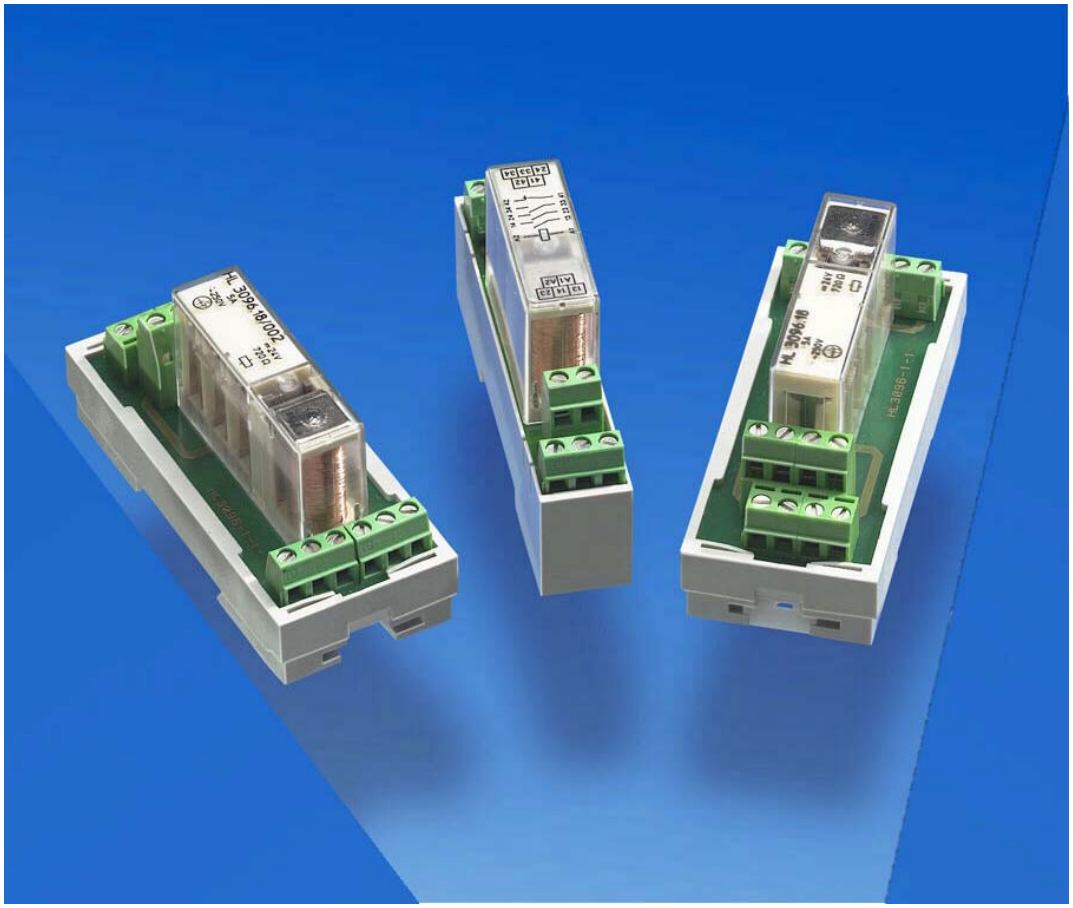
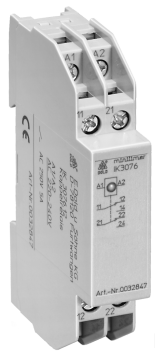


Interface Relays

Interface relay IK 3076, SK 3076
Input interface relay - Output interface relay

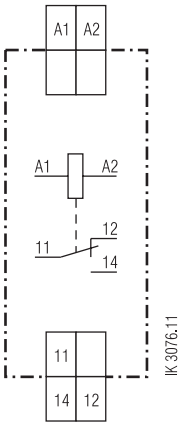
0222110


IK 3076

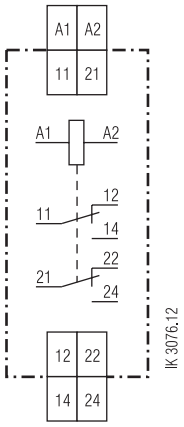

SK 3076

- According to IEC 255, VDE 0435 part 201
- Devices available in 2 enclosure version:
  IK 3076: depth 59 mm with terminals as the bottom for installations systems and industrial distribution systems
  SK 3076: depth 98 mm with terminals at the top for cabinets with mounting plate and cable duct
- Protective separation according to VDE 0106 part 101 in configuration with 1 changeover contact
- With input wiring protection against voltage surges
- With 1 or 2 changeover contacts as options
- High permanent current I_{th}
- For switching low loads as an option
- LED indicator
- Width 17,5 mm

Circuit diagrams



IK 3076.11
SK 3076.11



IK 3076.12
SK 3076.12

Approvals and marking

CE

Applications

- Link between the control and power levels
- For separating potentials

Indicator

LED: on when the relay is supplied with current

Standard type

IK 3076.12 AC/DC 24 V 50/60 Hz
Article number: 0033445 stock item
SK 3076.12 AC/DC 24 V 50/60 Hz
Article-number:
- Output: 2 changeover contacts
- Nominal voltage U_N: AC/DC 24 V

Variants

IK 3076.16/60,
SK 3076.16/60: with CSA approval
IK 3076._ _/004,
SK 3076._ _/004: for low loads of 0,1 ... 60 V, 1 mA ... 300 mA
IK 3076._ _/007,
SK 3076._ _/007: release voltage AC 30 V (with AC 110 V)

Technical data

Input

Nominal voltage U_N: AC/DC 8, 12, 24, 48 V
AC 110 ... 130, 230 ... 240 V
Voltage range: 0,8 ... 1,1 U_N
0,9 ... 1,25 U_N in battery operating mode
Nominal consumption: DC 24 V AC 230 V
0,5 W 0,8 VA
Nominal frequency: 50 / 60 Hz
Frequency range: ± 5 %

Output

Contacts
IK 3076.11, SK 3076.11: 1 changeover contact
IK 3076.12, SK 3076.12: 2 changeover contacts
Operate/release time: < 10 ms / < 20 ms
Thermal current I_{th}
IK 3076.11, SK 3076.11: 10 A
IK 3076.12, SK 3076.12: 5 A

Technical data

Switching capacity		EN 60 947-5-1
to AC 15:		
NC contact:	1 A / AC 230 V	
NO contact:	3 A / AC 230 V	
Electrical life		
AC 15 at 3 A, AC 230 V		EN 60 947-5-1
IK 3076.11, SK 307.11:	1 x 10^5 switching cycles	
IK 3076.12, SK 3076.12:	1 x 10^5 switching cycles	
Permissible switching frequency:	6 000 switching cycles/h	
Short circuit strength max. fuse rating		
IK 3076.11, SK 3076.11:	10 A gL	EN 60 947-5-1
IK 3076.12, SK 3076.12:	4 A gL	EN 60 947-5-1
Mechanical life:	> 30 x 10^6 switching cycles	

General data

Operating mode:	Continuous operation	
Temperature range:	- 20 ... + 60°C	
Clearance and creepage distances		
overvoltage category/ contamination level:		
IK 3076.11, SK 3076.11:		
Input/output:	6 kV / 2	VDE 0110-1 (04.97)
IK 3076.12, SK 3076.12:		
Input/output:	4 kV / 2	VDE 0110-1 (04.97)
Contacts:	2,5 kV / 2 only for 1-phase systems (same phase)	VDE 0110-1 (04.97)
EMC		
Electrostatic discharge:	8 kV (air)	EN 61 000-4-2
HF irradiation:	10 V/m	EN 61 000-4-3
Fast transients:	2 kV	EN 61 000-4-4
Surge voltages between		
wires for power supply:	1 kV	EN 61 000-4-5
between wire and ground:	2 kV	EN 61 000-4-5
HF-wire guided:	10 V	EN 61 000-5-6
Interference suppression:	Limit value class B	EN 55011
Degree of protection:	Housing: IP 40	EN 60 529
	Terminals: IP 20	EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL Subject 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	20 / 60 / 04	EN 60 068-1
Terminal designation:	EN 50 005	
Wire connection:	2 x 2,5 mm^2 solid or 2 x 1,5 mm^2 stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	EN 50 022
Weight		
IK 3076:	72 g	
SK 3076:	91 g	

Ordering example

IK 3076 .12 /_ _ _ AC/DC 48 V 50 / 60 Hz

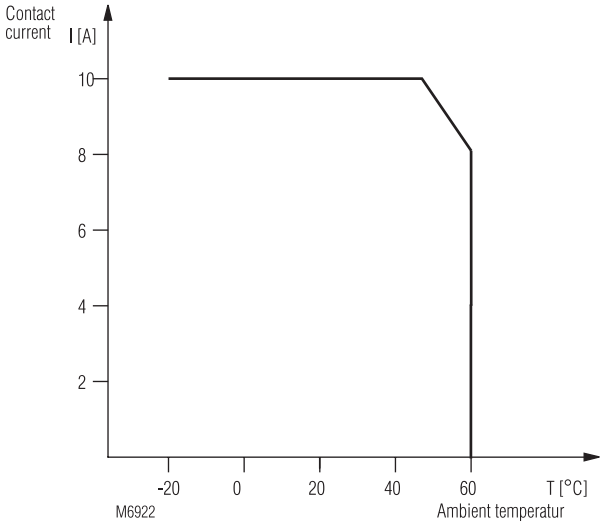
- Nominal frequency
- Nominal voltage
- Variant, if required
- Contacts
- Type

Dimensions

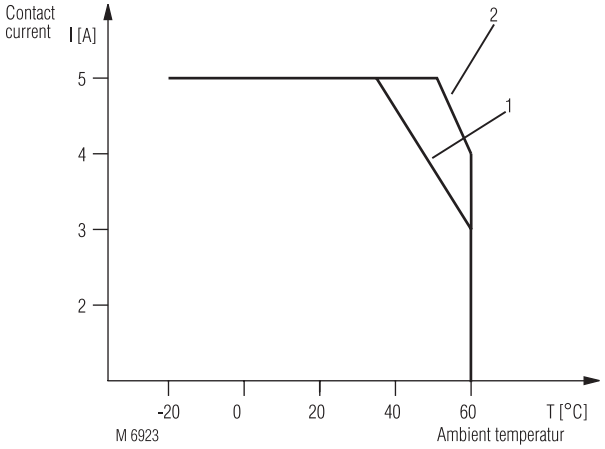
Width x height x depth

IK 3076:	17,5 x 89 x 59 mm
SK 3076:	17,5 x 90 x 98 mm

Characteristics



Permanent current limit curve:
Permissible contact current of IK 3076.11, SK 3076.11 in relation to the ambient temperature



Permanent current limit curve:
Permissible contact current of IK 3076.12, SK 3076.12 in relation to the ambient temperature

1 Nominal voltage, mounted without distance, current supplied to both contacts
2 Nominal voltage, mounted without distance, current only supplied to one contact

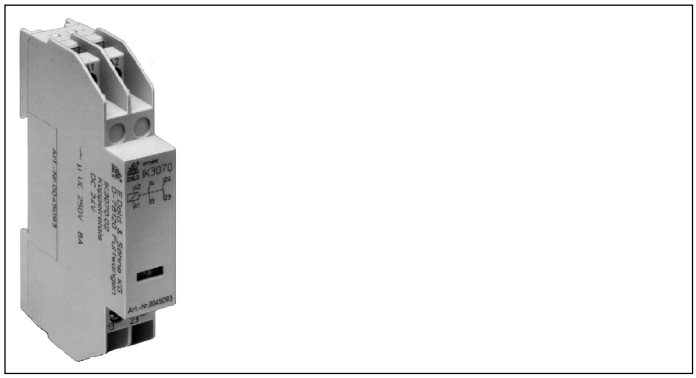
Specifiaction for tender for IK 3076

Interface relay according to IEC 255, VDE 0435 part 201 to be built in consumer units, 1 changeover contact, protective separation according to VDE 0106 part 101 and input wiring protection against voltage surges, LED-indicator
Width 17,5 mm.
Type IK 3076.11
Manufactured by: E. DOLD & SÖHNE KG

nterface relay according to IEC 255, VDE 0435 part 201 to be built in consumer units, 2 changeover contacts, protective separation according to VDE 0106 part 101 and input wiring protection against voltage surges, LED-indicator
Width 17,5 mm.
Type IK 3076.12
Manufactured by: E. DOLD & SÖHNE KG

