



• Installation relays - electromagnetic • Cadmium - free contacts • AC, DC and AC/DC coils • Cover - installation module, width 17,5 mm • Application areas: automatic systems in buildings - in cooperation with control timers, switches, control switches; electric systems; industrial automation and power engineering automation; switchgears of modular equipment • Possibility to control circuits and receivers of the load of AC1 up to 16 A / 250 V (1 C/O, 1 NO versions) • Possibility of doubling of the transmitted signals (2 C/O, 2 NO versions) • Green LED to inform about the status of the relays ( $U_n$  operation) • Recognitions, certifications, directives: **CE**

### Contact data

Number and type of contacts		1 C/O, 1 NO	2 C/O, 2 NO
Contact material		<b>AgNi</b>	
Rated / max. switching voltage	AC	250 V / 400 V	
Min. switching voltage		5 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		5 mA	
Max. inrush current		30 A <sup>①</sup>	15 A
Rated current		16 A	
Max. breaking capacity	AC1	4 000 VA	2 000 VA
Min. breaking capacity		0,3 W	
Contact resistance		≤ 100 mΩ	
Max. operating frequency	AC1	• at rated load 600 cycles/hour	
		• no load 72 000 cycles/hour	

### Coil data

Rated voltage	• versions 1 C/O, 2 C/O	50/60 Hz AC	115-230 V
		DC	12-24-48 V
	• versions 1 NO, 2 NO	50 Hz AC	230 V
		AC: 50 Hz AC/DC	12-24-48-115 V
Must release voltage		AC: ≥ 0,15 $U_n$	DC: ≥ 0,05 $U_n$
Operating range of supply voltage		0,85...1,1 $U_n$ AC:50/60 Hz	see Tables 1, 2, 3, 4
Rated power consumption	• versions 1 C/O, 2 C/O	AC	≤ 1,0 VA 115 V AC, 230 V AC, AC: 50 Hz
		DC	≤ 0,5 W 12 V DC
	• versions 1 NO, 2 NO	DC	≤ 0,65 W 24 V DC, 48 V DC
		AC	≤ 0,5 VA 230 V AC, AC: 50 Hz
		AC/DC	≤ 0,75 VA / 0,75 W 12 V AC/DC, AC: 50 Hz
		AC/DC	≤ 0,65 VA / 0,65 W 24 V AC/DC, 48 V AC/DC, 115 V AC/DC, AC: 50 Hz

### Insulation according to PN-EN 60664-1

Insulation rated voltage	250 V AC		
Rated surge voltage	4 000 V 1,2 / 50 μs		
Overvoltage category	II		
Insulation pollution degree	1		
Flammability degree	contact plate: V-0	cover: V-1 UL94	
Dielectric strength	• between coil and contacts	3 000 V AC	contacts 1 C/O and 2 C/O, type of insulation: basic
		4 000 V AC	contacts 1 NO and 2 NO, type of insulation: reinforced
	• contact clearance	1 000 V AC	type of clearance: micro-disconnection
		• pole - pole	2 000 V AC
	2 500 V AC		contacts 2 NO, type of insulation: basic

### General data

Operating / release time (typical values)	15 ms / 20 ms	
Mechanical life (cycles)	≥ 10 <sup>7</sup>	
Dimensions (L x W x H)	90 <sup>②</sup> x 17,5 x 63,5 mm	
Weight	60 g	65 g
Ambient temperature	• storage	-40...+70 °C
	• operating	-20...+45 °C
Cover protection category	IP 20	PN-EN 60529
Relative humidity	15 ... 90%	
Shock resistance	15 g	
Vibration resistance	(NO/NC)	9 g / 5 g 10...150 Hz

The data in bold type pertain to the standard versions of the relays.

<sup>①</sup> UL only for 15 A.

<sup>②</sup> Length with 35 mm rail taps: 98,8 mm.

**Coil data - DC voltage version (contacts 1 C/O, 2 C/O)**

Tabele 1

Coil code	Rated voltage V DC	Coil operating range V DC		Power consumption mW
		min. (at 20°C)	max. (at 55°C)	
1012	12	10,2	13,2	500
1024	24	20,4	26,4	650
1048	48	40,8	52,8	650

**Coil data - AC 50/60 Hz voltage version (contacts 1 C/O, 2 C/O)**

Tabele 2

Coil code	Rated voltage V AC	Coil operating range V AC		Power consumption mVA (AC: 50 Hz)
		min. (at 20°C)	max. (at 55°C)	
3115	115	97,8	126,5	1 000
3230	230	195,5	253,0	1 000

**Coil data - AC 50 Hz voltage version (contacts 1 NO, 2 NO)**

Tabele 3

Coil code	Rated voltage V AC	Coil operating range V AC		Power consumption mVA (AC: 50 Hz)
		min. (at 20°C)	max. (at 55°C)	
9024 Ⓢ	230	195,5	253,0	500

Ⓢ Selection of supply voltage via wires connection: 24 V AC/DC - to the terminals A1-A2, 230 V AC - to the terminals A1-A3.

