON-OFF Switch with spring return, 1 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61070	4	8	Multi-step Switch without OFF, 4 steps, 1 pole
61109	1	2	Gang Switch, 2 gangs, 1 pole
61111	3	6	Gang Switch, 2 gangs, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	Operator
003M1	M-handle silver/black

Dimensions in mm:



Type	A	C1	D	D1	D2	E	L with ... stages (max. 8) 1	2	3	4	5	6	7	8
P110	30	24	29	8	3.2	20	39	51	63	75	87	99	111	123

Front mounting switches with two hole mounting 20 mm

- **10 A**
- 1 up to 16 contacts
- IP66 (front)

- Main/Emergency-Off Switch
- Main Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 1 pole Main/Emergency-Off Switch 90°, 10 A, padlock device with M-handle yellow/red ➔	Type	Switching programme	Mtg. form
	P110	61191	033M4
	Order code no.	**P110-61191-033M4**	

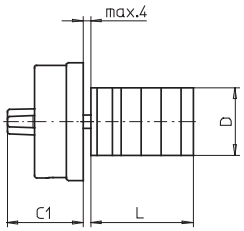
Type	**Rated data** (IEC 60947)			**Degree of Protection**	**Terminal accessibility**
	Operational current I_e	Operational power (at 380–440 V)		Terminals	
	AC-21A (A)	AC-23A (kW)	AC-3A (kW)		
P110	10	3	2.2	IP20	 Terminals accessible from mounting direction

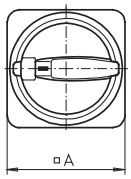
Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61906	3	6	ON-OFF Switch 90°, 6 pole
61919	4	8	ON-OFF Switch 90°, 8 pole, 2 pole early make/late break

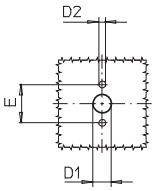
Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Main/Emergency-Off Switch**	**Mounting form**	**Operator**	**Main Switch**
033M4		padlock device with M-handle yellow/red	**033M1**		padlock device with M-handle black

Dimensions in mm:







Type	**A**	**C1**	**D**	**D1**	**D2**	**E**	**L with ... stages (max. 8)**							
							1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
P110	48	31	29	8	3.2	20	39	51	63	75	87	99	111	123

Rotary Cam Switches

Front mounting Four hole mounting 36 × 36 mm

Front mounting switches with four hole mounting 36 × 36 mm

- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP66 (front)



- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch

Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
4 pole Changeover Switch without OFF 60°, 20 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
M220	61040	003M1
Order code no.	**M220-61040-003M1**	

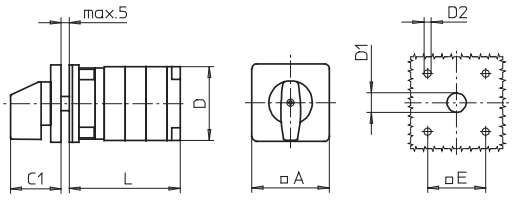
Type	Rated data (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	Degree of Protection Terminals	Terminal accessibility
P220	20	7.5	5.5	IP1B	 Terminals accessible from mounting direction
P225	25	11	7.5	IP1B	
M220	20	7.5	5.5	IP20	 Terminals accessible laterally
M225	25	11	7.5	IP20	
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	Stages	Contacts	Description
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61040	4	8	Changeover Switch without OFF 60°, 4 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61313	3	6	Voltmeter Selector Switch with centre OFF, 3 phase line to line + 3 phase line to N
61325	3	6	Ammeter Selector Switch with centre OFF, 3 transformers, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	Operator
003M1	 M-handle silver/black

Dimensions in mm:



Type	A	C1	D	D1	D2	E	L with ... stages (max. 12) 1	2	3	4	5	each additional
P220	48	32	44	12	4.5	36	47	60	73	86	99	13
P225	48	32	46	12	4.5	36	51	66	81	96	111	15
M220	48	32	46	12	4.5	36	40	50	60	70	80	10
M225	48	32	48	12	4.5	36	43	56	69	82	95	13
T225	48	32	50	12	4.5	36	45	60	75	90	105	15

Front mounting switches with four hole mounting 36 × 36 mm

- **with dust protective cover**
- **20 A / 25 A / 32 A**
- 1 up to max. 8 contacts
- IP66

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
2 pole Changeover Switch with centre OFF and spring return 60°, 20 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
M220	61362	005M1
Order code no.	**M220-61362M005M1**	

Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	1 to 6 1 to 4	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible from mounting direction
M220 **M225**	1 to 8 1 to 6	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible laterally
T225	1 to 4	32	15	11	IP66	 Terminals accessible laterally

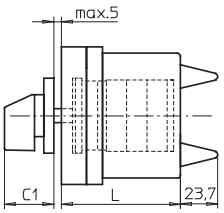
Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61362	2	4	Changeover Switch with centre OFF and spring return 60°, 2 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole

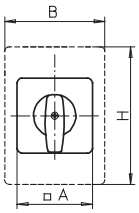
Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
005M1	 M-handle silver/black

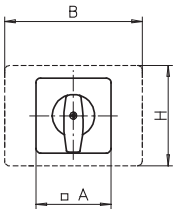
Dimensions in mm:

M200/P200





T225



Type	A	B	C1	D1	D2	E	H	L with ... stages 1	2	3	4
P220	48	64	32	12	4.5	36	88	80	80	80	-
P225	48	64	32	12	4.5	36	88	80	80	-	-
M220	48	64	32	12	4.5	36	88	80	80	80	80
M225	48	64	32	12	4.5	36	88	80	80	80	-
T225	48	88	32	12	4.5	36	64	80	80	-	-

Rotary Cam Switches

Front mounting Four hole mounting 36 × 36 mm

Front mounting switches with four hole mounting 36 × 36 mm

- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP66 (front)

- Main/Emergency-Off Switch
- Main Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
2 pole Main/Emergency-Off Switch 90°, 20 A, padlock device with M-handle yellow/red ➔

Type	Switching programme	Mtg. form
M220	61192	033M4
Order code no.	**M220-61192-033M4**	

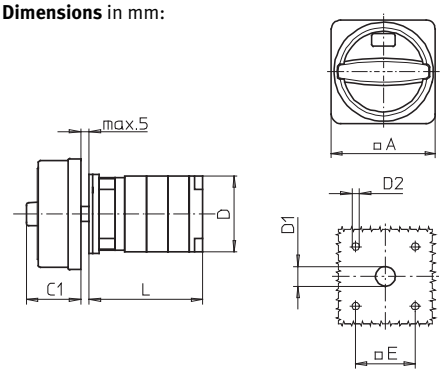
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61906	3	6	ON-OFF Switch 90°, 6 pole
61919	4	8	ON-OFF Switch 90°, 8 pole, 2 pole early make/late break

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Main/Emergency-Off Switch**	**Mounting form**	**Operator**	**Main Switch**
033N4		padlock device with N-handle yellow/red	**033N1**		padlock device with N-handle black
033M4		padlock device with M-handle yellow/red	**033M1**		padlock device with M-handle black
033V4		padlockable with V-handle yellow/red	**033V1**		padlockable with V-handle silver/black

Dimensions in mm:



Type	Mounting form	A	C1	D	D1	D2	E	L with ... stages (max. 12) 1	2	3	4	5	each additional
P220	033N4/033N1	67	33	44	15	4.5	36	47	60	73	86	99	13
	033M4/033M1	67	38	44	15	4.5	36	47	60	73	86	99	13
	033V4/033V1	48	32	44	12	4.5	36	47	60	73	86	99	13
P225	033N4/033N1	67	33	46	15	4.5	36	51	66	81	96	111	15
	033M4/033M1	67	38	46	15	4.5	36	51	66	81	96	111	15
	033V4/033V1	48	32	46	12	4.5	36	51	66	81	96	111	15
M220	033N4/033N1	67	33	46	15	4.5	36	40	50	60	70	80	10
	033M4/033M1	67	38	46	15	4.5	36	40	50	60	70	80	10
	033V4/033V1	48	32	46	12	4.5	36	40	50	60	70	80	10
M225	033N4/033N1	67	33	48	15	4.5	36	43	56	69	82	95	13
	033M4/033M1	67	38	48	15	4.5	36	43	56	69	82	95	13
	033V4/033V1	48	32	48	12	4.5	36	43	56	69	82	95	13
T225	033N4/033N1	67	33	50	15	4.5	36	45	60	75	90	105	15
	033M4/033M1	67	38	50	15	4.5	36	45	60	75	90	105	15
	033V4/033V1	48	32	50	12	4.5	36	45	60	75	90	105	15

Front mounting switches with four hole mounting 48 × 48 mm

- **50 A / 63 A**
- 1 up to 24 contacts
- IP55 (front)

- ON-OFF Switch
- Multi-step Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 3 pole ON-OFF Switch 90°, 50 A, M-handle silver/black ➔	Type	Switching programme	Mtg. form
	S432	61199	003M1
	Order code no.	**S432-61199-003M1**	

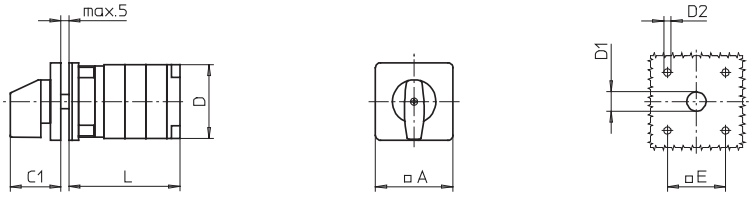
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S432 **S440**	50 63	22 30	22 30	Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
003M1	M-handle silver/black

Dimensions in mm:



Type	A	C1	D	D1	D2	E	L with ... stages (max. 12) 1	2	3	4	5	6	7	each additional
S432	64	39	65	12	5	48	51	69	87	105	123	141	159	18
S440	64	39	70	12	5	48	56	77	98	119	140	161	182	21

Rotary Cam Switches

Front mounting Four hole mounting 68 × 68 mm

Front mounting switches with four hole mounting 68 × 68 mm

- **80 A / 100 A / 160 A**
- 1 up to 24 contacts
- IP55 (front)

- ON-OFF Switch
- Multi-step Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 3 pole ON-OFF Switch 90°, 80 A, G-handle silver/black ➔	Type	Switching programme	Mtg. form
	S606	61199	003G1
	Order code no.	**S606-61199-003G1**	

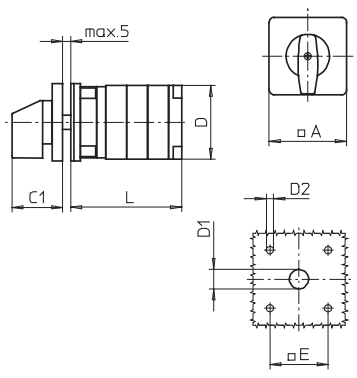
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	 AC-3A (kW)	**Terminal accessibility**
S606 **S608** **S612**	80 100 160	45 55 75	30 37 45	Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Mounting form**	**Operator**
003M1	M-handle silver/black	**003G1**	G-handle silver/black

Dimensions in mm:



Type	**Mtg. form**	**A**	**C1**	**D**	**D1**	**D2**	**E**	**L with ... stages** (max. 12) 1	2	3	4	5	**each additional**
S606	003M1	88	52	84	15	5.5	68	59	81	103	125	147	22
	003G1	88	66	84	15	5.5	68	59	81	103	125	147	22
S608	003M1	88	52	88	15	5.5	68	66	92	118	144	170	26
	003G1	88	66	88	15	5.5	68	66	92	118	144	170	26
S612	003M1	88	52	88	15	5.5	68	72	104	136	168	200	32
	003G1	88	66	88	15	5.5	68	72	104	136	168	200	32

Front mounting switches with four hole mounting 104 × 104 mm

- **315 A**
- 1 up to 24 contacts
- IP55 (front)

- ON-OFF Switch
- Multi-step Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 4 pole ON-OFF Switch 90°, 315 A, G-handle silver/black ➔	Type	Switching programme	Mtg. form
	S825	61194	003G1
	Order code no.	**S825-61194-003G1**	

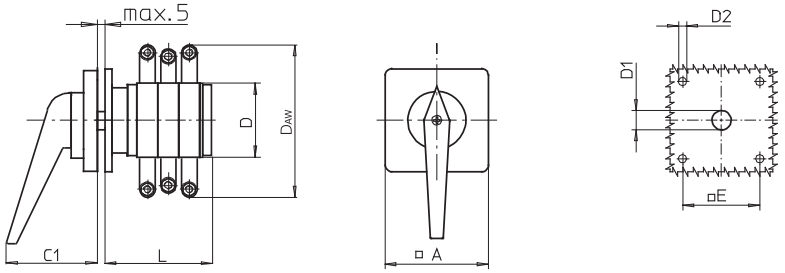
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S825	315	132	55	Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
003G1	G-handle silver/black

Dimensions in mm:



Type	**A**	**C1**	**D**	**D_{AW}**	**D1**	**D2**	**E**	**L with ... stages (max. 12)** 1	2	3	4	5	6	7	**each additional**
S825	130	74	120	210	20	5.5	104	89	125	161	197	233	269	305	36

Rotary Cam Switches

Front mounting Single hole mounting ∅ 16 mm/22.5 mm

Front mounting switches with single hole mounting Ø 16 mm/22.5 mm



- **10 A**
- 1 up to 16 contacts
- IP66 (front)

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch

Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
4 pole Changeover Switch with centre OFF 60°, 10 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
P110	61028	219M1
Order code no.	**P110-61028-219M1**	

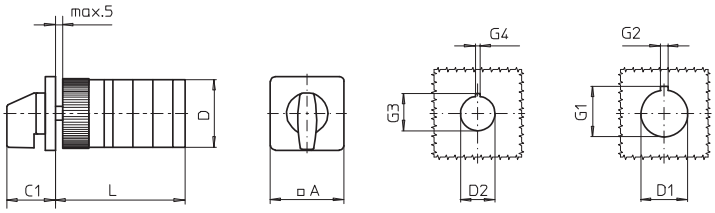
Type	**Rated data** (IEC 60947)			**Degree of Protection**	**Terminal accessibility**
	Operational current I_e	Operational power (at 380–440 V)		Terminals	
	AC-21A (A)	AC-23A (kW)	AC-3A (kW)		
P110	10	3	2.2	IP20	Terminals accessible from mounting direction

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61351	1	1	ON-OFF Switch with spring return, 1 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61028	4	8	Changeover Switch with centre OFF 60°, 4 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61109	1	2	Gang Switch, 2 gangs, 1 pole
61111	3	6	Gang Switch, 2 gangs, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
219M1	M-handle silver/black

Dimensions in mm:



Type	A	C1	D	D1	D2	G1	G2	G3	G4	L with ... stages (max. 8) 1	2	3	4	each additional
P110	30	26	29	22.5	16.2	20	3.2	17.9	1.7	57	69	81	93	12

Front mounting switches with single hole mounting Ø 16 mm/22.5 mm



- **with front ring**
- **10 A**
- 1 up to 16 contacts
- IP66 (front)

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch

Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
4 pole Changeover Switch with centre OFF 60°, 10 A, M-handle with front ring black/black ➔

Type	Switching programme	Mtg. form
P110	61028	218M1
Order code no.	**P110-61028-218M1**	

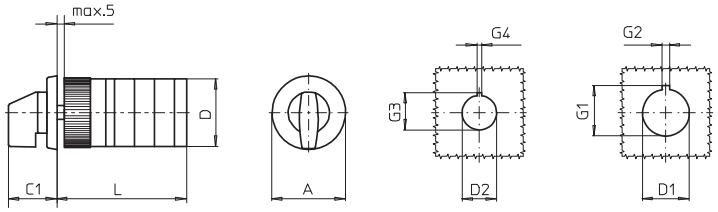
Type	**Rated data** (IEC 60947)			**Degree of Protection**	**Terminal accessibility**
	Operational current I_e	Operational power (at 380–440 V)		Terminals	
	AC-21A (A)	AC-23A (kW)	AC-3A (kW)		
P110	10	3	2.2	IP20	 Terminals accessible from mounting direction

Switching programme	Stages	Contacts	Description
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61351	1	1	ON-OFF Switch with spring return, 1 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61028	4	8	Changeover Switch with centre OFF 60°, 4 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61109	1	2	Gang Switch, 2 gangs, 1 pole
61111	3	6	Gang Switch, 2 gangs, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
218M1	 M-handle with front ring black/black

Dimensions in mm:



Type	A	C1	D	D1	D2	G1	G2	G3	G4	L with ... stages (max. 8) 1	2	3	4	each additional
P110	30	26	29	22.5	16.2	24.2	3.2	17.9	1.7	57	69	81	93	12

Front mounting switches with single hole mounting Ø 16 mm/22.5 mm



- **key operated**
- **10 A**
- 1 up to 16 contacts
- IP40 (front)

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch

Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
1 pole Multi-step Switch without OFF, 10 A, key operated, key removable at 9h ➔

Type	Switching programme	Mtg. form
P110	61050	S001A
Order code no.	**P110-61050-S001A**	

Type	**Rated data** (IEC 60947)			**Degree of Protection**	**Terminal accessibility**
	Operational current I_e	Operational power (at 380–440 V)		Terminals	
	AC-21A (A)	AC-23A (kW)	AC-3A (kW)		
P110	10	3	2.2	IP20	 Terminals accessible from mounting direction

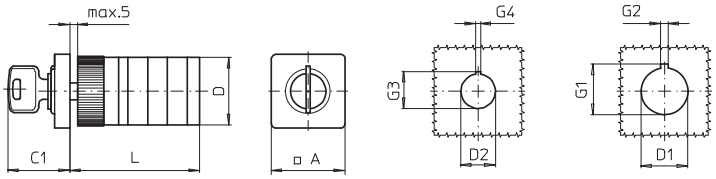
Switching programme	Stages	Contacts	Description
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61351	1	1	ON-OFF Switch with spring return, 1 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61109	1	2	Gang Switch, 2 gangs, 1 pole
61111	3	6	Gang Switch, 2 gangs, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
S001. *	 Key operated, silver/metal key Ronis cylinder lock L001, 2 keys (other lock types on request)

* The dot in the order code number must be replaced by the classification letter which identifies the key removable positions, see page 85.

Dimensions in mm:



Type	A	C1	D	D1	D2	G1	G2	G3	G4	L with ... stages (max. 8) 1	2	3	4	each additional
P110	30	26	29	22.5	16.2	24.2	3.2	17.9	1.7	57	69	81	93	12

Front mounting switches with single hole mounting Ø 16 mm/22.5 mm

- **key operated with front ring**
- **10 A**
- 1 up to 16 contacts
- IP40 (front)

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole Changeover Switch whithout OFF, 10 A, front ring, key operated, key removable at 11h/01h/05h/07h ➔

Type	Switching programme	Mtg. form
P110	61039	R001A
Order code no.	**P110-61039-R001O**	

Type	**Rated data** (IEC 60947)			**Degree of Protection**	**Terminal accessibility**
	Operational current I_e	Operational power (at 380–440 V)		Terminals	
	AC-21A (A)	AC-23A (kW)	AC-3A (kW)		
P110	10	3	2.2	IP20	Terminals accessible from mounting direction

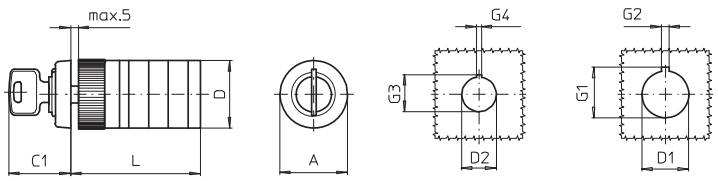
Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61351	1	1	ON-OFF Switch with spring return, 1 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61039	3	6	Changeover Switch without OFF 60°, 3 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61109	1	2	Gang Switch, 2 gangs, 1 pole
61111	3	6	Gang Switch, 2 gangs, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
R001. *	key operated, with front ring black/metal key Ronis cylinder lock L001, 2 keys (other lock types on request)

* The dot in the order code number must be replaced by the classification letter which identifies the key removable positions, see page 85.

Dimensions in mm:



Type	A	C1	D	D1	D2	G1	G2	G3	G4	L with ... stages (max. 8) 1	2	3	4	each additional
P110	30	26	29	22.5	16.2	24.2	3.2	17.9	1.7	57	69	81	93	12

Rotary Cam Switches

Front mounting Single hole mounting ∅ 22.5 mm

Front mounting switches with single hole mounting Ø 22.5 mm

- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP66 (front)

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
4 pole ON-OFF Switch 60°, 20 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
M220	61004	219M1
Order code no.	**M220-61004-219M1**	

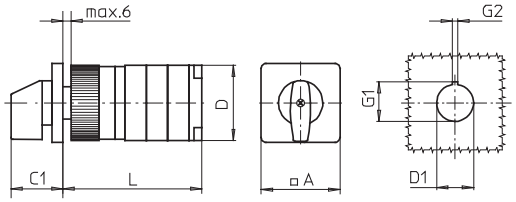
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61004	2	4	ON-OFF Switch 60°, 4 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61313	3	6	Voltmeter Selector Switch with centre OFF, 3 phase line to line + 3 phase line to N
61325	3	6	Ammeter Selector Switch with centre OFF, 3 transformers, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
219M1	 M-handle silver/black

Dimensions in mm:



Type	A	C1	D	D1	G1	G2	L with ... stages (max. 12) 1	2	3	4	5	each additional
P220	48	32	44	22.5	24.2	3.2	66	79	92	105	118	13
P225	48	32	46	22.5	24.2	3.2	70	85	100	115	130	15
M220	48	32	46	22.5	24.2	3.2	59	69	79	89	99	10
M225	48	32	48	22.5	24.2	3.2	62	75	88	101	114	13
T225	48	32	50	22.5	24.2	3.2	64	79	94	109	124	15

Front mounting switches with single hole mounting Ø 22.5 mm

- **with front ring**
- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP66 (front)

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
4 pole Changeover Switch with centre OFF 60°, 20 A, M-handle black/black ➔

Type	Switching programme	Mtg. form
P220	61028	218M1
Order code no.	**P220-61028-218M1**	

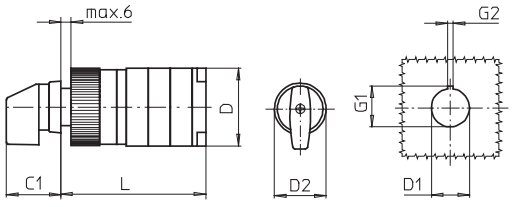
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61028	4	8	Changeover Switch with centre OFF 60°, 4 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61313	3	6	Voltmeter Selector Switch with centre OFF, 3 phase line to line + 3 phase line to N
61325	3	6	Ammeter Selector Switch with centre OFF, 3 transformers, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
218M1	M-handle with front ring black/black

Dimensions in mm:



Type	**C1**	**D**	**D1**	**D2**	**G1**	**G2**	**L with ... stages** (max. 12) **1**	**2**	**3**	**4**	**5**	**each additional**
P220	32	44	22.5	30.5	24.2	3.2	66	79	92	105	118	13
P225	32	46	22.5	30.5	24.2	3.2	70	85	100	115	130	15
M220	32	46	22.5	30.5	24.2	3.2	59	69	79	89	99	10
M225	32	48	22.5	30.5	24.2	3.2	62	75	88	101	114	13
T225	32	50	22.5	30.5	24.2	3.2	64	79	94	109	124	15

Rotary Cam Switches

Front mounting Single hole mounting ∅ 22.5 mm

Front mounting switches with single hole mounting Ø 22.5 mm

- **key operated**
- **20 A / 25 A / 32 A**
- 1 up to 16 contacts
- IP40 (front)

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole Changeover Switch without OFF, 20 A, key operated, key removable at 11h/01h/05h/07h ➔

Type	Switching programme	Mtg. form
M220	61039	S001A
Order code no.	**M220-61039-S001O**	

Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	1 to 16 1 to 16	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	1 to 16 1 to 16	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	1 to 12	32	15	11	IP20	 Terminals accessible laterally

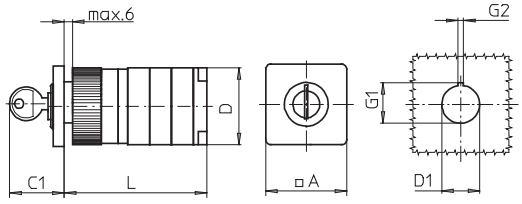
Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61039	3	6	Changeover Switch without OFF 60°, 3 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61313	3	6	Voltmeter Selector Switch with centre OFF, 3 phase line to line + 3 phase line to N
61325	3	6	Ammeter Selector Switch with centre OFF, 3 transformers, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
S001. *	Key operated, silver/metal key Ronis cylinder lock C001, 2 keys (other lock types on request)

* The dot in the order code number must be replaced by the classification letter which identifies the key removable positions, see page 85.

Dimensions in mm:



Type	A	C1	D	D1	G1	G2	L with ... stages (max. 8) 1	2	3	4	5	each additional
P220	48	33	44	22.5	24.2	3.2	66	79	92	105	118	13
P225	48	33	46	22.5	24.2	3.2	70	85	100	115	130	15
M220	48	33	46	22.5	24.2	3.2	59	69	79	89	99	10
M225	48	33	48	22.5	24.2	3.2	62	75	88	101	114	13
T225	48	33	50	22.5	24.2	3.2	64	79	94	109	124	15

Front mounting switches with single hole mounting Ø 22.5 mm

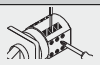
- **key operated with front ring**
- **20 A / 25 A / 32 A**
- 1 up to 16 contacts
- IP40 (front)

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole Changeover Switch without OFF, 20 A, key operated, key removable at 11h/01h/05h/07h ➔

Type	Switching programme	Mtg. form
M220	61039	R001A
Order code no.	**M220-61039-R001O**	

Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	1 to 16 1 to 16	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	1 to 16 1 to 16	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	1 to 12	32	15	11	IP20	 Terminals accessible laterally

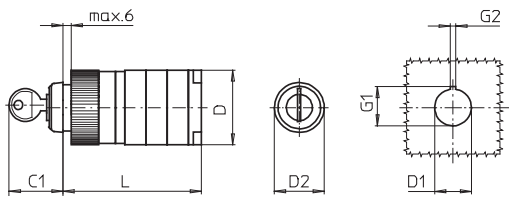
Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61039	3	6	Changeover Switch without OFF 60°, 3 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61313	3	6	Voltmeter Selector Switch with centre OFF, 3 phase line to line + 3 phase line to N
61325	3	6	Ammeter Selector Switch with centre OFF, 3 transformers, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
R001. *	key operated, with front ring black/metal key Ronis cylinder lock C001, 2 keys (other lock types on request)

* The dot in the order code number must be replaced by the classification letter which identifies the key removable positions, see page 85.

