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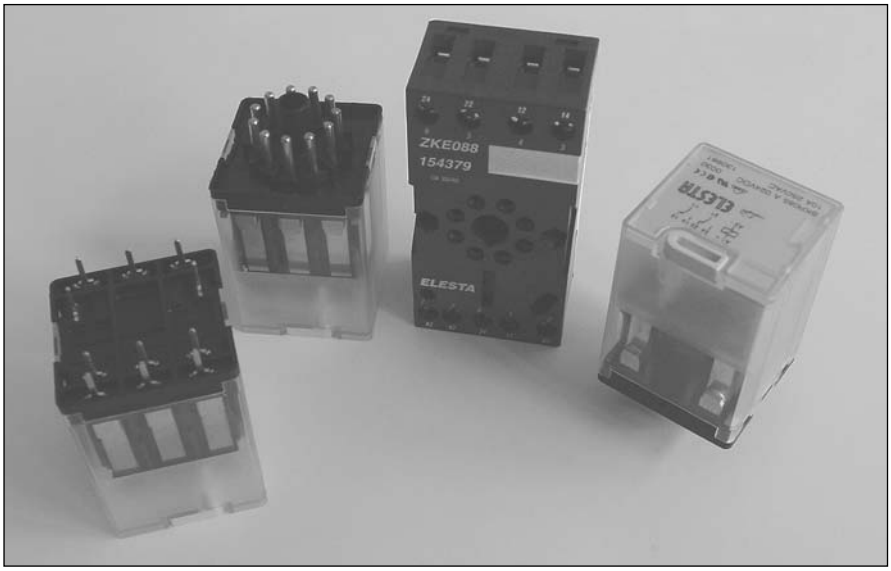
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Find the *Elesta SKR115A* at our website: *Click HERE*

SKR - industry relay



the universal relay SKR

The strengths of the SKR industry relay lie in the mature and thought-out construction.
Over-average contact safety and life time, electrical and mechanical status indication as well as the unsurpassed construction from only six assemblies makes the relay to the excellent power switch.

the time module STM

8 adjustable functions and 8 selectable time ranges: these are the special features of the time module STM. With only one version of the module all essential features as operating voltage, functions and time ranges are adjustable.

The result: a simple and cost-effective warehousing.

the socket

Simple to handle screw-terminal and clear, rich in contrast labeled clamp identification, are the base for a problemles use.
The ZKE/ZKX sockets permit a rapid and secure installation.

The separated inputs and outputs are located at one level. There is also the possibility to plug a time module STM or other additional modules together with the SKR relay.

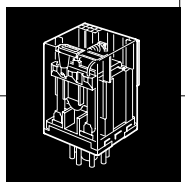
features

- simple construction
- high contact load
- contact spring in Beryllium bronze
- safe wire diameter
- long life time
- large coil room
- electrical or mechanical status indication
- integrated manual actuation
- simple installation
- indelible scheme on socket or cover following international standards

applications

- mostly used where a time-dependent event must be headed
- switch panel making
- machine industry
- illuminations
- locking of functions
- gate control
- machine control

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type number key

SKR 115 A ... 024VDC

coil voltage

VDC = direct current
VAC = alternating current

standard voltage

VAC: 024, 115, 230 V
VDC: 024, 110

options

D = double contact (AgCuNi)
L = electrical position indication
F = free wheel diode
FL = free wheel diode and
electrical position indication
B = without manual actuation
T = push-button actuation
C = current coil

relay version

SKR 085 A
SKR 115 A
SKR 122 A

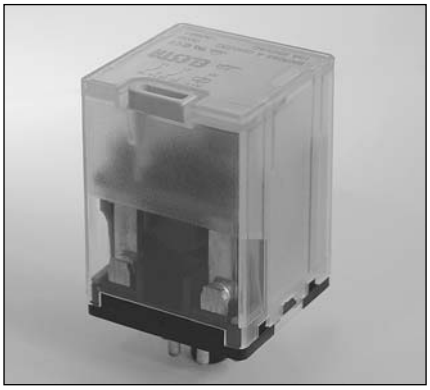
A = mechanical position indication
standard: manual actuation

order samples

manual actuation	position indication	free wheel diode	LED display						
•	•			SKR085 A	VDC/AC	SKR115 A	VDC/AC	SKR122 A	VDC/AC
•	•	•		SKR085 AF	VDC	SKR115 AF	VDC	SKR122 AF	VDC
•	•		•	SKR085 AL	VDC/AC	SKR115 AL	VDC/AC	SKR122 AL	VDC/AC
•	•	•	•	SKR085 AFL	VDC	SKR115 AFL	VDC	SKR122 AFL	VDC

