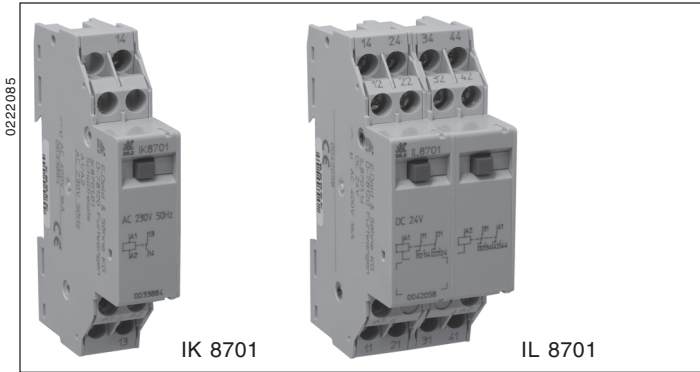
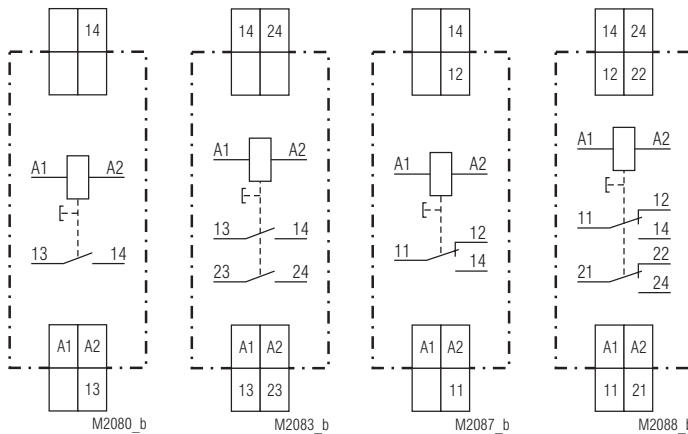


## Switching relay IK 8701, IL 8701, IN 8701 Input-output interface relay



- 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

### Circuit diagrams



### 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.

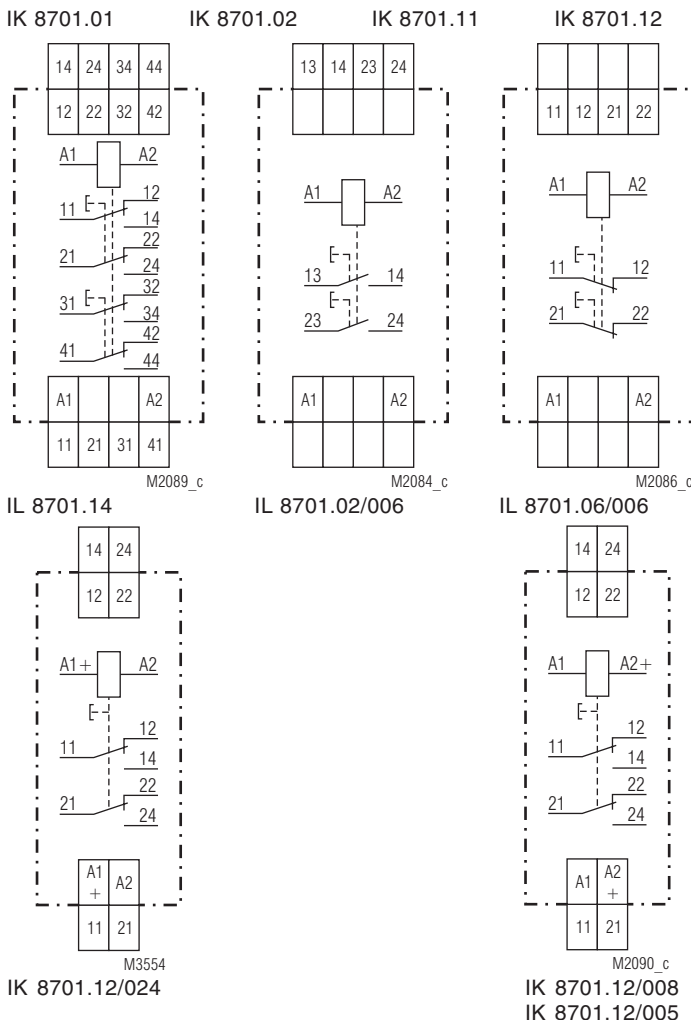
### Indicators

Pushbutton: pressed, when the relay is supplied with current

### Technical data

#### Input

<b>Nominal voltage:</b>	AC 24, 42, 230 V
	DC 12, 24 V
	other voltages available on request
	0,9 ... 1,1 $U_N$
<b>Voltage range:</b>	
<b>Nominal consumption</b>	
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
<b>Nominal frequency:</b>	50 or 60 Hz



## Technical data

### 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 10<sup>4</sup> switching cycles

bulb load: 1200 W / contact

5 x 10<sup>4</sup> switching cycles

**Electrical life:** 500 switching cycles / h

with ohmic load AC 230 V: 6 A 150 x 10<sup>4</sup> switching cycles

10 A 75 x 10<sup>4</sup> switching cycles

16 A 12 x 10<sup>4</sup> switching cycles

Inductive load cos φ 0,6: 10 A 10 x 10<sup>4</sup> 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 IEC/EN 60 947-5-1

**Mechanical life:** > 10 x 10<sup>6</sup> 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 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

Humid heat IEC/EN 60 068-2-30

**Climate resistance:** EN 50 005

#### Terminal designation:

**Wire connection:** 2 x 2,5 mm<sup>2</sup> solid or

2 x 1,5 mm<sup>2</sup> stranded ferruled

DIN 46 228-1/-2/-3/-4 or

2 x 1 mm<sup>2</sup> stranded ferruled

DIN 46 228-1/-2/-3/-4

**Wire fixing:** Flat terminals with self-lifting

clamping piece IEC/EN 60 999-1

DIN rail IEC/EN 60 715

#### 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

**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:** 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+**

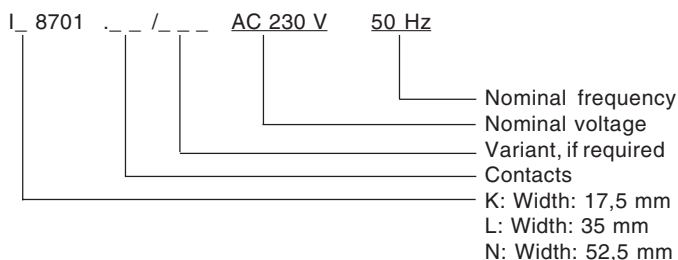
**I\_ 8701. \_ \_ /013:** With recovery diodes to reduce switching spikes, plus on **A2+**

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

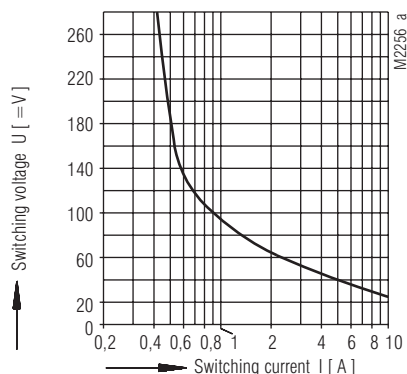
**I\_ 8701. \_ \_ /027:** With recovery diodes to reduce switching spikes, plus on **A1+**

Other variants or combinations on request

## Ordering example for variants



## 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

## 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 17,5 mm

Type IK 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 17,5 mm

Type IK 8701.14

Manufactured by: E. DOLD & SÖHNE KG