Dimensions in mm:



Type	C1	D	D1	D2	G1	G2	L with ... stages (max. 8) 1	2	3	4	5	each additional
P220	33	44	22.5	30.5	24.2	3.2	66	79	92	105	118	13
P225	33	46	22.5	30.5	24.2	3.2	70	85	100	115	130	15
M220	33	46	22.5	30.5	24.2	3.2	59	69	79	89	99	10
M225	33	48	22.5	30.5	24.2	3.2	62	75	88	101	114	13
T225	33	50	22.5	30.5	24.2	3.2	64	79	94	109	124	15

Front mounting switches with single hole mounting Ø 22.5 mm

- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP66 (front)

- Main/Emergency-Off Switch
- Main Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 3 pole Main/Emergency-Off Switch 90°, 20 A, padlock device with M-handle yellow/red ➔	Type	Switching programme	Mtg. form
	M220	61199	206M4
	Order code no.	**M220-61199-206M4**	

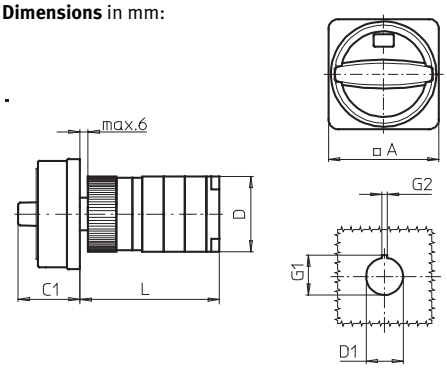
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	 AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61906	3	6	ON-OFF Switch 90°, 6 pole
61919	4	8	ON-OFF Switch 90°, 8 pole, 2 pole early make/late break

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Main/Emergency-Off Switch**	**Mounting form**	**Operator**	**Main Switch**
206N4		padlock device with N-handle yellow/red	**206N1**		padlock device with N-handle black
206M4		padlock device with M-handle yellow/red	**206M1**		padlock device with M-handle black
206V4		padlockable with V-handle yellow/red	**206V1**		padlockable with V-handle silver/black

Dimensions in mm:



Type	Mounting form	A	C1	D	D1	G1	G2	L with … stages (max. 12) 1	2	3	4	5	each additional
P220	206N4/206N1	67	33	44	22.5	24.2	3.2	66	79	92	105	118	13
	206M4/206M1	67	38	44	22.5	24.2	3.2	66	79	92	105	118	13
	206V4/206V1	48	32	44	22.5	24.2	3.2	66	79	92	105	118	13
P225	206N4/206N1	67	33	46	22.5	24.2	3.2	70	85	100	115	130	15
	206M4/206M1	67	38	46	22.5	24.2	3.2	70	85	100	115	130	15
	206V4/206V1	48	32	46	22.5	24.2	3.2	70	85	100	115	130	15
M220	206N4/206N1	67	33	46	22.5	24.2	3.2	59	69	79	89	99	10
	206M4/206M1	67	38	46	22.5	24.2	3.2	59	69	79	89	99	10
	206V4/206V1	48	32	46	22.5	24.2	3.2	59	69	79	89	99	10
M225	206N4/206N1	67	33	48	22.5	24.2	3.2	62	75	88	101	114	13
	206M4/206M1	67	38	48	22.5	24.2	3.2	62	75	88	101	114	13
	206V4/206V1	48	32	48	22.5	24.2	3.2	62	75	88	101	114	13
T225	206N4/206N1	67	33	50	22.5	24.2	3.2	64	79	94	109	124	15
	206M4/206M1	67	38	50	22.5	24.2	3.2	64	79	94	109	124	15
	206V4/206V1	48	32	50	22.5	24.2	3.2	64	79	94	109	124	15

Front mounting switches for flush wall mounting

- **20 A / 25 A**
- 1 up to max. 6 contacts
- IP30 (front)
- for plaster depth box

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 1 pole ON-OFF Switch 90°, 20 A, N-handle silver/white ➔	Type	Switching programme	Mtg. form
	P220	61191	025N3
	Order code no.	**P220-61191-025N3**	

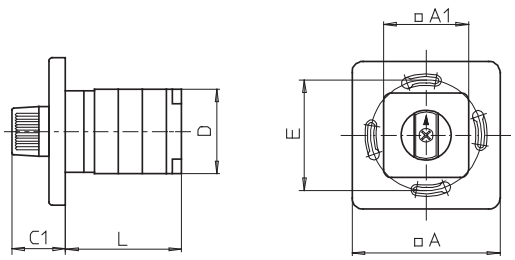
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	 AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	1 to 4 1 to 2	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	1 to 6 1 to 2	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
025N3	 N-handle silver/white

Dimensions in mm:



Type	**A**	**A1**	**C1**	**D**	**E**	**L with ... stages 1**	**2**	**3**
P220	80	46	31	44	60	43	56	-
P225	80	46	31	46	60	47	-	-
M220	80	46	31	46	60	36	46	56
M225	80	46	31	48	60	39	-	-

Base mounting switches with snap on mounting

- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP66 (front)
- Four hole front mounting 36 × 36 mm

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
2 pole Changeover Switch with centre OFF 60°, 20 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
P220	61026	021M1
Order code no.	**P220-61026-021M1**	

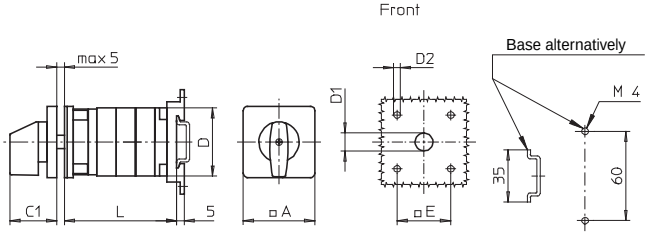
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
021M1	 M-handle silver/black

Dimensions in mm:



Type	**A**	**C1**	**D**	**D1**	**D2**	**E**	**L with ... stages** (max. 12) 1	2	3	4	5	**each additional**
P220	48	32	44	12	4.5	36	46	59	72	85	98	13
P225	48	32	46	12	4.5	36	48	63	78	93	108	15
M220	48	32	46	12	4.5	36	43	53	63	73	83	10
M225	48	32	48	12	4.5	36	46	59	72	85	98	13
T225	48	32	50	12	4.5	36	48	63	78	93	108	15

Base mounting switches with snap on mounting for DIN Rail

- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP40 (front)
- Installation mounting for 45 mm aperture in Panel/Distribution boards

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
1 pole Multi-step Switch with OFF, 20 A, N-handle silver/grey ➔

Type	Switching programme	Mtg. form
P220	61060	026N2
Order code no.	**P220-61060-026N2**	

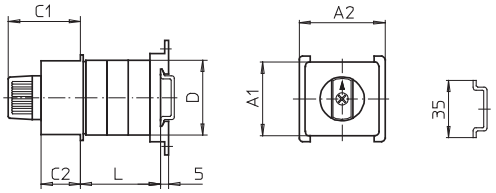
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61060	2	3	Multi-step Switch with OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61313	3	6	Voltmeter Selector Switch with centre OFF, 3 phase line to line + 3 phase line to N
61325	3	6	Ammeter Selector Switch with centre OFF, 3 transformers, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
026N2	 N-handle silver/grey

Dimensions in mm:



Type	A1	A2	C1	C2	D	L with ... stages (max. 12) 1	2	3	4	5	each additional
P220	45	52.2	45	24	44	28	41	54	67	80	13
P225	45	52.2	45	24	46	30	45	60	75	90	15
M220	45	52.2	45	24	46	25	35	45	55	65	10
M225	45	52.2	45	24	48	28	41	54	67	80	13
T225	45	52.2	45	24	50	30	45	60	75	90	15

Base mounting switches with snap on mounting / Door clutch with modular shaft extension

- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP66 (front)
- Four hole front mounting 36 × 36 mm

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
1 pole Multi-step Switch with OFF, 20 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
M220	61061	241M1
Order code no.	**M220-61061-241M1**	

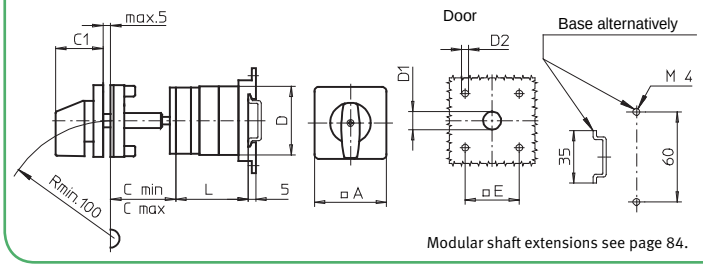
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61061	2	4	Multi-step Switch with OFF, 4 steps, 1 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
241M1	 M-handle silver/black

Dimensions in mm:



Type	A	C_{min}	C_{max}	C1	D	D1	D2	E	L with ... stages (max. 12) 1	2	3	4	each additional
P220	48	42	59	32	44	12	4.5	36	40	53	66	79	13
P225	48	42	59	32	46	12	4.5	36	42	57	72	87	15
M220	48	42	59	32	46	12	4.5	36	37	47	57	67	10
M225	48	42	59	32	48	12	4.5	36	40	53	66	79	13
T225	48	42	59	32	50	12	4.5	36	42	57	72	87	15

Modular shaft extensions see page 84.

Base mounting switches with snap on mounting / Door clutch with modular shaft extension

- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP66 (front)
- Four hole front mounting 36 × 36 mm

- Main/Emergency-Off Switch
- Main Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
4 pole Main/Emergency-Off Switch 90°, 20 A, padlock device with N-handle yellow/red ➔

Type	Switching programme	Mtg. form
M220	61194	232N4
Order code no.	**M220-61194-232N4**	

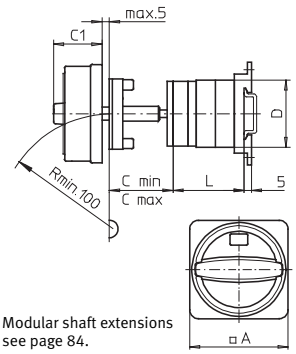
Type	Rated data (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	Degree of Protection Terminals	Terminal accessibility
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	Stages	Contacts	Description
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61906	3	6	ON-OFF Switch 90°, 6 pole
61919	4	8	ON-OFF Switch 90°, 8 pole, 2 pole early make/late break

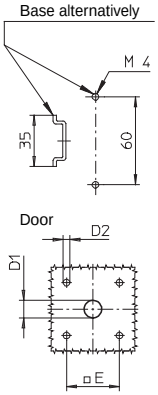
Switching diagrams and further switching programmes from page 56.

Mounting form	Operator	Main/Emergency-Off Switch	Mounting form	Operator	Main Switch
232N4		padlock device with N-handle yellow/red	**232N1**		padlock device with N-handle black
232M4		padlock device with M-handle yellow/red	**232M1**		padlock device with M-handle black
232V4		padlockable with V-handle yellow/red	**232V1**		padlockable with V-handle silver/black

Dimensions in mm:



Modular shaft extensions see page 84.



Type	Mounting form	A	C_{min}	C_{max}	C1	D	D1	D2	E	L with ... stages (max. 12) 1	2	3	4	each additional
P220	232N4/232N1	67	42	59	33	44	15	4.5	36	40	53	66	79	13
	232M4/232M1	67	42	59	38	44	15	4.5	36	40	53	66	79	13
	232V4/232V1	48	42	59	32	44	12	4.5	36	40	53	66	79	13
P225	232N4/232N1	67	42	59	33	46	15	4.5	36	42	57	72	87	15
	232M4/232M1	67	42	59	38	46	15	4.5	36	42	57	72	87	15
	232V4/232V1	48	42	59	32	46	12	4.5	36	42	57	72	87	15
M220	232N4/232N1	67	42	59	33	46	15	4.5	36	37	47	57	67	10
	232M4/232M1	67	42	59	38	46	15	4.5	36	37	47	57	67	10
	232V4/232V1	48	42	59	32	46	12	4.5	36	37	47	57	67	10
M225	232N4/232N1	67	42	59	33	48	15	4.5	36	40	53	66	79	13
	232M4/232M1	67	42	59	38	48	15	4.5	36	40	53	66	79	13
	232V4/232V1	48	42	59	32	48	12	4.5	36	40	53	66	79	13
T225	232N4/232N1	67	42	59	33	50	15	4.5	36	42	57	72	87	15
	232M4/232M1	67	42	59	38	50	15	4.5	36	42	57	72	87	15
	232V4/232V1	48	42	59	32	50	12	4.5	36	42	57	72	87	15

Base mounting switches with snap on mounting / Door interlock with modular shaft extension

- **with N/PE connection link**
- **20 A / 25 A / 32 A**
- 1 up to 24 contacts
- IP66 (front)
- Four hole front mounting 36 × 36 mm

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole ON-OFF Switch 90°, 20 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
M220	61199	242M1
Order code no.	**M220-61199-242M1**	

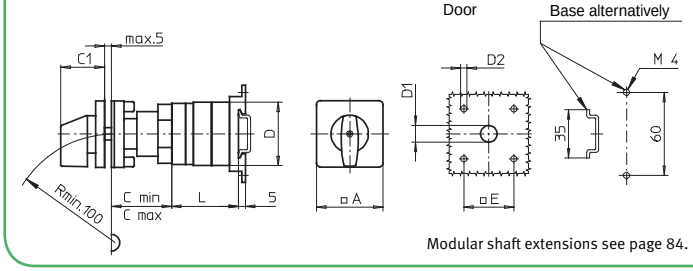
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
242M1	 M-handle silver/black

Dimensions in mm:



Type	A	C_{min}	C_{max}	C1	D	D1	D2	E	L with ... stages (max. 12) 1	2	3	4	each additional
P220	48	42	57	32	44	12	4.5	36	40	53	66	79	13
P225	48	42	57	32	46	12	4.5	36	42	57	72	87	15
M220	48	42	57	32	46	12	4.5	36	37	47	57	67	10
M225	48	42	57	32	48	12	4.5	36	40	53	66	79	13
T225	48	42	57	32	50	12	4.5	36	42	57	72	87	15

Modular shaft extensions see page 84.

Base mounting switches with snap on mounting / Door interlock with modular shaft extension

- **with N/PE connection link**
- **20 A / 25 A / 32 A**
- IP66 (front)
- 1 up to 24 contacts
- Four hole front mounting 36 × 36 mm

- Main/Emergency-Off Switch
- Main Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 4 pole Main Switch 90°, 20 A, padlock device with M-handle black ➔	Type	Switching programme	Mtg. form
	P220	61194	234M1
	Order code no.	**P220-61194-234M1**	

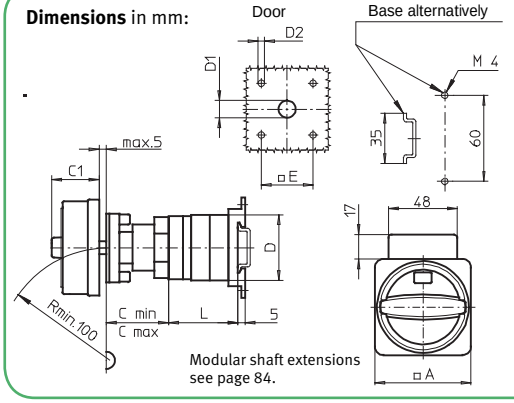
Type	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	 AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	20 25	7.5 11	5.5 7.5	IP1B IP1B	 Terminals accessible from mounting direction
M220 **M225**	20 25	7.5 11	5.5 7.5	IP20 IP20	 Terminals accessible laterally
T225	32	15	11	IP20	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61906	3	6	ON-OFF Switch 90°, 6 pole
61919	4	8	ON-OFF Switch 90°, 8 pole, 2 pole early make/late break

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Main/Emergency-Off Switch**	**Mounting form**	**Operator**	**Main Switch**
234N4		padlock device with N-handle yellow/red	**234N1**		padlock device with N-handle black
234M4		padlock device with M-handle yellow/red	**234M1**		padlock device with M-handle black
234V4		padlockable with V-handle yellow/red	**234V1**		padlockable with V-handle silver/black

Dimensions in mm:



Modular shaft extensions see page 84.

Type	**Mounting form**	**A**	**C_{min}**	**C_{max}**	**C1**	**D**	**D1**	**D2**	**E**	**L with ... stages** (max. 12) 1	2	3	4	**each additional**
P220	234N4/234N1	67	42	57	33	44	15	4.5	36	40	53	66	79	13
	234M4/234M1	67	42	57	38	44	15	4.5	36	40	53	66	79	13
	234V4/234V1	48	42	57	32	44	12	4.5	36	40	53	66	79	13
P225	234N4/234N1	67	42	57	33	46	15	4.5	36	42	57	72	87	15
	234M4/234M1	67	42	57	38	46	15	4.5	36	42	57	72	87	15
	234V4/234V1	48	42	57	32	46	12	4.5	36	42	57	72	87	15
M220	234N4/234N1	67	42	57	33	46	15	4.5	36	37	47	57	67	10
	234M4/234M1	67	42	57	38	46	15	4.5	36	37	47	57	67	10
	234V4/234V1	48	42	57	32	46	12	4.5	36	37	47	57	67	10
M225	234N4/234N1	67	42	57	33	48	15	4.5	36	40	53	66	79	13
	234M4/234M1	67	42	57	38	48	15	4.5	36	40	53	66	79	13
	234V4/234V1	48	42	57	32	48	12	4.5	36	40	53	66	79	13
T225	234N4/234N1	67	42	57	33	50	15	4.5	36	42	57	72	87	15
	234M4/234M1	67	42	57	38	50	15	4.5	36	42	57	72	87	15
	234V4/234V1	48	42	57	32	50	12	4.5	36	42	57	72	87	15

Base mounting switches with four hole mounting 68 × 68 mm

- **50 A / 63 A**
- 1 up to 24 contacts
- IP55 (front)
- Four hole front mounting 48 × 48 mm

- ON-OFF Switch
- Multi-step Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 3 pole Changeover Switch with centre OFF 60°, 50 A, M-handle silver/black ➔	Type	Switching programme	Mtg. form
	S432	61027	002M1
	Order code no.	**S432-61027-002M1**	

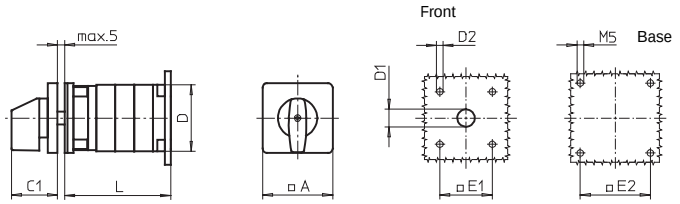
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S432 **S440**	50 63	22 30	22 30	Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
002M1	M-handle silver/black

Dimensions in mm:



Type	**A**	**C1**	**D**	**D1**	**D2**	**E1**	**E2**	**L with ... stages (max. 12)** 1	2	3	4	5	6	**each additional**
S432	64	39	65	12	5	48	68	56	74	92	110	128	146	18
S440	64	39	70	12	5	48	68	61	82	103	124	145	166	21

Base mounting switches with four hole mounting 68 × 68 mm

- **80 A / 100 A / 160 A**
- 1 up to 24 contacts
- IP55 (front)
- Four hole front mounting 68 × 68 mm

- ON-OFF Switch
- Multi-step Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole Changeover Switch with centre OFF 60°, 80 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
S606	61027	002M1
Order code no.	**S606-61027-002M1**	

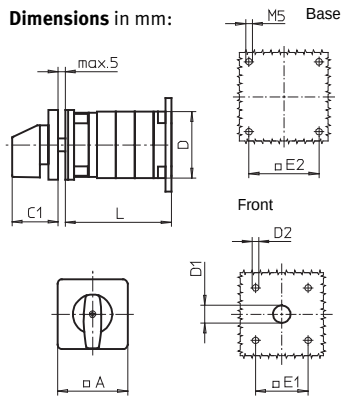
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S606	80	45	30	 Terminals accessible laterally
S608	100	55	37	
S612	160	75	45	

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Mounting form**	**Operator**
002M1	 M-handle silver/black	**002G1**	 G-handle silver/black

Dimensions in mm:



Type	**Mtg. form**	**A**	**C1**	**D**	**D1**	**D2**	**E1**	**E2**	**L with ... stages** (max. 12) 1	2	3	4	**each additional**
S606	002M1	88	52	84	15	5.5	68	68	64	86	108	130	22
	002G1	88	66	84	15	5.5	68	68	64	86	108	130	22
S608	002M1	88	52	88	15	5.5	68	68	71	97	123	149	26
	002G1	88	66	88	15	5.5	68	68	71	97	123	149	26
S612	002M1	88	52	88	15	5.5	68	68	77	109	141	173	32
	002G1	88	66	88	15	5.5	68	68	77	109	141	173	32

Rotary Cam Switches

Base mounting Four hole mounting 68 × 68 mm / Door clutch

Base mounting switches with four hole mounting 68 × 68 mm / Door clutch

- **50 A / 63 A**
- IP55 (front)
- Four hole front mounting 48 × 48 mm
- 1 up to 24 contacts

- ON-OFF Switch
- Multi-step Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole ON-OFF Switch 60°, 50 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
S432	61006	041M1
Order code no.	**S432-61006-041M1**	

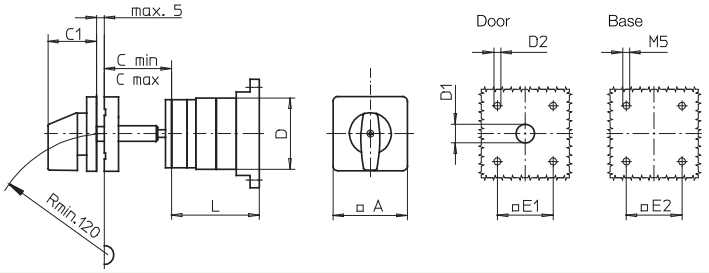
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S432	50	22	22	 Terminals accessible laterally
S440	63	30	30	

Switching programme	Stages	Contacts	Description
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61006	3	6	ON-OFF Switch 60°, 6 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
041M1	 M-handle silver/black

Dimensions in mm:



Type	A	C_{min}	C_{max}	C1	D	D1	D2	E1	E2	L with ... stages (max. 12) 1	2	3	4	each additional
S432	64	42	56	39	65	12	5	48	68	51	69	87	105	18
S440	64	42	56	39	70	12	5	48	68	56	77	98	119	21

Base mounting switches with four hole mounting 68 × 68 mm / Door clutch

- **80 A / 100 A / 160 A**
- 1 up to 24 contacts
- IP55 (front)
- Four hole front mounting 68 × 68 mm

- ON-OFF Switch
- Changeover Switch
- Multi-step Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 3 pole ON-OFF Switch 90°, 80 A, M-handle silver/black ➔	Type	Switching programme	Mtg. form
	S606	61199	041M1
	Order code no.	**S606-61199-041M1**	

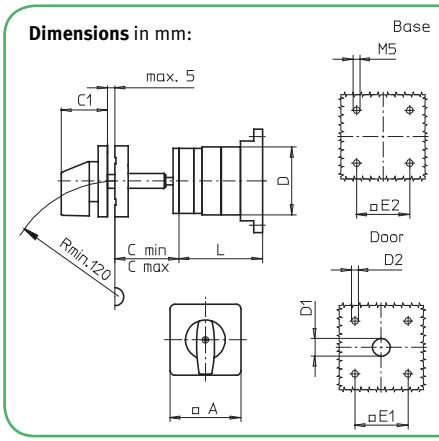
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S606 **S608** **S612**	80 100 160	45 55 75	30 37 45	Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Mounting form**	**Operator**
041M1	M-handle silver/black	**041G1**	G-handle silver/black

Dimensions in mm:



Type	Mtg. form	A	C_{min}	C_{max}	C1	D	D1	D2	E1	E2	L with ... stages (max. 12) 1	2	3	4	each additional
S606	041M1	88	48	60	52	84	18	5.5	68	68	58	80	107	129	22
	041G1	88	48	60	66	84	18	5.5	68	68	58	80	107	129	22
S608	041M1	88	48	60	52	88	18	5.5	68	68	65	91	117	143	26
	041G1	88	48	60	66	88	18	5.5	68	68	65	91	117	143	26
S612	041M1	88	48	60	52	88	18	5.5	68	68	71	103	135	167	32
	041G1	88	48	60	66	88	18	5.5	68	68	71	103	135	167	32

Base mounting switches with four hole mounting 68 × 68 mm / Door interlock

- **50 A / 63 A**
- 1 up to 24 contacts
- IP55 (front)
- Four hole front mounting 48 × 48 mm

- ON-OFF Switch
- Changeover Switch
- Multi-step Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 3 pole ON-OFF Switch 90°, 50 A, M-handle silver/black ➔	Type	Switching programme	Mtg. form
	S432	61199	042M1
	Order code no.	**S432-61199-042M1**	

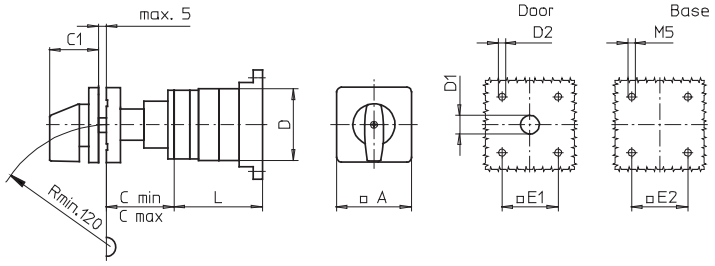
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S432 **S440**	50 63	22 30	22 30	Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
042M1	M-handle silver/black

Dimensions in mm:



Type	A	C_{min}	C_{max}	C1	D	D1	D2	E1	E2	L with ... stages (max. 12) 1	2	3	4	each additional
S432	64	42	56	39	65	15	5	48	68	51	69	87	105	18
S440	64	42	56	39	70	15	5	48	68	56	77	98	119	21

Base mounting switches with four hole mounting 68 × 68 mm / Door interlock

- **80 A / 100 A / 160 A**
- 1 up to 24 contacts
- IP55 (front)
- Four hole front mounting 68 × 68 mm

- ON-OFF Switch
- Changeover Switch
- Multi-step Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole ON-OFF Switch 90°, 80 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
S606	61199	042M1
Order code no.	**S606-61199-042M1**	

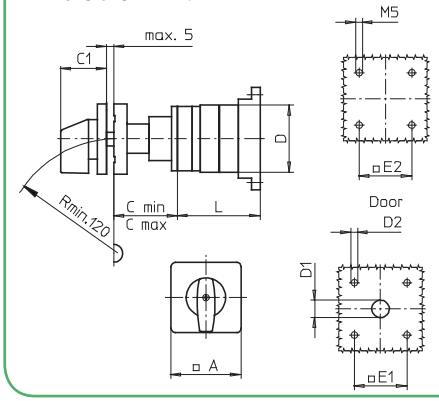
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S606	80	45	30	 Terminals accessible laterally
S608	100	55	37	
S612	160	75	45	