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SKR085 - industry relay, 8-pole



Industry relay with two change-over contacts in different versions.

order numbers

serial version	SKR 085 A ... VDC/AC
with mechanical position indication	

options

electrical position indication with free wheel diode	SKR 085 L ..
	SKR 085 F ..
electrical position indication with free wheel diode	SKR 085 FL ..
double contact	SKR 085 D ..
without manual actuation	SKR 085 B ..
push-button actuation	SKR 085 T ..
current coil	SKR 085 C ..

(combinations with mechanical and electrical position indication and free-wheel diode are possible)

accessories

plug-in socket	ZVE 8
	ZKE 088
metal clamp	ZKR 008

contact specifications

contact material	AgCuNi
contact type	single contact
nominal switching capacity	250 VAC 10 A AC1 2500 VA 440 VAC 4 A AC1
electric life expectancy	app. 700'000 operations 250 VAC, 10 A, AC1 (360 operations/h)
inrush current max.	40 A for 200 ms
switching current range	50 mA to 10 A
switching power range	0,3 VA(W) to 2500 VA

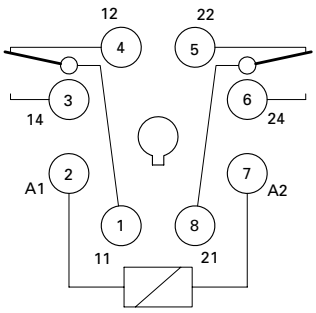
general data

mechanic life expectancy	> 10^8 operations
mechanical switching frequency	20 Hz
pull-in time	12 ms at DC / 3-10 ms at AC
release time	3,5 ms at DC / 2-15 ms at AC
bounce time normally open contact	3,5 ms at DC / 3-6 ms at AC
bounce time break contact	9 ms at DC / 6-11 ms at AC
shock resistance	AK: > 10 g
vibration resistance	10-55 Hz, AK: 10 g, RK: 3 g
test voltage, coil/contact	2500 V_{eff}
test voltage, open contact	1500 V_{eff}
insulation resistance	10^{12} Ohm
weight	app. 80 g
installation situation	any
ambient temperature	max. +70 °C
protection standard	IP 40

tests, instructions

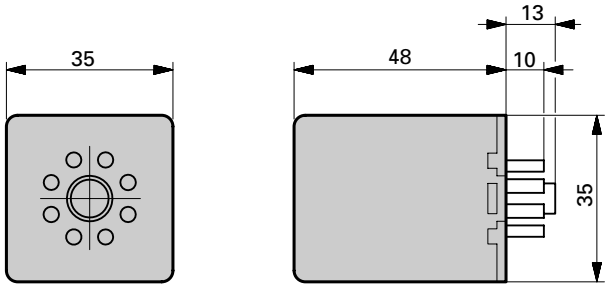
certificates	UL, CSA, VDE
insulation group	VDE 0110 / group C 250 VAC

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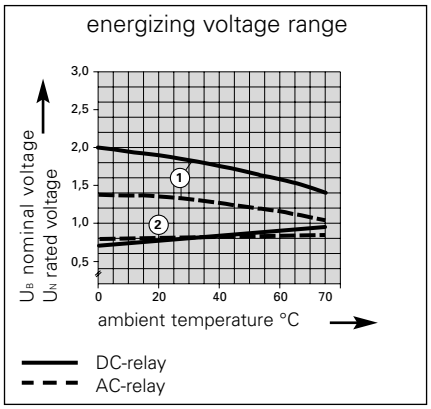


circuit diagram

dimensions



coil specifications



- single relay, no heat concentration by surrounding components with self-heating.
- on time 100%

1) max. energizing voltage without contact load
2) min. energizing voltage (guaranteed value), without operation in advance.

