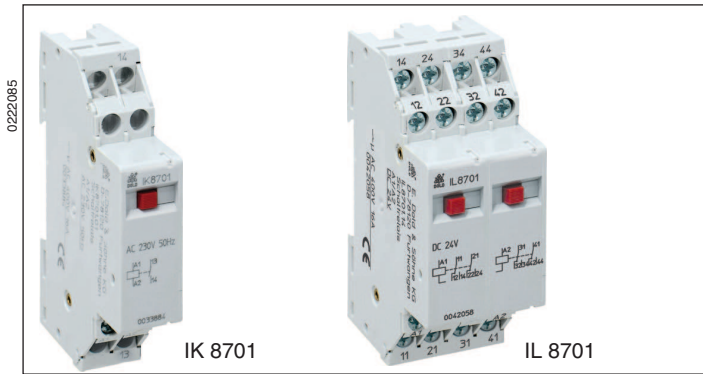
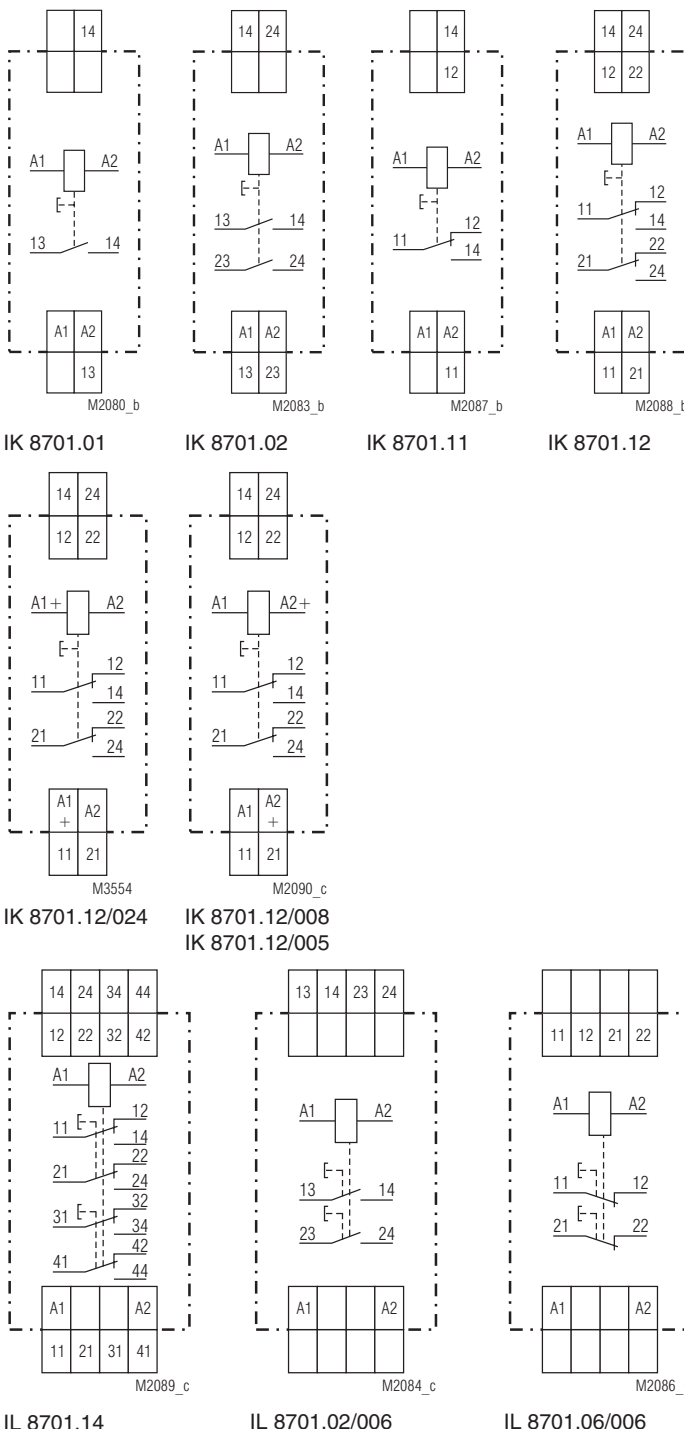


Switching Relay Input-Output Interface Relay IK 8701, IL 8701, IN 8701



- According to IEC/EN 61 810-1
- Optionally contacts with up to a maximum 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 (only DC devices)
- 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

Schaltbilder



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. The 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.

Note: IL devices have 2, IN devices have 3 pushbuttons on the front. These are **not** linked together. The pushbuttons only activate the contact shown on the front under the button.