Switching programme	Stages	Contacts	Description
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Mounting form**	**Operator**
042M1	 M-handle silver/black	**042G1**	 G-handle silver/black

Dimensions in mm:



Type	Mtg. form	A	C_{min}	C_{max}	C1	D	D1	D2	E1	E2	L with ... stages (max. 12) 1	2	3	4	each additional
S606	042M1	88	48	60	52	84	18	5.5	68	68	58	80	107	129	22
	042G1	88	48	60	66	84	18	5.5	68	68	58	80	107	129	22
S608	042M1	88	48	60	52	88	18	5.5	68	68	65	91	117	143	26
	042G1	88	48	60	66	88	18	5.5	68	68	65	91	117	143	26
S612	042M1	88	48	60	52	88	18	5.5	68	68	71	103	135	167	32
	042G1	88	48	60	66	88	18	5.5	68	68	71	103	135	167	32

Base mounting switches with four hole mounting 104 × 104 mm

- **315 A**
- 1 up to 24 contacts
- IP55 (front)
- Four hole front mounting 104 × 104 mm

- ON-OFF Switch
- Multi-step Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 2 pole Changeover Switch with centre OFF 60°, 315 A, G-handle silver/black ➔	Type	Switching programme	Mtg. form
	S825	61026	002G1
	Order code no.	**S825-61026-002G1**	

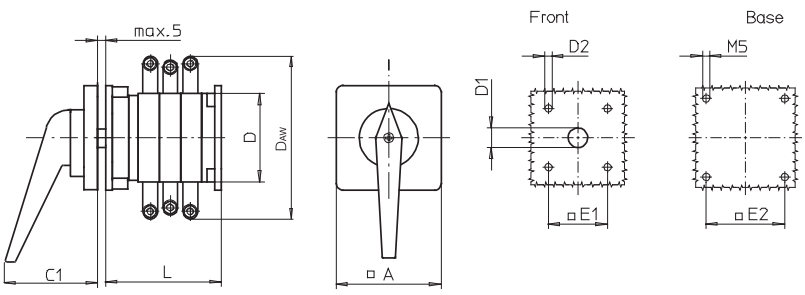
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S825	315	132	55	Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
002G1	G-handle silver/black

Dimensions in mm:



Type	**A**	**C1**	**D**	**D_{AW}**	**D1**	**D2**	**E1**	**E2**	**L with ... stages (max. 12) 1**	**2**	**3**	**4**	**5**	**6**	**each additional**
S825	130	74	120	210	20	5.5	104	104	96	132	168	204	240	276	36

Base mounting switches with four hole mounting 104 × 104 mm / Door clutch



- **315 A**
- 1 up to 24 contacts
- IP55 (front)
- Four hole front mounting 104 × 104 mm

- ON-OFF Switch
- Changeover Switch
- Multi-step Switch
- Motor Switch

Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole Changeover Switch with centre OFF 60°, 315 A, G-handle silver/black ➔

Type	Switching programme	Mtg. form
S825	61027	041G1
Order code no.	**S825-61027-041G1**	

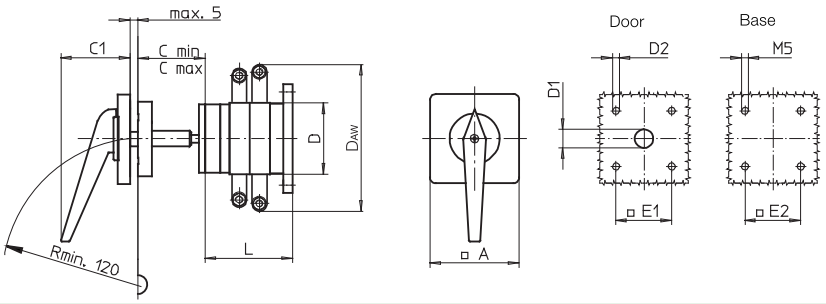
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S825	315	132	55	Terminals accessible laterally

Switching programme	Stages	Contacts	Description
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
041G1	G-handle silver/black

Dimensions in mm:



Type	A	C_{min}	C_{max}	C1	D	D_{AW}	D1	D2	E1	E2	L with ... stages (max. 12) 1	2	3	4	each additional
S825	130	75	102	74	120	210	20	5.5	104	104	90	126	162	198	36

Base mounting switches with four hole mounting 104 × 104 mm / Door interlock

- **315 A**
- 1 up to 24 contacts
- IP55 (front)
- Four hole front mounting 104 × 104 mm

- ON-OFF Switch
- Changeover Switch
- Multi-step Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 3 pole ON-OFF Switch 90°, 315 A, G-handle silver/black ➔	Type	Switching programme	Mtg. form
	S825	61199	042G1
	Order code no.	**S825-61199-042G1**	

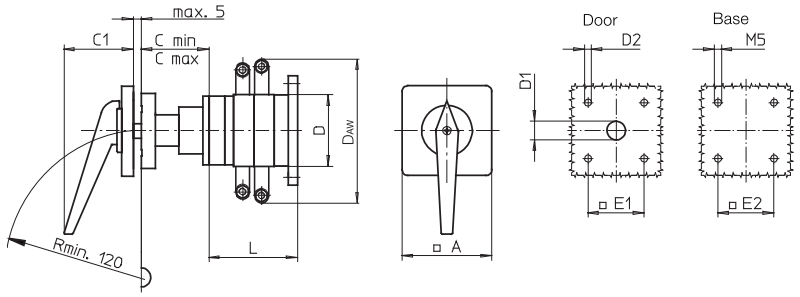
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
S825	315	132	55	 Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
042G1	 G-handle silver/black

Dimensions in mm:



Type	**A**	**C_{min}**	**C_{max}**	**C1**	**D**	**D_{AW}**	**D1**	**D2**	**E1**	**E2**	**L with ... stages (max. 12) 1**	**2**	**3**	**4**	**each additional**
S825	130	75	102	74	120	210	20	5.5	104	104	90	126	162	198	36

Enclosed Switches with insulated enclosure 68 × 68 × 53 mm

- **20 A**
- 1 up to 4 contacts
- IP65
- Insulated polycarbonate enclosure

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
1 pole Multi-step Switch without OFF, 20 A, N-handle silver/black ➔

Type	Switching programme	Mtg. form
M220	61049	107M1
Order code no.	**M220-61049-107M1**	

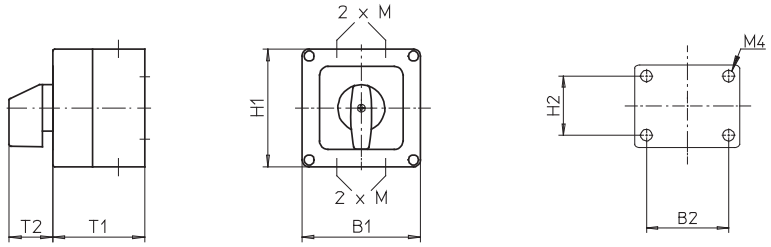
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
M220	20	7.5	5.5	Terminals accessible laterally

Switching programme	Stages	Contacts	Description
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61003	2	3	ON-OFF Switch 60°, 3 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61210	2	4	Motor Reversing Switch, 2 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
107M1	M-handle silver/black

Dimensions in mm:



Type	H1	B1	T1	T2	2 × M	H2	B2
M220	68	68	53	25	16	36	50

Enclosed Switches with insulated enclosure 68 × 68 × 53 mm

- **20 A**
- 1 up to 4 contacts
- IP65
- Insulated polycarbonate enclosure

- Main/Emergency-Off Switch
- Main Switch



Setup of order code number: Type - Switching programme - Mounting form Ordering example: 2 pole Main/Emergency-Off Switch 90°, 20 A, padlock device with M-handle yellow/red ➔	Type	Switching programme	Mtg. form
	M220	61192	117M4
	Order code no.	**M220-61192-117M4**	

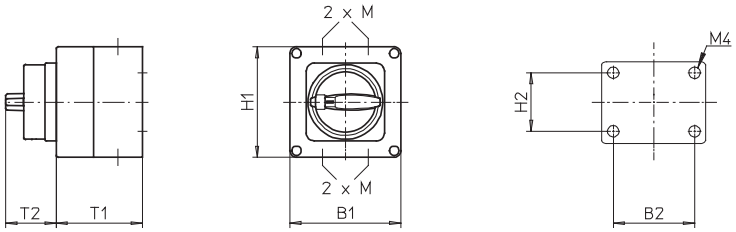
Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
M220	20	7.5	5.5	Terminals accessible laterally

Switching programme	**Stages**	**Contacts**	**Description**
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61199	2	3	ON-OFF Switch 90°, 3 pole
61194	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Main/Emergency-Off Switch**	**Mounting form**	**Operator**	**Main Switch**
117M4		padlock device with M-handle yellow/red	**117M1**		padlock device with M-handle black

Dimensions in mm:



Type	H1	B1	T1	T2	2 × M	H2	B2
M220	68	68	53	31	16	36	50

Enclosed Switches with insulated enclosure 100 × 80 × 65 mm

- **20 A**
- 1 up to max. 4 contacts
- IP66
- Insulated polycarbonate enclosure

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
2 pole Changeover Switch without OFF 60°, 20 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
M220	61038	076M1
Order code no.	**M220-61038-076M1**	

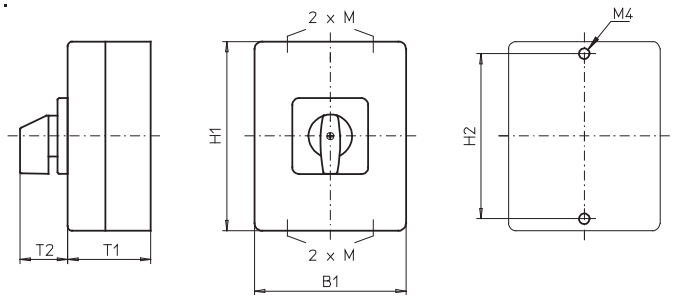
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Terminal accessibility**
P220	1 to 2	20	7.5	5.5	Terminals accessible from mounting direction
M220	1 to 4	20	7.5	5.5	Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61191	for type P220	1	1	ON-OFF Switch 90°, 1 pole
61192	for type P220	1	2	ON-OFF Switch 90°, 2 pole
61001	for type P220	1	1	ON-OFF Switch 60°, 1 pole
61002	for type P220	1	2	ON-OFF Switch 60°, 2 pole
61025	for type P220	1	2	Changeover Switch with centre OFF 60°, 1 pole
61037	for type P220	1	2	Changeover Switch without OFF 60°, 1 pole
61003	for type M220	2	3	ON-OFF Switch 60°, 3 pole
61026	for type M220	2	4	Changeover Switch with centre OFF 60°, 2 pole
61038	for type M220	2	4	Changeover Switch without OFF 60°, 2 pole
61049	for type M220	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	for type M220	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61210	for type M220	2	4	Motor Reversing Switch, 2 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
076M1	M-handle silver/black

Dimensions in mm:



Type	H1	B1	T1	T2	2 × M	H2
P220	100	80	65	32	20	90
M220	100	80	65	32	20	90

Enclosed Switches with insulated enclosure 100 × 80 × 65 mm

- **20 A**
- 1 up to max. 4 contacts
- IP66
- Insulated polycarbonate enclosure

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
2 pole Changeover Switch 90°, 20 A, padlockable with V-handle silver/black ➔

Type	Switching programme	Mtg. form
M220	61152	076V1
Order code no.	**M220-61152-076V1**	

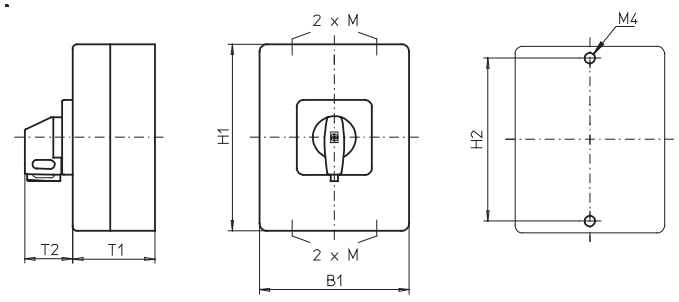
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Terminal accessibility**
P220	1 to 2	20	7.5	5.5	Terminals accessible from mounting direction
M220	1 to 4	20	7.5	5.5	Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61001	for type P220	1	1	ON-OFF Switch 60°, 1 pole
61002	for type P220	1	2	ON-OFF Switch 60°, 2 pole
61025	for type P220	1	2	Changeover Switch with centre OFF 60°, 1 pole
61151	for type P220	1	2	Changeover Switch with centre OFF 90°, 1 pole
61003	for type M220	2	3	ON-OFF Switch 60°, 3 pole
61026	for type M220	2	4	Changeover Switch with centre OFF 60°, 2 pole
61151	for type M220	1	2	Changeover Switch with centre OFF 90°, 1 pole
61152	for type M220	2	4	Changeover Switch with centre OFF 90°, 2 pole
61210	for type M220	2	4	Motor Reversing Switch, 2 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Padlockable options**
076V1	padlockable with V-handle silver/black	padlockable 12h
078V1	padlockable with V-handle silver/black	3 positions padlockable (9h/12h/03h) (only for Changeover Switches with 90° switching angle)

Dimensions in mm:



Type	H1	B1	T1	T2	2 × M	H2
P220	100	80	65	32	20	90
M220	100	80	65	32	20	90

Enclosed Switches with insulated enclosure 100 × 80 × 65 mm

- **20 A**
- 1 up to max. 4 contacts
- IP66
- Insulated polycarbonate enclosure

- Main/Emergency-Off Switch
- Main Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
2 pole Main Switch 90°, 20 A, padlock device with N-handle yellow/red ➔

Type	Switching programme	Mtg. form
P220	61192	077N4
Order code no.	**P220-61192-077N4**	

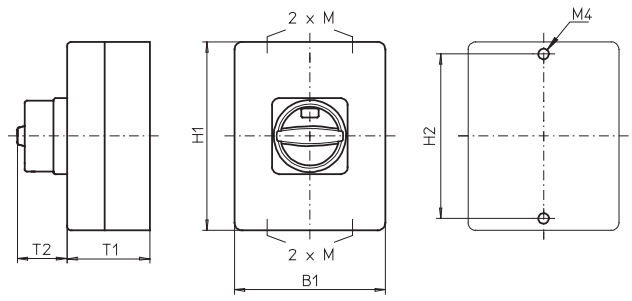
Type	Contacts	**Rated data** (IEC 60947)			**Terminal accessibility**	
		Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)		
P220	1 to 2	20	7.5	5.5		Terminals accessible from mounting direction
M220	1 to 4	20	7.5	5.5		Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61191	for type P220	1	1	ON-OFF Switch 90°, 1 pole
61192	for type P220	1	2	ON-OFF Switch 90°, 2 pole
61191	for type M220	1	1	ON-OFF Switch 90°, 1 pole
61192	for type M220	1	2	ON-OFF Switch 90°, 2 pole
61199	for type M220	2	3	ON-OFF Switch 90°, 3 pole
61194	for type M220	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Main/Emergency-Off Switch**	**Mounting form**	**Operator**	**Main Switch**
077N4		padlock device with N-handle yellow/red	**077N1**		padlock device with N-handle black
077M4		padlock device with M-handle yellow/red	**077M1**		padlock device with M-handle black
077V4		padlockable with V-handle yellow/red	**077V1**		padlockable with V-handle silver/black

Dimensions in mm:



Mounting form	H1	B1	T1	T2	2 × M	H2
077N4/077N1	100	80	65	33	20	90
077M4/077M1	100	80	65	38	20	90
077V4/077V1	100	80	65	32	20	90

Enclosed Switches with insulated enclosure 100 × 80 × 85 mm

- **20 A**
- 3 up to max. 8 contacts
- IP66
- Insulated polycarbonate enclosure

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
4 pole Changeover Switch without OFF 60°, 20 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
M220	61040	176M1
Order code no.	**M220-61040-176M1**	

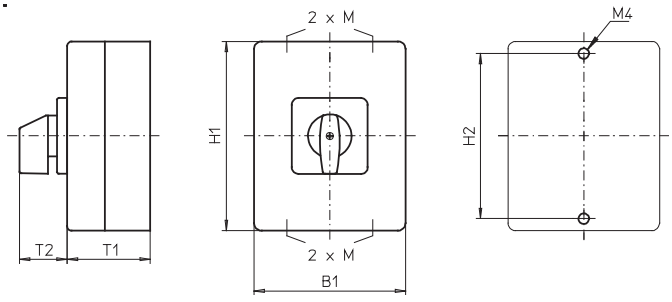
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Terminal accessibility**
P220	3 to 6	20	7.5	5.5	 Terminals accessible from mounting direction
M220	5 to 8	20	7.5	5.5	 Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61199	for type P220	2	3	ON-OFF Switch 90°, 3 pole
61194	for type P220	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61026	for type P220	2	4	Changeover Switch with centre OFF 60°, 2 pole
61038	for type P220	2	4	Changeover Switch without OFF 60°, 2 pole
61049	for type P220	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61211	for type P220	3	5	Motor Reversing Switch, 3 pole
61906	for type M220	3	6	ON-OFF Switch 90°, 6 pole
61919	for type M220	4	8	ON-OFF Switch 90°, 8 pole, 2 pole early make/late break
61028	for type M220	4	8	Changeover Switch with centre OFF 60°, 4 pole
61039	for type M220	3	6	Changeover Switch without OFF 60°, 3 pole
61040	for type M220	4	8	Changeover Switch without OFF 60°, 4 pole
61211	for type M220	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
176M1	 M-handle silver/black

Dimensions in mm:



Type	H1	B1	T1	T2	2 × M	H2
P220	100	80	85	32	20	90
M220	100	80	85	32	20	90

Enclosed Switches with insulated enclosure 100 × 80 × 85 mm

- **20 A**
- 3 up to max. 8 contacts
- IP66
- Insulated polycarbonate enclosure

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
2 pole Changeover Switch 90°, 20 A, padlockable with V-handle silver/black ➔

Type	Switching programme	Mtg. form
P220	61152	178V1
Order code no.	**P220-61152-178V1**	

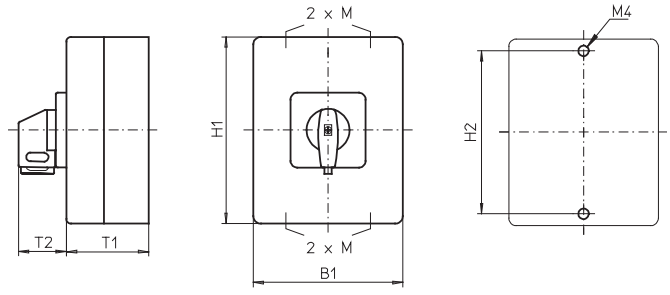
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Terminal accessibility**
P220	1 to 2	20	7.5	5.5	Terminals accessible from mounting direction
M220	1 to 4	20	7.5	5.5	Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61003	for type P220	2	3	ON-OFF Switch 60°, 3 pole
61027	for type P220	3	6	Changeover Switch with centre OFF 60°, 3 pole
61152	for type P220	2	4	Changeover Switch with centre OFF 90°, 2 pole
61153	for type P220	3	6	Changeover Switch with centre OFF 90°, 3 pole
61211	for type P220	3	5	Motor Reversing Switch, 3 pole
61027	for type M220	3	6	Changeover Switch with centre OFF 60°, 3 pole
61028	for type M220	4	8	Changeover Switch with centre OFF 60°, 4 pole
61153	for type M220	3	6	Changeover Switch with centre OFF 90°, 3 pole
61211	for type M220	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Padlockable options**
176V1	padlockable with V-handle silver/black	padlockable 12h
178V1	padlockable with V-handle silver/black	3 positions padlockable (9h/12h/03h) (only for Changeover Switches with 90° switching angle)

Dimensions in mm:



Type	H1	B1	T1	T2	2 × M	H2
P220	100	80	85	32	20	90
M220	100	80	85	32	20	90

Enclosed Switches with insulated enclosure 100 × 80 × 85 mm

- **key operated**
- **20 A**
- 1 up to 6 contacts
- IP40
- Insulated polycarbonate enclosure

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole Changeover Switch with centre OFF 60°, 20 A, key operated, key removable at 12h ➔

Type	Switching programme	Mtg. form
M220	61027	E001B
Order code no.	**M220-61027CE001B**	

Type	**Rated data** (IEC 60947)			**Terminal accessibility**
	Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	
M220	20	7.5	5.5	Terminals accessible laterally

Switching programme	Stages	Contacts	Description
61191	1	1	ON-OFF Switch 90°, 1 pole
61192	1	2	ON-OFF Switch 90°, 2 pole
61001	1	1	ON-OFF Switch 60°, 1 pole
61002	1	2	ON-OFF Switch 60°, 2 pole
61025	1	2	Changeover Switch with centre OFF 60°, 1 pole
61026	2	4	Changeover Switch with centre OFF 60°, 2 pole
61027	3	6	Changeover Switch with centre OFF 60°, 3 pole
61037	1	2	Changeover Switch without OFF 60°, 1 pole
61038	2	4	Changeover Switch without OFF 60°, 2 pole
61049	2	3	Multi-step Switch without OFF, 3 steps, 1 pole
61050	2	4	Multi-step Switch without OFF, 4 steps, 1 pole
61211	3	5	Motor Reversing Switch, 3 pole

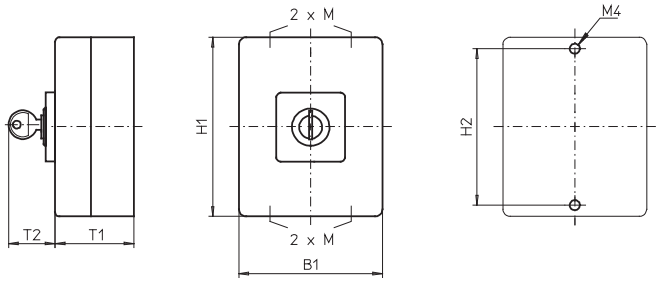
Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
E001. *	Key operated, silver/metal key Ronis cylinder lock C001, 2 keys (other lock types on request)

* The dot in the order code number must be replaced by the classification letter which identifies the key removable positions, see page 85.

Dimensions in mm:

.



Type	H1	B1	T1	T2	2 × M	H2
M220	100	80	85	33	20	90

Enclosed Switches with insulated enclosure 100 × 80 × 85 mm

- **20 A**
- 3 up to max. 8 contacts
- IP66
- Insulated polycarbonate enclosure

- Main/Emergency-Off Switch
- Main Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
6 pole ON-OFF Switch 90°, 20 A, padlock device with N-handle yellow/red ➔

Type	Switching programme	Mtg. form
M220	61906	177N4
Order code no.	**M220-61906-177N4**	

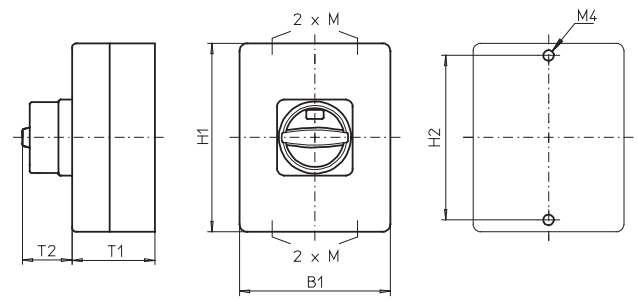
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Terminal accessibility**
P220	3 to 6	20	7.5	5.5	Terminals accessible from mounting direction
M220	5 to 8	20	7.5	5.5	Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61199	for type P220	2	3	ON-OFF Switch 90°, 3 pole
61194	for type P220	2	4	ON-OFF Switch 90°, 4 pole, 1 pole early make/late break
61906	for type P220	3	6	ON-OFF Switch 90°, 6 pole
61906	for type M220	3	6	ON-OFF Switch 90°, 6 pole
61919	for type M220	4	8	ON-OFF Switch 90°, 8 pole, 2 pole early make/late break

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Main/Emergency-Off Switch**	**Mounting form**	**Operator**	**Main Switch**
177N4		padlock device with N-handle yellow/red	**177N1**		padlock device with N-handle black
177M4		padlock device with M-handle yellow/red	**177M1**		padlock device with M-handle black
177V4		padlockable with V-handle yellow/red	**177V1**		padlockable with V-handle silver/black

Dimensions in mm:



Mounting form	**H1**	**B1**	**T1**	**T2**	**2 × M**	**H2**
177N4/177N1	100	80	85	33	20	90
177M4/177M1	100	80	85	38	20	90
177V4/177V1	100	80	85	32	20	90

Enclosed Switches with insulated enclosure 125 × 100 × 133 mm

- **without cover interlock**
- **20 A / 25 A / 32 A**
- 1 up to max. 16 contacts
- IP66
- Insulated polycarbonate enclosure

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
Reversing Star-Delta Switch, 25 A, M-handle silver/black ➔

Type	Switching programme	Mtg. form
M225	61203	276M1
Order code no.	**M225-61203-276M1**	

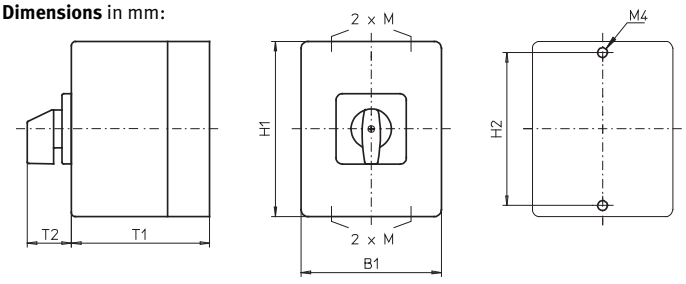
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	1 to 12 1 to 10	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible from mounting direction
M220 **M225**	1 to 16 1 to 12	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible laterally
T225	1 to 10	32	15	11	IP66	 Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61906	for types P220/P225	3	6	ON-OFF Switch 90°, 6 pole
61905	for types P220/P225	3	5	ON-OFF Switch 90°, 5 pole, 3 pole early make/late break
61029	for types P220/P225	5	10	Changeover Switch with centre OFF 60°, 5 pole
61089	for types P220/P225	5	9	Multi-step Switch without OFF, 3 steps, 3 pole
61211	for types P220/P225	3	5	Motor Reversing Switch, 3 pole
61203	for types P220/P225	5	10	Reversing Star-Delta Switch
61906	for types M220/M225/T225	3	6	ON-OFF Switch 90°, 6 pole
61919	for types M220/M225/T225	4	8	ON-OFF Switch 90°, 8 pole, 2 pole early make/late break
61030	for types M220/M225	6	12	Changeover Switch with centre OFF 60°, 6 pole
61041	for types M220/M225/T225	5	10	Changeover Switch without OFF 60°, 5 pole
61040	for types M220/M225/T225	4	8	Changeover Switch without OFF 60°, 4 pole
61211	for types M220/M225/T225	3	5	Motor Reversing Switch, 3 pole
61203	for types M220/M225/T225	5	10	Reversing Star-Delta Switch