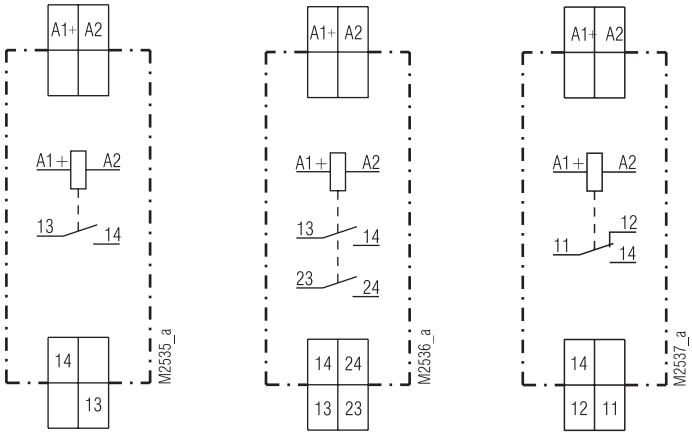
Interface relay IK 3070
Input-output interface relay

0222633



- According to En 61 810
- Protective separation according to VDE 0106 part 101
- Contact: 1 NO contact
  2 NO contacts
  1 changeover contact
- Optionally input wiring with recovery diode or MOV
- Optionally for small switching currents
- Optionally without operating position display
- IK 3070.02: optionally with positive guided contacts
- Optionally interface relay system to reduce the amount of wiring
- Width 17,5 mm

Circuit diagrams



IK 3070.01 IK 3070.02 IK 3070.11

Variants

IK 3070.__ / _ _ _

Input circuit
- 0 without operating position display
- 1 with MOV
- 2 Standard
- 8 with recovery diode for DC version
- A with MOV and recovery diode
- B with recovery diode and operating position display

Additional functions
- 0 Standard
- 1 positive guided contacts with IK 3070.02

- 0 Standard
- 1 for small loads 0,3 ... 60 V, 1 ... 300 mA

- 01 1 NO contact
- 02 2 NO contacts
- 11 1 changeover contact

Approvals and marking

CE

Applications

- Link between the control and the power level
- For separating potentials

Indicators

LED green	on when output relay active

Standard type

IK 3070.02/002 DC 24 V

Article number:	0045093	stock item
• Output:	2 NO contacts	
• Nominal voltage U_N:	DC 24 V	
• With operating position display (LED)		

Technical data

Input

Nominal voltage:	DC 24 V AC 230 V Other nominal voltages available on request
Voltage range:	DC 0,9 ... 1,2 U_N AC 0,8 ... 1,1 U_N
Nominal consumption:	DC approx. 0,5 W AC approx. 0,9 W

Output

Contacts		
IK 3070.01:	1 NO contact	
IK 3070.02:	2 NO contacts	
IK 3070.11:	1 changeover contact	
Reaction time:	≤ 10 ms	
Release time:	≤ 15 ms	
Nominal switching voltage:	AC 250 V	
Nominal output voltage:	min. AC 8 V; max. AC 400 V	
Switching-on capacity:	min. 0.3 A max. 8 A or 2 x 5 A at the same time	
Thermal current I_{th}:	max. 8 A (see continuous current limit curve)	
Switching capacity		
to AC 15:	3 A / AC 230 V	EN 60 947-5-1
Electrical life		EN 60 947-5-1
to AC 15 at 3 A, AC 230 V:	≥ 2,5 x 10^5 switching cycles	
Permissible switching frequency:	max. 10 switching cycles / s	
Short circuit strength max. fuse rating:	10 A gL	EN 60 947-5-1

Technical data

Mechanical life: ≥ 50 x 10^6

General data

Operating mode:	Continuous operation	
Temperature range:	- 20 ... + 55 °C	
Clearance and creepage distances		
overvoltage category / contamination level:	4 kV / 2	DIN VDE 0110-1 (04.97)
Rated surge voltage:	5 kV with MOV 2 kV without MOV	VDE 0435 p. 303
EMC		
Electrostatic discharge:	8 kV (air)	EN 61 000-4-2
HF irradiation:	10 V / m	EN 61 000-4-3
Fast transients:	4 kV	EN 61 000-4-4
Surge voltages between		
wires for power supply:	2 kV	EN 61 000-4-5
between wire and ground:	4 kV	EN 61 000-4-5
HF-wire guided:	10 V	EN 61 000-4-6
Interference suppression:	Limit value class B	EN 55 011
Degree of protection:	Housing: IP 40 Terminals: IP 20	EN 60 529 EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	Humid heat	EN 60 068-2-30
Terminal designation:	EN 50 005	
Wire connection:	2 x 2,5 mm^2 solid or 2 x 1,5 mm^2 stranded wire with sleeve DIN 46 228-1/-2/-3	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	EN 50 022
Weight:	68 g	

Ordering example

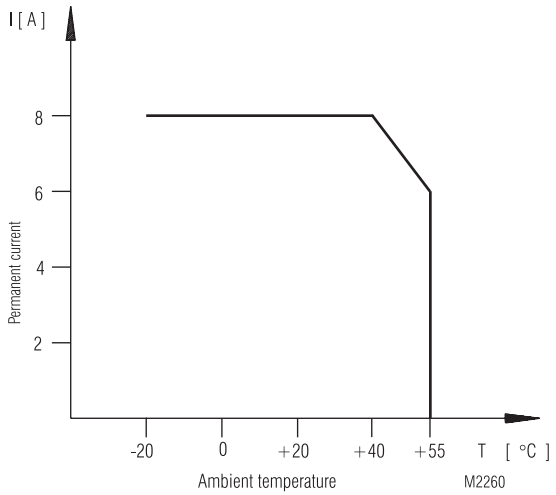
IK 3070 .02 /_ _ _ DC 24 V

- DC 24 V — Nominal voltage
- /_ _ _ — Variant, if required
- .02 — Contact
- IK 3070 — Type

Dimensions

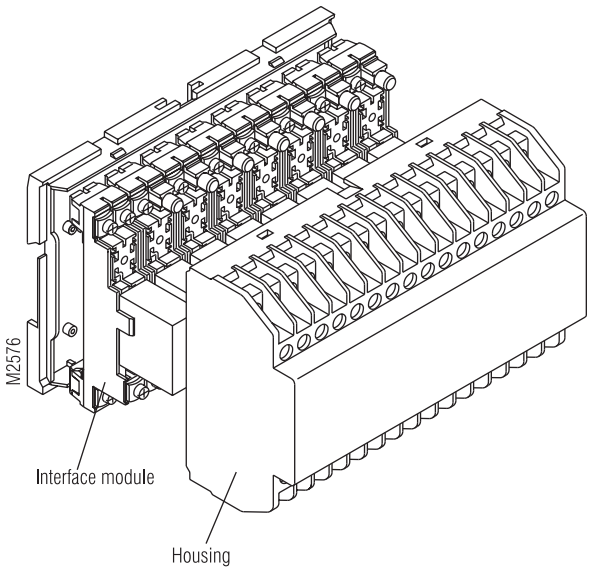
Width x height x depth: 17,5 x 90 x 58 mm

Characteristics



Continuous current limit curve

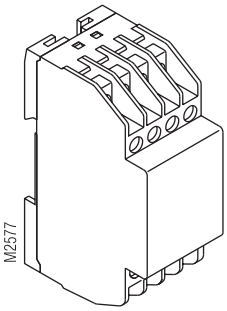
Interface relay system I_ 3070
Input-output interface relay / imod - omod



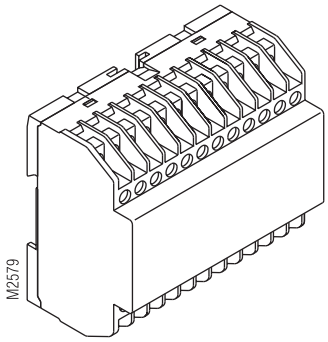
The interface relay system consists of a maximum of 8 interface modules that are accommodated in a housing. The product configuration can be chosen as required according to the different versions shown here. The purpose of the enquiry form below is to specify the required interface relay system.

Applications

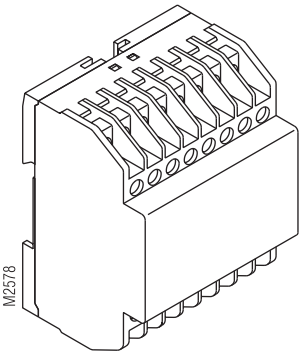
To reduce the amount of wiring required for several interface relays.



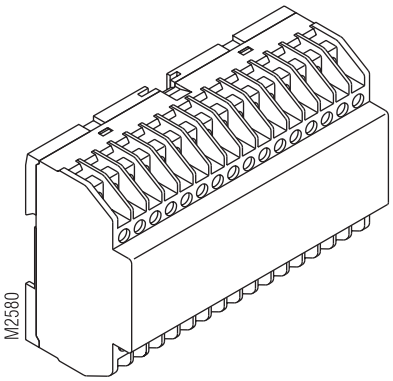
IL 3070/_ _ _ _
for 2 interface modules
Width 35 mm



IR 3070/_ _ _ _
for max. 6 interface modules
Width 105 mm



IP 3070/_ _ _ _
for max. 4 interface modules
Width 70 mm



IS 3070/_ _ _ _
for max. 8 interface modules
Width 140 mm

Enquiry form for interface relay system I_ 3070

Production type no. I_ 3070 / _ _ _ _ _

- Consecutive number
- Number of interface modules
- Product type

Connection terminals ⇓	Activation possibilities	Nominal voltage
A11		
A12		
A13		
A14		
A15		
A16		
A17		
A18		
	Reference potential connections	
A21		
A22		
A23		
A24		
A25		
A26		
A27		
A28		

Modules	1	2	3	4	5	6	7	8
Type IL								
Type IP								
Type IR								
Type IS								

Version IK 3070

. _ _ / _ _ _
. _ _ / _ _ _
. _ _ / _ _ _
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. _ _ / _ _ _

Further requests
(e.g. connections between output contacts):

. . . . . .
. . . . . .
. . . . . .
. . . . . .

Ordering example

Production type no. IS 3070 / 8 0 1 1 7

- Consecutive number
- Number of interface modules
- Product type

Assignment:
A coupling relay system consisting of the following 8 coupling modules is required:

Module 1: for DC 24 V, 2 N.O. contacts without operating position display
Module 2: for DC 24 V, 2 N.O. contacts with MOV and positive guided contacts
Module 3: for DC 24 V, 1 N.O. contact with recovery diode
Module 4: for AC 230 V, 1 changeover contact with MOV and recovery diode
Module 5: for AC 230 V, 1 changeover contact without operating position display
Module 6: for DC 24 V, 1 N.O. contact with MOV and without operating position display
Module 7: for DC 24 V, 2 N.O. contacts, positive guided contacts, MOV and recovery diode
Module 8: for DC 24 V, 2 N.O. contacts, for small loads, MOV and recovery diode

Activation of modules 1 + 2 via A11
Activation of module 3 via A13
Activation of modules 4 + 5 via A14 AC 230 V
Activation of modules 6 + 7 + 8 via A16 DC 24 V
The (-) connections of the DC 24 V modules are to be made via a joint connection terminal (A21). A joint neutral conductor connection of the AC 230 V modules must be provided via a further connection terminal (A 24).