Indicators

Pushbutton: pressed, when the relay is supplied with current

Technical Data

Input

Nominal voltage: AC 24, 42, 230 V
DC 12, 24 V
other voltages available on request

Voltage range: 0.9 ... 1.1 U_N

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 IEC/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

fluorescent lamp load

with electronic series reactor: 58 lamps with 18 W / contact each
28 lamps with 40 W / contact each
20 lamps with 58 W / contact each

duo switching

(series compensated):

2 x 20 lamps with 58 W / contact each
5 x 10⁴ switching cycles

bulb load:

1200 W / contact
5 x 10⁴ switching cycles

Electrical life:

with ohmic load AC 230 V:

500 switching cycles / h
6 A 150 x 10⁴ switching cycles
10 A 75 x 10⁴ switching cycles
16 A 12 x 10⁴ switching cycles
10 A 10 x 10⁴ 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 IEC/EN 60 947-5-1

Mechanical life:

> 10 x 10⁶ switching cycles

General Data

Operating mode: Continuous operation

Temperature range:

- 20 ... + 45°C

Clearance and creepage distances

rated impuls voltage /

pollution degree:

4 kV / 2 IEC 60 664-1

Degree of protection

Housing:

IP 30 IEC/EN 60 529

Terminals:

IP 20 IEC/EN 60 529

Housing:

Thermoplastic with V0 behaviour
according to UL subject 94

Vibration resistance:

Amplitude 0.35 mm
frequency 10 ... 55 Hz IEC/EN 60 068-2-6

Climate resistance:

Humid heat IEC/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 ferruled
DIN 46 228-1/-2/-3/-4 or
2 x 1 mm² stranded ferruled
DIN 46 228-1/-2/-3/-4

Wire fixing:

Flat terminals with self-lifting
clamping piece IEC/EN 60 999-1

Mounting:

DIN rail IEC/EN 60 715

Weight:

IK 8701: 100 g
IL 8701: 200 g
IN 8701: 300 g

Technical Data

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

I_ 8701. _ _ /001: For switching low loads up to 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.

I_ 8701. _ _ /002: For U_N > 100 V DC or AC
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.

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

Only for devices with NC or NO contact:

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

I_ 8701. _ _ /006: 6 mm contact opening

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 (only 1 or 2 NO contacts).
Maximum parallel compensation 100 µF

Only for DC devices:

I_ 8701. _ _ /008: With protection diode to protect against wrong polarity and recovery diodes to reduce switching spikes, plus on **A2+**

I_ 8701. _ _ /013: With recovery diodes to reduce switching spikes, plus on **A2+**; contact gap 6 mm

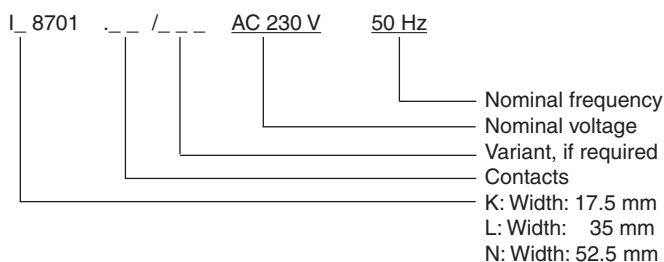
I_ 8701. _ _ /024: With protection diode to protect against wrong polarity and recovery diodes to reduce switching spikes, plus on **A1+**

I_ 8701. _ _ /027: With recovery diodes to reduce switching spikes, plus on **A1+**

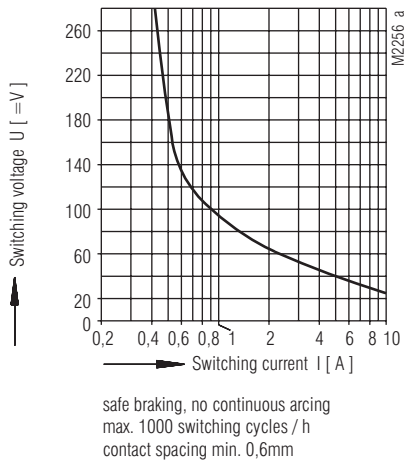
I_ 8701. _ _ /032: With recovery diodes to reduce switching spikes, plus on **A1+**; 6 mm contact opening

Other variants or combinations on request

Ordering example for variants



Characteristics



Arc limit curve for direct current voltage-resistive load

Specification for Tender for IK 8701

Switching relay according to IEC/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 IEC/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 IEC/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 IEC/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 IEC/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 35 mm

Type IL 8701.13

Manufactured by: E. DOLD & SÖHNE KG

Switching relay according to IEC/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 35 mm

Type IL 8701.14

Manufactured by: E. DOLD & SÖHNE KG