standard coils for direct current (other voltages on enquiry)

rated voltage VDC	pull-in voltage at 20 °C	reset voltage at 20 °C	nominal current mA	resistance Ohm at 20 °C	tolerance %
12	9,6	≥ 0,6	104	115	+/-10
24	19,2	≥ 1,2	50,0	480	+/-10
48	38,4	≥ 2,4	25,9	1850	+/-10
110	88,0	≥ 5,5	12,2	9'000	+/-15
220	176,0	≥ 11	7,58	29'000	+/-15

standard coils for alternated current (other voltages on enquiry)

VAC					
12	9,6	≥ 0,6	211	13,3	+/-10
24	19,2	≥ 1,2	104	52	+/-10
48	38,4	≥ 2,4	55	240	+/-10
110	88,0	≥ 5,5	23	1'120	+/-10
220	176	≥ 11,0	12,0	4'450	+/-10
230	184	≥ 11,5	11,5	5'600	+/-10

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SKR115 - industry relay, 11-pole



Industry relay with three change-over contacts in different versions

order numbers

serial version	SKR 115 A ... VDC/AC
with mechanical position indication	

contact specifications

contact material	AgCuNi
contact type	single contact
nominal switching capacity	250 VAC 10 A AC1 2500 VA 440 VAC 4 A AC1
electric life expectancy	app. 700'000 operations 250 VAC, 10 A, AC1 (360 operations/h)
max. inrush current	40 A for 200 ms
switching current range	50 mA to 10 A
switching power range	0,3 VA to 2500 VA

options

electrical position indication with free wheel diode	SKR 115 L ..
	SKR 115 F ..
electrical position indication with free wheel diode	SKR 115 FL ..
double contact	SKR 115 D ..
without manual actuation	SKR 115 B ..
push-button actuation	SKR 115 T ..
current coil	SKR 115 C ..

(combinations with mechanical and electrical position indication and free-wheel diode are possible)

general data

mechanic life expectancy	> 10^8 operations
mechanical switching frequency	20 Hz
pull-in time	12 ms at DC / 3-10 ms at AC
release time	3,5 ms at DC / 2-15 ms at AC
bounce time normally open contact	3,5 ms at DC / 3-6 ms at AC
bounce time break contact	9 ms at DC / 6-11 ms at AC
shock resistance	AK: > 10 g
vibration resistance	10-55 Hz, AK: 10 g, RK: 3 g
test voltage, coil/contact	2500 V_{eff}
test voltage, open contact	1500 V_{eff}
insulation resistance	10^{12} Ohm
weight	app. 80 g
installation situation	any
ambient temperature	max. +70 °C
protection standard	IP 40

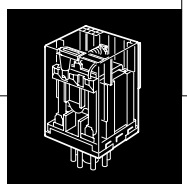
accessories

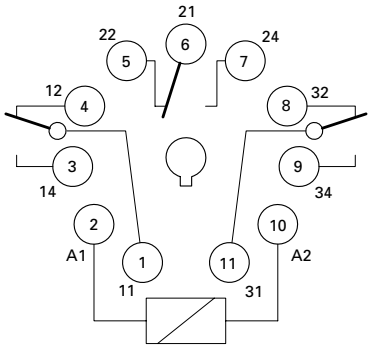
plug-in socket	ZVE 11 ZKE 118 ZKX 118
time module	STM 100
metal clamp	ZKR 008