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**
276M1	 M-handle silver/black

Dimensions in mm:



Type	H1	B1	T1	T2	2 × M	H2
P220	125	100	133	32	20/25	115
P225	125	100	133	32	20/25	115
M220	125	100	133	32	20/25	115
M225	125	100	133	32	20/25	115
T225	125	100	133	32	20/25	115

Enclosed Switches with insulated enclosure 125 × 100 × 133 mm

- **without cover interlock**
- **20 A / 25 A / 32 A**
- 1 up to max. 16 contacts
- IP66
- Insulated polycarbonate enclosure

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
4 pole Changeover Switch 90°, 25 A, padlockable with V-handle silver/black ➔

Type	Switching programme	Mtg. form
P220	61154	276V1
Order code no.	**P220-61154-276V1**	

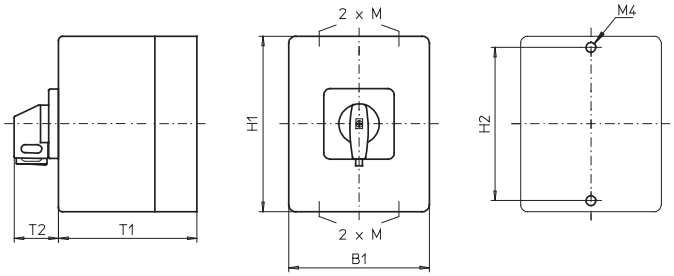
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	1 to 12 1 to 10	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible from mounting direction
M220 **M225**	1 to 16 1 to 12	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible laterally
T225	1 to 10	32	15	11	IP66	 Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61027	for types P220/P225	3	6	Changeover Switch with centre OFF 60°, 3 pole
61154	for types P220/P225	4	8	Changeover Switch with centre OFF 90°, 4 pole
61363	for types P220/P225	3	6	Changeover Switch with centre OFF 60°, 3 pole with spring return
61211	for types P220/P225	3	5	Motor Reversing Switch, 3 pole
61029	for types M220/M225/T225	5	10	Changeover Switch with centre OFF 60°, 5 pole
61032	for types M220/M225	8	16	Changeover Switch with centre OFF 60°, 8 pole
61008	for types M220/M225/T225	4	8	ON-OFF Switch 60°, 8 pole
61217	for types M220/M225	6	12	Reversing Multi-Speed Switch, single winding, 2 speeds

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**		**Padlockable options**
276V1		padlockable with V-handle silver/black	padlockable 12h

Dimensions in mm:



Type	H1	B1	T1	T2	2 × M	H2
P220	125	100	133	32	20/25	115
P225	125	100	133	32	20/25	115
M220	125	100	133	32	20/25	115
M225	125	100	133	32	20/25	115
T225	125	100	133	32	20/25	115

Enclosed Switches with insulated enclosure 125 × 100 × 133 mm

- **with cover interlock, interlocked in ON positions**
- **20 A / 25 A / 32 A**
- 1 up to max. 12 contacts
- IP66
- Insulated polycarbonate enclosure

- Control Switch
- ON-OFF Switch
- Multi-step Switch
- Instrument Switch
- Changeover Switch
- Motor Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
3 pole Motor Reversing Switch, 32 A, padlockable with V-handle silver/black ➔

Type	Switching programme	Mtg. form
T225	61154	273V1
Order code no.	**T225-61154-273V1**	

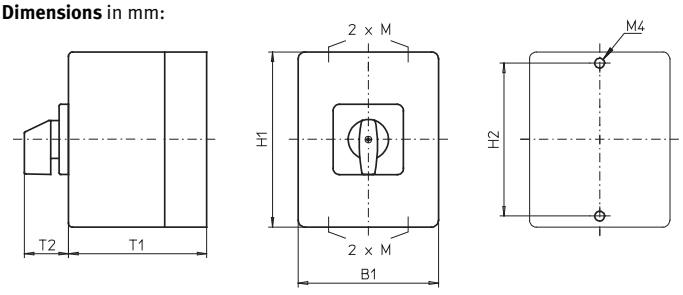
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	1 to 10 1 to 8	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible from mounting direction
M220 **M225**	1 to 12 1 to 10	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible laterally
T225	1 to 8	32	15	11	IP66	 Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61008	for types P220/P225	4	8	ON-OFF Switch 60°, 8 pole
61027	for types P220/P225	3	6	Changeover Switch with centre OFF 60°, 3 pole
61028	for types P220/P225	4	8	Changeover Switch with centre OFF 60°, 4 pole
61363	for types P220/P225	3	6	Changeover Switch with centre OFF 60°, 3 pole with spring return
61211	for types P220/P225	3	5	Motor Reversing Switch, 3 pole
61010	for types M220/M225	5	10	ON-OFF Switch 60°, 10 pole
61028	for types M220/M225/T225	4	8	Changeover Switch with centre OFF 60°, 4 pole
61029	for types M220/M225/T225	5	10	Changeover Switch with centre OFF 60°, 5 pole
61154	for types M220/M225/T225	4	8	Changeover Switch with centre OFF 90°, 4 pole
61211	for types M220/M225/T225	3	5	Motor Reversing Switch, 3 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**		**Padlockable options**
273V1		padlockable with V-handle silver/black	padlockable 12h
273M1		M-handle silver/black	

Dimensions in mm:



Type	H1	B1	T1	T2	2 × M	H2
P220	125	100	133	32	20/25	115
P225	125	100	133	32	20/25	115
M220	125	100	133	32	20/25	115
M225	125	100	133	32	20/25	115
T225	125	100	133	32	20/25	115

Enclosed Switches with insulated enclosure 125 × 100 × 133 mm

- **with cover interlock, interlocked in ON position**
- **20 A / 25 A / 32 A**
- 1 up to max. 12 contacts
- IP66
- Insulated polycarbonate enclosure

- Main/Emergency-Off Switch
- Main Switch



Setup of order code number: Type - Switching programme - Mounting form
Ordering example:
6 pole ON-OFF Switch 90°, 20 A, padlock device with N-handle yellow/red ➔

Type	Switching programme	Mtg. form
M220	61907	275N4
Order code no.	**M220-61907-275N4**	

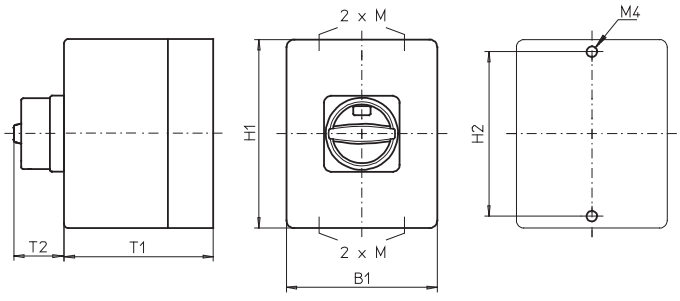
Type	Contacts	**Rated data** (IEC 60947) Operational current I_e AC-21A (A)	Operational power (at 380–440 V) AC-23A (kW)	AC-3A (kW)	**Degree of Protection** Terminals	**Terminal accessibility**
P220 **P225**	1 to 10 1 to 8	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible from mounting direction
M220 **M225**	1 to 12 1 to 10	20 25	7.5 11	5.5 7.5	IP66 IP66	 Terminals accessible laterally
T225	1 to 8	32	15	11	IP66	 Terminals accessible laterally

Switching programme		**Stages**	**Contacts**	**Description**
61919	for types P220/P225	4	8	ON-OFF Switch 90°, 8 pole, 2 pole early make/late break
61918	for types P220/P225	4	8	ON-OFF Switch 90°, 8 pole
61910	for type P220	5	10	ON-OFF Switch 90°, 10 pole
61907	for types M220/M225/T225	4	8	ON-OFF Switch 90°, 6 pole, 2 auxiliary contacts
61910	for types M220/M225	5	10	ON-OFF Switch 90°, 10 pole

Switching diagrams and further switching programmes from page 56.

Mounting form	**Operator**	**Main/Emergency-Off Switch**	**Mounting form**	**Operator**	**Main Switch**
275N4		padlock device with N-handle yellow/red	**275N1**		padlock device with N-handle black
275M4		padlock device with M-handle yellow/red	**275M1**		padlock device with M-handle black
275V4		padlockable with V-handle yellow/red	**275V1**		padlockable with V-handle silver/black

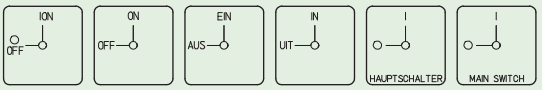
Dimensions in mm:



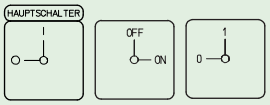
Mounting form	H1	B1	T1	T2	2 × M	H2
275N4/275N1	125	100	133	33	20/25	115
275M4/275M1	125	100	133	38	20/25	115
275V4/275V1	125	100	133	32	20/25	115

ON-OFF Switches 90°

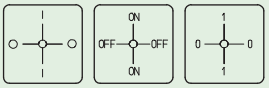
Description	Stages	Contacts	Ident No.	Ident No. with inscription
1 pole	1	1	**61191.**	
2 pole	1	2	**61192.**	
3 pole	2	3	**61199.**	
3 pole with N/PE terminals	2	4	**61178.**	
3 pole with N terminals	2	4	**61908.**	
4 pole	2	4	**61914.**	
4 pole, 1 pole early make/late break	2	4	**61194.**	
4 pole, 3 pole early make/late break	2	4	**61904.**	
5 pole, 3 pole early make/late break	3	5	**61905.**	
6 pole	3	6	**61906.**	
6 pole, 2 auxiliary contacts	4	8	**61907.**	
7 pole	4	7	**61917.**	
8 pole	4	8	**61918.**	
8 pole, 2 pole early make/late break	4	8	**61919.**	
9 pole	5	9	**61909.**	
10 pole	5	10	**61910.**	
12 pole	6	12	**61912.**	
Complete rotation				
2 pole	1	2	**61198.**	
3 pole	2	3	**61197.**	



61...- **61...A** **61...B** **61...C** **61...D** **61...E**



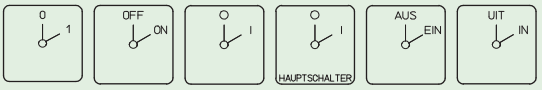
61...F **61...H** **61...K**



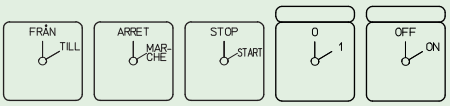
61...- **61...A** **61...B**

ON-OFF Switches 60°

Description	Stages	Contacts	Ident No.	Ident No. with inscription
1 pole	1	1	**61001.**	
2 pole	1	2	**61002.**	
3 pole	2	3	**61003.**	
4 pole	2	4	**61004.**	
5 pole	3	5	**61005.**	
6 pole	3	6	**61006.**	
7 pole	4	7	**61007.**	
8 pole	4	8	**61008.**	
9 pole	5	9	**61009.**	
10 pole	5	10	**61010.**	
11 pole	6	11	**61011.**	
12 pole	6	12	**61012.**	



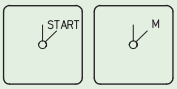
61...- **61...A** **61...B** **61...C** **61...D** **61...E**



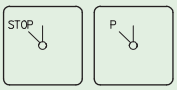
61...F **61...G** **61...H** **61...K** **61...L**

ON-OFF Switches with spring return

Description	Stages	Contacts	Ident No.	Ident No. with inscription
Spring return to OFF				
1 pole	1	1	**61351.**	
2 pole	1	2	**61352.**	
3 pole	2	3	**61353.**	
4 pole	2	4	**61354.**	
Spring return to ON				
1 pole	1	1	**61302.**	



61...- **61...A**



61302- **61302A**

Changeover Switches with centre OFF, 60°

Description	Stages	Contacts	Ident No.
1 pole	1	2	**61025.**
2 pole	2	4	**61026.**
3 pole	3	6	**61027.**
4 pole	4	8	**61028.**
5 pole	5	10	**61029.**
6 pole	6	12	**61030.**
7 pole	7	14	**61031.**
8 pole	8	16	**61032.**
without jumpers			
1 pole	1	2	**61625.**
2 pole	2	4	**61626.**
3 pole	3	6	**61627.**

Ident No. with inscription



61...-



61...A



61...B



61...C



61...D



61...E



61...G



61...H



61...I



61...J



61...K



61...L



61...M



61...N



61...O



61...P



61...Q



61...R



61...S



61...T



61...U



61...V



61...W

Changeover Switches with centre OFF, 90°

Description	Stages	Contacts	Ident No.
1 pole	1	2	**61151.**
2 pole	2	4	**61152.**
3 pole	3	6	**61153.**
4 pole	4	8	**61154.**

Ident No. with inscription



61...-



61...A



61...B



61...C



61...D



61...E

Changeover Switches with centre OFF and spring return

Description	Stages	Contacts	Ident No.
Spring return to centre			
1 pole	1	2	**61361.**
2 pole	2	4	**61362.**
3 pole	3	6	**61363.**
without jumpers			
1 pole	1	2	**61761.**
2 pole	2	4	**61762.**

Ident No. with inscription



61...-



61...A



61...B



61...C



61...D



61...E



61...F



61...G



61...H



61...I



61...J

61...K

61...L

61...M

61...N

61...P

61...Q

61...R

61...S

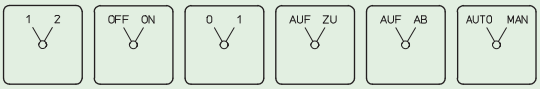
61...T

Changeover Switches with centre OFF and spring return

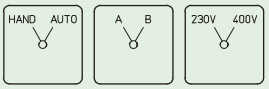
Description	Stages	Contacts	Ident No.	Ident No. with inscription
Spring return from left to centre				
1 pole	1	2	**61364.**	
2 pole	2	4	**61365.**	
3 pole	3	6	**61369.**	
				61...-

Changeover Switches without OFF

Description	Stages	Contacts	Ident No.	Ident No. with inscription
1 pole	1	2	**61037.**	
2 pole	2	4	**61038.**	
3 pole	3	6	**61039.**	
4 pole	4	8	**61040.**	
5 pole	5	10	**61041.**	
6 pole	6	12	**61042.**	
7 pole	7	14	**61043.**	
8 pole	8	16	**61044.**	
9 pole	9	18	**61045.**	
10 pole	10	20	**61046.**	
11 pole	11	22	**61047.**	
12 pole	12	24	**61048.**	
without jumpers				
1 pole	1	2	**61637.**	
2 pole	2	4	**61638.**	
3 pole	3	6	**61639.**	
4 pole	4	8	**61640.**	
overlapping contacts				
1 pole	1	2	**61737.**	
2 pole	2	4	**61738.**	
3 pole	3	6	**61739.**	
4 pole	4	8	**61740.**	



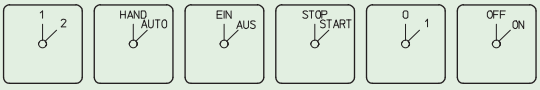
61...- **61...A** **61...B** **61...C** **61...D** **61...E**



61...F **61...H** **61...I**

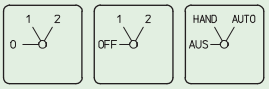
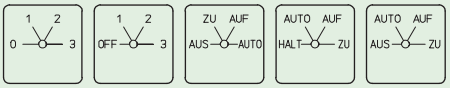
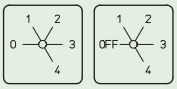
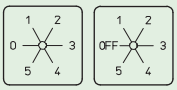
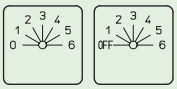
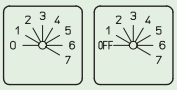
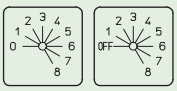
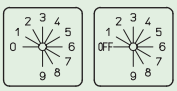
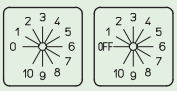
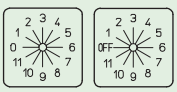
Changeover Switches without OFF with spring return

Description	Stages	Contacts	Ident No.	Ident No. with inscription
Spring return to left				
1 pole	1	2	**61371.**	
2 pole	2	4	**61372.**	
3 pole	3	6	**61373.**	
without jumpers				
1 pole	1	2	**61771.**	



61...- **61...A** **61...B** **61...C** **61...D** **61...E**

Multi-step Switches with OFF

Description	Stages	Contacts	Ident No.	Ident No. with inscription
2 steps				
1 pole	1	2	**61059.**	 **61...-** **61...A** **61...B**
2 pole	2	4	**61079.**	
3 pole	3	6	**61099.**	
4 pole	4	8	**61130.**	
5 pole	5	10	**61134.**	
6 pole	6	12	**61137.**	
3 steps				
1 pole	2	3	**61060.**	 **61...-** **61...A** **61...B** **61...C** **61...D**
2 pole	3	6	**61080.**	
3 pole	5	9	**61100.**	
4 pole	6	12	**61131.**	
5 pole	8	15	**61135.**	
4 steps				
1 pole	2	4	**61061.**	 **61...-** **61...A**
2 pole	4	8	**61081.**	
3 pole	6	12	**61101.**	
4 pole	8	16	**61132.**	
5 steps				
1 pole	3	5	**61062.**	 **61...-** **61...A**
2 pole	5	10	**61082.**	
3 pole	8	15	**61102.**	
6 steps				
1 pole	3	6	**61063.**	 **61...-** **61...A**
2 pole	6	12	**61083.**	
3 pole	9	18	**61103.**	
7 steps				
1 pole	4	7	**61064.**	 **61...-** **61...A**
2 pole	7	14	**61084.**	
8 steps				
1 pole	4	8	**61065.**	 **61065-** **61065A**
9 steps				
1 pole	5	9	**61066.**	 **61066-** **61066A**
10 steps				
1 pole	5	10	**61067.**	 **61067-** **61067A**
11 steps				
1 pole	6	11	**61068.**	 **61068-** **61068A**

Multi-step Switches without OFF

Description	Stages	Contacts	Ident No.	Ident No. with inscription
3 steps				
1 pole	2	3	**61049.**	 
2 pole	3	6	**61069.**	
3 pole	5	9	**61089.**	
4 pole	6	12	**61120.**	**61...-** **61...A**
5 pole	8	15	**61124.**	
6 pole	9	18	**61126.**	
without jumpers				
1 pole	2	3	**61649.**	
2 pole	3	6	**61669.**	
4 steps				
1 pole	2	4	**61050.**	 
2 pole	4	8	**61070.**	
3 pole	6	12	**61090.**	
4 pole	8	16	**61121.**	**61...-** **61...A**
5 pole	10	20	**61125.**	
6 pole	12	24	**61127.**	
without jumpers				
1 pole	2	4	**61650.**	
2 pole	4	8	**61670.**	
5 steps				
1 pole	3	5	**61051.**	 
2 pole	5	10	**61071.**	
3 pole	8	15	**61091.**	
4 pole	10	20	**61122.**	**61...-** **61...A**
6 steps				
1 pole	3	6	**61052.**	 
2 pole	6	12	**61072.**	
3 pole	9	18	**61092.**	**61...-** **61...A**
7 steps				
1 pole	4	7	**61053.**	
2 pole	7	14	**61073.**	
3 pole	11	21	**61093.**	**61...-**
8 steps				
1 pole	4	8	**61054.**	
2 pole	8	16	**61074.**	
3 pole	12	24	**61094.**	**61...-**
9 steps				
1 pole	5	9	**61055.**	
				61055-
10 steps				
1 pole	5	10	**61056.**	
				61056-
11 steps				
1 pole	6	11	**61057.**	
				61057-
12 steps				
1 pole	6	12	**61058.**	
				61058-

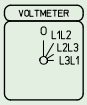
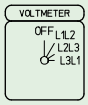
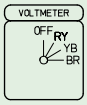
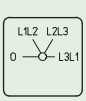
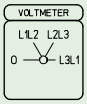
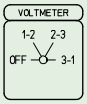
Code Switches

Description	Stages	Contacts	Ident No.	Ident No. with inscription
Binary code				
0 - 7	2	3	**61920.**	
0 - 7 complement	2	3	**61921.**	
0 - 7 + complement	3	6	**61922.**	**61...-**
0 - 11	2	4	**61923.**	
0 - 11 + complement	4	8	**61924.**	
				61...-
BCD Code				
0 - 9	2	4	**61930.**	
0 - 9 complement	2	4	**61931.**	
0 - 9 + complement	4	8	**61932.**	**61...-**

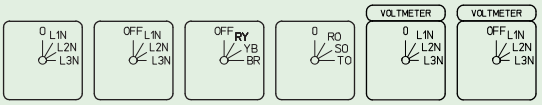
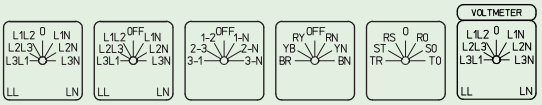
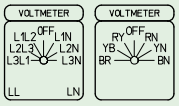
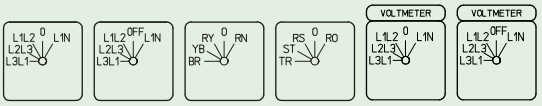
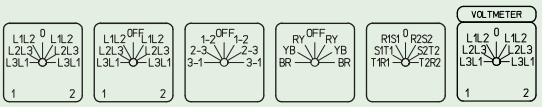
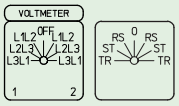
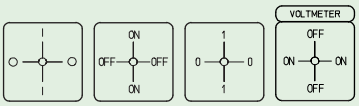
Gang Switches

Description	Stages	Contacts	Ident No.	Ident No. with inscription
2 gangs				
1 pole	1	2	**61109.**	  
2 pole	2	4	**61117.**	
3 pole	3	6	**61111.**	**61...-** **61...A** **61...B**
3 gangs				
1 pole	2	3	**61110.**	 
2 pole	3	6	**61118.**	
3 pole	5	9	**61112.**	**61...-** **61...A**
Series-gang Switches				
2 gangs				
1 pole	1	2	**61113.**	
2 pole	2	4	**61115.**	
3 pole	3	6	**61114.**	
Series-parallel Switches				
2 gangs				
2 pole	2	4	**61116.**	

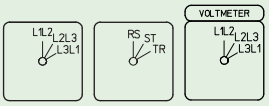
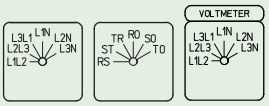
Voltmeter Selector Switches with OFF

Description	Stages	Contacts	Ident No.	Ident No. with inscription
3 phase line to line, 30°	2	4	**61312.**	     
				61312- **61312A** **61312B** **61312C** **61312D** **61312E**
				
				61312F
3 phase line to line, 60°	2	4	**61485.**	  
				61485- **61485A** **6485B**

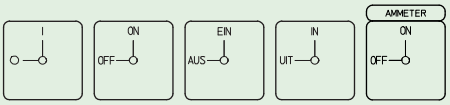
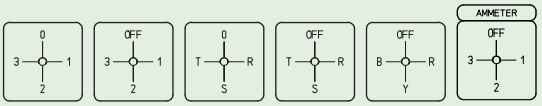
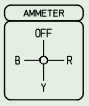
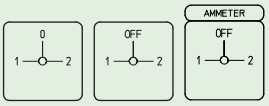
Voltmeter Selector Switches with OFF

Description	Stages	Contacts	Ident No.	Ident No. with inscription
3 phase line to N	2	4	**61311.**	 **61311-** **61311A** **61311B** **61311C** **61311D** **61311E**
3 phase line to line + 3 phase line to N	3	6	**61313.**	 **61313-** **61313A** **61313B** **61313C** **61313D** **61313E**  **61313F** **61313G**
3 phase line to line + 1 phase line to N	3	5	**61317.**	 **61317-** **61317A** **61317B** **61317C** **61317D** **61317E**
3 phase line to line for 2 sources	4	8	**61318.**	 **61318-** **61318A** **61318B** **61318C** **61318D** **61318E**  **61318F** **61318G**
2 pole, 1 phase	1	2	**61198.**	 **61198-** **61198A** **61198B** **61198C**

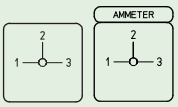
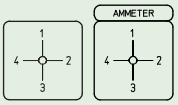
Voltmeter Selector Switches without OFF

Description	Stages	Contacts	Ident No.	Ident No. with inscription
3 phase line to line	2	4	**61319.**	 **61319-** **61319A** **61319B**
3 phase line to line + 3 phase line to N	3	6	**61314.**	 **61314-** **61314A** **61314B**

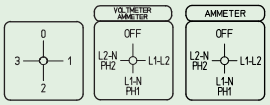
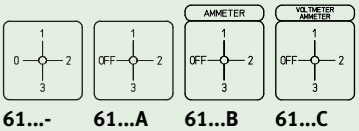
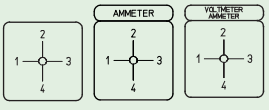
Ammeter Selector Switches with OFF

Description	Stages	Contacts	Ident No.	Ident No. with inscription
1 transformer, 1 pole	1	2	**61321.**	 **61321-** **61321A** **61321B** **61321C** **61321G**
2 transformers, 1 pole (3 phase)	2	4	**61331.**	 **61...-** **61...A** **61...B** **61...C** **61...D** **61...E**
3 transformers, 1 pole	3	6	**61325.**	
3 transformers, 2 pole	5	9	**61328.**	
				 **61...F**
2 transformers, 2 pole	3	6	**61327.**	 **61327-** **61327A** **61327E**

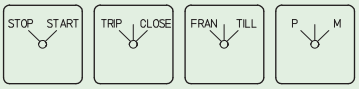
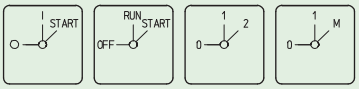
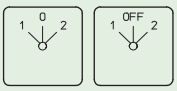
Ammeter Selector Switches without OFF

Description	Stages	Contacts	Ident No.	Ident No. with inscription
3 transformers, 1 pole	3	6	**61384.**	 **61...-** **61...A**
3 transformers, 2 pole	5	9	**61329.**	
4 transformers, 1 pole	4	8	**61326.**	 **61...-** **61...A**
4 transformers, 2 pole	6	12	**61330.**	