Connection terminals ⇓	Activation possibilities								Nominal voltage
A11	X	X							DC 24 V
A12									
A13			X						DC 24 V
A14				X	X				AC 230 V
A15									
A16						X	X	X	DC 24 V
A17									
A18									
	Reference potential connections								
A21	X	X	X			X	X	X	- DC 24 V
A22									
A23									
A24				X	X				N
A25									
A26									
A27									
A28									

Modules	1	2	3	4	5	6	7	8
Type IL								
Type IP								
Type IR								
Type IS								

Variant IK 3070

. 0 2 / 1 0 A
. 0 2 / 0 1 A
. 0 1 / 0 0 B
. 1 1 / 0 0 2
. 1 1 / 0 0 A
. 0 1 / 0 0 8
. 0 2 / 0 1 1
. 0 2 / 0 0 2

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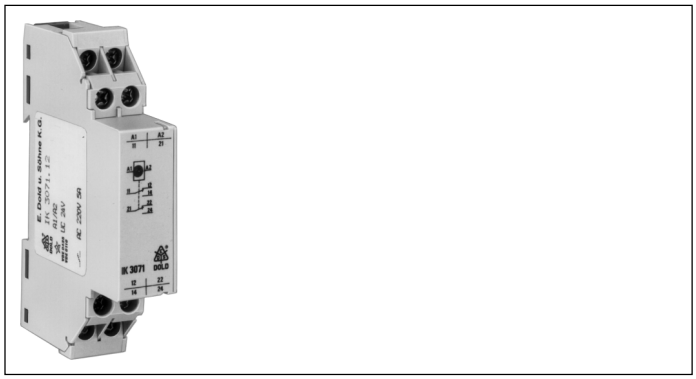
e-mail dold-relays@t-online.de • internet http://www.dold.com

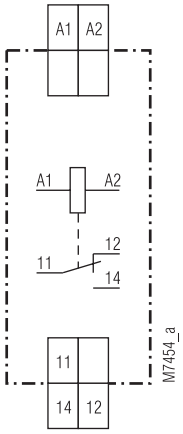
Interface relay IK 3071
Input interface relay

0222105

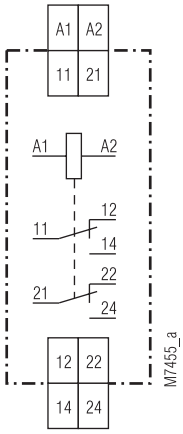


- According to IEC 255, VDE 0435 part 201
- Safe separation according to VDE 0106 section 101 in configuration with 1 changeover contact
- With input wiring protection against voltage surges
- with 1 or 2 changeover contacts as options
- For 2-wire proximity sensor connection
- With an RC combination to protect the contacts as an option
- For switching low loads as an option
- LED indicator
- Width 17,5 mm

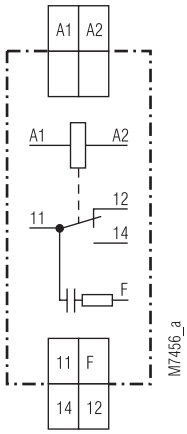
Circuit diagrams



IK 3071.11



IK 3071.12



IK 3071.11/100

Approvals and marking

CE

Application

- Input interface relay, e.g. for activation of PLC
- For separating potentials

Function

IK 3071 is an electromechanical relay with no-potential changeover contacts. It is suitable for direct current voltage and alternating current voltage activation.
A light-emitting diode indicates when the relay has been activated.
The interface relay can be activated by initiators with a residual current ≤ 5 mA via the terminals A1-A2.

Indicators

LED:	on when the relay is supplied with current

Standard type

IK 3071.12 AC/DC 220 ... 240 V 50 / 60 Hz

Article number:	0032339	stock item
• Output:	2 changeover contacts	
• Nominal voltage U_N:	AC/DC 220 ... 240 V	

Variants

IK 3071._ _/004:	for low loads of 0,1 ... 60 V, 1 mA ... 300 mA
IK 3071.11/100:	to protect the contacts, this configuration has an RC combination that can be be connected via F when required.

Technical data

Input

Nominal voltage U_N:	AC/DC 12, 24, 48, 60, 110 ... 127, 220 ... 240 V						
Voltage range:	0,8 ... 1,1 U_N 0,9 ... 1,25 U_N in battery operating mode						
Nominal consumption:	AC/DC	24	48	60	110	230	V
apparent power:		0,8	0,7	0,7	4,0	6,0	VA
actual power:		0,7	0,6	0,6	0,4	0,5	W
Nominal frequency:	50 / 60 Hz						
Frequency range:	± 5 %						
Permissible residual current:	≤ 5 mA						

Technical data

Output

Contacts

IK 3071.11:	1 changeover contact	
IK 3071.12:	2 changeover contacts	
Operate time		
at 24 ... 60 V:	≤ 20 ms	
at 110 ... 240 V:	≤ 15 ms	
Release time		
at 24 ... 60 V:	≤ 20 ms	
at 110 ... 240 V:	≤ 200 ms	
Thermal current I_{th}:	5 A	
Switching capacity:		
AC 15		
NO contact:	3 A / AC 230 V	EN 60 947-5-1
NC contact:	1 A / AC 230 V	EN 60 947-5-1
Electrical life		EN 60 947-5-1
AC 15 at 3 A, AC/DC 230 V:	0,5 x 10^5 switching cycles	
Permissible switching frequency:	6 000 switching cycles/h	
Short circuit strength max. fuse rating:	4 A gL	EN 60 947-5-1
Mechanical life:	> 30 x 10^6 switching cycles	

General data

Operating mode:	Continuous operation	
Temperature range:	- 20 ... + 60°C	
Clearance and creepage distances		
overvoltage category/ contamination level:	4 kV / 2	VDE 0110-1 (04.97)
EMC		
Electrostatic discharge:	6 kV (air)	EN 61 000-4-2
Fast transients:	2 kV	EN 61 000-4-4
Surge voltages between		
wires for power supply:	1 kV	EN 61 000-4-5
between wire and ground:	2 kV	En 61 000-4-5
Interference suppression:	Limit value class B	EN 55011
Degree of protection:	Housing: IP 40	EN 60 529
	Terminals: IP 20	EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL Subject 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	20 / 60 / 04	EN 60 068-1
Terminal designation:	EN 50005	
Wire connection:	2 x 2,5 mm² solid or 2 x 1,5 mm² stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	EN 50 022
Weight:	78 g	

Ordering example

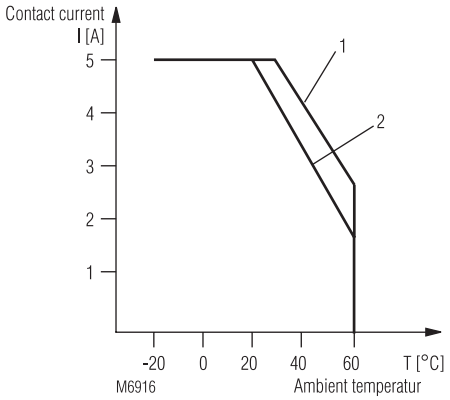
IK 3071 .11 /100 AC/DC 60 V 50 / 60 Hz

- 50 / 60 Hz — Nominal frequency
- AC/DC 60 V — Nominal voltage
- /100 — Variant, if required
- .11 — Contacts
- IK 3071 — Type

Dimensions

Width x height x depth:	17,5 x 89 x 58 mm

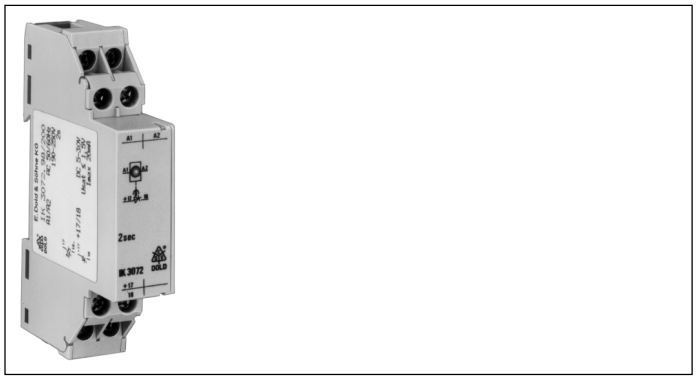
Characteristics



Permanent current limit curve:
Permissible contact current in relation to the ambient temperature
1 = Device mounted without distance, operated with nominal voltage
2 = Device mounted without distance, operated with excess voltage

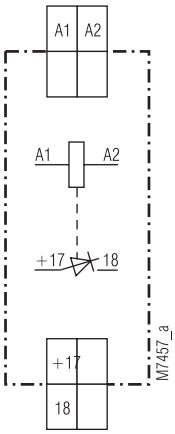
Interface relay IK 3072
Input interface relay, static

0222106

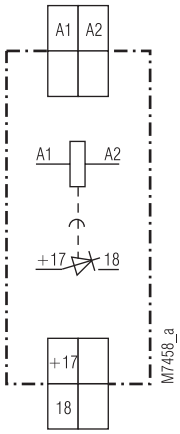


- According to IEC 255, VDE 0435 part 201
- Static relay for max. DC 20 mA switching current
- For high switching frequency
- Input/output circuit galvanically separated via opto-coupler
- With operate delay as an option
- LED indicator
- Width 17,5 mm

Circuit diagrams



IK 3072.98



IK 3072.98/200

Approvals and marking

CE

Applications

- for switching DC-loads
- for high switching frequency

Indicators

LED:	on, when the relay is supplied with voltage

Standard type

IK 3072.98 AC/DC 24 V

Article number:	0034384	stock item
• Output:	1 Transistor	
• Nominal voltage U_N:	AC/DC 24 V	

Variant

IK 3072.98/200:	Operate delay of 1 s, 2 s, 5 s, or 20 s as options

Technical data

Input

Nominal voltage U_N:	AC/DC 24 V, AC 230 V	
Voltage range:	AC/DC 10 ... 30 V, AC 190 ... 250 V	
Nominal consumption:	DC 24 V 0,5 W	AC 24 V AC 220 V 1 VA 2,5 VA
Nominal frequency:	50 / 60 Hz	
Frequency range:	± 5 %	

Output

Type of output		
IK 3072.98:	Transistor	
Switching-on/-off time:	< 15 ms / < 30 ms	
Nominal output voltage:	DC 5 ... 30 V	
Switching-on capacity:	20 mA	
Residual voltage:	1,5 V	
Residual current:	≤ 500 µA	

General data

Operating mode:	Continuous operation	
Temperature range:	- 20 ... + 60°C	
Clearance and creepage distances		
overvoltage category / contamination level:	4 kV / 2	VDE 0110-1 (04.97)

Technical data

EMC

Electrostatic discharge:	6 kV (air)	EN 61 000-4-2
Fast transients:	2 kV	EN 61 000-4-4
Surge voltages between		
wires for power supply:	1 kV	EN 61 000-4-5
between wire and ground:	2 kV	EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011
Degree of protection:	Housing: IP 40	EN 60 529
	Terminals: IP 20	EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	20 / 60 / 04	EN 60 068-1
Terminal designation:	EN 50 005	
Wire connection:	2 x 2,5 mm^2 solid or 2 x 1,5 mm^2 stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	DIN EN 50 022
Weight:	65 g	

Ordering example

IK 3072 .98 /200 AC/DC 24 V 50 / 60 Hz 2 s

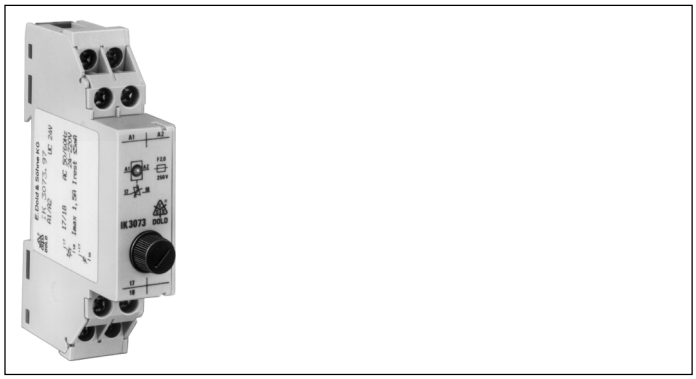
- 2 s — Operate delay
- 50 / 60 Hz — Nominal frequency
- AC/DC 24 V — Nominal voltage
- /200 — Variant, if required
- .98 — Contact
- IK 3072 — Type

Dimensions

Width x height x depth: 17,5 x 89 x 58 mm

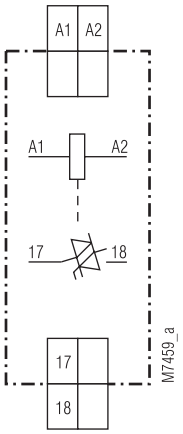
Interface relay IK 3073
Output interface relay, static

0222107



- According to IEC 255, VDE 0435 section 201
- Static relay for max. AC 2 A switching current
- For high switching frequency
- Input/output circuit galvanically separated via opto-coupler
- With protective wiring for the output
- LED indicator
- Width 17,5 mm