tests, instructions

certificates	UL, CSA, VDE
insulation group	VDE 0110 / group C 250 VAC

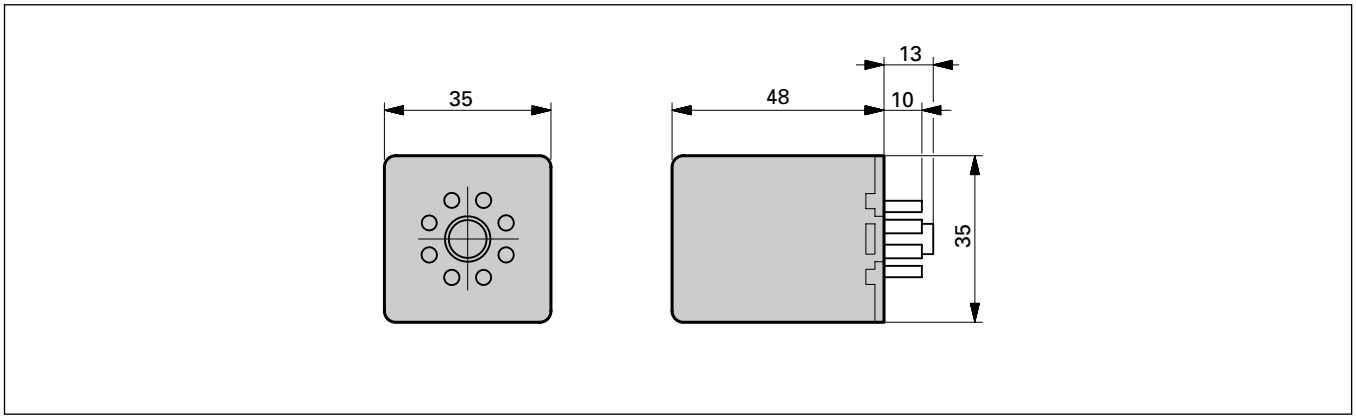
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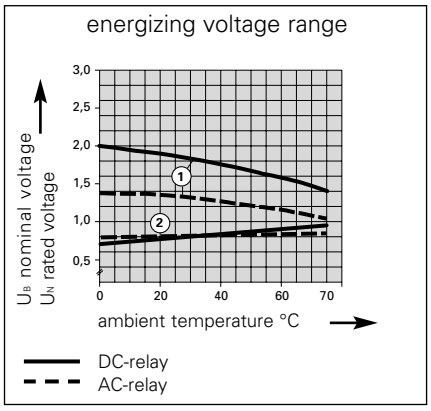


circuit diagram

dimensions



coil specifications



- single relay, no heat concentration by surrounding components with self-heating.
- on time 100%

1) max. energizing voltage without contact load
2) min. energizing voltage (guaranteed value), without operation in advance.

standard coils for direct current (other voltages on enquiry)

rated voltage VDC	pull-in voltage at 20 °C	reset voltage at 20 °C	nominal current mA	resistance Ohm at 20 °C	tolerance %
12	9,6	≥ 0,6	104	115	+/-10
24	19,2	≥ 1,2	50,0	480	+/-10
48	38,4	≥ 2,4	25,9	1850	+/-10
110	88,0	≥ 5,5	12,2	9'000	+/-15
220	176,0	≥ 11	7,58	29'000	+/-15

standard coils for alternated current (other voltages on enquiry)

VAC					
12	9,6	≥ 0,6	211	13,3	+/-10
24	19,2	≥ 1,2	104	52	+/-10
48	38,4	≥ 2,4	55	240	+/-10
110	88,0	≥ 5,5	23	1'120	+/-10
220	176	≥ 11,0	12,0	4'450	+/-10
230	184	≥ 11,5	11,5	5'600	+/-10

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Industry relay with three change-over contacts in different versions

order numbers

serial version	SKR 122 A ... VDC/AC
with mechanical position indication	

contact specifications

contact material	AgCuNi
contact type	single contact
nominal switching capacity	250 VAC 10 A AC1 2500 VA 440 VAC 4 A AC1
electric life expectancy	app. 700'000 operations 250 VAC, 10 A, AC1 (360 operations/h)
max. inrush current	40 A for 200 ms
switching current range	50 mA to 10 A
switching power range	0,3 VA to 2500 VA

options

electrical position indication	SKR 122 L ..
with free wheel diode	SKR 122 F ..
electrical position indication with free wheel diode	SKR 22 FL ..
double contact	SKR 122 D ..
without manual actuation	SKR 122 B ..
push-button actuation	SKR 122 T ..
current coil	SKR 122 C ..