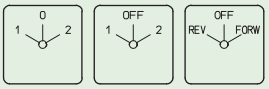
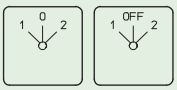
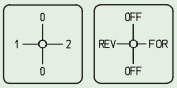
Volt-Ammeter Selector Switches

Description	Stages	Contacts	Ident No.	Ident No. with inscription
1 phase line to line, 2 phase voltages L–N, 2 currents	4	8	**61334.**	 **61334-** **61334A** **61334B**
3 voltages L–L, 3 currents	5	10	**61336.**	 **61...-** **61...A** **61...B** **61...C**
3 phase voltages L–N, 3 currents	5	9	**61338.**	
4 voltages, 3 currents	6	11	**61337.**	 **61337-** **61337A** **61337B**

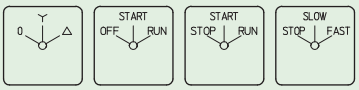
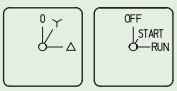
Control Switches with spring return

Description	Stages	Contacts	Ident No.	Ident No. with inscription
Control Switches				
1 pole	1	2	**61300.**	
2 pole	2	4	**61388.**	
without jumpers				
1 pole	1	2	**61700.**	**61...-** **61...A** **61...B** **61...C**
Control Switches with position indication				
1 pole	1	2	**61301.**	
without jumpers				
1 pole	1	2	**61701.**	**61...-** **61...A** **61...B** **61...C**
Controlling two contactors				
Standard	2	3	**61307.**	
without jumpers	2	3	**61707.**	
				61...- **61...A** **61...B**
With spring return				
4 auxiliary contacts	2	4	**61366.**	
Motor voltage control switch	2	3	**61271.**	
single winding contactor	4	8	**61272.**	**61...-** **61...T**

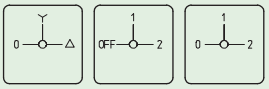
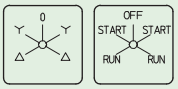
Motor Reversing Switches

Description	Stages	Contacts	Ident No.	Ident No. with inscription
2 pole	2	4	**61210.**	
3 pole	3	5	**61211.**	
				61...- **61...A** **61...B**
3 pole with spring return	3	5	**61253.**	
				61253- **61253T**
3 pole, complete rotation	3	5	**61214.**	
				61214- **61214A**

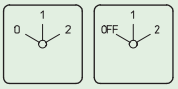
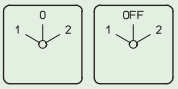
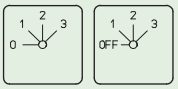
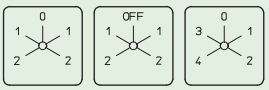
Star-Delta Switches

Description	Stages	Contacts	Ident No.	Ident No. with inscription
Standard	4	8	**61200.**	
Contact closed in “OFF”/“STOP”	5	9	**61239.**	
				61...- **61...A** **61...B** **61...C**
Spring return from START to “OFF”	4	8	**61201.**	
				61201- **61201A**

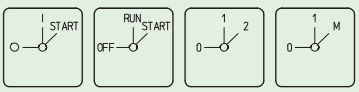
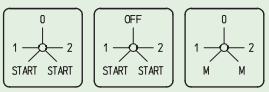
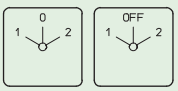
Star-Delta Switches

Description	Stages	Contacts	Ident No.	Ident No. with inscription
for use with contactor	4	7	**61240.**	 **61240-** **61240A** **61240B**
Reversing Star-Delta Switches				
Standard	5	10	**61203.**	 **61203-** **61203A**

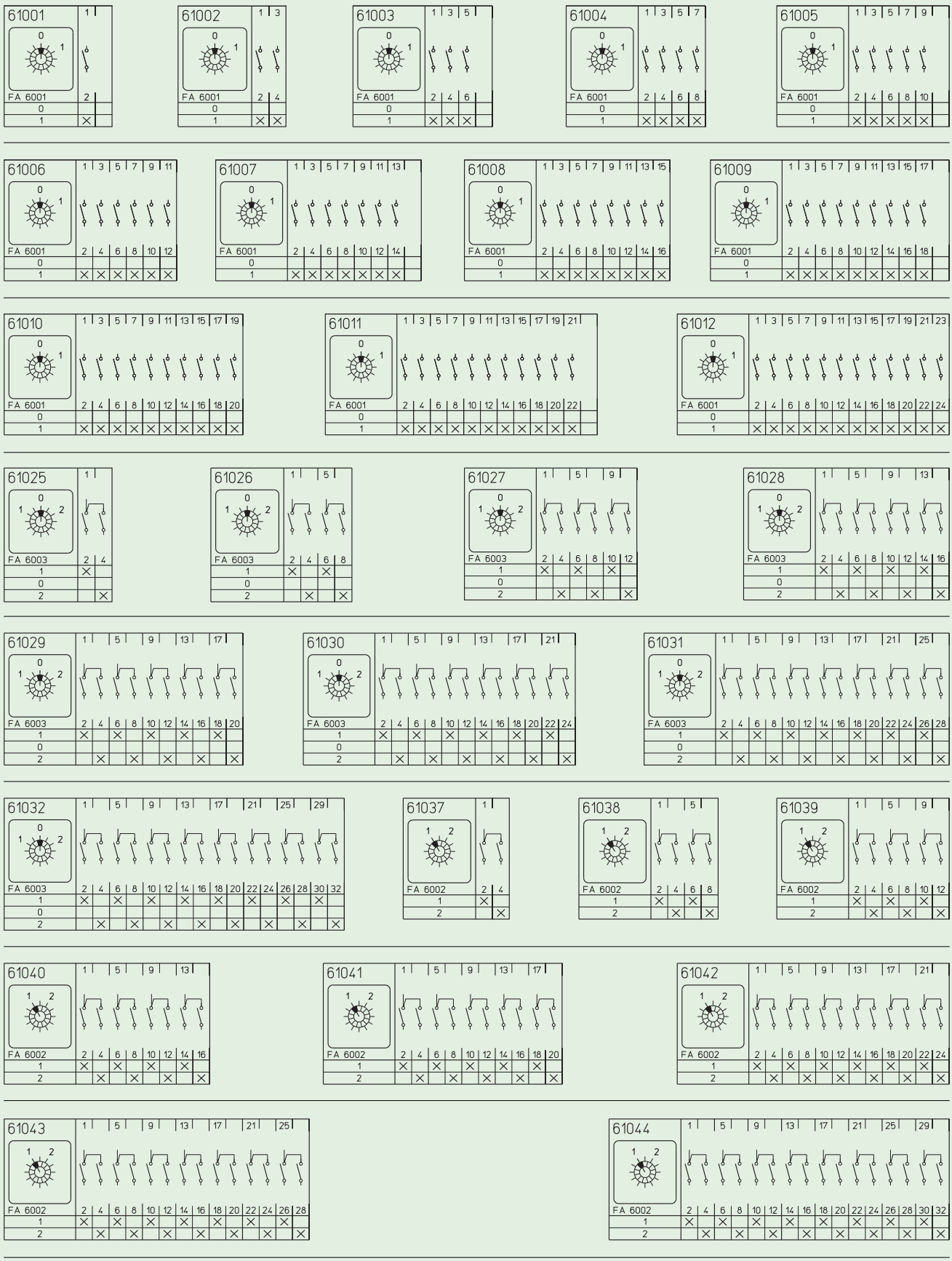
Multi-Speed Switches

Description	Stages	Contacts	Ident No.	Ident No. with inscription
2 speeds				
single winding	4	8	**61212.**	 **61...-** **61...A**
single winding –				
contactor control	5	10	**61215.**	
2 separate windings	3	6	**61219.**	
2 speeds				
single winding	4	8	**61213.**	 **61213-** **61213A**
3 speeds				
speed 1+3 Dahlander	6	11	**61226.**	 **61...-** **61...A**
speed 2+3 Dahlander	6	11	**61243.**	
Reversing Multi-Speed Switches				
2 speeds, single winding	6	12	**61217.**	 **61217-** **61217A** **61217B**

Auxiliary Phase Switches

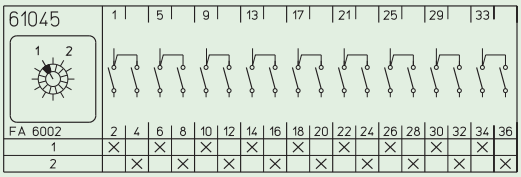
Description	Stages	Contacts	Ident No.	Ident No. with inscription
Standard	2	3	**61208.**	 **61208-** **61208A** **61208B** **61208C**
2 directions	3	6	**61209.**	 **61209-** **61209A** **61209B**
2 directions				
phase continuously under load	3	6	**61270.**	 **61270-** **61270A**

Switching diagrams 61001–61044



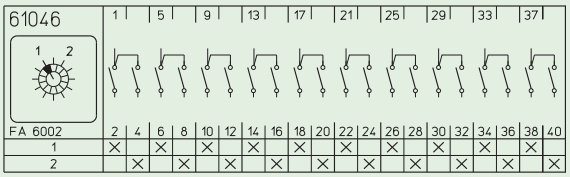
Switching diagrams 61045–61062

61045



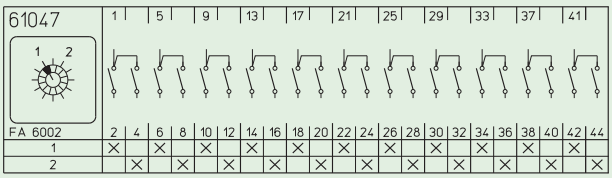
FA 6002	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
1	×		×		×		×		×		×		×		×		×	
2		×		×		×		×		×		×		×		×		×

61046



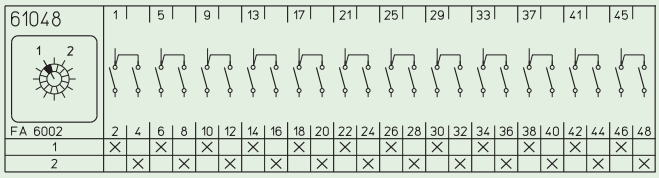
FA 6002	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
1	×		×		×		×		×		×		×		×		×		×	
2		×		×		×		×		×		×		×		×		×		×

61047



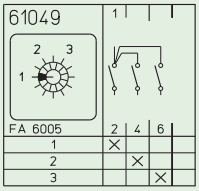
FA 6002	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44
1	×		×		×		×		×		×		×		×		×		×		×	
2		×		×		×		×		×		×		×		×		×		×		×

61048



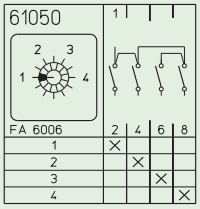
FA 6002	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48
1	×		×		×		×		×		×		×		×		×		×		×		×	
2		×		×		×		×		×		×		×		×		×		×		×		×

61049



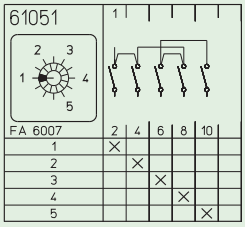
FA 6005	2	4	6
1	×		
2		×	
3			×

61050



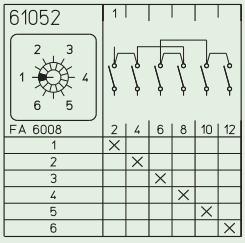
FA 6006	2	4	6	8
1	×			
2		×		
3			×	
4				×

61051



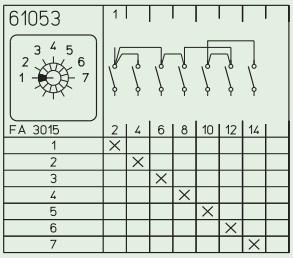
FA 6007	2	4	6	8	10
1	×				
2		×			
3			×		
4				×	
5					×

61052



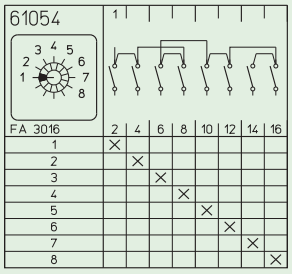
FA 6008	2	4	6	8	10	12
1	×					
2		×				
3			×			
4				×		
5					×	
6						×

61053



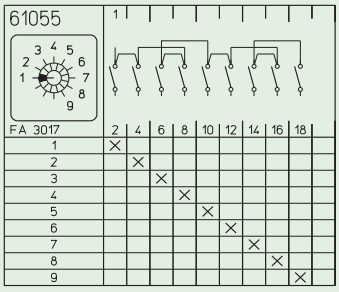
FA 3015	2	4	6	8	10	12	14
1	×						
2		×					
3			×				
4				×			
5					×		
6						×	
7							×

61054



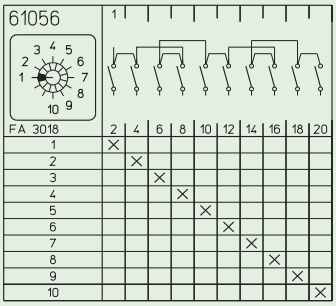
FA 3016	2	4	6	8	10	12	14	16
1	×							
2		×						
3			×					
4				×				
5					×			
6						×		
7							×	
8								×

61055



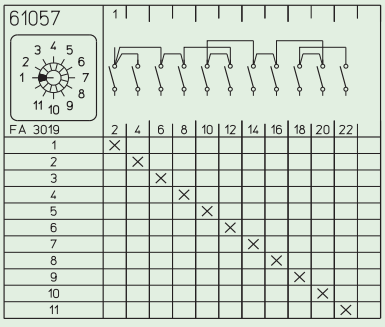
FA 3017	2	4	6	8	10	12	14	16	18
1	×								
2		×							
3			×						
4				×					
5					×				
6						×			
7							×		
8								×	
9									×

61056



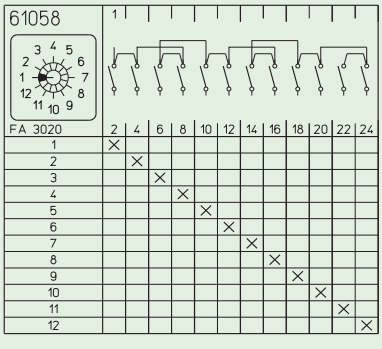
FA 3018	2	4	6	8	10	12	14	16	18	20
1	×									
2		×								
3			×							
4				×						
5					×					
6						×				
7							×			
8								×		
9									×	
10										×

61057



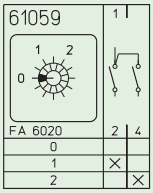
FA 3019	2	4	6	8	10	12	14	16	18	20	22
1	×										
2		×									
3			×								
4				×							
5					×						
6						×					
7							×				
8								×			
9									×		
10										×	
11											×

61058



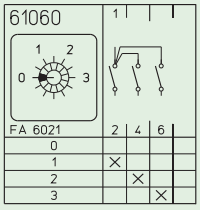
FA 3020	2	4	6	8	10	12	14	16	18	20	22	24
1	×											
2		×										
3			×									
4				×								
5					×							
6						×						
7							×					
8								×				
9									×			
10										×		
11											×	
12												×

61059



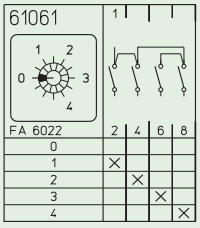
FA 6020	2	4
0		
1	×	
2		×

61060



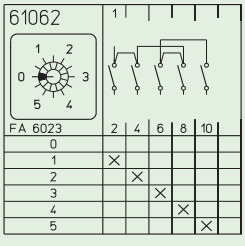
FA 6021	2	4	6
0			
1	×		
2		×	
3			×

61061



FA 6022	2	4	6	8
0				
1	×			
2		×		
3			×	
4				×

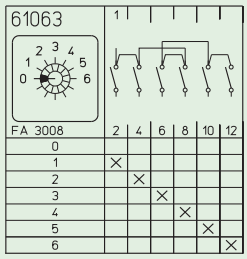
61062



FA 6023	2	4	6	8	10
0					
1	×				
2		×			
3			×		
4				×	
5					×

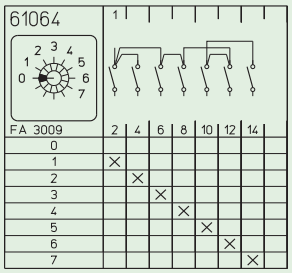
Switching diagrams 61063–61082

61063



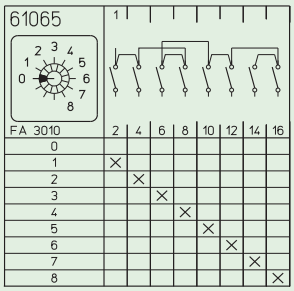
FA 3008	2	4	6	8	10	12
0						
1	×					
2		×				
3			×			
4				×		
5					×	
6						×

61064



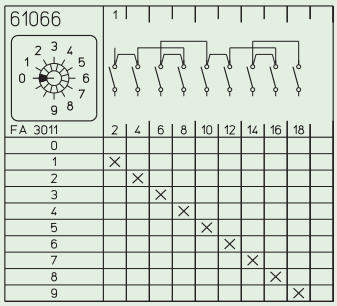
FA 3009	2	4	6	8	10	12	14
0							
1	×						
2		×					
3			×				
4				×			
5					×		
6						×	
7							×

61065



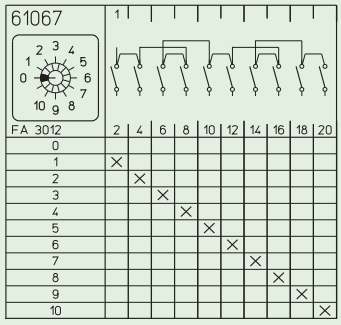
FA 3010	2	4	6	8	10	12	14	16
0								
1	×							
2		×						
3			×					
4				×				
5					×			
6						×		
7							×	
8								×

61066



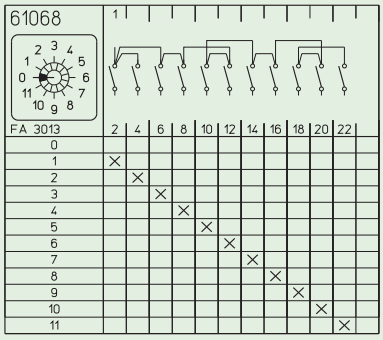
FA 3011	2	4	6	8	10	12	14	16	18
0									
1	×								
2		×							
3			×						
4				×					
5					×				
6						×			
7							×		
8								×	
9									×

61067



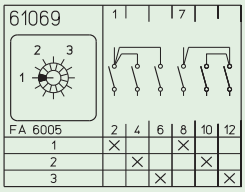
FA 3012	2	4	6	8	10	12	14	16	18	20
0										
1	×									
2		×								
3			×							
4				×						
5					×					
6						×				
7							×			
8								×		
9									×	
10										×

61068



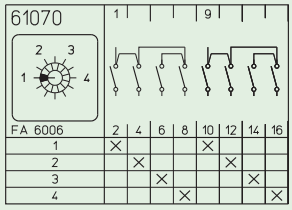
FA 3013	2	4	6	8	10	12	14	16	18	20	22
0											
1	×										
2		×									
3			×								
4				×							
5					×						
6						×					
7							×				
8								×			
9									×		
10										×	
11											×

61069



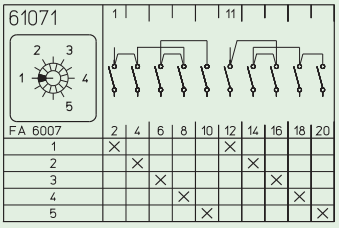
FA 6005	2	4	6	8	10	12
1	×			×		
2		×			×	
3			×			×

61070



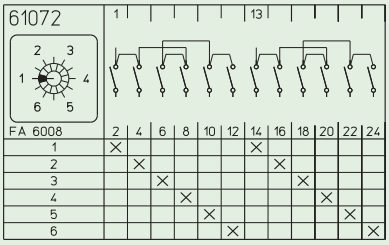
FA 6006	2	4	6	8	10	12	14	16
1	×				×			
2		×				×		
3			×				×	
4				×				×

61071



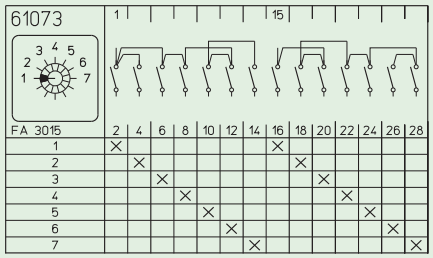
FA 6007	2	4	6	8	10	12	14	16	18	20
1	×					×				
2		×					×			
3			×					×		
4				×					×	
5					×					×

61072



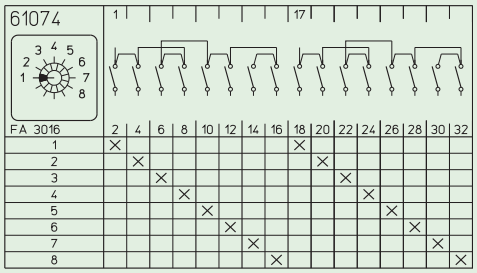
FA 6008	2	4	6	8	10	12	14	16	18	20	22	24
1	×						×					
2		×						×				
3			×						×			
4				×						×		
5					×						×	
6						×						×

61073



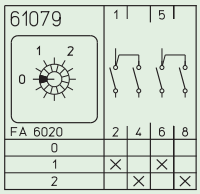
FA 3015	2	4	6	8	10	12	14	16	18	20	22	24	26	28
1	×							×						
2		×							×					
3			×							×				
4				×							×			
5					×							×		
6						×							×	
7							×							×

61074



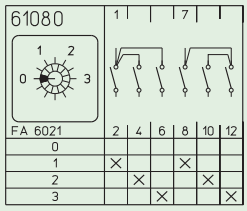
FA 3016	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32
1	×								×							
2		×								×						
3			×								×					
4				×								×				
5					×								×			
6						×								×		
7							×								×	
8								×								×

61079



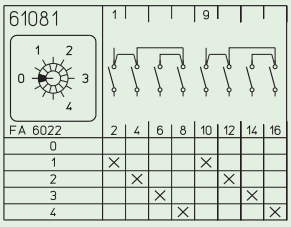
FA 6020	2	4	6	8
0				
1	×		×	
2		×		×

61080



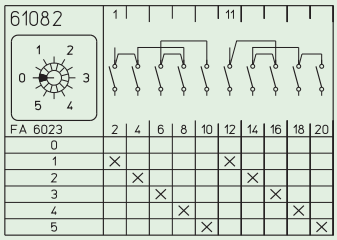
FA 6021	2	4	6	8	10	12
0						
1	×			×		
2		×			×	
3			×			×

61081



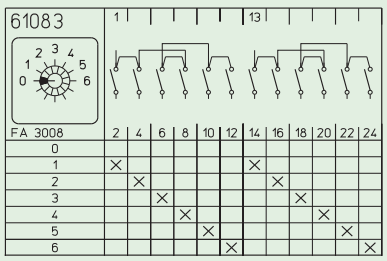
FA 6022	2	4	6	8	10	12	14	16
0								
1	×				×			
2		×				×		
3			×				×	
4				×				×

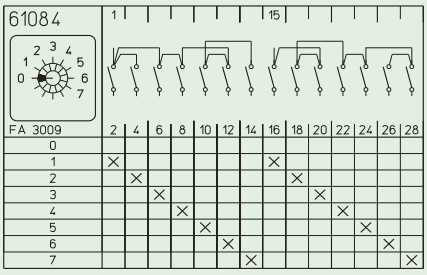
61082

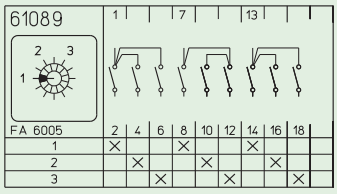


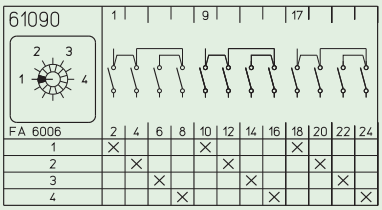
FA 6023	2	4	6	8	10	12	14	16	18	20
0										
1	×					×				
2		×					×			
3			×					×		
4				×					×	
5					×					×

