

# RPI-Z-... installation relays



RPI-1Z-U12



RPI-2Z-U24A

- **Installation relays - electromagnetic**
- Cadmium - free contacts 1 NO, 2 NO • AC/DC and AC input voltages
- Cover - modular, width 17,5 mm • Direct mounting on 35 mm rail mount acc. to EN 60715 • Applications: automatic systems in buildings - in cooperation with control timers, switches, push buttons; electric systems; industrial automation and power engineering automation; switchgears of modular equipment
- Recognitions, certifications, directives: RoHS,

## Output circuit - contact data

Number and type of contacts		1 NO	2 NO
Contact material		AgSnO <sub>2</sub>	
Max. switching voltage		300 V AC / 300 V DC	
Min. switching voltage		10 V	
Rated load	AC1	16 A / 250 V AC	8 A / 250 V AC
	DC1	16 A / 24 V DC	8 A / 24 V DC
Min. switching current		10 mA	
Max. make current		30 A	15 A
Rated current		16 A	8 A
Max. breaking capacity	AC1	4 000 VA	2 000 VA
Min. breaking capacity		1 W	
Contact resistance		≤ 100 mΩ	
Max. operating frequency	AC1		
• at rated load		600 cycles/hour	
• no load		72 000 cycles/hour	

## Input circuit - coil data

Rated voltage	50 Hz AC AC: 50 Hz AC/DC	230 V 12, 24, 48, 115 V	terminals A1, A3 terminals (+)A1, (-)A2
Must release voltage		AC: ≥ 0,15 U <sub>n</sub> DC: ≥ 0,05 U <sub>n</sub>	
Operating range of supply voltage		0,85...1,1 U <sub>n</sub>	see Table 1
Rated power consumption		≤ 1 W ≤ 1,5 W / 5,5 VA	12, 24, 48, 115 V AC/DC, AC: 50 Hz 230 V AC, 50 Hz
Range of supply frequency	AC	48...63 Hz	

## Insulation according to EN 60664-1

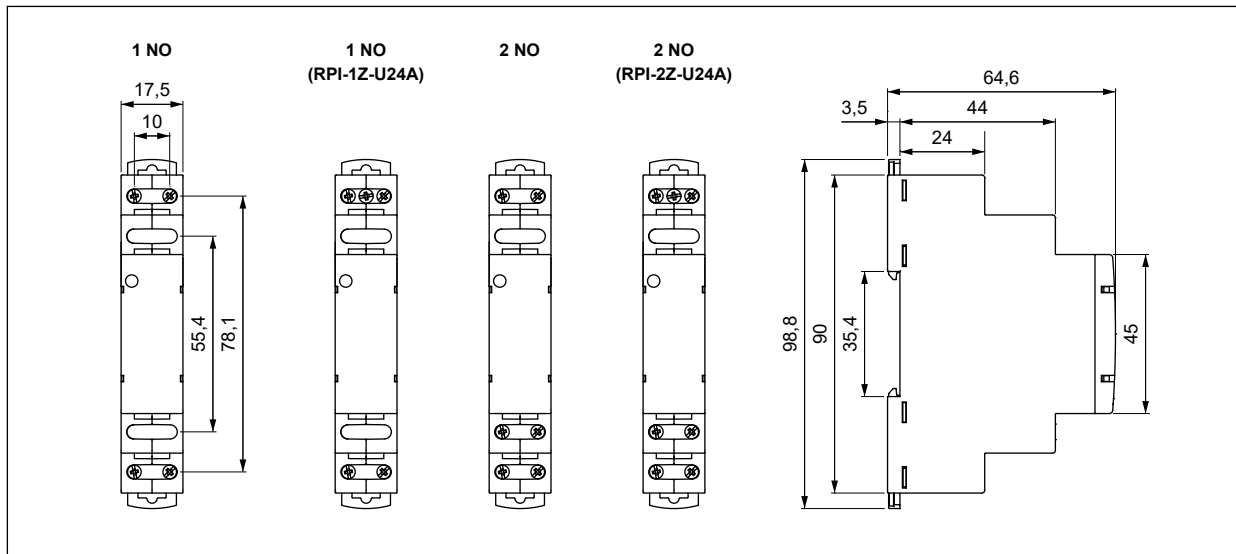
Insulation rated voltage	250 V AC		
Rated surge voltage	4 000 V 1,2 / 50 μs		
Overvoltage category	III		
Insulation pollution degree	2		
Flammability class	V-0 for modular cover, UL 94		
Dielectric strength			
• input - output	4 000 V AC	type of insulation: basic	
• contact clearance	1 000 V AC	type of clearance: micro-disconnection	
• pole - pole	2 500 V AC	contacts 2 NO, type of insulation: basic	

## General data

Operating / release time (typical values)	15 ms / 20 ms		
Electrical life	• resistive AC1	0,5 x 10 <sup>5</sup>	16 A, 8 A, 250 V AC
Mechanical life (cycles)	10 <sup>7</sup>		
Dimensions (L x W x H)	90  x 17,5 x 64,6 mm		
Weight	63 g		65 g
Ambient temperature	• storage (non-condensation and/or icing)	-40...+70 °C -20...+50 °C	
Cover protection category		IP 20	EN 60529
Relative humidity	up to 85%		
Shock resistance	15 g		
Vibration resistance	(NO)	9 g 10...150 Hz	

The data in bold type relate to the standard versions of the relays. Length with 35 mm rail catches: 98,8 mm.