(combinations with mechanical and electrical position indication and free-wheel diode are possible)

general data

mechanic life expectancy	> 10^8 operations
mechanical switching frequency	20 Hz
pull-in time	12 ms at DC / 3-10 ms at AC
release time	3,5 ms at DC / 2-15 ms at AC
bounce time normally open contact	3,5 ms at DC / 3-6 ms at AC
bounce time break contact	9 ms at DC / 6-11 ms at AC
shock resistance	AK: > 10 g
vibration resistance	10-55 Hz, AK: 10 g, RK: 3 g
test voltage, coil/contact	2500 V_{eff}
test voltage, open contact	1500 V_{eff}
insulation resistance	10^{12} Ohm
weight	app. 80 g
installation situation	any
ambient temperature	max. +70 °C

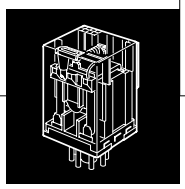
accessories

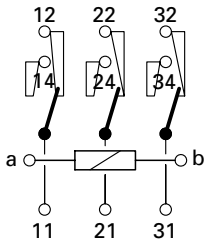
PCB socket	ZKR 003
metal clamp	ZKR 008

tests, instructions

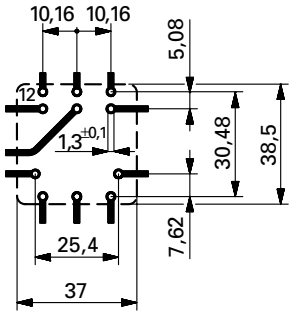
certificates	UL, CSA, VDE
insulation group	VDE 0110 / group C 250 VAC

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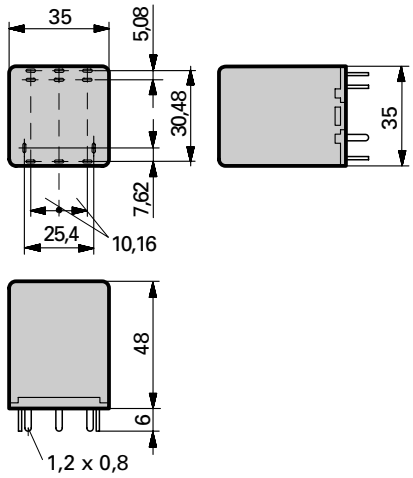


circuit diagram

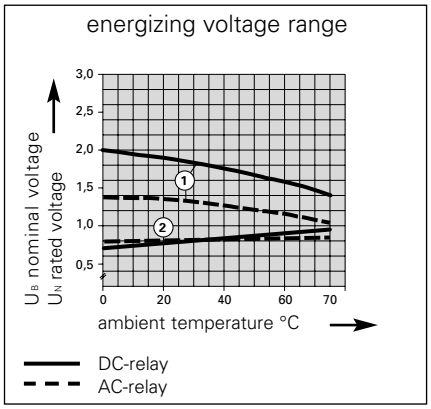


drilling plan (view on solder side)

dimensions



coil specifications



- single relay, no heat concentration by surrounding components with self-heating.
- on time 100%

1) max. energizing voltage without contact load
2) min. energizing voltage (guaranteed value), without operation in advance.

standard coils for direct current (other voltages on enquiry)

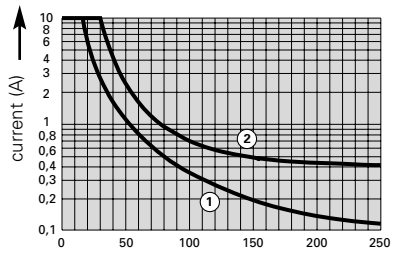
rated voltage VDC	pull-in voltage at 20 °C	reset voltage at 20 °C	nominal current mA	resistance Ohm at 20 °C	tolerance %
12	9,6	≥ 0,6	104	115	+/-10
24	19,2	≥ 1,2	50,0	480	+/-10
48	38,4	≥ 2,4	25,9	1850	+/-10
110	88,0	≥ 5,5	12,2	9'000	+/-15
220	176,0	≥ 11	7,58	29'000	+/-15

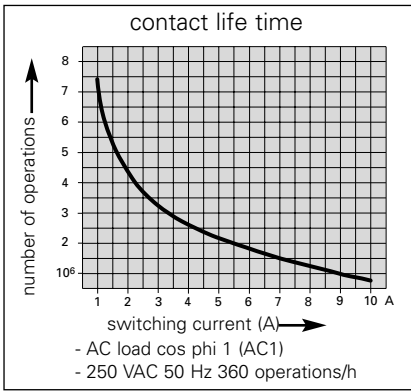
standard coils for alternated current (other voltages on enquiry)

VAC					
12	9,6	≥ 0,6	211	13,3	+/-10
24	19,2	≥ 1,2	104	52	+/-10
48	38,4	≥ 2,4	55	240	+/-10
110	88,0	≥ 5,5	23	1'120	+/-10
220	176	≥ 11,0	12,0	4'450	+/-10
230	184	≥ 11,5	11,5	5'600	+/-10