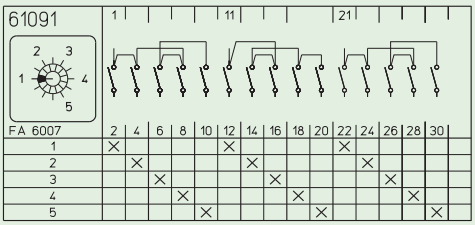
Switching diagrams 61083–61111

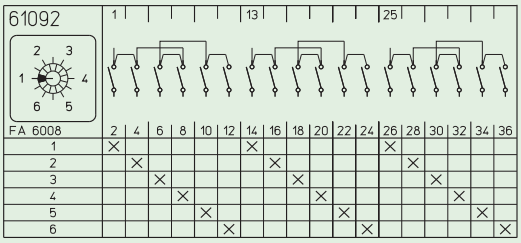


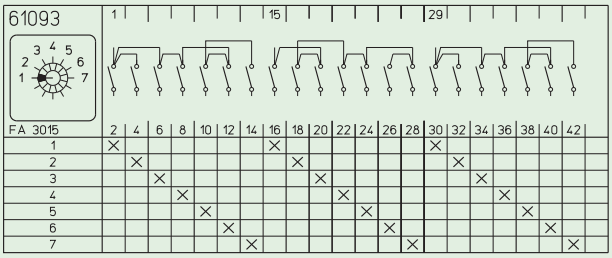


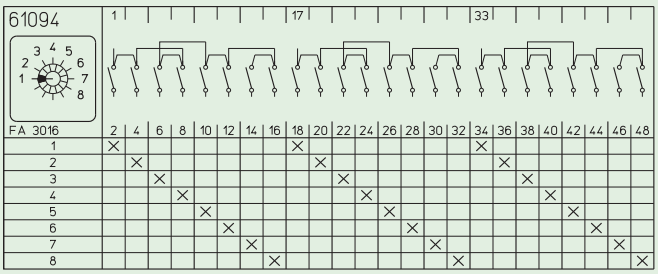


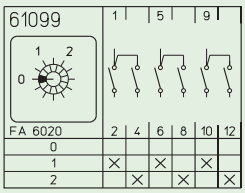


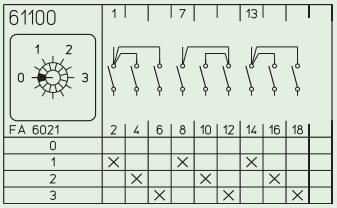


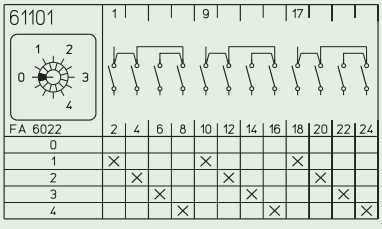


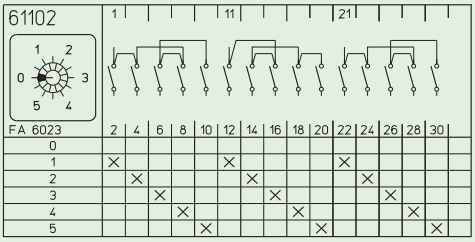


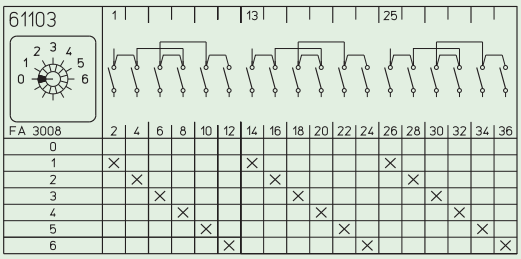


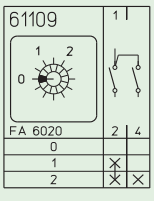


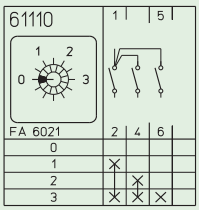


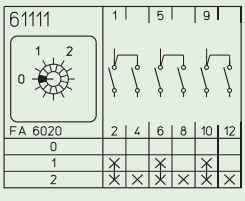




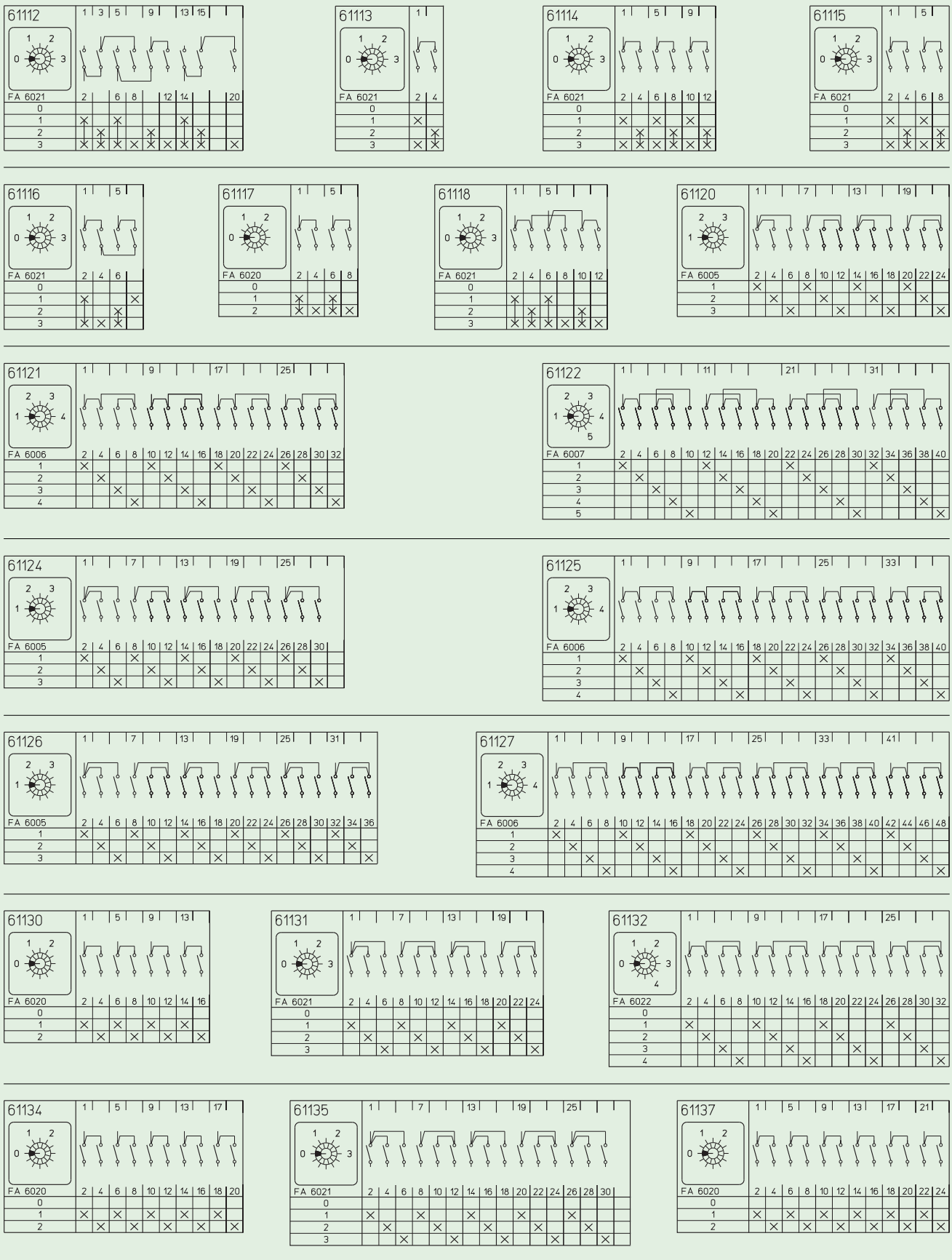




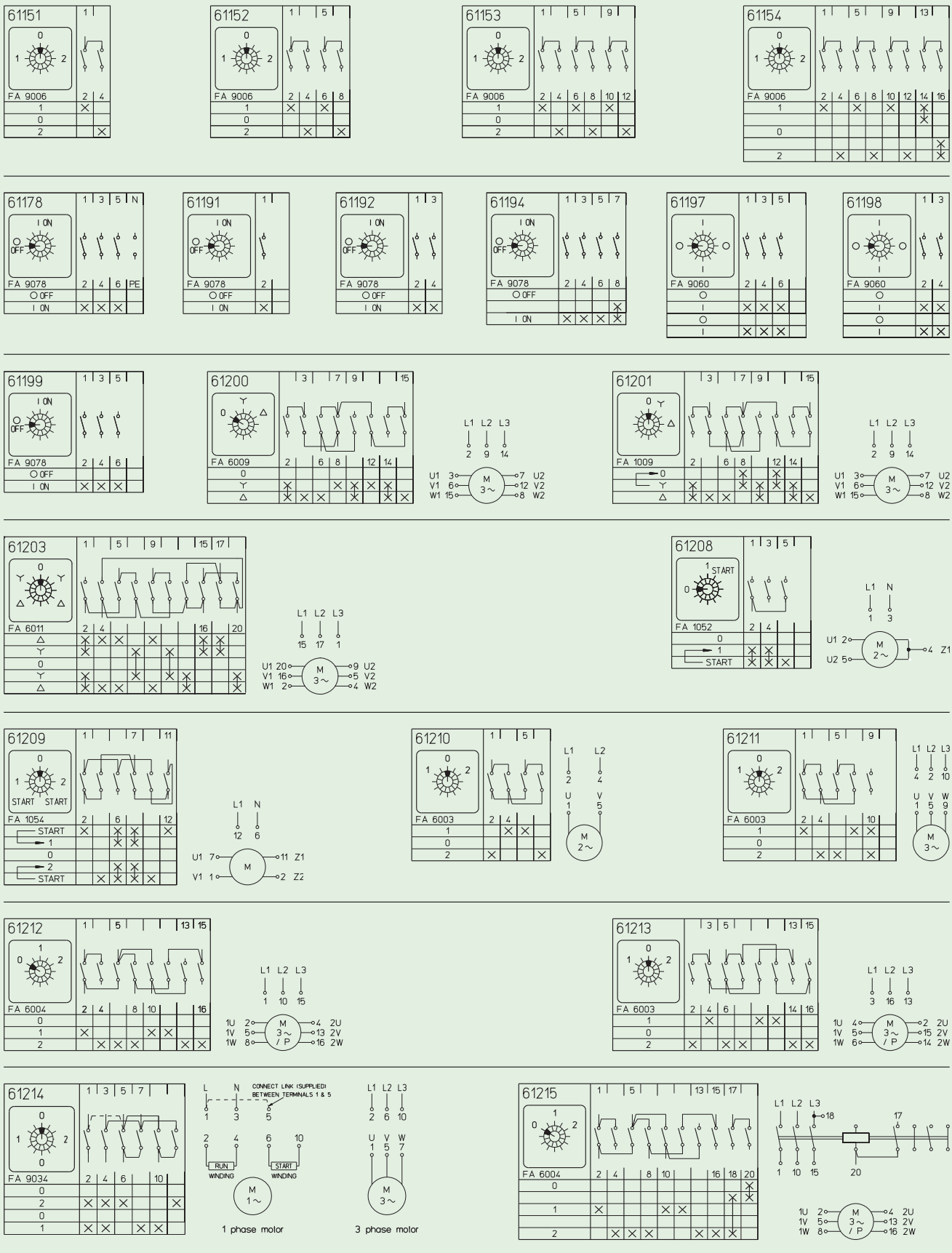




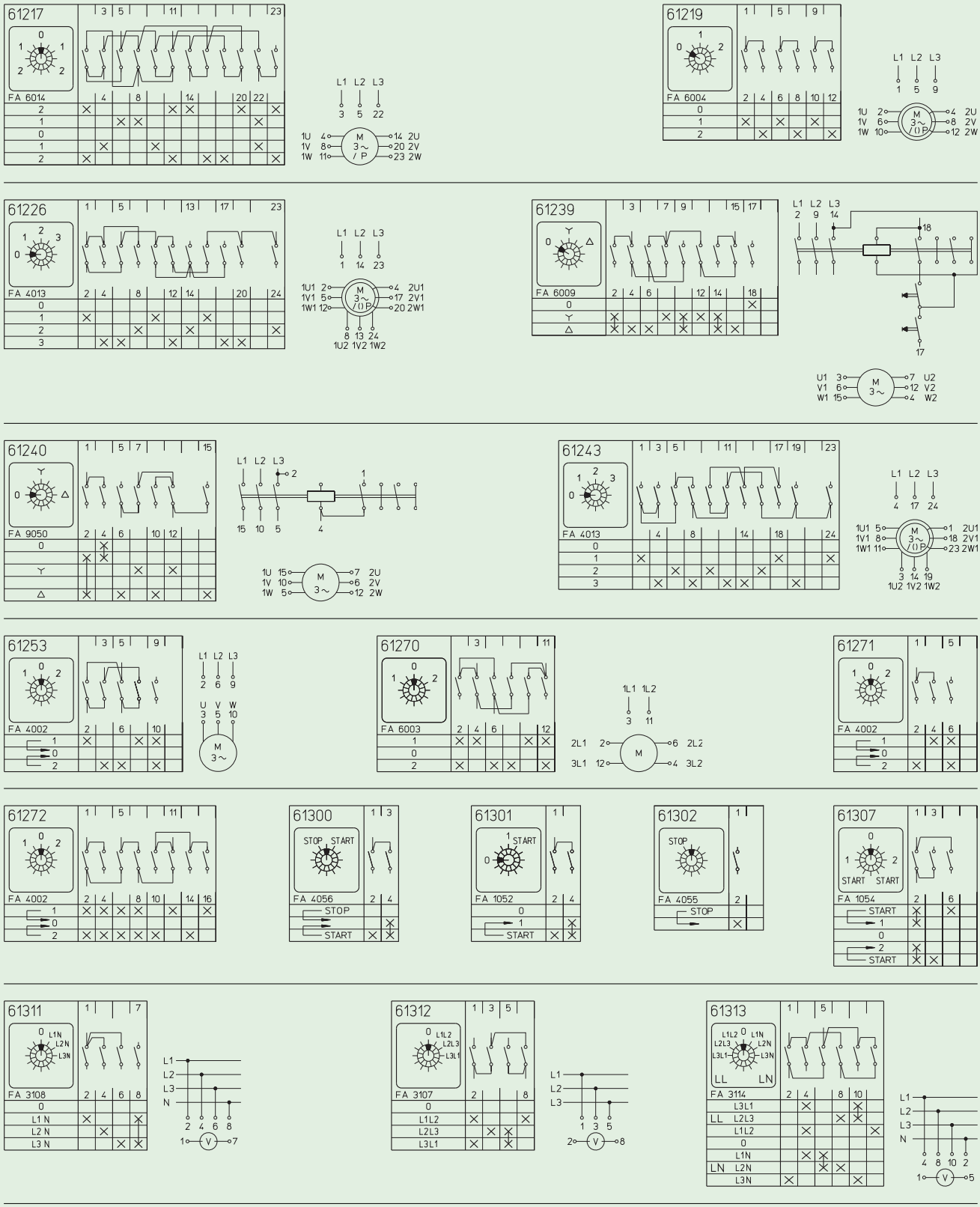
Switching diagrams 61112–61137



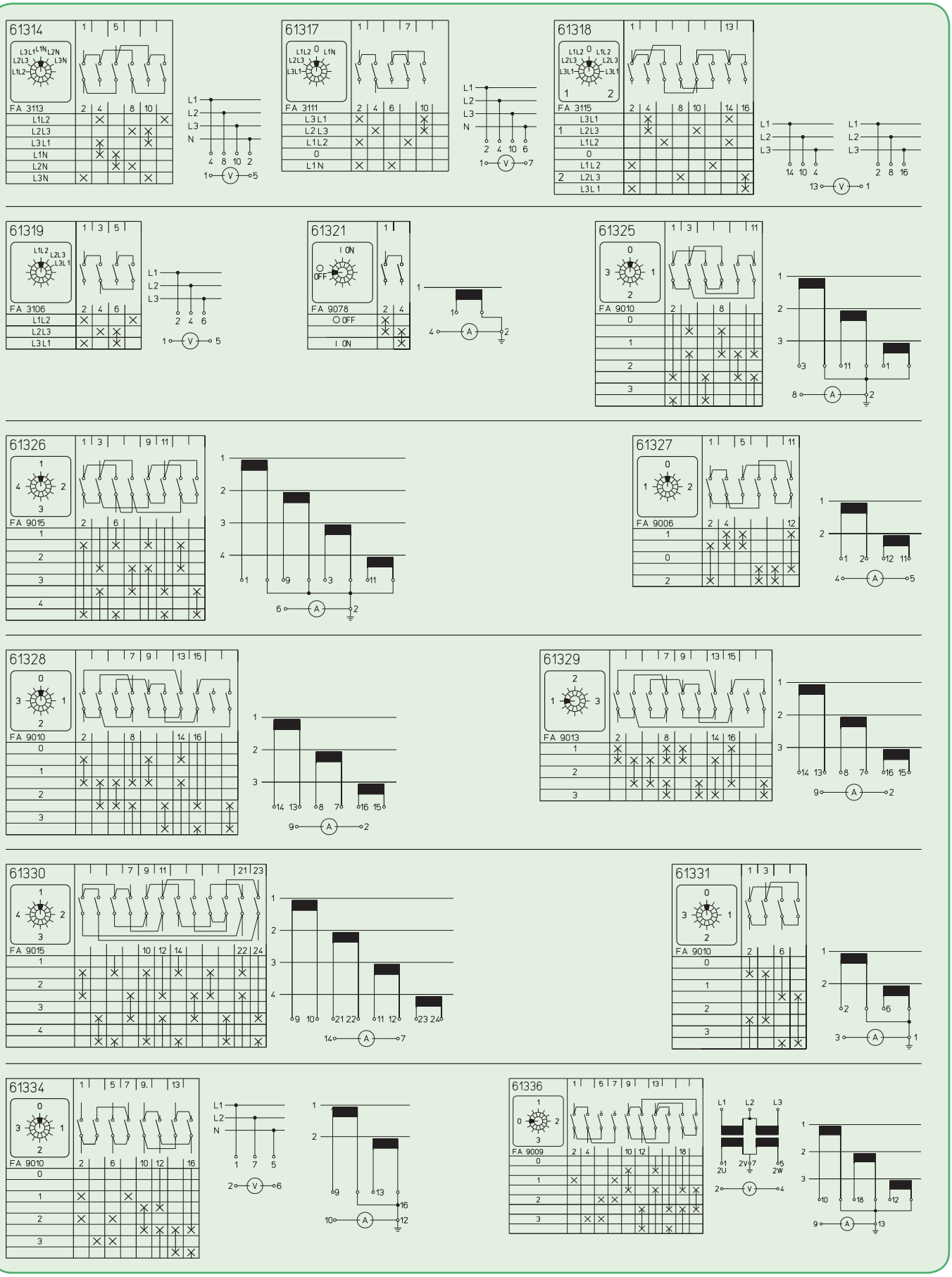
Switching diagrams 61151–61215



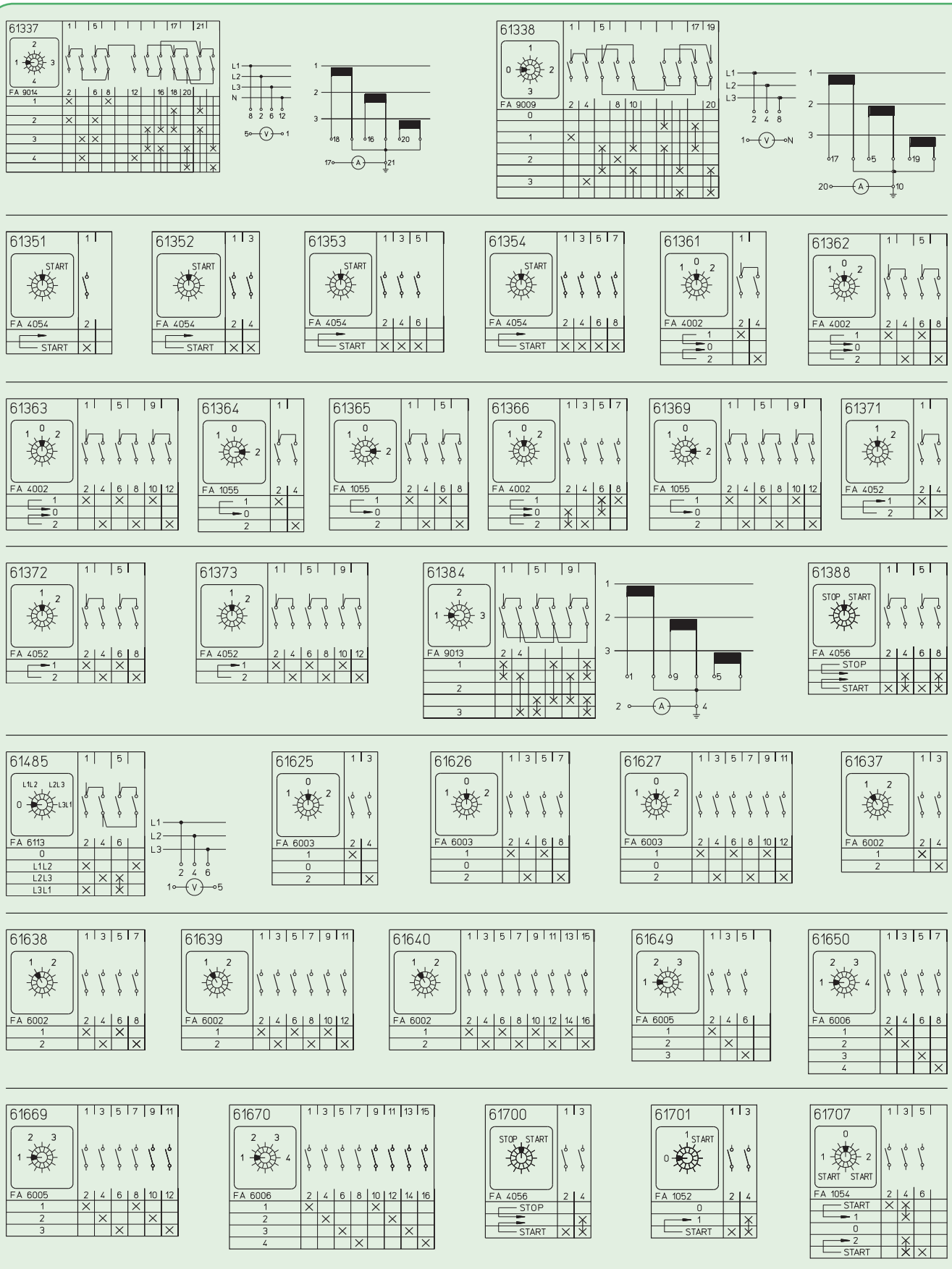
Switching diagrams 61217–61313



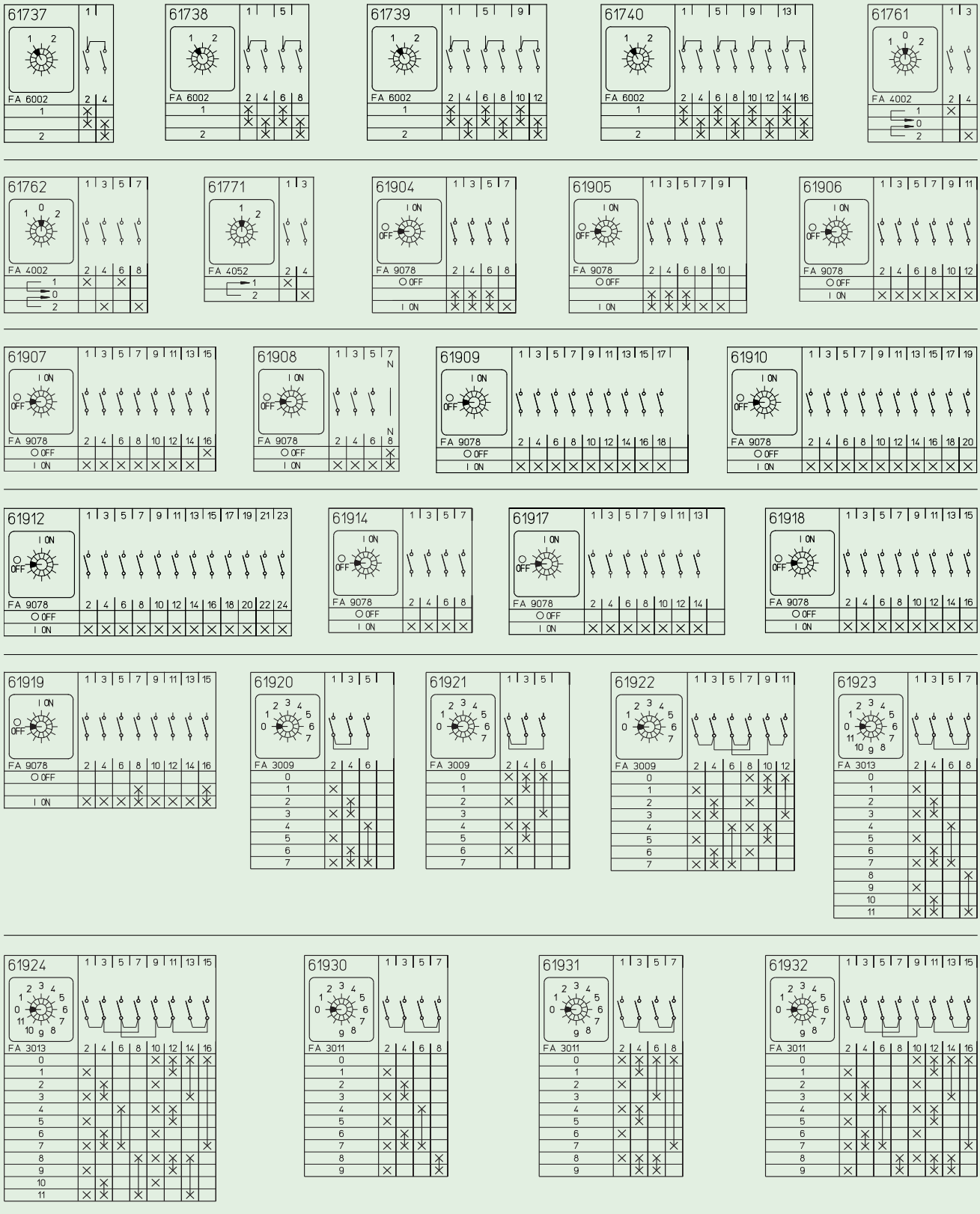
Switching diagrams 61314–61336



Switching diagrams 61337–61707



Switching diagrams 61737–61932



Order form for rotary cam switches with special switching programmes page 88.