## Dimensions



## Mounting

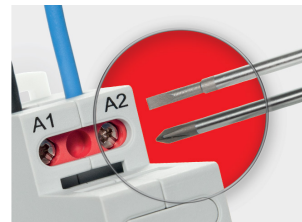
Relays **RPI-Z-...** are designed for direct mounting on 35 mm rail mount acc. to EN 60715. Operational position - any.  
**Connections:** max. cross section of the cables: 1 x 2,5 mm<sup>2</sup> (1 x 14 AWG), stripping length: 6,5 mm, max. tightening moment for the terminal: 0,5 Nm.



**Green LED:**  
signalling the operation status of the relay (is illuminated permanently - correct supply).

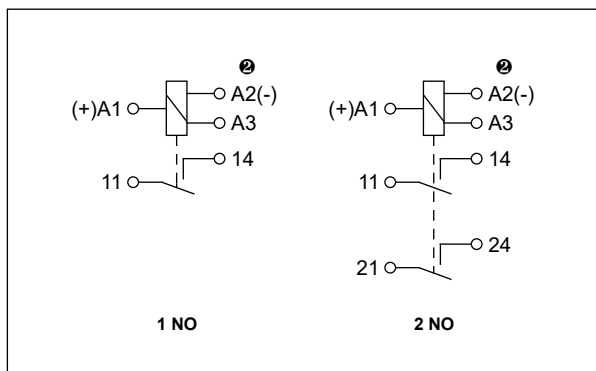


**Two catches:**  
easy mounting on 35 mm rail, firm hold (top and bottom).



**Mounting wires in clamps:**  
universal screw (cross-recessed or slotted head).

## Connection diagrams



② Terminal A3 occurs only in versions RPI-Z-U24A. Selection of relays supply voltage: 24 V AC/DC - wires connection to the terminals A1-A2; 230 V AC - to the terminals A1-A3.



**Coil data - AC/DC 50 Hz voltage version**
**Table 1**

Coil code	Rated voltage V AC/DC	Coil operating range V AC/DC	
		min. (at 20 °C)	max. (at 50 °C)
U12	12	10,2	13,2
U24	24	20,4	26,4
U24A	24 V AC/DC ②	20,4	26,4
	230 V AC ②	195,5	253,0
U48	48	40,8	52,8
U115	115	97,8	126,5

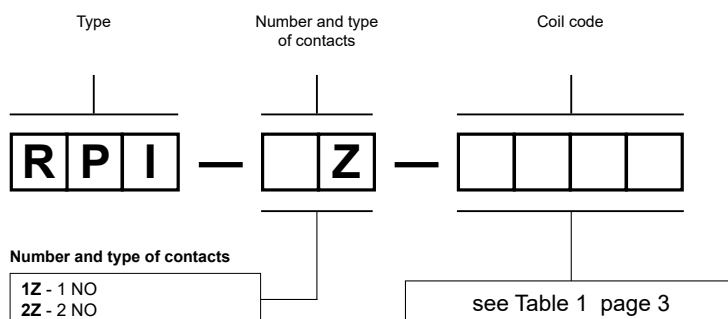
**Table of codes**
**Table 2**

Relays **RPI-Z-...** replace withdrawn from the offer relays **MT-PI-...**

Installation relay code				Rated coil voltage
with 1 NO contact		with 2 NO contacts		
MT-PI-17S-21-8012	RPI-1Z-U12	MT-PI-17S-22-8012	RPI-2Z-U12	12 V AC/DC AC: 50 Hz
–	RPI-1Z-U24	–	RPI-2Z-U24	24 V AC/DC AC: 50 Hz
MT-PI-17S-21-8048	RPI-1Z-U48	MT-PI-17S-22-8048	RPI-2Z-U48	48 V AC/DC AC: 50 Hz
MT-PI-17S-21-8115	RPI-1Z-U115	MT-PI-17S-22-8115	RPI-2Z-U115	115 V AC/DC AC: 50 Hz
MT-PI-17S-21-9024	RPI-1Z-U24A	MT-PI-17S-22-9024	RPI-2Z-U24A	24 V AC/DC AC: 50 Hz 230 V AC 50 Hz ②

② Selection of relays supply voltage: 24 V AC/DC - wires connection to the terminals A1-A2; 230 V AC - to the terminals A1-A3.

### Ordering codes



③ Ordering codes **RPI-Z-...** are specified in Table 2, "Installation relay code" column.

Examples of ordering codes ③:

**RPI-1Z-U12**

relay **RPI-Z-...**, cover - modular, width 17,5 mm, one normally open contact, contact material AgSnO<sub>2</sub>, coil voltage 12 V AC/DC AC: 50 Hz

**RPI-2Z-U24A**

relay **RPI-Z-...**, cover - modular, width 17,5 mm, two normally open contacts, contact material AgSnO<sub>2</sub>, coil voltage 24 V AC/DC AC: 50 Hz or 230 V AC 50 Hz ②

### PRECAUTIONS:

1. Ensure that the parameters of the product described in its specification provide a safety margin for the appropriate operation of the device or system and never use the product in circumstances which exceed the parameters of the product. 2. Never touch any live parts of the device. 3. Ensure that the product has been connected correctly. An incorrect connection may cause malfunction, excessive heating or risk of fire. 4. In case of any risk of any serious material loss or death or injuries of humans or animals, the devices or systems shall be designed so to equip them with double safety system to guarantee their reliable operation.