Circuit diagram



IK 3073.97

Approvals and marking

CE

Application

- for switching ohmic and inductive alternating current voltage loads
- for high switching frequency

Indicator

LED:	on when the relay is supplied with current

Standard type

IK 3073.97/100 AC/DC 24 V

Article number:	0040219	stock item
• Output:	1 Triac	
• Nominal voltage U_N:	AC/DC 24 V	
• without an integrated fuse		

Variant

IK 3073.97/100:	without an integrated fuse

Technical data

Input

Nominal voltage U_N:	AC/DC 24 V
Voltage range:	AC/DC 18 ... 30 V
Nominal consumption:	0,22 W
Current consumption	
at U_N DC 24 V:	9 mA
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 %

Output

Type of output	
IK 3073.97:	1 Triac
Operate / release time:	≤ 11 ms / ≤ 30 ms
Nominal output voltage:	AC 20 ... 260 V
Switching-on capacity:	10 mA ... 2 A
Residual voltage:	1,5 V
Residual current:	AC 24 V AC 220 V
	1 mA 7 mA
Protective wiring:	R-C series connection
	Varistor
	Fuse
Spare fuse:	2 A quick-acting, IEC 127 Bl. II
	DIN 41 661

Technical data

General data

Operating mode:	Continuous operation	
Temperature range:	- 20 ... + 60°C	
Clearance and creepage distances		
overvoltage category/ contamination level:	4 kV / 2	VDE 0110-1 (04.97)
EMC		
Electrostatic discharge:	6 kV (air)	EN 61 000-4-2
Fast transients:	2 kV	EN 61 000-4-4
Surge voltages between		
wires for power supply:	1 kV	EN 61 000-4-5
between wire and ground:	2 kV	EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011
Degree of protection:	Housing: IP 40	EN 60 529
	Terminals: IP 20	EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL Subject 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	20 / 60 / 04	EN 60 068-1
Terminal designation:	EN 50 005	
Wire connection:	2 x 2,5 mm² solid or 2 x 1,5 mm² stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	EN 50 022
Weight:	80 g	

Ordering example

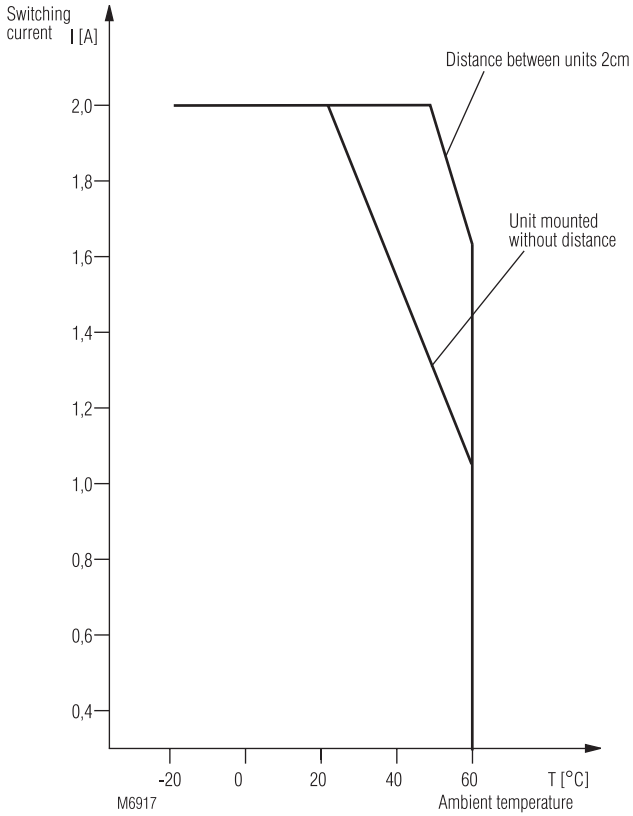
IK 3073 .97 /100 AC/DC 24 V 50 / 60 Hz

- Nominal frequency
- Nominal voltage
- Variant, if required
- Output
- Type

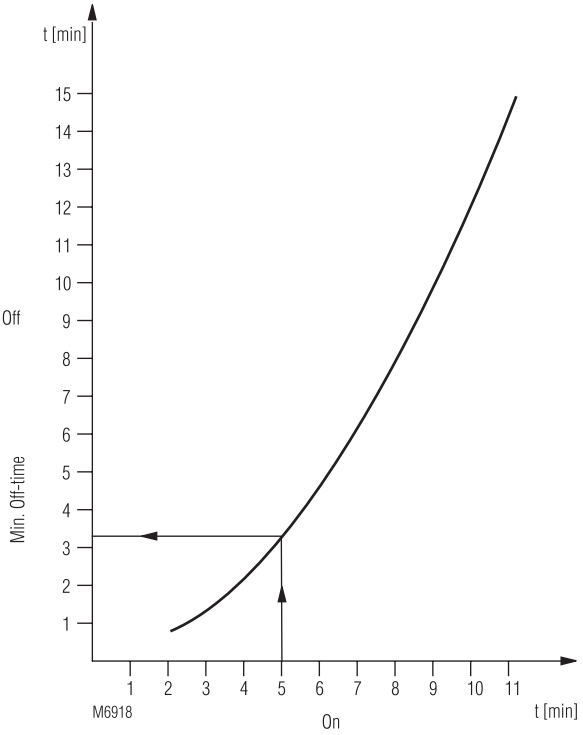
Dimensions

Width x height x depth: 17,5 x 89 x 58 mm

Characteristics



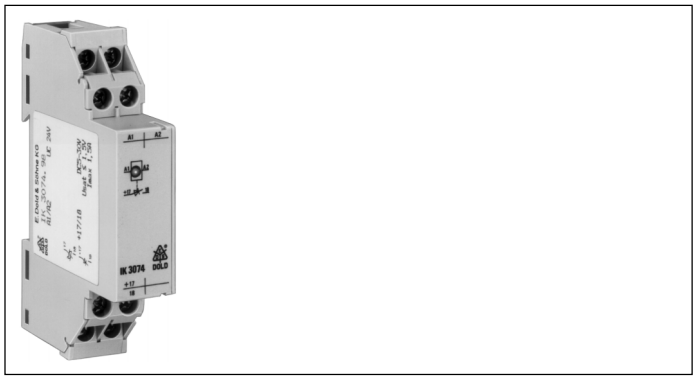
Permanent current limit curve:
Permissible switching current in relation to the ambient temperature in continuous operation



Permissible switching times in pulse operation
Ambient temperature 46°C
Load current 2 A
Units mounted next to each other

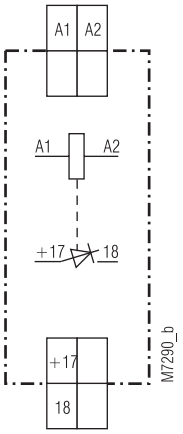
Interface relay IK 3074
Output interface relay - omod

0222108



- According to IEC 255, VDE 0435 section 201
- Static relay for max. DC 2 A switching current
- For high switching frequency
- Input/output circuit galvanically separated via opto-coupler
- LED indicator
- Width 17,5 mm

Circuit diagram



IK 3074.98

Approvals and marking

CE

Application

- For switching direct current voltage loads
- For high switching frequency

Indicator

LED:	Goes on when the relay is supplied with current

Standard type

IK 3074.98 AC/DC 24 V 50 / 60 Hz

Article number:	0033207
• Output:	Transistor
• Nominal voltage U_N:	AC/DC 24 V

Technical data

Input

Nominal voltage U_N:	AC/DC 24 V
Voltage range:	AC/DC 18 ... 30 V
Nominal consumption:	0,2 W
Current consumption	
at U_N DC 24 V:	7 mA
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 %

Output

Type of output	
IK 3074.98:	Transistor
Operate / release time:	< 45 ms / < 100 ms
Nominal output voltage:	DC 5 ... 30 V
Switching-on capacity:	2 A
Residual voltage:	1,6 V
Residual current:	≤ 500 µA
Protective wiring:	Zener diode

General data

Nominal operating mode:	Continuous operation	
Temperature range:	- 20 ... + 60°C	
Clearance and creepage distances		
Overvoltage category/ pollution severity		
Input/output:	4 kV / 2	VDE 0110-1 (04.97)

Technical data

EMC

Electrostatic discharge:	6 kV (air)	EN 61 000-4-2
Fast transients:	2 kV	EN 61 000-4-4
Surge voltages between		
wires for power supply:	1 kV	EN 61 000-4-5
between wire and ground:	2 kV	En 61 000-4-5
Interference suppression:	Limit category B	EN 55 011
Degree of protection:	Housing: IP 40	EN 60 529
	Terminals: IP 20	EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL Subj. 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	20 / 60 / 04	EN 60 068-1
Terminal designation:	EN 50 005	
Wire connection:	2 x 2,5 mm² solid or 2 x 1,5 mm² stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	EN 50 022
Weight:	80 g	

Ordering example

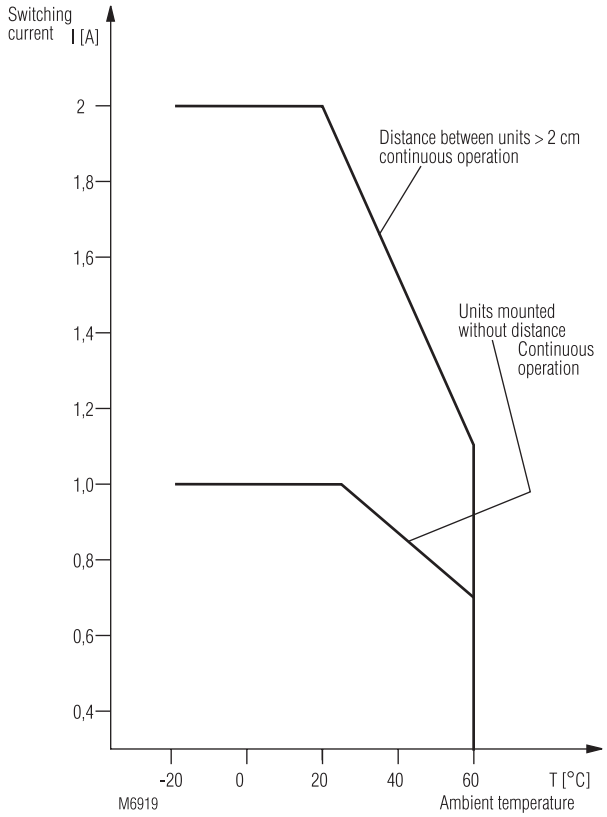
IK 3074 .98 AC/DC 24 V 50 / 60 Hz

- Nominal frequency
- Nominal voltage
- Output
- Type

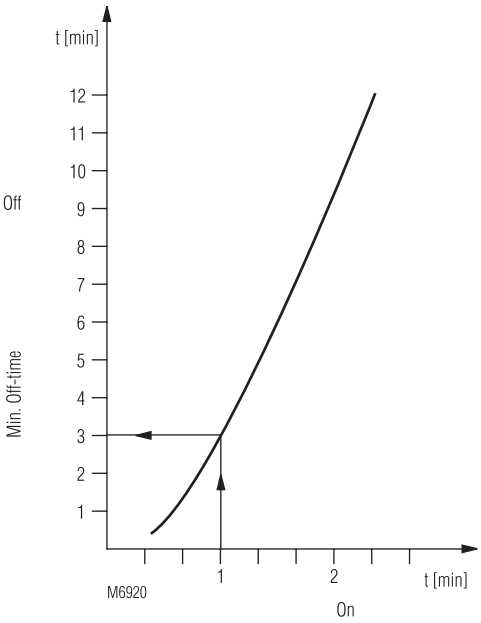
Dimensions

Width x height x depth: 17.5 x 89 x 58 mm

Characteristics



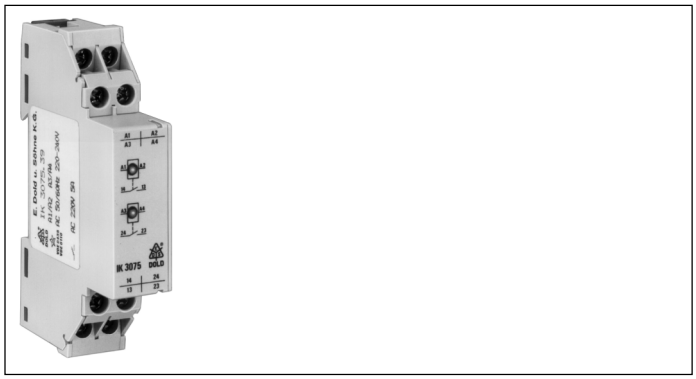
Permanent current limit curve:
Permissible switching times in pulse operation
Ambient temperature 45°C,
load current 2 A, units mounted next to each other
Example: With a switching-on time of 1 min. (load current 2 A), the unit then has to be switched off for at least 3 min.