2 switch positions

45° switching angle



FA 4018



FA 4020



FA 4022



FA 4047



FA 4048



FA 4052



FA 4054



FA 4055



FA 4056



FA 4066



FA 4073



FA 4077



FA 4078



FA 4080

60° switching angle



FA 6001



FA 6002



FA 6018



FA 6025



FA 6026



FA 6027



FA 6028



FA 6029



FA 6030



FA 6033


FA 6051



FA 6053



FA 6055



FA 6056



FA 6057



FA 6058



FA 6129



FA 6134



FA 6135



FA 6140



FA 6149

90° switching angle



FA 9011



FA 9016



FA 9017



FA 9018



FA 9021

FA 9026

FA 9031

FA 9032

FA 9033

FA 9057

FA 9058

FA 9078

FA 9079

FA 9080

3 switch positions

30° switching angle

FA 3028

FA 3030

FA 3046

FA 3103

FA 3104

FA 3105

FA 3106

FA 3116

FA 3117

FA 3118

FA 3119

FA 3120

FA 3121

3 switch positions

45° switching angle



FA 4001



FA 4002



FA 4006



FA 4012



FA 4024



FA 4025



FA 4026



FA 4027



FA 4028



FA 4029



FA4030



FA 4031



FA 4032



FA 4033



FA 4034



FA 4035



FA 4036



FA 4037



FA 4038



FA 4045



FA 4067



FA 4068



FA 4069



FA 4070



FA 4071



FA 4072



FA 4074



FA 4076



FA 4079



FA 4081



FA 4082

60° switching angle



FA 6003



FA 6004



FA 6005



FA 6009



FA 6010



FA 6017



FA 6019



FA 6020



FA 6034

FA 6035

FA 6036

FA 6038

FA 6039

FA 6044

FA 6045

FA 6060

FA 6061

FA 6062

FA 6063

FA 6064

FA 6065

FA 6067

FA 6068

FA 6069

FA 6070

FA 6071

FA 6072

FA 6073

FA 6074

FA 6075

FA 6076

FA 6077

FA 6091

FA 6103

FA 6105

FA 6116

FA 6117

FA 6126

FA 6131

FA 6132

FA 6133

FA 6136

FA 6141

FA 6142

FA 6143

FA 6144

FA 6146

FA 6147

FA 6148

FA 6150

FA 6151

FA 6152

90° switching angle

FA 9006

FA 9008

FA 9013

FA 9023

FA 9024

FA 9027

FA 9037

FA 9038

FA 9050

FA 9081

FA 9083

Miscellaneous switching angles

FA 1009

FA 1015

FA 1020

FA 1052

FA 1053

FA 1055

FA 1059

FA 1061

FA 1063

Rotary Cam Switches

4 switch positions

30° switching angle



FA 3014



FA 3021



FA 3022



FA 3029



FA 3047



FA 3056



FA 3058



FA 3087



FA 3088



FA 3089



FA 3090



FA 3107



FA 3108



FA 3109



FA 3110

45° switching angle



FA 4007



FA 4013



FA 4075



FA 4083



FA 4084



FA 4085

60° switching angle



FA 6006



FA 6013



FA 6021



FA 6041



FA 6049



FA 6104



FA 6113



FA 6114



FA 6119



FA 6127



FA 6137



FA 6138



FA 6145



FA 6153

90° switching angle



FA 9004



FA 9005



FA 9007



FA 9009



FA 9010

FA 9014

FA 9015

FA 9019

FA 9020

FA 9025

FA9028

FA 9029

FA 9034

FA 9035

FA 9039

FA 9046

FA 9047

FA 9048

FA 9049

FA 9052

FA 9060

FA 9082

FA 9084

Miscellaneous switching angles

FA 1017

FA 1022

FA 1056

FA 1057

5 switch positions

30° switching angle



FA 3006



FA 3031



FA 3033



FA 3034



FA 3048



FA 3063



FA 3064



FA 3092



FA 3093



FA 3111



FA 3112

45° switching angle



FA 4003



FA 4008



FA 4014



FA 4039



FA 4040



FA 4041



FA 4059



FA 4060

60° switching angle



FA 6007



FA 6011



FA 6014



FA 6022



FA 6037



FA 6042



FA 6046



FA 6078



FA 6139

Miscellaneous switching angles



FA 1007



FA 1008



FA 1011



FA 1014



FA 1018



FA 1019



FA 1054



FA 1058



FA 1060



FA 1062

6 switch positions

30° switching angle



FA 3007



FA 3032

FA 3049

FA 3100

FA 3113

FA 3122

45° switching angle

FA 4009

FA 4015

FA 4091

Rotary Cam Switches

6 switch positions

60° switching angle



FA 6008



FA 6012



FA 6015



FA 6023



FA 6024



FA 6040



FA 6043



FA 6047



FA 6081



FA 6083



FA 6085



FA 6098



FA 6118

7 switch positions

30° switching angle



FA 3004



FA 3008



FA 3015



FA 3023



FA 3035



FA 3043



FA 3050



FA 3060



FA 3062



FA 3065



FA 3067



FA 3082



FA 3083



FA 3084



FA 3114



FA 3115

45° switching angle



FA 4004



FA 4010



FA 4016



FA 4086



FA 4087



FA 4088



FA 4089



FA 4090

8 switch positions

30° switching angle



FA 3009



FA 3016



FA 3051

45° switching angle

FA 4011

FA 4017

FA 4046

FA 4058

FA 4061

FA 4092

9 switch positions

30° switching angle



FA 3010



FA 3017



FA 3025



FA 3044



FA 3052

---

10 switch positions

30° switching angle



FA 3011



FA 3018



FA 3053

---

11 switch positions

30° switching angle



FA 3012



FA 3019



FA 3054

---

12 switch positions

30° switching angle



FA 3013



FA 3020



FA 3055



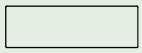
FA 3123

Other



FA 1001

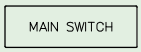
Additional top escutcheon plates



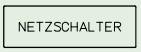
FA 8000



FA 8001



FA 8002



FA 8003



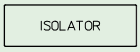
FA 8004



FA 8005



FA 8006



FA 8007



FA 8008



FA 8009



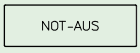
FA 8010



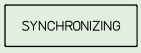
FA 8011



FA 8012



FA 8013



FA 8014



FA 8015



FA 8016



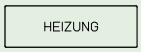
FA 8017



FA 8018



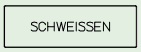
FA 8019



FA 8021



FA 8023



FA 8024



FA 8025



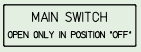
FA 8026



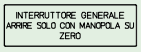
FA 8027



FA 8028



FA 8029



FA 8030



FA 8031



FA 8032



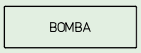
FA 8033



FA 8034



FA 8035



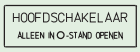
FA 8036



FA 8037



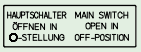
FA 8038



FA 8039



FA 8040



FA 8041

FA 8042

FA 8044

FA 8045

FA 8046

FA 8047

How to order legend plates

Standard escutcheon 30 × 30 mm	**Order code number**
Legend plate silver, inscription black	FAS1-.... (+FA number)
Legend plate yellow, inscription black	FBS1-.... (+FA number)
Legend plate black, inscription silver	FCS1-.... (+FA number)
Legend plate white, inscription black	FDS1-.... (+FA number)
Legend plate black, inscription white	FES1-.... (+FA number)

Standard escutcheon 48 × 48 mm	**Order code number**
Legend plate silver, inscription black	FAS2-.... (+FA number)
Legend plate yellow, inscription black	FBS2-.... (+FA number)
Legend plate black, inscription silver	FCS2-.... (+FA number)
Legend plate white, inscription black	FDS2-.... (+FA number)
Legend plate black, inscription white	FES2-.... (+FA number)

Standard escutcheon 64 × 64 mm	**Order code number**
Legend plate silver, inscription black	FAS4-.... (+FA number)
Legend plate yellow, inscription black	FBS4-.... (+FA number)
Legend plate black, inscription silver	FCS4-.... (+FA number)
Legend plate white, inscription black	FDS4-.... (+FA number)
Legend plate black, inscription white	FES4-.... (+FA number)

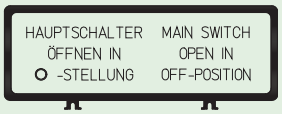
Standard escutcheon 88 × 88 mm	**Order code number**
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Legend plate yellow, inscription black	FBS6-.... (+FA number)
Legend plate black, inscription silver	FCS6-.... (+FA number)
Legend plate white, inscription black	FDS6-.... (+FA number)
Legend plate black, inscription white	FES6-.... (+FA number)

Standard escutcheon 130 × 130 mm	**Order code number**
Legend plate silver, inscription black	FAS8-.... (+FA number)
Legend plate yellow, inscription black	FBS8-.... (+FA number)
Legend plate black, inscription silver	FCS8-.... (+FA number)
Legend plate white, inscription black	FDS8-.... (+FA number)
Legend plate black, inscription white	FES8-.... (+FA number)

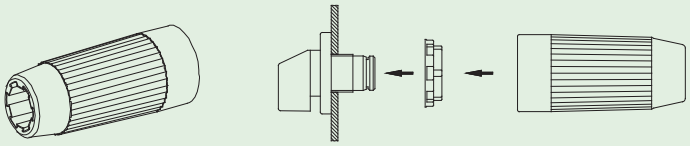
Additional top escutcheon plates	**Order code number**
Legend plate silver, inscription black	FAS2-8... (+FA number)
Legend plate yellow, inscription black	FBS2-8... (+FA number)
Legend plate black, inscription silver	FCS2-8... (+FA number)
Legend plate white, inscription black	FDS2-8... (+FA number)
Legend plate black, inscription white	FES2-8... (+FA number)

Order form for Rotary cam switches with special inscriptions page 90.

Additional top escutcheon plates/Assembly tool



FAZ2-8041



218098

Additional top escutcheon plates
with additional inscription to be clipped on the escutcheons and padlock devices

	Order code number
Escutcheon frame plate black, legend plate silver, without inscription (can be engraved)	**FAZ2 - 8000**
Escutcheon frame plate black, legend plate silver, inscription black, inscription FA 8... (see page 82)	**FAZ2 - 8...**
Escutcheon frame plate black, legend plate silver, inscription black, special engraving	**FAZ2 -** (special no.)
Escutcheon frame plate black, legend plate yellow, without inscription (can be engraved)	**FBZ2 - 8000**
Escutcheon frame plate black, legend plate yellow, inscription black, inscription FA 8... (see page 82)	**FBZ2 - 8**
Escutcheon frame plate black, legend plate yellow, inscription black, special engraving	**FBZ2 -** (special no.)
Escutcheon frame plate black, legend plate black, without inscription (can be engraved)	**FCZ2 - 8000**
Escutcheon frame plate black, legend plate black, inscription silver, inscription FA 8... (see page 82)	**FCZ2 - 8...**
Escutcheon frame plate black, legend plate black, inscription silver, special engraving	**FCZ2 -** (special no.)
Escutcheon frame plate black, legend plate white, without inscription (can be engraved)	**FDZ2 - 8000**
Escutcheon frame plate black, legend plate white, inscription black, inscription FA 8... (see page 82)	**FDZ2 - 8...**
Escutcheon frame plate black, legend plate white, inscription black, special engraving	**FDZ2 -** (special no.)
Escutcheon frame plate black, legend plate black, without inscription (can be engraved)	**FEZ2 - 8000**
Escutcheon frame plate black, legend plate black, inscription white, inscription FA 8... (see page 82)	**FEZ2 - 8...**
Escutcheon frame plate black, legend plate black, inscription white, special engraving	**FEZ2 -** (special no.)
Escutcheon frame plate black (without legend plate)	**FAZ2**

Legend plates for additional top escutcheon plates

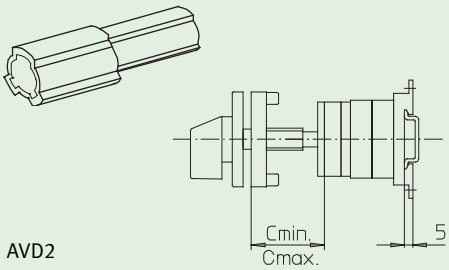
Legend plate silver, without inscription (can be engraved)	**FAS2 - 8000**
Legend plate silver, inscription black, inscription FA 8... (see page 82)	**FAS2 - 8...**
Legend plate silver, inscription black, special engraving	**FAS2 -** (special no.)
Legend plate yellow, without inscription (can be engraved)	**FBS2 - 8000**
Legend plate yellow, inscription black, inscription FA 8... (see page 82)	**FBS2 - 8...**
Legend plate yellow, inscription black, special engraving	**FBS2 -** (special no.)
Legend plate black, without inscription (can be engraved)	**FCS2 - 8000**
Legend plate black, inscription silver, inscription FA 8... (see page 82)	**FCS2 - 8...**
Legend plate black, inscription silver, special engraving	**FCS2 -** (special no.)
Legend plate white, without inscription (can be engraved)	**FDS2 - 8000**
Legend plate white, inscription black, inscription FA 8... (see page 82)	**FDS2 - 8...**
Legend plate white, inscription black, special engraving	**FDS2 -** (special no.)
Legend plate black, inscription white, inscription FA 8... (see page 82)	**FES2 - 8...**
Legend plate black, inscription white, special engraving	**FES2 -** (special no.)

Assembly tool for single hole mounting

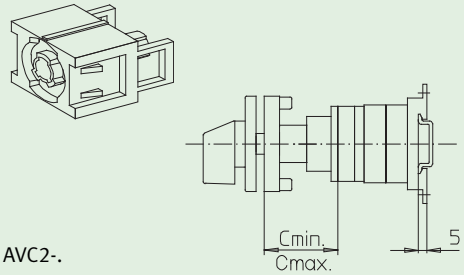
suitable for the fast assembly of escutcheons and padlock devices

Types	**Order code number**
P110 / P220 / P225 / M220 / M225 / T225	**218098**

Shaft extensions



AVD2



AVC2-.

Modular shaft extensions for mounting forms with door clutch or door interlock

C_{min}	C_{max}	number	Order code number	
Door clutch				
42 mm	59 mm	–	**–**	
60 mm	84 mm	1	**AVD2**	
85 mm	109 mm	2	**AVD2**	
110 mm	134 mm	3	**AVD2**	
135 mm	159 mm	4	**AVD2**	
160 mm	184 mm	5	**AVD2**	
185 mm	209 mm	6	**AVD2**	
Door interlock				
42 mm	57 mm	–	**–**	
64 mm	82 mm	1	**AVC2 - 1**	
89 mm	107 mm	1	**AVC2 - 2**	Please note: AVC-2 to AVC2-6 have additional parts to aid the stability of the extended shaft modules
114 mm	132 mm	1	**AVC2 - 3**	
139 mm	157 mm	1	**AVC2 - 4**	
164 mm	182 mm	1	**AVC2 - 5**	
189 mm	207 mm	1	**AVC2 - 6**	

The dot in the order code number must be replaced by the classification letter which identifies the key removable positions.
Due to the construction of the locking cylinder the key can also be removed at 180 degrees of the designated position.

Type P110

Standard cylinder lock L001. Other lock types on request.



key removable at
09 h / 03 h



key removable at
12 h / 06 h



key removable at
09 h / 12 h / 03 h / 06 h



key removable at
09 h / 11 h / 01 h / 03 h / 05 h / 07 h



key removable at
10 h / 04 h



key removable at
02 h / 08 h



key removable at
11 h / 05 h



key removable at
01 h / 07 h



key removable at
10 h / 12 h / 02 h / 04 h / 06 h / 08 h



key removable at
11 h / 01 h / 05 h / 07 h



key removable at
10 h / 12 h / 04 h / 06 h



key removable at
12 h / 02 h / 06 h / 08 h



key removable at
10 h / 02 h / 04 h / 08 h

Types P220 / P225 / M220 / M225 / T225

Standard cylinder lock C001. Other lock types on request.



key removable at
09 h / 03 h



key removable at
12 h / 06 h



key removable at
09 h / 12 h / 03 h / 06 h



key removable at
09 h / 11 h / 01 h / 03 h / 05 h / 07 h



key removable at
10 h / 04 h



key removable at
02 h / 08 h



key removable at
09 h / 10.30 h / 12 h / 01.30 h /
03 h / 04.30 h / 06 h / 07.30 h



key removable at
10.30 h / 04.30 h



key removable at
01.30 h / 07.30 h



key removable at
09 h / 10 h / 11 h / 12 h / 01 h / 02 h /
03 h / 04 h / 05 h / 06 h / 07 h / 08 h



key removable at
11 h / 05 h



key removable at
01 h / 07 h



key removable at
10 h / 12 h / 02 h / 04 h / 06 h / 08 h



key removable at
11 h / 01 h / 05 h / 07 h



key removable at
10 h / 12 h / 04 h / 06 h



key removable at
12 h / 02 h / 06 h / 08 h



key removable at
10 h / 02 h / 04 h / 08 h

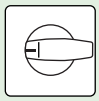
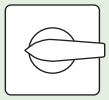
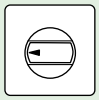
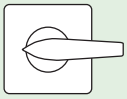
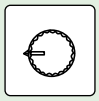


key removable at
09 h / 10.30 h / 03 h / 04.30 h

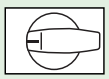
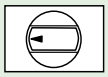


key removable at
10.30 h / 12 h / 04.30 h / 06 h

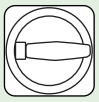
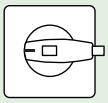
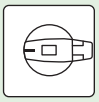
Operator variants for mounting forms with escutcheon and handle

Operator Suitable for Types		Colour escutcheon	Colour legend plate	Colour operator	Change of order code number
M-handle P110, P220, P225, M220, M225, T225, S432, S440, S606, S608, S612		black grey white black black black	silver silver silver yellow silver black	black grey white red red black	**.... - ..... - ...M1** **.... - ..... - ...M2** **.... - ..... - ...M3** **.... - ..... - ...M4** **.... - ..... - ...M5** **.... - ..... - ...M8**
F-handle P220, P225, M220, M225, T225		black grey white black black black	silver silver silver yellow silver black	black grey white red red black	**.... - ..... - ...F1** **.... - ..... - ...F2** **.... - ..... - ...F3** **.... - ..... - ...F4** **.... - ..... - ...F5** **.... - ..... - ...F8**
B-handle P220, P225, M220, M225, T225, S432, S440, S606, S608, S612, S825		black grey white black black black	silver silver silver yellow silver black	black grey white red red black	**.... - ..... - ...B1** **.... - ..... - ...B2** **.... - ..... - ...B3** **.... - ..... - ...B4** **.... - ..... - ...B5** **.... - ..... - ...B8**
N-handle P220, P225, M220, M225, T225, S432, S440		black grey white black black black	silver silver silver yellow silver black	black grey white red red black	**.... - ..... - ...N1** **.... - ..... - ...N2** **.... - ..... - ...N3** **.... - ..... - ...N4** **.... - ..... - ...N5** **.... - ..... - ...N8**
G-handle S432, S440, S606, S608, S612, S825		black black black black	silver yellow silver black	black red red black	**.... - ..... - ...G1** **.... - ..... - ...G4** **.... - ..... - ...G5** **.... - ..... - ...G8**
R-handle P220, P225, M220, M225, T225, S432, S440		black grey white black black	silver silver silver yellow silver	black grey white red red	**.... - ..... - ...R1** **.... - ..... - ...R2** **.... - ..... - ...R3** **.... - ..... - ...R4** **.... - ..... - ...R5**

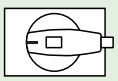
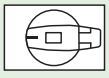
Installation mounting for 45 mm aperture in Panel/Distribution boards:

M-handle P220, P225, M220, M225 T225		grey grey grey	silver silver yellow	black grey red	**.... - ..... - ...M1** **.... - ..... - ...M2** **.... - ..... - ...M4**
N-handle P220, P225, M220, M225, T225		grey grey grey	silver silver yellow	black grey red	**.... - ..... - ...N1** **.... - ..... - ...N2** **.... - ..... - ...N4**

Operator variants for mounting forms with padlock device

Operator Suitable for Types		Colour escutcheon	Colour legend plate	Colour operator	Change of order code number
N-padlock device P220, P225, M220, M225, T225, S432, S440, S606, S608, S612		black grey yellow grey yellow	white white white white white	black grey red black black	.... - ..... - ...**N1** .... - ..... - ...**N2** .... - ..... - ...**N4** .... - ..... - ...**N6** .... - ..... - ...**N7**
		operator external dimension 67 × 67 mm 88 × 88 mm	**max. number of padlocks** 3 4	**hasp diameter of padlock** 4 mm (min) / 8 mm (max) 5 mm (min) / 9 mm (max)	
M-padlock device P110, P220, P225, M220, M225, T225, S432, S440, S606, S608, S612		black grey yellow grey yellow	white white white white white	black grey red black black	.... - ..... - ...**M1** .... - ..... - ...**M2** .... - ..... - ...**M4** .... - ..... - ...**M6** .... - ..... - ...**M7**
		operator external dimension 48 × 48 mm 67 × 67 88 × 88 mm	**max. number of padlocks** 3 3 4	**hasp diameter of padlock** 3 mm (min) / 5 mm (max) 4 mm (min) / 8 mm (max) 5 mm (min) / 9 mm (max)	
B-padlock device S432, S440, S606, S608, S612, S825		black black black	silver yellow black	black red black	.... - ..... - ...**B1** .... - ..... - ...**B4** .... - ..... - ...**B8**
		operator external dimension 75 × 114 mm 98 × 142 130 × 178 mm	**max. number of padlocks** 4 4 4	**hasp diameter of padlock** 5 mm (min) / 8 mm (max) 5 mm (min) / 8 mm (max) 5 mm (min) / 8 mm (max)	
H-padlock device S432, S440, S606, S608, S612, S825		black black black	silver yellow black	black red black	.... - ..... - ...**H1** .... - ..... - ...**H4** .... - ..... - ...**H8**
		operator external dimension 75 × 114 mm 98 × 142 130 × 178 mm	**max. number of padlocks** 4 4 4	**hasp diameter of padlock** 5 mm (min) / 8 mm (max) 5 mm (min) / 8 mm (max) 5 mm (min) / 8 mm (max)	
Padlockable with V-handle P110, P220, P225, M220, M225, T225, S432, S440		black black	silver yellow	black red	.... - ..... - ...**V1** .... - ..... - ...**V4**
		operator external dimension 48 × 48 mm 64 × 64 mm	**max. number of padlocks** 2 3	**hasp diameter of padlock** 3 mm (min) / 5 mm (max) 4 mm (min) / 6 mm (max)	
Padlockable with L-handle P110, P220, P225, M220, M225, T225		black black	silver yellow	black red	.... - ..... - ...**L1** .... - ..... - ...**L4**
		operator external dimension 48 × 48 mm	**max. number of padlocks** 2	**hasp diameter of padlock** 3 mm (min) / 5 mm (max)	

Installation mounting for 45 mm aperture in Panel/Distribution boards:

Padlockable with V-handle P220, P225, M220, M225 T225		grey grey	silver yellow	black red	.... - ..... - ...**V1** .... - ..... - ...**V4**
		operator external dimension 45 × 52.5 mm	**max. number of padlocks** 2	**hasp diameter of padlock** 3 mm (min) / 5 mm (max)	
Padlockable with L-handle P220, P225, M220, M225, T225		grey grey	silver yellow	black red	.... - ..... - ...**L1** .... - ..... - ...**L4**
		operator external dimension 45 × 52.5 mm	**max. number of padlocks** 2	**hasp diameter of padlock** 3 mm (min) / 5 mm (max)	

How to order special switches

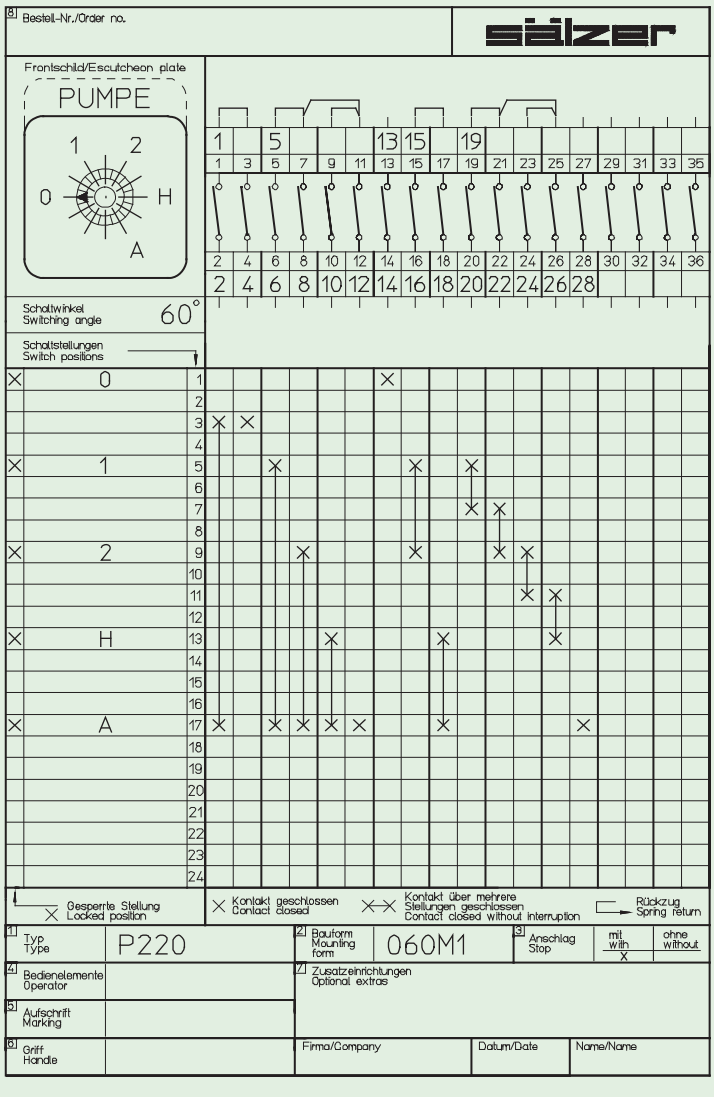
Special switching programmes can be produced by means of prefabricated modules either by us or by our authorized workshops all over the world.

For description of the desired course of switching please use our form on page 89. In case of more than 18 contacts an additional form can be used as page 2.

When determining the desired switch the following has to be considered:

- Indicate terminal designations at connection points only and use figures, if possible.
- Mark initial position and/or “OFF” position on the handle with an arrow.
- Mark escutcheon engraving on the escutcheon and indicate it in the column “Switch positions”. In the case of special engraving if the space is not sufficient, use the form for special legend plates (refer to page 91) or enclose a sketch.
- Determine the desired switching angle. If necessary due to technical reasons we may suggest a different switching angle.
- The column “locked positions” is to be filled in only in case of interlockings (e.g. key removable position) and locking mechanisms.
- At the bottom of the order form 6 areas are identified (1 to 6). Areas 1 to 3 must always be specified. Areas 4 to 6 have to be completed in case of deviations from the standard equipment of the design and/or upon demand. Area 7 “Order code no.” is specified on your first order. For all subsequent orders the indication of this order code number is sufficient.

Ordering example

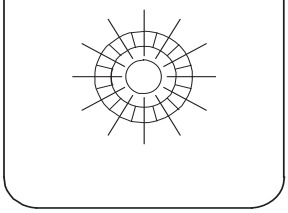


Copy form for special switches

7 Bestell-Nr./Order no.

sälzer

Frontschild/Escutcheon plate



1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35
2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36

Schaltwinkel / Switching angle °

Schaltstellungen / Switch positions

	1
	2
	3
	4
	5
	6
	7
	8
	9
	10
	11
	12
	13
	14
	15
	16
	17
	18
	19
	20
	21
	22
	23
	24

Gesperrte Stellung / Locked position

Kontakt geschlossen / Contact closed

Kontakt über mehrere Stellungen geschlossen / Contact closed without interruption

Rückzug / Spring return

1 Typ / Type		2 Bauform / Mounting form		3 Anschlag / Stop	mit / with ohne / without
4 Bedienelemente / Operator		6 Zusatzeinrichtungen / Optional extras			
5 Aufschrift / Marking					
		Firma/Company	Datum/Date	Name/Name	

How to order special engravings

For descriptions of the desired special engraving please use our order forms. On page 91 you will find order forms for switches with switching angle 30°/ 60° and 45°/ 90°.

