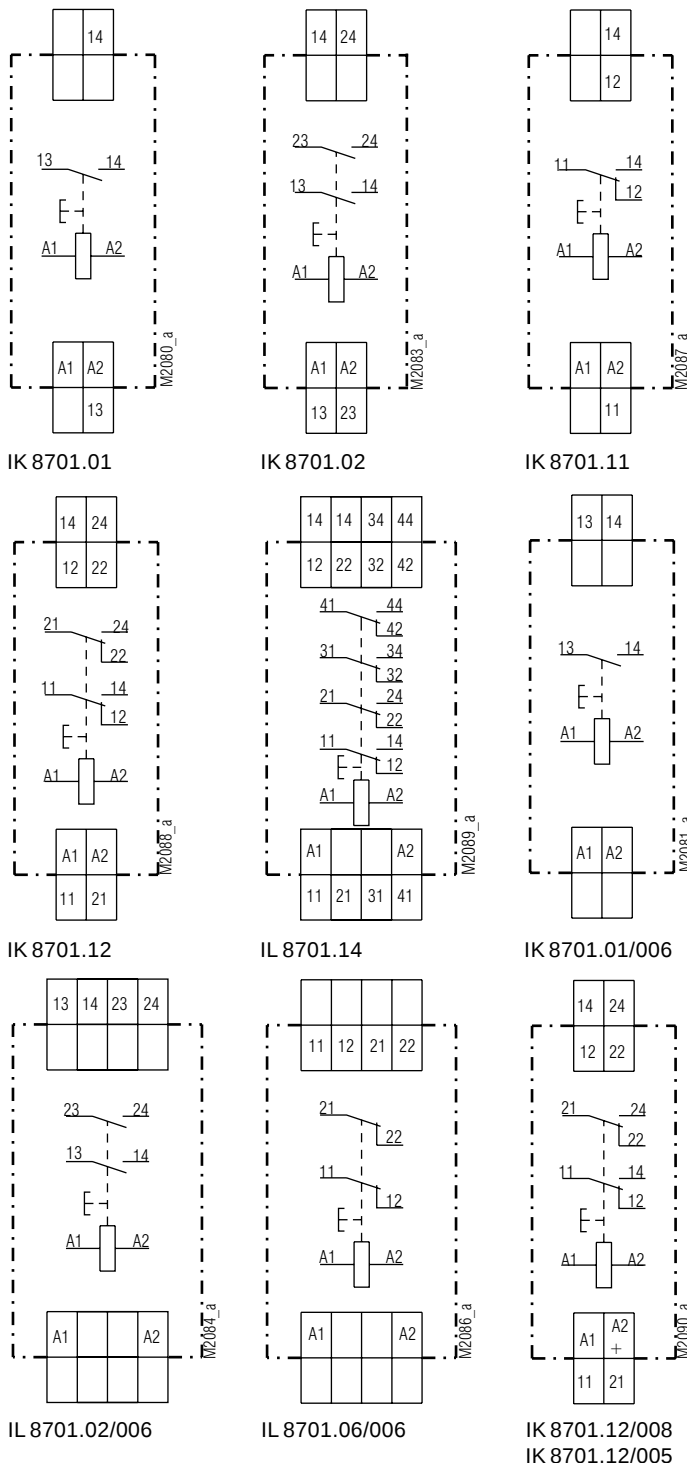


Switching relay IK 8701, IL 8701, IN 8701 Input-output interface relay

0222085



Circuit diagrams



- 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

Approvals and marking



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

Technical data

Input

Nominal voltage U_N : AC 24, 42, 230 V
DC 12, 24 V
other voltages available on request
0,9 ... 1,1 U_N

Voltage range:
Nominal consumption:

IK 8701: AC 1,8 W DC 1,2 W
IL 8701: AC 3,8 W DC 2,6 W
IN 8701: AC 5,8 W DC 4,0 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

Technical data	
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 10 A 10 x 10 ⁴ switching cycles see arc limit curve
Inductive load cos φ 0,6:	
DC-load:	
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

General data

Operating mode:	Continuous operation
Temperature range:	- 20 ... + 45°C
Clearance and creepage distances	
overvoltage category / contamination level:	4 kV / 2 IEC 60 664-1
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 Humid heat EN 60 068-2-30
Climate resistance:	
Terminal designation:	EN 50 005
Wire connection:	2 x 2,5 mm ² solid or 2 x 1,5 mm ² stranded ferruled DIN 46 228-1/-2/-3 or 2 x 1 mm ² stranded ferruled DIN 46 228-4
Wire fixing:	Flat terminals with self-lifting clamping piece EN 60 999 DIN rail EN 50 022
Mounting:	
Weight:	
IK 8701:	100 g
IL 8701:	200 g
IN 8701:	300 g

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

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		
• Width: 17,5 mm		

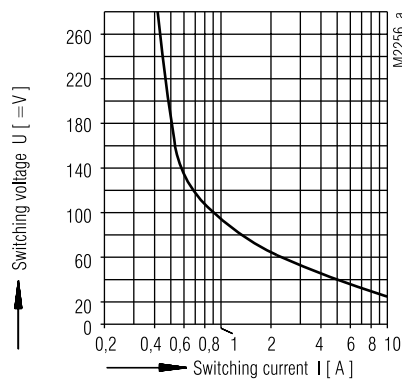
Variants

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 (only NC and NO contact)
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), (only NC and NO contact)
IK 8701. __ /007:	For switching lamps with parallel compensation, e.g. HQ lamps. (only 1 or 2 NO contacts) 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. __ /016:	Nominal voltage DC 24 V Voltage range 0,8 ... 1,15 UN Temperature range - 20 ... + 55°C (only 1 NC, NO or changeover contact)
IK 8701. __ /700:	Without manual actuation and an operating position display

Ordering example for variants

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

Characteristics



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

Arc limit curve for direct current voltage-resistive load

Specifiacion 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