Permissible switching current in relation to the ambient temperature in continuous operation

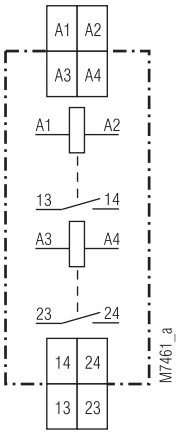
Interface relay IK 3075
Input - output interface relay

0222109



- According to IEC 255, VDE 0435 section 201
- Compact configuration with 2 relay systems that can be activated separately
- 1 NO contact for each system
- With input wiring protection against voltage surges
- With 1 LED indicator for each system
- For switching low loads as an option
- Width 17,5 mm

Circuit diagram



IK 3075.39

Approvals and marking

CE

Applications

- Link between the control and power levels
- For separating potentials

Indicators

LEDs: on when the relevant relay are supplied with current

Standard type

IK 3075.39 AC/DC 24 V 50/60 Hz
Article number: 0033477 stock item
- Output: 2 output relays with 1 NO contact each
- Nominal voltage U_N: AC/DC 24 V

Variants

IK 3075.39/004: for low loads of 0,1 ... 60 V, 1 mA ... 300 mA
IK 3075.39/005: Contacts with a minimal tendency to weld together
IK3075.39/006: with recovery diode (DC supply systems)

Technical data

Input

Nominal voltage U_N: AC/DC 12, 24, 48
AC 110 ... 130, 220 ... 240 V
Voltage range: 0,8 ... 1,1 U_N
0,9 ... 1,25 U_N in battery operating mode
Nominal consumption: DC 24 VDC 48 VAC 220 V
0,3 W 0,3 W 1,5 VA
Nominal frequency: 50 / 60 Hz
Frequency range: ± 5 %

Output

Contacts
IK 3075.39: 2 output relays with 1 NO contact each
Operate/release time: < 15 ms / < 15 ms
Thermal current I_{th}: 3 A
Switching capacity
AC 15
NO contact: 3 A / AC 230 V EN 60 947-5-1
NC contact: 1 A / AC 230 V EN 60 947-5-1
Electrical life EN 60 947-5-1
to AC 15 at 3 A, AC 230 V: 2×10^5 switching cycles
Permissible switching frequency: 72 000 switching cycles/h

Technical data

Short circuit strength		
max. fuse rating:	3 A gL	EN 60 947-5-1
Mechanical life:	> 100 x 10^6 switching cycles	

General data

Nominal operating mode:	Continuous operation	
Temperature range:	- 20 ... + 60°C	
Clearance and creepage distances		
overvoltage category/ contamination level:	4 kV / 2	VDE 0110-1 (04.97)
EMC		
Electrostatic discharge:	6 kV (air)	EN 61 000-4-2
Fast transients:	2 kV	EN 61 000-4-4
Surge voltages between		
wires for power supply:	1 kV	EN 61 000-4-5
between wire and ground:	2 kV	EN 61 000-4-5
Interference suppression:	Limit value class B	EN 55 011
Degree of protection:	Housing: IP 40	EN 60 529
	Terminals: IP 20	EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL Subject 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	20 / 60 / 04	EN 60 068-1
Terminal designation:	EN 50 005	
Wire connection:	2 x 2,5 mm^2 solid or 2 x 1,5 mm^2 stranded wire with sleeve DIN 46 228-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	EN 50 022
Weight:	75 g	

Ordering example

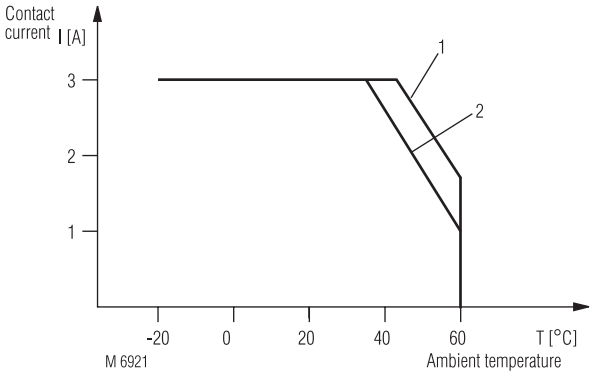
IK 3075 .39 /_ _ _ AC/DC 48 V 50 / 60 Hz

- Nominal frequency
- Nominal voltage
- Variant, if required
- Contacts
- Type

Dimensions

Width x height x depth: 17,5 x 89 x 58 mm

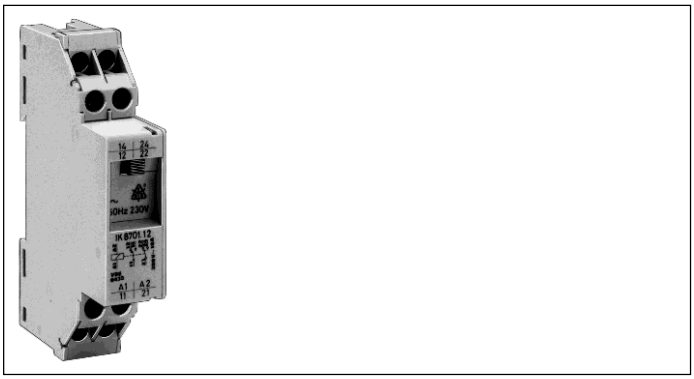
Characteristics



Permanent current limit curve:
Permissible contact current in relation to the ambient temperature
1. Nominal voltage, current supplied to both inputs, mounted on distance
2. Nominal voltage, current supplied to both inputs, mounted without distance

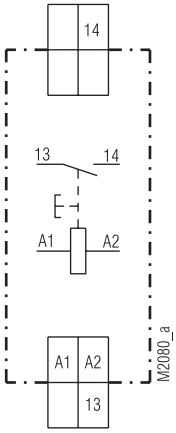
Switching relay IK 8701, IL 8701, IN 8701
Input-output interface relay

0222085

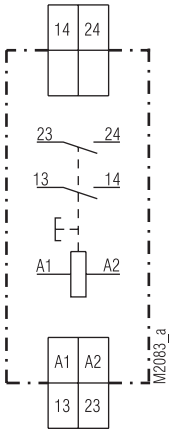


- According to EN 61 810-1
- Optionally contacts with up to a maximum of 4 changeover contacts
- High thermal current I_{th}
- Pushbutton for manual actuation of the contact
- Operating position display
- Optionally without manual actuation and an operating position display
- Optionally for 2-wire initiator activation
- Optionally for switching low loads
- Optionally for switching lamps with parallel compensation (e.g. HQ lamps)
- Optionally for switching large inductive direct current loads
- Optionally with a recovery diode
- Optionally with reliable release voltage of AC 120 V
- IK 8701: width 17,5 mm
  IL 8701: width 35 mm
  IN 8701: width 52,5 mm

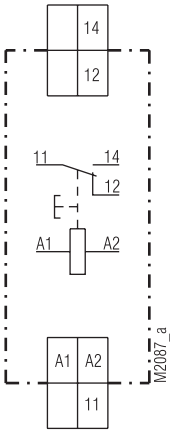
Circuit diagrams



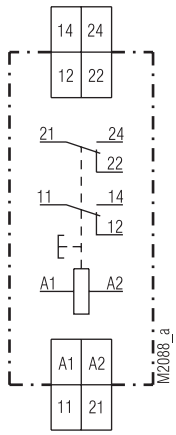
IK 8701.01



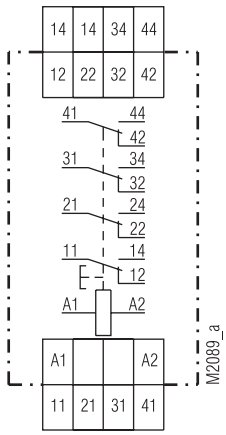
IK 8701.02



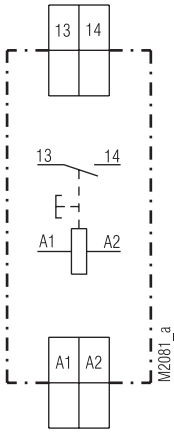
IK 8701.11



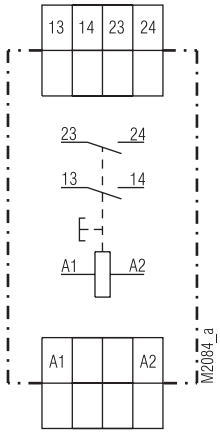
IK 8701.12



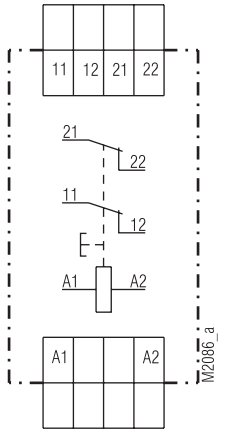
IL 8701.14



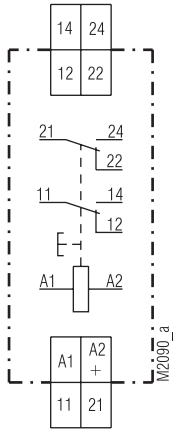
IK 8701.01/006



IL 8701.02/006



IL 8701.06/006



IK 8701.12/008
IK 8701.12/005

Approvals and marking

CE

Applications

- For switching lamp loads
- Input interface relay, e.g. for activation of PLC
- Output interface relay, e.g. for PLC-controlled loads

Function

The contacts are actuated with an armature via a plunger. After the exciting voltage has dropped, a spring returns the armature (which is connected to the plunger) to its home position. The contacts can be actuated manually via a pushbutton on the front as well. This pushbutton acts at the same time as an operating position display. The contacts are closed when the pushbutton is pressed. The red pushbutton is flush with the front edge when there is no current.

Indicators

Pushbutton: pressed in when the relay is supplied with current

Standard type

IK 8701.12 AC 230 V 50 Hz
Article number: 0033896 stock item

- Pushbutton for manual actuation of the contacts and operating position display
- Output: 2 changeover contacts
- Nominal voltage U_N: AC 230 V

Variants

IK 8701. _ _ /001: For switching low loads up to a maximum of 6 VA/W at 0,3 ... 60 V / 1 ... 300 mA
The contacts also permit the maximum switching current.
However, since the gold plating is burnt off at this current level, the unit is no longer suitable for switching low loads again afterwards.

IK 8701. _ _ /002: Can be activated with 2-wire initiators, permissible residual current ≤ 3 mA. Max. 6 glow lamps (0,5 mA each) are possible parallel to the mains button.

IK 8701. _ _ /003: 3 mm contact opening

IK 8701. _ _ /005: Same as IK 8701. _ _ /001 with a recovery diode to provide protection against voltage surges

IK 8701. _ _ /006: For switching large inductive direct current voltage loads (DC 220 V, L/R = 30 ms)

IK 8701. _ _ /007: For switching lamps with parallel compensation, e.g. HQ lamps.
Maximum parallel compensation 100 µF

IK 8701. _ _ /008: With a recovery diode to provide protection against voltage surges

IK 8701. _ _ /009: With a reliable release voltage of AC 120 V with a nominal voltage of AC 230 V.