When determining the desired engraving the following has to be considered:

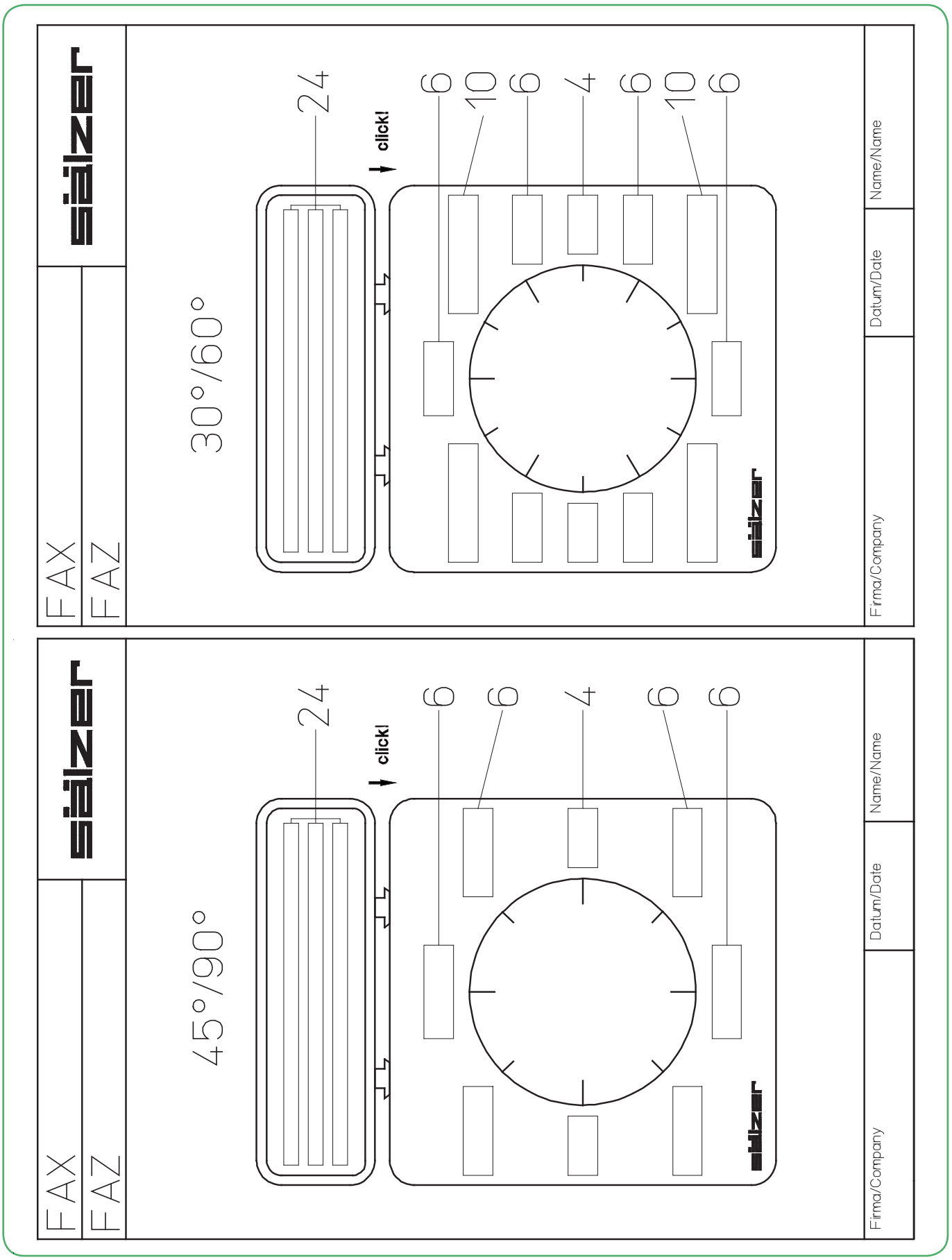
- For standard engraving capital letters or figures type Helvetica in black are used.
- Engravings deviating from the standard design like small size text, symbols or graphical symbols please enclose a drawing or a file.
- The max. quantity of letters (symbols) is specified in the order form.
- The max. letter height is for

escutcheon	□	30 mm	=	3.5 mm
escutcheon	□	48 mm	=	4.0 mm
escutcheon	□	64 mm	=	4.5 mm
escutcheon	□	88 mm	=	6.5 mm
escutcheon	□	130 mm	=	8.0 mm

When utilizing the max. letter (symbol) quantity the letter height might be reduced.

- With the first order a FAX no. for the legend plate and a FAZ no. for the additional legend plate is fixed for every special engraving that will remain valid for all subsequent orders.

Copy form for special engravings



Utilisation Categories

Utilisation categories for Switches, Disconnectors, Switch-Disconnectors and Fuse-Combination Units according to IEC/EN 60947-3

Type of Current	Utilisation Category		Typical applications
	Frequent operation	Occasional operation	
AC	AC-15A	AC-15B	Controlling electromagnetic load
	AC-20A *	AC-20B *	Making and breaking without load
	AC-21A	AC-21B	Switching resistive loads including low overloads
	AC-22A	AC-22B	Switching mixed resistive and inductive loads, including low overloads
	AC-23A	AC-23B	Switching motors and other highly inductive loads
DC	DC-20A *	DC-20B *	Making and breaking without load
	DC-21A	DC-21B	Switching resistive loads including low overloads
	DC-22A	DC-22B	Switching mixed resistive and inductive loads, including low overloads (e. g. shunt motors)
	DC-23A	DC-23B	Switching highly inductive loads (e. g. series motors)

* The application of these utilisation categories isn't permitted in the USA.

Category AC-23 includes occasional switching of individual motors. The utilisation categories in the above table do not apply to an equipment normally used to start, accelerate and/or stop individual motors. The utilisation categories for such an equipment are dealt with the following table:

Type of Current	Utilisation Category	Typical applications
AC	AC-2	Slip-ring motors: starting, plugging[1)], switching off
	AC-3	Squirrel-cage motors: starting, switching off running motors
	AC-4	Squirrel-cage motors: starting, plugging[1)], inching[2)]
DC	DC-3	Shunt motors: starting, plugging[1)], inching [2)], dynamic breaking of d.c. motors
	DC-4	Series motors: starting, plugging[1)], inching [2)], dynamic breaking of d.c. motors

[1)] Plugging is understood to mean stopping or reversing the motor rapidly by reversing motor primary connections while the motor is running.

[2)] Inching (jogging) is understood to mean energizing a motor once or repeatedly for short periods to obtain small movements of the driven mechanism.

Note: The switching of rotor circuits, capacitors or tungsten filament/discharge lamps shall be subject to special agreements between manufacturer and user.

Rated currents of three-phase motors (approximate figures for squirrel-cage motors)

Motor rating			Motor full-load current	Fuse starting D.O.L.	Y/Δ	Motor full-load current	Fuse starting D.O.L.	Y/Δ
kW	cos ϕ	Percent efficiency η %	A	A	A	A	A	A
			230 V			**400 V**		
0.06	0.7	58	0.37	2	—	0.21	2	—
0.09	0.7	60	0.54	2	—	0.31	2	—
0.12	0.7	60	0.72	4	2	0.41	2	—
0.18	0.7	62	1.04	4	2	0.6	2	—
0.25	0.7	62	1.4	4	2	0.8	4	2
0.37	0.72	66	2	6	4	1.1	4	2
0.55	0.75	69	2.7	10	4	1.5	4	2
0.75	0.79	74	3.2	10	4	1.9	6	4
1.1	0.81	74	4.6	10	6	2.6	6	4
1.5	0.81	74	6.3	16	10	3.6	6	4
2.2	0.81	78	8.7	20	10	5	10	6
3	0.82	80	11.5	25	16	6.6	16	10
4	0.82	83	14.8	32	16	8.5	20	10
5.5	0.82	86	19.6	32	25	11.3	25	16
7.5	0.82	87	26.4	50	32	15.2	32	16
11	0.84	87	38	80	40	21.7	40	25
15	0.84	88	51	100	63	29.3	63	32
18.5	0.84	88	63	125	80	36	63	40
22	0.84	92	71	125	80	41	80	50
30	0.85	92	96	200	100	55	100	63
37	0.86	92	117	200	125	68	125	80
45	0.86	93	141	250	160	81	160	100
55	0.86	93	173	250	200	99	200	125
75	0.86	94	233	315	250	134	200	160
90	0.86	94	279	400	315	161	250	200
110	0.86	94	342	500	400	196	315	200
132	0.87	95	401	630	500	231	400	250
160	0.87	95	486	630	630	279	400	315
200	0.87	95	607	800	630	349	500	400
250	0.87	95	—	—	—	437	630	500
315	0.87	96	—	—	—	544	800	630
400	0.88	96	—	—	—	683	1000	800
			500 V			**690 V**		
0.06	0.7	58	0.17	2	—	0.12	2	—
0.09	0.7	60	0.25	2	—	0.18	2	—
0.12	0.7	60	0.33	2	—	0.24	2	—
0.18	0.7	62	0.48	2	—	0.35	2	—
0.25	0.7	62	0.7	2	—	0.5	2	—
0.37	0.72	66	0.9	2	2	0.7	2	—
0.55	0.75	69	1.2	4	2	0.9	4	2
0.75	0.79	74	1.5	4	2	1.1	4	2
1.1	0.81	74	2.1	6	4	1.5	4	2
1.5	0.81	74	2.9	6	4	2.1	6	4
2.2	0.81	78	4	10	4	2.9	10	4
3	0.82	80	5.3	16	6	3.8	10	4
4	0.82	83	6.8	16	10	4.9	16	6
5.5	0.82	86	9	20	16	6.5	16	10
7.5	0.82	87	12.1	25	16	8.8	25	10
11	0.84	87	17.4	32	20	12.6	25	16
15	0.84	88	23.4	50	25	17	32	20
18.5	0.84	88	28.9	50	32	20.9	32	25
22	0.84	92	33	63	32	23.8	50	25
30	0.85	92	44	80	50	32	63	32
37	0.86	92	54	100	63	39	80	50
45	0.86	93	65	125	80	47	80	63
55	0.86	93	79	160	80	58	100	63
75	0.86	94	107	200	125	78	160	100
90	0.86	94	129	200	160	93	160	100
110	0.86	94	157	250	160	114	200	125
132	0.87	95	184	250	200	134	250	160
160	0.87	95	224	315	250	162	250	200
200	0.87	95	279	400	315	202	315	250
250	0.87	95	349	500	400	253	400	315
315	0.87	96	436	630	500	316	500	400
400	0.88	96	547	800	630	396	630	400

The rated motor currents are for standard 1500 r.p.m. motors with normal inner and outer surface cooling
Fuse: This table applies to “slow” or “gL”
D.O.L. starting: Maximum starting current: 6 × rated current. Maximum starting time: 5 sec.
Y/Δ starting: Maximum starting current: 2 × rated current. Maximum starting time: 15 sec.

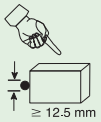
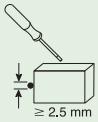
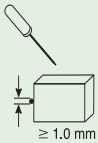
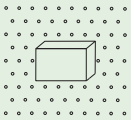
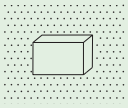
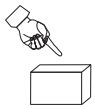
IP Codes

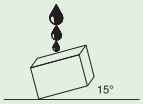
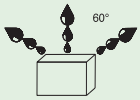
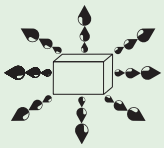
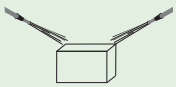
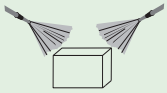
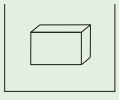
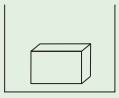
A coding system is defined by IEC/EN 60529 for the classification of degrees of protection provided by enclosures of electrical equipment against solid objects and water. This coding comprises the letters 'IP' followed by a two digit code as follows:

IP 6 6

Defines protection against solid objects and access to hazardous parts.

Defines protection against water.

1st digit		protection against solid objects and access to hazardous parts
0		No protection.
1		No ingress by solid objects ≥ 50 mm dia nor access to hazardous parts with the back of the hand.
2		No ingress by solid objects ≥12.5 mm dia nor access to hazardous parts with a finger.
3		No ingress by solid objects ≥ 2.5 mm dia nor access to hazardous parts with a tool.
4		No ingress by solid objects ≥1.0 mm dia nor access to hazardous parts with a wire.
5		Dust protected. Ingress of dust is not completely prevented, but there should be no harmful deposits. No access to hazardous parts with a wire.
6		Dust tight. No ingress of dust. No access to hazardous parts with a wire.
1B		Test finger penetration to a maximum of 80 mm must not contact hazardous parts.

2nd digit		Protection against water
0		No protection.
1		Veritcally falling drops of water shall have no harmful effect.
2		Vertically falling drops of water shall have no harmful effect when the enclosure is tilted at any angle up to 15° from vertical.
3		Water sprayed at up to 60° from the vertical shall have no harmful effect.
4		Water splashed from any direction shall have no harmful effect.
5		Jets of water projected from any direction shall have no harmful effect.
6		Strong jets of water projected from any direction shall have no harmful effect.
7		Temporary immersion in water shall not result in ingress of harmful quantities of water.
8		Continuous immersion in water shall not result in ingress of harmful quantities of water.

Mounting form table

Mtg. form	Type of mounting	page
002G1	Base mounting/Four hole mounting 68×68 mm	35
002G1	Base mounting/Four hole mounting 104×104 mm	40
002M1	Base mounting/Four hole mounting 68×68 mm	34
002M1	Base mounting/Four hole mounting 68×68 mm	35
003G1	Front mounting/Four hole mounting 104×104 mm	17
003G1	Front mounting/Four hole mounting 68×68 mm	16
003M1	Front mounting/Four hole mounting 36×36 mm	12
003M1	Front mounting/Four hole mounting 48×48 mm	15
003M1	Front mounting/Four hole mounting 68×68 mm	16
003M1	Front mounting/Two hole mounting 20 mm	10
005M1	Front mounting/Four hole mounting 36×36 mm	13
021M1	Base mounting/Snap on mounting	28
025N3	Front mounting/Flush wall mounting	27
026N2	Base mounting/Snap on mounting/DIN rail	29
033M1	Front mounting/Four hole mounting 36×36 mm	14
033M1	Front mounting/Two hole mounting 20 mm	11
033M4	Front mounting/Four hole mounting 36×36 mm	14
033M4	Front mounting/Two hole mounting 20 mm	11
033N1	Front mounting/Four hole mounting 36×36 mm	14
033N4	Front mounting/Four hole mounting 36×36 mm	14
033V1	Front mounting/Four hole mounting 36×36 mm	14
033V4	Front mounting/Four hole mounting 36×36 mm	14
041G1	Base mtg../Four hole mtg. 104×104 mm/door clutch	41
041G1	Base mtg../Four hole mtg. 68×68 mm/door clutch	37
041M1	Base mtg../Four hole mtg. 68×68 mm/door clutch	36
041M1	Base mtg../Four hole mtg. 68×68 mm/door clutch	37
042G1	Base mtg../Four hole mtg. 104×104 mm/door interlock	42
042G1	Base mtg../Four hole mtg. 68×68 mm/door interlock	39
042M1	Base mtg../Four hole mtg. 68×68 mm/door interlock	38
042M1	Base mtg../Four hole mtg. 68×68 mm/door interlock	39
076M1	Enclosed/Insulated enclosure 100×80×65 mm	45
076V1	Enclosed/Insulated enclosure 100×80×65 mm	46
077M1	Enclosed/Insulated enclosure 100×80×65 mm	47
077M4	Enclosed/Insulated enclosure 100×80×65 mm	47
077N1	Enclosed/Insulated enclosure 100×80×65 mm	47
077N4	Enclosed/Insulated enclosure 100×80×65 mm	47
077V1	Enclosed/Insulated enclosure 100×80×65 mm	47
077V4	Enclosed/Insulated enclosure 100×80×65 mm	47
078V1	Enclosed/Insulated enclosure 100×80×65 mm	46
107M1	Enclosed/Insulated enclosure 68×68×53 mm	43
117M1	Enclosed/Insulated enclosure 68×68×53 mm	44
117M4	Enclosed/Insulated enclosure 68×68×53 mm	44
176M1	Enclosed/Insulated enclosure 100×80×85 mm	48
176V1	Enclosed/Insulated enclosure 100×80×85 mm	49
177M1	Enclosed/Insulated enclosure 100×80×85 mm	51
177M4	Enclosed/Insulated enclosure 100×80×85 mm	51
177N1	Enclosed/Insulated enclosure 100×80×85 mm	51
177N4	Enclosed/Insulated enclosure 100×80×85 mm	51
177V1	Enclosed/Insulated enclosure 100×80×85 mm	51
177V4	Enclosed/Insulated enclosure 100×80×85 mm	51
178V1	Enclosed/Insulated enclosure 100×80×85 mm	49
206M1	Front mounting/Single hole mounting ø 22.5 mm	26
206M4	Front mounting/Single hole mounting ø 22.5 mm	26
206N1	Front mounting/Single hole mounting ø 22.5 mm	26
206N4	Front mounting/Single hole mounting ø 22.5 mm	26
206V1	Front mounting/Single hole mounting ø 22.5 mm	26
206V4	Front mounting/Single hole mounting ø 22.5 mm	26
218M1	Front mounting/Single hole mounting ø 16 mm/22.5 mm	19
218M1	Front mounting/Single hole mounting ø 22.5 mm	23
219M1	Front mounting/Single hole mounting ø 16 mm/22.5 mm	18
219M1	Front mounting/Single hole mounting ø 22.5 mm	22
232M1	Base mounting/Snap on mounting/door clutch	31
232M4	Base mounting/Snap on mounting/door clutch	31
232N1	Base mounting/Snap on mounting/door clutch	31
232N4	Base mounting/Snap on mounting/door clutch	31
232V1	Base mounting/Snap on mounting/door clutch	31
232V4	Base mounting/Snap on mounting/door clutch	31
234M1	Base mounting/Snap on mounting/door interlock	33
234M4	Base mounting/Snap on mounting/door interlock	33
234N1	Base mounting/Snap on mounting/door interlock	33
234N4	Base mounting/Snap on mounting/door interlock	33
234V1	Base mounting/Snap on mounting/door interlock	33
234V4	Base mounting/Snap on mounting/door interlock	33
241M1	Base mounting/Snap on mounting/door clutch	30
242M1	Base mounting/Snap on mounting/door interlock	32
273M1	Enclosed/Insulated enclosure 125×100×133 mm	54
273V1	Enclosed/Insulated enclosure 125×100×133 mm	54
275M1	Enclosed/Insulated enclosure 125×100×133 mm	55
275M4	Enclosed/Insulated enclosure 125×100×133 mm	55
275N1	Enclosed/Insulated enclosure 125×100×133 mm	55
275N4	Enclosed/Insulated enclosure 125×100×133 mm	55
275V1	Enclosed/Insulated enclosure 125×100×133 mm	55
275V4	Enclosed/Insulated enclosure 125×100×133 mm	55
276M1	Enclosed/Insulated enclosure 125×100×133 mm	52
276V1	Enclosed/Insulated enclosure 125×100×133 mm	53
E001.*	Enclosed/Insulated enclosure 100×80×85 mm	50
R001.*	Front mounting/Single hole mounting ø 16 mm/22.5 mm	21
R001.*	Front mounting/Single hole mounting ø 22.5 mm	25
S001.*	Front mounting/Single hole mounting ø 16 mm/22.5 mm	20
S001.*	Front mounting/Single hole mounting ø 22.5 mm	24

Rated data

Rated data			P110	M220 P220	M221* P221*	P225	M225 P226*	T225	S432	S440	S606	S608	S612	S825
Operational voltage U_e		(V AC)	440	690	690	690	690	690	690	690	690	690	690	690
Impulse withstand voltage U_{imp}		(kV)	4	6	6	6	6	6	6	6	6	6	6	6
Overvoltage category			III	III	III	III	III	III	III	III	III	III	III	III
Pollution degree			3	3	3	3	3	3	3	3	3	3	3	3
Uninterrupted current I_u / I_{th} / I_{the}		(A)	10	20	20	25	25	32	50	63	80	100	160	315
Load carrying capacity in intermittend operation (class 12)		(AB)	DF: 60% = 1.3 × I_e / 40% = 1.6 × I_e / 25% = 2 × I_e											
Breaking capacity	220–240V	(A)	90	180	180	255	255	370	520	550	600	700	900	1800
	380–440V	(A)	70	150	150	230	230	300	430	500	550	600	850	1650
	500–690V	(A)	—	90	90	270	270	210	280	380	420	450	340	350
short-circuit rating (max. fuse)		(gL)	10	20	20	25	25	32	50	63	80	100	160	315
Conditional short-circuit current		(kA_{eff})	3	10	10	10	10	15	20	20	25	25	25	25
Isolating characteristics (to EN 60947)	(up to ... V AC)		460	690	690	690	690	690	690	690	690	690	690	690
Switching angle			30° / 45° / 60° / 90°											
Contacts (Current paths) (max.)			16	24	24	24	24	24	24	24	24	24	24	24
Current heat loss per contact at I_u		(W)	0.3	0.65	0.65	0.75	0.75	1	3	3.5	4	5	11	28.5
Terminal capacity														
solid or stranded	min.	(mm^2)	0.75	1	1	1.5	1.5	2.5	2.5	4	6	10	10	185[1]
	max.	(mm^2)	1.5	2.5	2.5	4	4	6	10	16	25	35	70	185[1]
flexible or multiwire (including ferrule)	min.	(mm^2)	0.75	1	1	1.5	1.5	1.5	2.5	2.5	6	10	10	185[1]
	max.	(mm^2)	1.5	2.5	2.5	2.5	2.5	4	6	10	16	25	50	185[1]
American Wire Gauge		(AWG)	16	12	12	10	10	10	6	4	4	1/0	2/0	350MCM
Thread dimensions for terminal screw			M2.5	M3	M3	M3.5	M3.5	M4	M5	M5	2×M4	2×M5	2×M6	M12
Terminal tightening torque	min.	(Nm)	0.4	0.5	0.5	0.8	0.8	1.2	2	2	1.2	2	2.5	14
	max.	(Nm)	0.6	1	1	1.5	1.5	2.5	4	4	2.5	4	6	25
Operational current I_e														
AC-21A		(A)	10	20	20	25	25	32	50	63	80	100	160	315
AC-22A	220–500V	(A)	10	20	20	25	25	32	50	63	80	100	160	315
	660–690V	(A)	—	20	20	25	25	32	50	60	80	80	125	125
AC-23A (cos ϕ = 0.65)	440V	(A)	6	16	16	22	22	30	44	50	65	80	120	285
cUL General Use	300V AC	(A)	10	20	20	25	25	35	55[1]	70[1]	95[1]	110[1]	175[1]	240
	600V AC	(A)	—	—	20	—	25	35	55[1]	70[1]	95[1]	110[1]	175[1]	240
Operational power 50–60 Hz (3 phase)														
AC-23A	220–240V	(kW)	1.8	4	4	5.5	5.5	7.5	11	15	30	30	37	75
	380–440V	(kW)	3	7.5	7.5	11	11	15	22	30	45	55	75	132
	500V	(kW)	—	7.5	7.5	11	11	15	30	45	55	55	90	132
	660–690V	(kW)	—	7.5	7.5	11	11	15	30	37	45	45	55	55
AC-3	220–240V	(kW)	1.5	3	3	4	4	5.5	11	15	15	22	22	37
	380–440V	(kW)	2.2	5.5	5.5	7.5	7.5	11	22	30	30	37	45	55
	500V	(kW)	—	5.5	5.5	7.5	7.5	11	22	30	30	37	45	55
	660–690V	(kW)	—	5.5	5.5	7.5	7.5	11	22	30	30	37	45	55
cUL	110–120V AC	(HP)	0.5	1	1	1.5	1.5	3	5	7.5	10	10	15	25
	208V AC	(HP)	0.5	2	2	5	5	7.5	7.5	7.5	10	15	15	30
	220–240V AC	(HP)	0.5	2	2	5	5	7.5	10	15	15	15	15	30
	440–480V AC	(HP)	—	—	5	—	10	10	20	30	30	30	40	50
	550–600V AC	(HP)	—	—	5	—	10	10	25	40	50	50	50	50

* use this version for 600V AC UL/CSA application

[1] with terminal extensions for cable lug connection

Rated data

Rated data (auxiliary contacts)			P110	M220 P220	M221* P221*	P225	M225 P226*	T225	S432	S440	S606	S608	S612	S825
Operational voltage U_e		(V AC)	440	500	500	500	500	500	500	500	500	500	500	500
Uninterrupted current I_u / I_{th} / I_{the}		(A)	10	20	20	25	25	32	50	63	80	100	160	315
Operational current I_e														
AC-21A		(A)	10	20	20	25	25	32	50	63	80	100	160	315
AC-15	110–240V	(A)	2.5	6	6	6	6	14	16	16	16	16	16	16
	380–440V	(A)	1.5	4	4	5	5	6	7	7	7	7	7	7
	500V	(A)	0.8	2	2	2.5	2.5	3	3.5	3.5	3.5	3.5	3.5	3.5
cUL General Use	600V AC	(A)	—	—	20	—	25	35	55	70	70	110	175	240
Heavy Pilot Duty			B300	A300	A600	A300	A600	A600	A600	A600	A600	A600	A600	A600
Short-circuit rating (max. fuse)		(gL)	10	20	20	25	25	32	50	63	80	100	160	315
Conditional short-circuit current		(kA_{eff})	3	10	10	10	10	15	20	20	25	25	25	25
Terminal capacity														
flexible or multiwire (including ferrule)	min.	(mm^2)	0.75	1	1	1.5	1.5	1.5	2.5	2.5	6	10	10	185[1]
	max.	(mm^2)	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
American Wire Gauge		(AWG)	16	12	12	10	10	10	6	4	4	1/0	2/0	350MCM

*use this version for 600V AC UL/CSA application

[1] with terminal extensions for cable lug connection

General

General		P110	M220 P220	M221* P221*	P225	M225 P226*	T225	S432	S440	S606	S608	S612	S825
Standards		IEC 60947 / EN 60947 / IEC 60204 / UL 508 / CSA 22.2, No. 14 / VDE 0660 Teil 107											
Mechanical lifespan		$>10^6$	$>10^6$	$>10^6$	$>10^6$	$>10^6$	$>10^6$	$>10^6$	$>10^6$	$>10^5$	$>10^5$	$>10^5$	$>10^5$
Max. operating frequency/h		50	50	50	50	50	50	50	50	50	50	50	50
Climatic resistance (damp heat)	constant	to DIN IEC 60068-2-78											
	cyclic	to DIN IEC 60068-2-30											
Ambient temperature (min. / max.)	open (°C)	–25 / +50											
	enclosed (°C)	–25 / +40											
Mounting position		as required											
Mechanical shock resistance (shock duration 20 ms)	(g)	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10	>10
Rated frequency	(Hz)	50 to 60 (other frequencies on request)											

*use this version for 600V AC UL/CSA application

Conformity

Sälzer Electric Rotary Cam Switches are conform to the regulations of 'Directive 2014/35/EU on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits', specified as Low Voltage Directive.

The conformity is proved by the complete compliance of the harmonized european standards EN 60947-1, EN 60947-3, EN 60947-5-1, EN 60204-1.

Sälzer Electric products are developed, manufactured and tested according to these standards. The CE marking on all our products prove the conformity to the directives.

Rotary Cam Switches from Sälzer are approved according to UL 60947.

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