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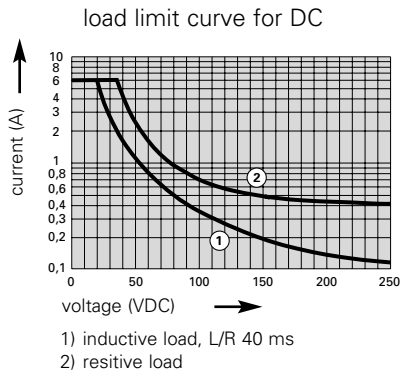
AgCuNi single contact

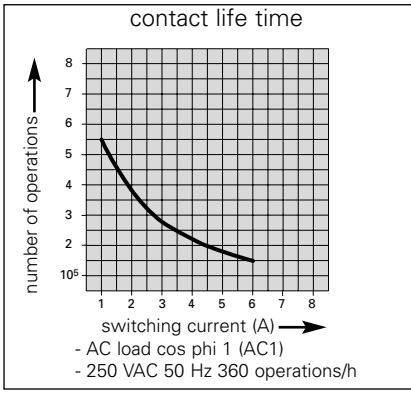




data valid for relay	SKR 085 SKR 115 SKR 122
contact material	AgCuNi (Ag1,88 Ni0,12)
contact type	single contact
nominal switching capacity	250 VAC 10 A AC1 2500 VA 440 VAC 4 A AC1 1600 VA
electric life expectancy	app. 700'000 operations 250 VAC 10 A AC1 (360 operations/h)
max. inrush current	40 A for 20 ms
switching current range	30 mA to 10 A
switching power range	0,18 VA to 2500 VA
contact resistance	20 mΩ

AgCuNi double contact

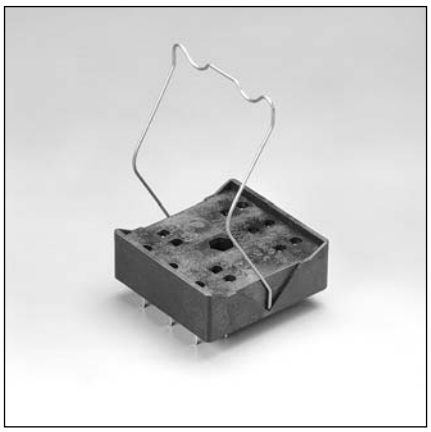




data valid for relay	SKR 085D SKR 115D SKR 122D
contact material	AgCuNi (Ag1,88 Ni0,12)
contact type	double contact
nominal switching capacity	250 VAC 6 A AC1 1500 VA
electric life expectancy	app. 150'000 operations 250 VAC 6 A AC1 (360 operations/h)
max. inrush current	15 A für 20 ms
switching current range	10 mA to 6 A
switching power range	0,06 VA to 1500 VA
contact resistance	10 mΩ

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ZKR-PCB socket with accessories



ZKR 003 matching to SKR 122

order numbers

ZKR 003

general data

nominal data	max. 10 A 400 V
test voltage	2000 V_{eff}
contact spring material	Ms improved
fixing	soldering pin 1 x M3
creeping resistance	CTI 250
weight	app. 7 g
installation situation	any
ambient temperature	-40 to +85 °C
number of poles	11-pole
protection standard	IP 30