IK 8701. _ _ /010: Same as IK 8701. _ _ /006 with a recovery diode to provide protection against voltage surges

IK 8701.12/016: Nominal voltage DC 24 V
Voltage range 0,8 ... 1,15 UN
Temperature range - 20 ... + 55°C

IK 8701. _ _ /700: Without manual actuation and an operating position display

Technical data

Input

Nominal voltage U_N:	AC 24, 42, 230 V DC 12, 24 V other voltages available on request	
Voltage range:	0,9 ... 1,1 U_N	
Nominal consumption:	AC 1,8 VA / DC 1,5 W	
Nominal frequency:	50 or 60 Hz	

Output

Contacts		
IK 8701.01:	1 NO contact	
IK 8701.02:	2 NO contacts	
IK 8701.05:	1 NC contact	
IK 8701.06:	2 NC contacts	
IK 8701.11:	1 changeover contact	
IK 8701.12:	2 changeover contacts	
IL 8701.13:	3 changeover contacts	
IL 8701.14:	4 changeover contacts	
Operate time:	< 30 ms	
Release time:	< 30 ms	
Nominal output voltage:	AC 230 / 400 V	EN 60 947-5-1
Thermal current I_{th}:	16 A	
Direct current load:	See arc limit curve	
Switching capacity		
fluorescent lamp load:	20 lamps with 58 W / contact each	
duo switching (series compensated):	2 x 20 lamps with 58 W / contact each 5 x 10^4 switching cycles	
bulb load:	1200 W / contact 5 x 10^4 switching cycles	
Electrical life:	500 switching cycles / h	
with ohmic load AC 230 V:	6 A 150 x 10^4 switching cycles 10 A 75 x 10^4 switching cycles 16 A 12 x 10^4 switching cycles	
Inductive load cos φ 0,6:	10 A 10 x 10^4 switching cycles	
DC-load:	see arc limit curve	
Permissible switching frequency:	1 000 switching cycles / h	
Short circuit strength max. fuse rating:	16 A gL	EN 60 947-5-1
Mechanical life:	> 10 x 10^6 switching cycles	

Technical data

General data

Operating mode:	Continuous operation	
Temperature range:	- 20 ... + 45°C	
Clearance and creepage distances		
overvoltage category / contamination level:	4 kV / 2	VDE 0110-1 (04.97)
Degree of protection:	Housing: IP 30	EN 60 529
	Terminals: IP 20	EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94	
Vibration resistance:	Amplitude 0,35 mm, frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	Humid heat	EN 60 068-2-30
Terminal designation:	EN 50 005	
Wire connection:	2 x 2,5 mm² solid or 2 x 1,5 mm² stranded wire with sleeve DIN 46 228-1/-2/-3 or 2 x 1 mm² stranded wire with sleeve DIN 46 228-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	EN 50 022
Weight:		
IK 8701:	100 g	
IL 8701:	200 g	
IN 8701:	300 g	

Ordering example

IK 8701 .01 /_ _ _ AC 230 V 50 Hz

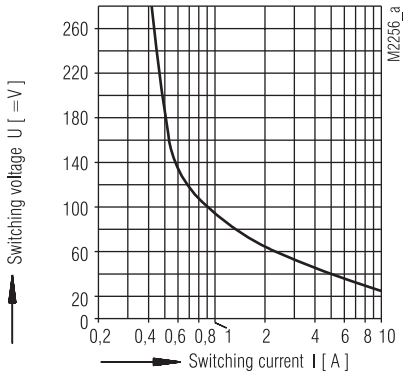
- 50 Hz — Nominal frequency
- AC 230 V — Nominal voltage
- /_ _ _ — Variant, if required
- .01 — Contacts
- IK 8701 — Type

Dimensions

Width x height x depth

IK 8701:	17,5 x 89 x 58 mm
IL 8701:	35 x 89 x 58 mm
IN 8701:	52,5 x 89 x 58 mm

Characteristics



safe braking, no continuous arcing
max. 1000 switching cycles / h
contact spacing min. 0,6mm

Arc limit curve for direct current voltage

Specifiaction for tender for IK 8701

Switching relay according to EN 61 810-1 to be built in consumer units, 1 NO contact, thermal current 16 A, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8701.01
Manufactured by: E. DOLD & SÖHNE KG

Switching relay according to EN 61 810-1 to be built in consumer units, 2 NO contacts, thermal current 16 A, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8701.02
Manufactured by: E. DOLD & SÖHNE KG

Switching relay according to EN 61 810-1 to be built in consumer units, 1 changeover contact, thermal current 16 A, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8701.11
Manufactured by: E. DOLD & SÖHNE KG

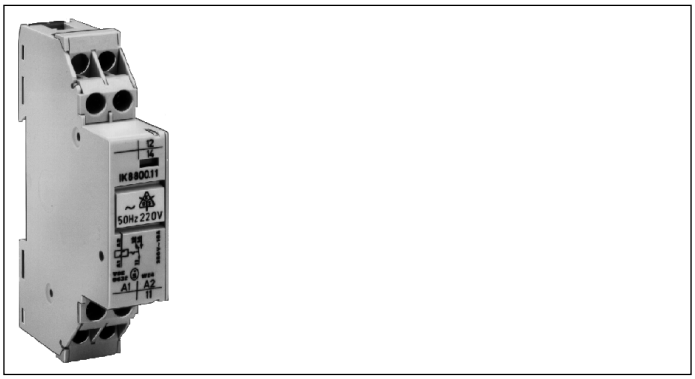
Switching relay according to EN 61 810-1 to be built in consumer units, 2 changeover contacts, thermal current 16 A, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8701.12
Manufactured by: E. DOLD & SÖHNE KG

Switching relay according to EN 61 810-1 to be built in consumer units, 3 changeover contacts, thermal current 16 A, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8701.13
Manufactured by: E. DOLD & SÖHNE KG

Switching relay according to EN 61 810-1 to be built in consumer units, 4 changeover contacts, thermal current 16 A, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8701.14
Manufactured by: E. DOLD & SÖHNE KG

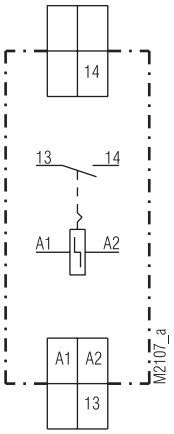
Remote switch IK 8800, IL 8800

0222086

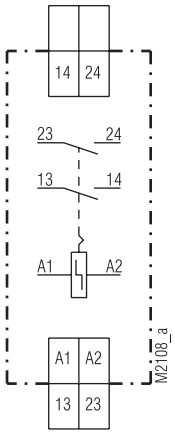


- According to VDE 0632
- Optionally contacts with up to a maximum of 4 changeover contacts
- Pushbutton for manual actuation of the contacts
- Operating position display
- Width 17,5 mm or 35 mm

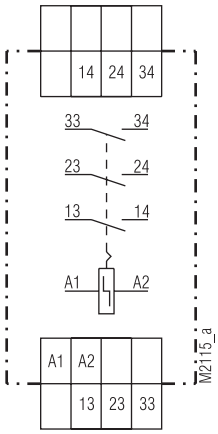
Circuit diagram



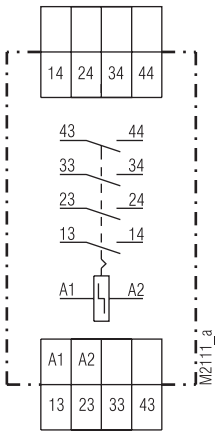
IK 8800.01



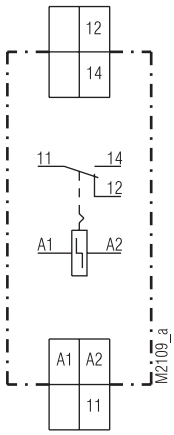
IK 8800.02



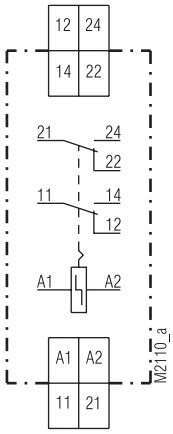
IL 8800.03



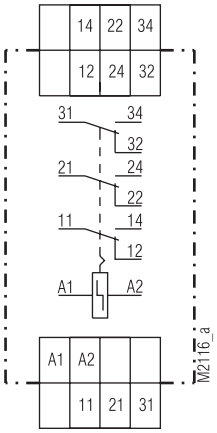
IL 8800.04



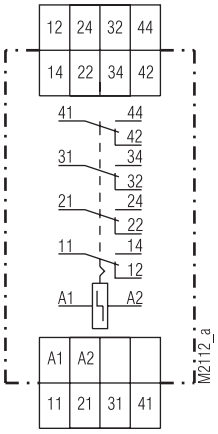
IK 8800.11



IK 8800.12



IL 8800.13



IL 8800.14

Approvals and marking

CE

Function

The contacts are actuated with every current pulse and they stay in the operating position they have adopted in each case until the next pulse occurs. It is possible to actuate the contacts manually by pressing a pushbutton provided on the unit. The contact position is shown by an indicator.
The units can be installed in rows close next to each other for pulse operation. The gap between the relays is 7 mm when they are on permanently.

Indicators

red indicator: is visible when output contacts are activated

Standard type

IK 8800.01 AC 230 V 50/60 Hz

Article number:	0009273	stock item
• Output:	1 NO contact	
• Nominal voltage U_N:	AC 230 V	

Technical data

Input

Nominal voltage U_N:	AC 8, 24, 42, 230 V DC 12, 24 V, other voltages on request	
Voltage range:	0,9 ... 1,1 U_N	
Nominal consumption:	1,2 contacts	4 contacts
apparent power:	5,2 VA	10,4 VA
actual power:	4,2 W	8,4 W
Nominal frequency:	50 or 60 Hz	
Frequency range:	± 5 %	
Glow lamp parallel to the pushbutton:	max. 8 lamps à 0,5 mA (corresponds to 4 mA residual current)	
Minimum on time	> 50 ms	

Output

Contacts

IK 8800.01:	1 NO contact
IK 8800.02:	2 NO contacts
IL 8800.03:	3 NO contacts
IL 8800.04:	4 NO contacts
IK 8800.11:	1 changeover contact
IK 8800.12:	2 changeover contacts
IL 8800.13:	3 changeover contacts
IK 8800.14:	4 changeover contacts

Technical data

Operate time:	< 30 ms	
Nominal output voltage:	AC 230 V / 400 V	
Electrical life		
with resistive load AC 230 V		
and 500 switching cycles / h:	6 A 150 x 10^4 switching cycles	
	10 A 75 x 10^4 switching cycles	
	16 A 10 x 10^4 switching cycles	
Switching capacity with lamp load:		
fluorescent lamp load:	20 lamps with 58 W / contact each	
duo circuit		
(series compensated):	2 x 20 lamps with 58 W / contact each	
	5 x 10^4 switching cycles	
bulb load:	2 000 W	
	5 x 10^4 switching cycles	
Nominal switching-off capacity:		
cos. φ 1 ... 0,7, AC 230 V:	16 A	
Thermal current I_{th}:	16 A	
Permissible switching frequency:	1 000 switching cycles / h	
Short circuit strength max. fuse rating:	16 A gL	EN 60 947-5-1
Mechanical life:	3 x 10^6 switching cycles	

General data

Operating mode:	Pulse operation	
Temperature range:	– 20 ... + 45°C	
Clearance and creepage distances		
overvoltage category / contamination level:	4 kV / 2	VDE 0110-1 (04.97)
EMC		
Electrostatic discharge:	6 kV (contact)	EN 61 000-4-2
Fast transients:	4 kV	EN 61 000-4-4
Surge voltages between		
wires for power supply:	2 kV	EN 61 000-4-5
between wire and ground:	4 kV	EN 61 000-4-5
HF wire guided:	10 V	En 61 000-4-6
Degree of protection:	Housing: IP 30	EN 60 529
	Terminals: IP 20	EN 60 529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	Humid heat	IEC 68-2-30
Terminal designation:	EN 50 005	
Wire connection:	2 x 2,5 mm² solid or 2 x 1,5 mm² stranded wire with sleeve DIN 46 228-1/-2/-3 or 2 x 1 mm² stranded wire with sleeve DIN 46 228-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	EN 50 022
Weight		
IK 8800:	110 g	
IL 8800:	210 g	

