



# DATA SHEET

## installation relays

**RI 024-110**

**compact relays for switching high currents**

**Article number 09981007**



### Function

Installation relays are monostable, i.e. they close the main circuit as long as there is control voltage. Thanks to different control voltages and contact configurations they are suitable for many applications, especially for switching lighting, boilers, etc. The series RI installation relays are suitable for switching single-phase consumers up to 20 A. They have the option of manual operation, a clearly detectable switch position indicator and a compact design even with high rated currents and powerful terminals. Thanks to the wide range of coil voltages and contact configurations, they can be used for many switching and control applications.

### Features

high flexibility thanks to different contact configurations, Manual operation for test purposes, low switching noise and no humming or buzzing, front switch position indicator through manual operation key, Option of visual display of operating status via LED, Switching contacts with safe isolation AC1 as per EN 60947-4-1, Duty cycle: 100 % with spacer 0,5 mod, easy connection thanks to generously dimensioned, captive terminals, connection wires cannot become lodged behind the terminals, easy accessibility for connecting coil supply, Use of flame-resistant materials as chlorine-free and halogen-free plastics, Protected against direct contact under BGV A3

### Mounting

quick fastening to mounting rail, any installation position with a tilt angle of max. 30°

### Applications

The components offer universal use for control tasks in industrial and building systems as well as in domestic installations. They are especially suitable for switching lighting systems, electric heaters, fans, air conditioning systems, ventilators, heat pumps and glow and gas-discharge lamps.

### Notes

The designation for the devices in the RI series includes the rated voltage (first group of digits) and the contact design (final group of digits), which is listed in the following order: normally opened contact, normally closed contact and changeover contact. A "RI 024-110" therefore has a rated voltage of 24 V, one normally opened contact and one normally closed contact, but no changeover contact, The duty cycle is max. 1 h. To reach 100 % duty cycle, the DHDS spacer must be used on both sides.

### Accessories

spacers DHDS

### Technical Data

Technical Data	RI 024-110
Series	RI 024
Number of (n.o, n.c.,change-over)	1 1 0
Operating voltage (AC)	24 V (21.6 V ... 26.4 V)
Operating frequency	50 Hz
Internal consumption	3.5 W ... 11 W
	<b>Display (status output)</b>
Number	1
Type	operating button (black)
	<b>control input</b>
Galvanically separated	true
Rated voltage (AC)	24 V

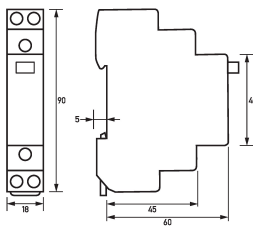
Subject to technical changes

Technical Data	RI 024-110
Tolerance of rated voltage	-15 % ... 10 %
Rated impulse withstand voltage	2 kV
Rated power	3.5 VA ... 11 VA
Rated frequency	50 Hz
min. Pulse duration control input	50 ms
Rated power (switch on)	10 VA ... 13 VA
Rated power (retaining)	3.4 VA ... 4 VA
	<b>load circuit</b>
Specification	relays
min. Contact opening	5 mm
Bounce time load circuit	typ. < 5 ms (max. 10 ms)
Rated voltage (AC)	250 V, 415 V
Tolerance of rated voltage	-10 % ... 10 %
max. Rated current added	20 A
max. Rated current not added	20 A
Rated insulation voltage	500 V
Rated impulse withstand voltage	4 kV
Rated frequency	50 Hz
Allowed utilization category	AC-1, AC-3, AC-5a, AC-5b, AC-7a
Current heat loss per current path	2 W
max. Rated current thermal	20 A
Thermal Backup-fuse OCPD	20 A
Short-circuit backup-fuse SCPD	20 A
Rated voltage AC-1 (fix)	250 V
max. Rated current AC-1	20 A
max. Rated switching capacity AC-1	30 A
max. Rated power AC-1	5000 VA
Rated voltage AC-3 3-phase (fix)	250 V
max. Rated current AC-3	8 A
max. Rated switching capacity AC-3	64 A
max. Rated power AC-3	2000 VA
Rated voltage AC-5a (fix)	250 V
max. Rated current AC-5a	10 A
max. Capacity AC-5a	30 A
max. Rated power AC-5a	2500 VA
Rated voltage AC-5b (fix)	230 V
max. Rated current AC-5b	8.8 A
max. Capacity AC-5b	13.2 A
max. Rated power AC-5b	2024 VA
Rated voltage AC-7a (fix)	250 V
max. Rated current AC-7a	20 A
max. Rated switching capacity AC-7a	30 A
max. Rated power AC-7a	5000 VA
max. Rated power glow lamps	1980 VA
max. Rated power low-voltage halogen lamp	900 VA

Subject to technical changes

Technical Data	RI 024-110
max. Rated power fluorescent lamp compensated	1105 VA
max. Rated power fluorescent lamp not compensated	1020 VA
max. Rated power fluorescent lamps duo-switching	1700 VA
max. Inrush current LED	80 A
<b>lift terminal, captive top and bottom (load circuit, control input)</b>	
Allowed types of wires	copper conductor, stranded conductors with ferrule
Cross section solid	1-wire: 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Connecting capacity flexible	1-wire: 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
Cross section flexible with ferrule	0.5 mm <sup>2</sup> ... 6 mm <sup>2</sup>
Cross section stranded	1-wire: 0.5 mm <sup>2</sup> ... 10 mm <sup>2</sup>
<b>General data</b>	
Duty cycle	short-time operation (Duty cycle ≤ 1 h, 100 % with spacer 0,5 mod. widths)
Operating noise	no humming or buzzing, little switching noise
Operating position	not suspended, tilt angle 30°
Mechanical endurance	min. 1 · 10 <sup>6</sup> switching cycles
Electrical endurance	min. 40000 switching cycles
Ambient temperature	-20 °C ... 45 °C
Housing type	distribution board housing
Installation type	Mounting rail (35 mm)
Housing material	polycarbonate (PC)
Protection class	IP20
Width	18 mm
Height	90 mm
Depth	65 mm
Installation depth	60 mm
Module widths	1
Weight	0.134 kg
Design requirements/Standards	EN 60947-1, EN 60715

**Dimensions**



Dimensional drawing Group view

**Wiring example**



Wiring diagram

Subject to technical changes