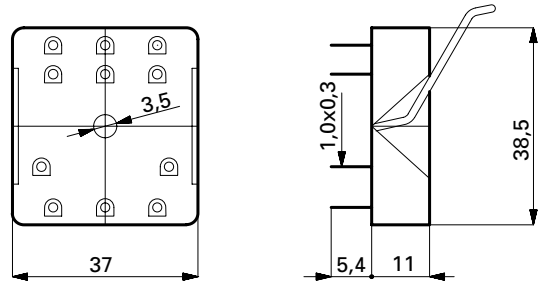
accessories

metal clamp
ZKR 008

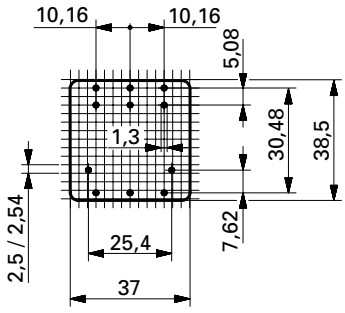
tests, instructions

certificates	UL, CSA
insulation group	VDE 0110 / group C 250 VAC

dimensions

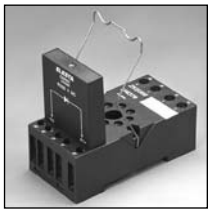


drilling plan



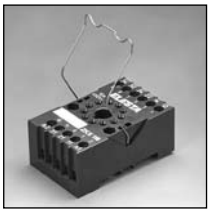
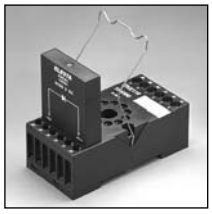
view from solder side

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socket	ZVE8	ZKE088
		

data			
nominal data		400 VAC 10 A	400 VAC 10 A
dimensions (L x B x H)	[mm]	57 x 38 x 28,5	75 x 38 x 26
ambient temperature	[°C]	-40 to +85	-40 to +85

accessories		
plug-in modules		E...
time module		STM 100
metal clamp	ZKR008	ZKR008

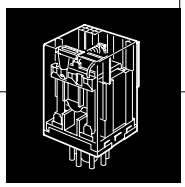
	ZVE11	ZKX118	ZKE118
			

data				
nominal data		400 VAC 10 A	400 VAC 10 A	400 VAC 10 A
dimensions (L x B x H)	[mm]	57 x 38 x 28,5	62 x 38 x 26	75 x 38 x 26
ambient temperature	[°C]	-40 to +85	-40 to +85	-40 to +85

accessories			
plug-in modules			E...
time modules			STM 100
metal clamp	ZKR008	ZKR008	ZKR008

tests, instructions	
certificates	UL, CSA
insulation group	VDE 0110 / group C 250 VAC

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time modules

STM 100

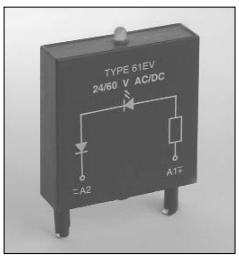


data	
compatible to socket	ZKE088/118
function	programmable
time range	0,05s - 240h
rated voltage	24 - 240 VDC/VAC

general data	
time range	8 ranges: 1s, 10s, 1m, 10m, 1h, 10h, 1d, 10d
time adjustment	variable, 5% - 100% of the time range
time function	8 functions, selectable by DIP switches
display	green LED for ON-status, blinking at time delay
dimensions	B x H x T = 35 x 46,7 x 10,3 mm (without clamp)
weight	app. 14 g
permissible ambient temperature	-25 to +55 °C
nominal voltage	24V to 240V AC (-15%...+10%) , 24V to 250V DC (-15%...+10%)
frequency	48 Hz to 63 Hz
max. power consumption	24V AC/DC: 70mW , 240V AC/DC: 700mW
min. impulse time (B1)	AC: 50ms, DC: 30 ms
min. pause time (B1)	AC&DC: 100ms at 25°C, AC&DC: 140ms at 55°C
pull-in delay	AC: max. 40ms, DC: 20ms
reset time delay	AC&DC: max. 100ms at 25°C, AC&DC: max. 140ms at 55°C
control voltage	24V: min. 80% of supply voltage 230V: min. 95% of supply voltage
time delay after power loss	max. 10ms
start-up time	60ms
re-readiness time	max. 100ms at 25°C, max. 150ms at 55°C
reset at	UN ≤ $10V_{eff}$
precision at the scale stops	±0,5%
repeatability	<0,5% or 5ms (in % from scale value)
accuracy in adjustment	≤5%
temperature influence	≤0,01% / °C
voltage influence	≤0,001% / V
max. load current	100mA at 25°C

plug-in modules

E...



data		
compatible to socket		ZKE088/118
free wheel diode	6 - 220 VDC	E 21
RC-circuit	110 - 230 VAC	E 51C
varistor	6 - 24 VAC	E 71
varistor	6 - 230 VAC	E 81
LED	24 - 60 VDC/ VAC	E 61EV
LED	110 - 230 VDC/ VAC	E 91V

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