Ordering example

IK 8800 .01 AC 230 V 50 Hz

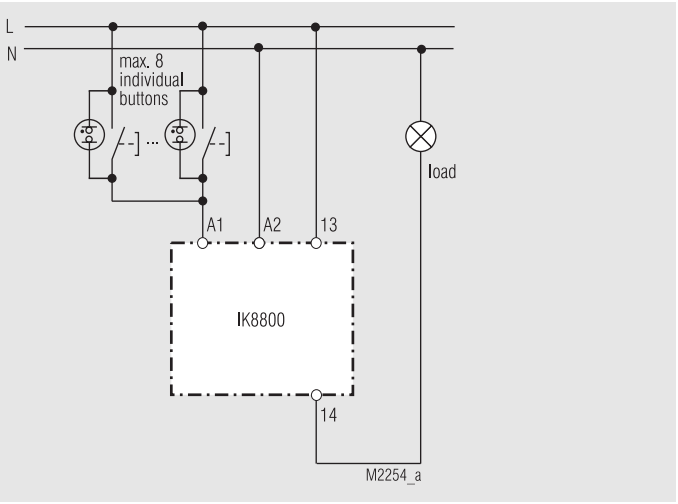
- 50 Hz — Nominal frequency
- AC 230 V — Nominal voltage
- .01 — Contacts
- IK 8800 — Type

Dimensions

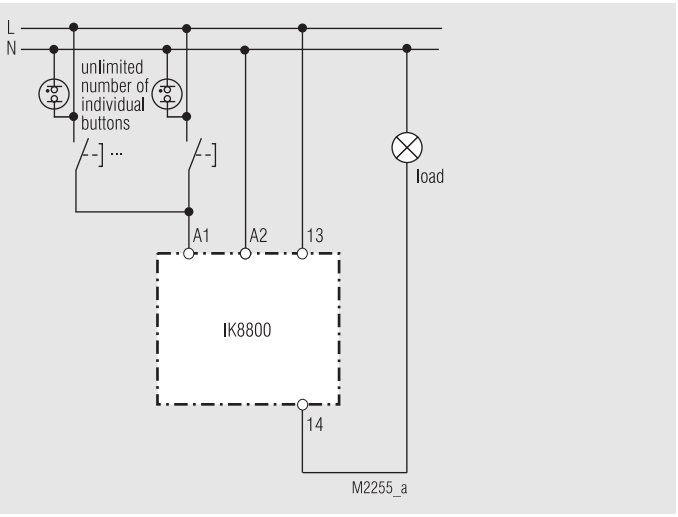
Width x height x depth:

IK 8800:	17,5 x 89 x 58 mm
IL 8800:	35 x 89 x 58 mm

Connection examples



This circuit can be used with up to 8 illuminated pushbuttons.



With this circuit it is possible to connect as many illuminated pushbuttons as required to a remote switch.

When low voltages are being used, the control circuit has to be disconnected from the mains system by means of a transformer. It is only possible to illuminate the pushbuttons here by providing a third control wire.

Specifiaction for tender for IK 8800

Remote switch according to VDE 0632 to be built in consumer units, 1 NO contact, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8800.01
Manufactured by: E. DOLD & SÖHNE KG

Remote switch according to VDE 0632 to be built in consumer units, 2 NO contacts, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8800.02
Manufactured by: E. DOLD & SÖHNE KG

Remote switch according to VDE 0632 to be built in consumer units, 4 NO contacts, pushbutton for manual actuation of the contacts and operating position display.
Width 35 mm.
Type IK 8800.04
Manufactured by: E. DOLD & SÖHNE KG

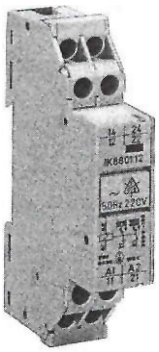
Remote switch according to VDE 0632 to be built in consumer units, 1 changeover contact, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8800.11
Manufactured by: E. DOLD & SÖHNE KG

Remote switch according to VDE 0632 to be built in consumer units, 2 changeover contacts, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8800.12
Manufactured by: E. DOLD & SÖHNE KG

Remote switch according to VDE 0632 to be built in consumer units, 4 changeover contacts, pushbutton for manual actuation of the contacts and operating position display.
Width 17,5 mm.
Type IK 8800.14
Manufactured by: E. DOLD & SÖHNE KG

Switching relay
IK 8801

to IEC 255 and VDE 0435
Note: Successor to IK 8801



IK8801

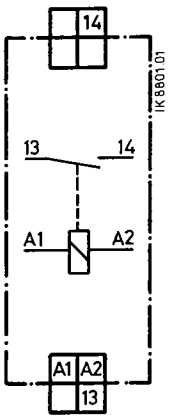


Fig. 1 IK 8801.01

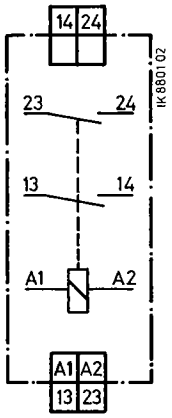


Fig. 2 IK 8801.02

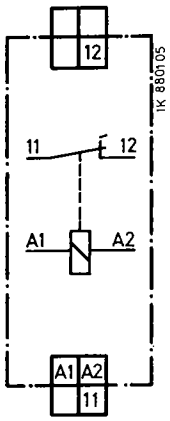


Fig. 3 IK 8801.05

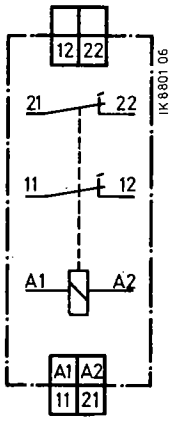


Fig. 4 IK 8801.06

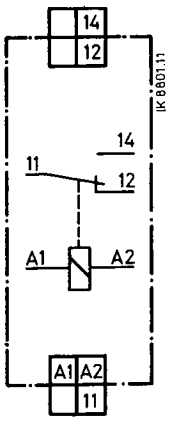


Fig. 5 IK 8801.11

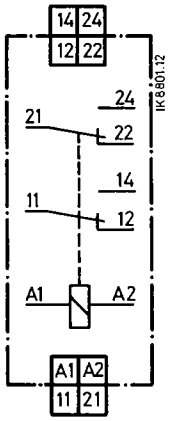


Fig. 6 IK 8801.12

Design and operation:

The contacts are operated by a can through a flap-type armature. A spring brings the armature which is linked to a switching can back into its off-position after drop of the energizing voltage. The contacts can also be operated manually through a key button located on the front. The position of the contact is indicated by a symbol

This remote switch is also suitable for installation in modern flat distribution cabinets thanks to its low construction height of 53 mm. The snap lugs for mounting on DIN rail can be drawn out sideways to enable also fitting by screws.

Suitable for **triggering by proximity switches:** usual 2-wire proximity switches, residual current ≤ 3 mA.

For pulse operation the devices can be mounted close in series. The installation distance between the relays is 7.5 mm for continuous operation.

Function:	Switching relay
Nominal voltage:	AC or UC 8, 24, 42, 110, 127, 230 V
Nominal frequency:	50 or 60 Hz
Contacts:	
IK 8801.01	1 make contact
IK 8801.02	2 make contacts
IK 8801.05	1 break contact
IK 8801.06	2 break contacts
IK 8801.11	1 changeover contact
IK 8801.12	2 changeover contacts
Switching capacity at resistive load AC 220 V:	with 500 operations/h 6 A 150 x 10^4 make/break operations 10 A 75 x 10^4 make/break operations 16 A 10 x 10^4 make/break operations
Switching capacity at lamp load:	
Fluorescent lamp load Duo circuit	20 lamps/58 W each 5 x 10^4 make/break operations
Filament lamp load:	2000 W 5 x 10^4 make/break operations
Case:	Self-extinguishing thermoplast to UL subject 94, class V-0
Quick mounting:	DIN rail EN 50022-35
Net weight:	100 g

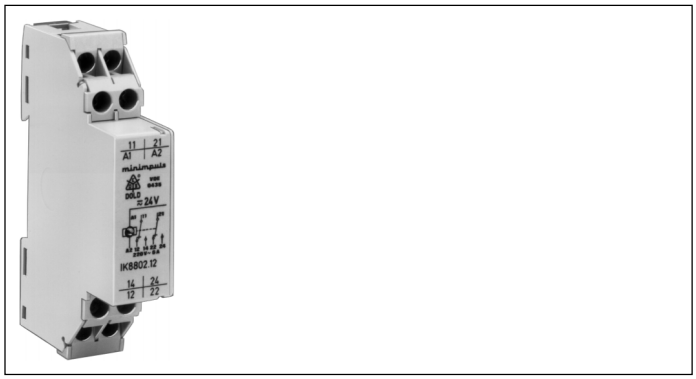
Example of order:

Type	Contacts	Nominal voltage
IK 8801	.01	AC 230 V

Nominal frequency
50 Hz

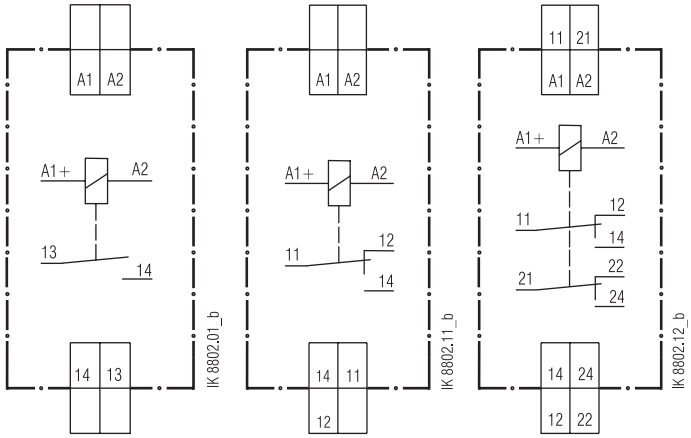
Interface relay IK 8802
Input-output interface relay

0222087



- According to IEC 255, VDE 0435 part 201
- With 1 or 2 changeover contacts as options
- High permanent current I_{th}
- For switching low loads as an option
- LED display
- Width 17,5 mm

Circuit diagrams



IK 8802.01 IK 8802.11 IK 8802.12

Approvals and marking

GL Deutschland, CE

Function

- link between the control and power levels
- for potential separation

Indicators

LED: on, when supply connected

Standard type

IK 8802.12 AC/DC 24 V 50/60 Hz
Article number: 0012142 stock item
- Output: 2 changeover contacts
- U_N: AC/DC 24 V

Variants

IK 8802._ _/005: for low loads of 0,1 ... 60 V, 1 mA ... 300 mA
IK 8802._ _/023: AC/DC 230 V, without an LED

Technical data

Input

Nominal voltage U_N: AC/DC 24 V max. 48 % RW, AC/DC 230 V
Voltage range: 0,8 ... 1,1 U_N
Nominal consumption: AC 24 V 0,7 VA
DC 24 V 0,6 W
Nominal frequency: 50 / 60 Hz
Frequency range: ± 5 %

Output

Contacts
IK 8802.01: 1 NO contact
IK 8802.11: 1 changeover contact
IK 8802.12: 2 changeover contacts
Operate / release time: < 10 ms / < 10 ms
Thermal current I_{th}
IK 8802.11: 10 A
IK 8802.12: 2 x 5 A
Switching capacity
AC 11: 3 A / AC 230 V DIN VDE 0660 p. 200
DC 11: 2 A / DC 24 V DIN VDE 0660 p. 200
Electrical life DIN VDE 0660 p. 200
to AC 15 at 3 A, AC 230 V
1 changeover contact: 2,5 x 10^5 switching cycles
2 changeover contacts: 0,5 x 10^5 switching cycles
Permissible switching frequency: 3 000 switching cycles/h

Technical data

Short circuit strength
max. fuse rating
IK 8802.11: 10 A gLDIN VDE 0660
IK 8802.12: 6 A gL DIN VDE 0660
Mechanical life: > 50 x 10^6 switching cycles

General data

Operating mode: Continuous operation
Temperature range: – 20 ... + 55°C
Clearance and creepage distances
overvoltage category / contamination level:
input/output: 4 kV / 3 VDE 0110-1 (04.97)
Degree of protection: Housing: IP 40 DIN VDE 0470-1
Terminals: IP 20 DIN VDE 0470-1
Housing: Thermoplastic with V0 behaviour according to UL subject 94
Vibration resistance: Amplitude 0,35 mm
frequency 10 ... 55 Hz IEC 68-2-6
Climate resistance: Humid heat IEC 68-2-30
Terminal designation: EN 50 005
Wire connection: 2 x 2,5 mm² solid or
2 x 1,5 mm² stranded wire with sleeve DIN 46 228-1/-2/-3/-4
Wire fixing: Flat terminals with self-lifting clamping piece DIN 46 206 and DIN 57 609 / VDE 0609
Mounting: DIN rail DIN EN 50 022
Weight: 60 g

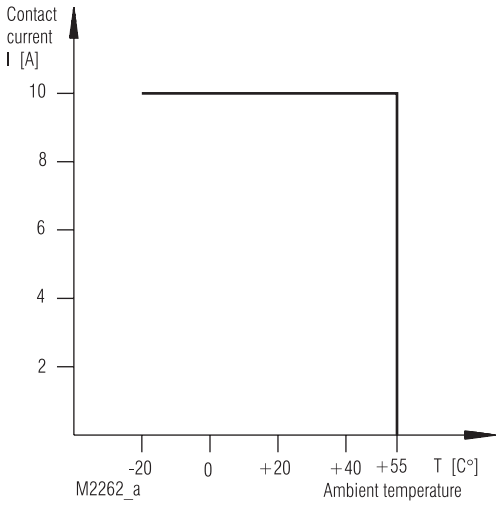
Ordering example

IK 8802 .12 AC/DC 24 V 50 / 60 Hz
- 50 / 60 Hz — Nominal frequency
- AC/DC 24 V — Nominal voltage
- .12 — Contacts
- IK 8802 — Type

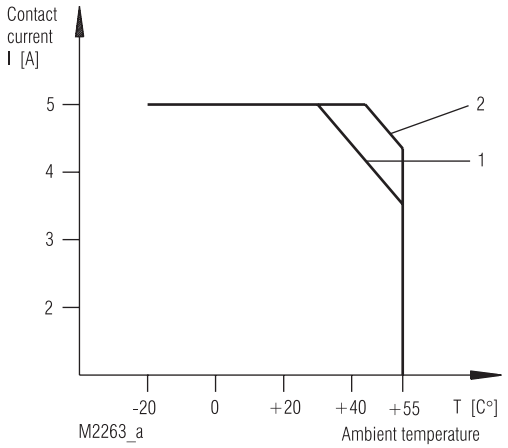
Dimensions

Width x height x depth: 17,5 x 89 x 58 mm

Characteristics

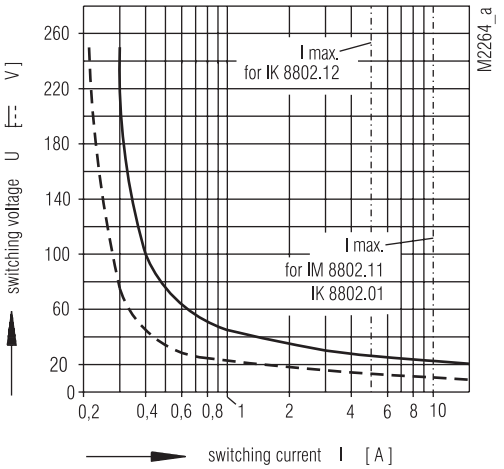


Permissible contact current of IK 8802.01 and IK 8802.11 depends on the ambient temperature.



1. at nominal voltage, mounted without distance, current on both contacts
2. at nominal voltage, mounted without distance, current on only one contact

Permissible contact current of IK 8802.12 depends on the ambient temperature.

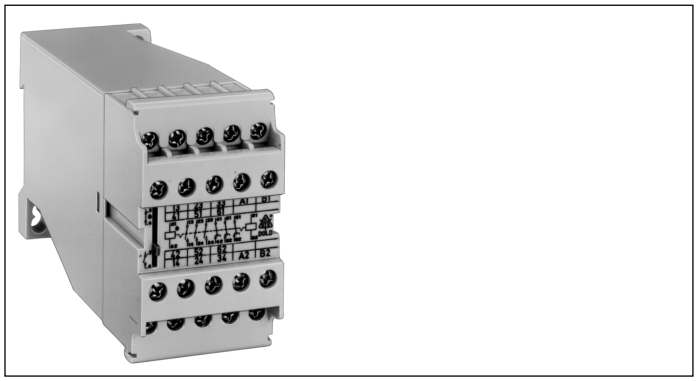


— safe breaking, no remaining arc
max. 1 switching cycle / s
--- arc extinguishes during contact changeover time
max. 12 switching cycles / s

Arc limit curve (load limit curve)

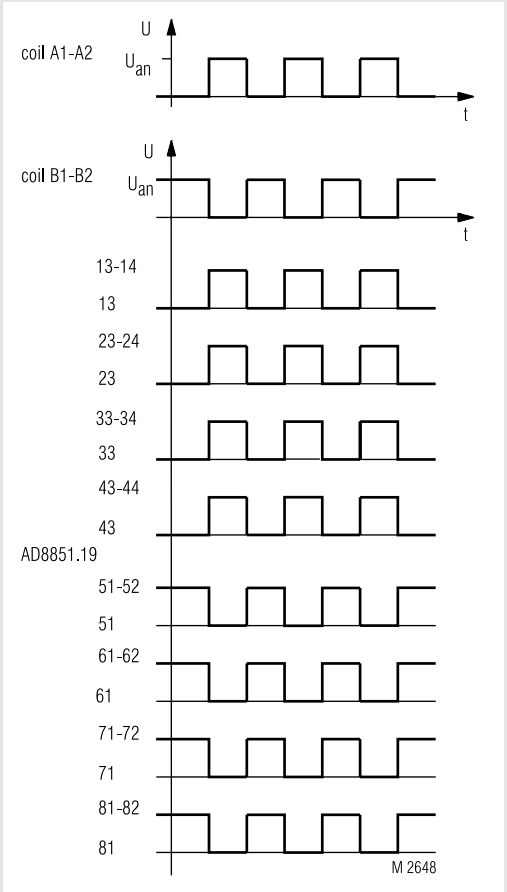
Latching relay AD 8851

0232902



- According to EN 61 810-1
- Manual operation possible
- Contact position indication via control lever
- max. 4 NC contacts, 4 NO contacts
- Width 45 mm

Function diagram



Approvals and marking

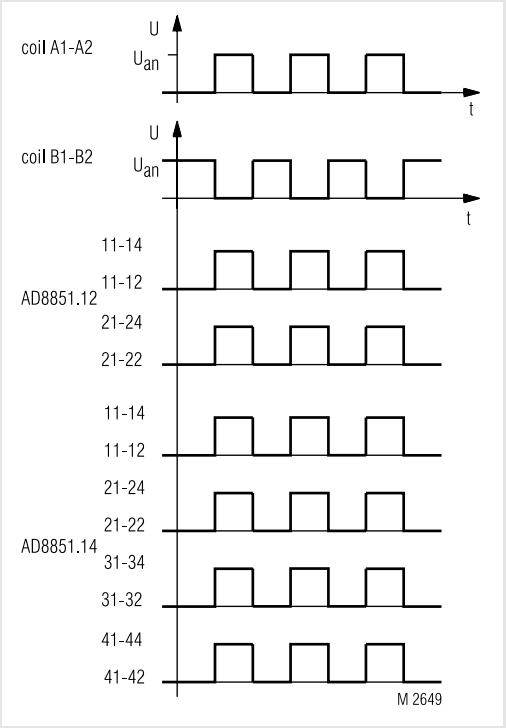
Canada

* see variants

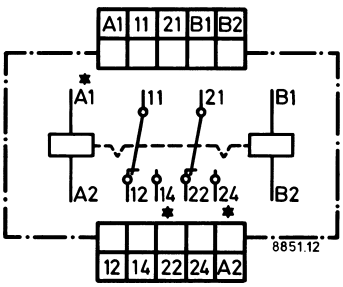
Application

Interlocking of control circuits

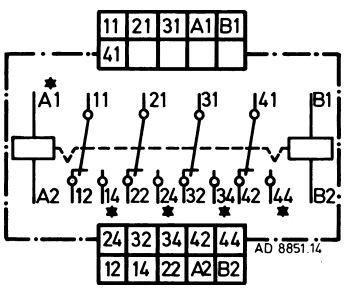
Function diagram



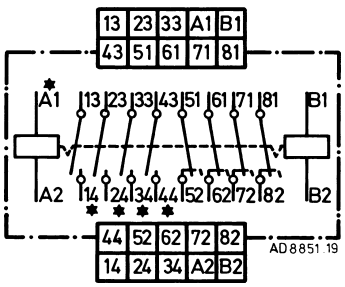
Circuit diagrams



AD 8851.12



AD 8851.14 / AD 8851.13
(without 41-42-44)



AD 8851.19

The circuit diagrams have been provided with star-marking. If the coil, provided with the star will be energized, the contacts, provided with the star, are closed.

Function

The relay will be actuated by impulse or continuous energizing of the coils A1-A2 or B1-B2. During the energizing of both systems at the same time, the interlocking is disabled; the contact position corresponds with the energizing of the coil A1-A2.

All contacts are on the same magnetic system, which is connected on A1, A2. Thus it is achieved, that in case of energizing of both systems at the same time, there will be no undefined contact condition.

Technical data

Input

Nominal voltage U_N:	AC 24, 42, 110, 127, 230, 240 V DC 12, 24, 60, 110, 220, 240 V
Voltage range:	0,8 ... 1,1 U_N
Nominal consumption:	AC 230 V / 3 VA DC 220 V / 3 W
Nominal frequency:	50 / 60 Hz
Frequency range:	± 5 %

Output

Contacts		
AD 8851.12:	2 changeover contacts	
AD 8851.13:	3 changeover contacts	
AD 8851.14:	4 changeover contacts	
AD 8851.17:	2 NO, 2 NC contacts	
AD 8851.18:	3 NO, 3 NC contacts	
AD 8851.19:	4 NO, 4 NC contacts	
Operate time of contacts:	< 40 ms	
Release time of contacts:	< 40 ms	
Thermal current I_{th}:	8 A / 5 A / 4 A current via 2/3/4 contacts	
Switching capacity		
to AC 15		
NO contacts:	3 A / AC 230 V	EN 60 947-5-1
NC contacts:	1 A / AC 230 V	EN 60 947-5-1
Electrical life		EN 60 947-5-1
to AC 15 at 1 A, AC 230 V:	1 x 10^5 switching cycles 3 000 switches/h at 50 % of the switching capacity 0,5 x 10^6 switching cycles 1 000 switches/h at 100% of the switching capacity	
Permissible switching frequency:	3 000 switching cycles / h	
Short circuit strength max. fuse rating:	10 A gL	EN 60 947-5-1
Mechanical life:	50 x 10^6 switching cycles	

General data

Operating mode:	Continuous operation	
Temperature range:	- 20 ... + 45°C	
Clearance and creepace distances		
overvoltage catecory / contamination level:	4 kV / 2	DIN VDE 0110-1 (4.97)
EMC		
Electrostatic discharge:	6 kV (contact discharge)	EN 61 000-4-2
Fast transients:	4 kV	EN 61 000-4-4
Surge voltages between		
wires for power supply:	2 kV	EN 61 000-4-5
between wire and ground:	4 kV	EN 61 000-4-5
HF-wire guided:	10 V	EN 61 000-4-6
Degree of protection:		
Housing:	IP 40	EN 60 529
Terminals:	IP 20	EN 60 529
Housing:	Thermoplast with V0-behaviour to UL subject 94	
Vibration resistance:	Amplitude 0,35 mm frequency 10 ... 55 Hz	EN 60 068-2-6
Climate resistance:	humid heat	EN 60 068-2-30
Terminal designation:	EN 50 005	

Technical data

Wire connection:	2 x 2,5 mm² solid or 2 x 1,5 mm² stranded wire with sleeve DIN 46 288-1/-2/-3/-4	
Wire fixing:	Flat terminals with self-lifting clamping piece	EN 60 999
Mounting:	DIN rail	EN 50 022
Weight:	400 g	

Dimensions

Width x height x depth: 45 x 77 x 127 mm

Standard type

AD 8851.19 AC 230 V 50 / 60 Hz

Article number	0016356	stock item
• Output:	4 NO, 4 NC contacts	
• Nominal voltage U_N:	AC 230 V	
• Width:	45 mm	

Variant

AD 8851._ _ /60: with CSA-approval

Ordering example for variant

AD 8851 .18 /60 AC 230 V 50 / 60 Hz

- 50 / 60 Hz — Nominal frequency
- AC 230 V — Nominal voltage
- /60 — Variant, if required
- .18 — Contacts
- AD 8851 — Type