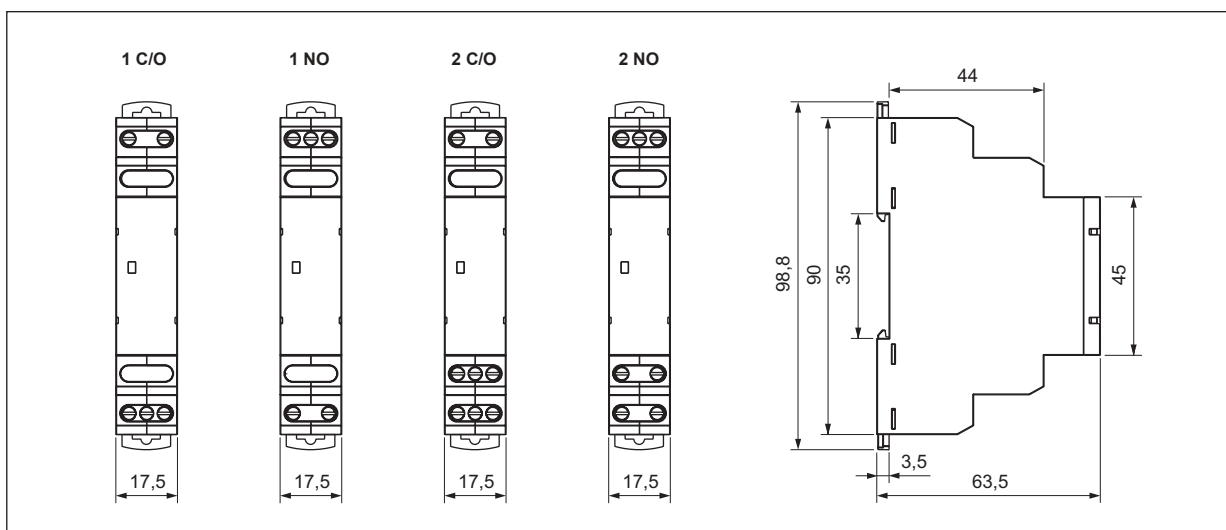
**Coil data - AC/DC 50 Hz voltage version (contacts 1 NO, 2 NO)**

Tabele 4

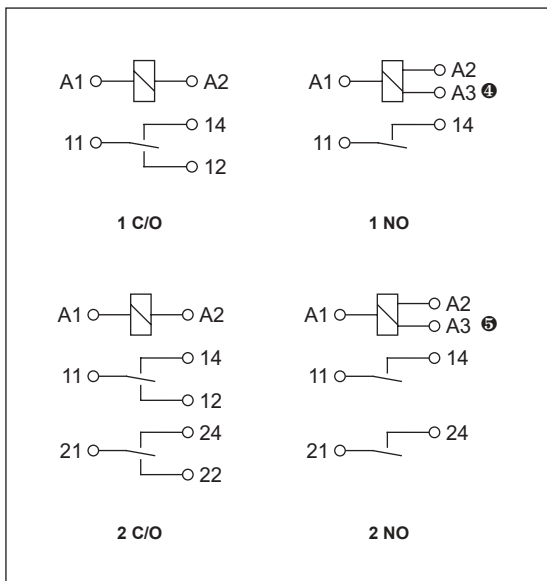
Coil code	Rated voltage V AC/DC	Coil operating range V AC/DC		Power consumption mVA / mW (AC: 50 Hz)
		min. (at 20°C)	max. (at 55°C)	
8012	12	10,2	13,2	750 / 750
9024 Ⓢ	24	20,4	26,4	650 / 650
8048	48	40,8	52,8	650 / 650
8115	115	97,8	126,5	650 / 650

Ⓢ Selection of supply voltage via wires connection: 24 V AC/DC - to the terminals A1-A2, 230 V AC - to the terminals A1-A3.

## Dimensions



### Connections diagrams



### Table of codes

Tabela 5

Installation relay code		Rated coil voltage
MT-PI-17S-11-1012	MT-PI-17S-12-1012	12 V DC
MT-PI-17S-11-1024	MT-PI-17S-12-1024	24 V DC
MT-PI-17S-11-1048	MT-PI-17S-12-1048	48 V DC
MT-PI-17S-11-3115	MT-PI-17S-12-3115	115 V AC 50 Hz
MT-PI-17S-11-3230	MT-PI-17S-12-3230	230 V AC 50 Hz
MT-PI-17S-21-8012	MT-PI-17S-22-8012	12 V AC/DC
MT-PI-17S-21-8048	MT-PI-17S-22-8048	48 V AC/DC
MT-PI-17S-21-8115	MT-PI-17S-22-8115	115 V AC/DC
MT-PI-17S-21-9024 ④	MT-PI-17S-22-9024 ⑤	24 V AC/DC 230 V AC 50 Hz

④ Selection of supply voltage via wires connection:  
24 V AC/DC - to the terminals A1-A2, 230 V AC - to the terminals A1-A3.

④ Only version MT-PI-17S-21-9024.  
⑤ Only version MT-PI-17S-22-9024.

### Mounting

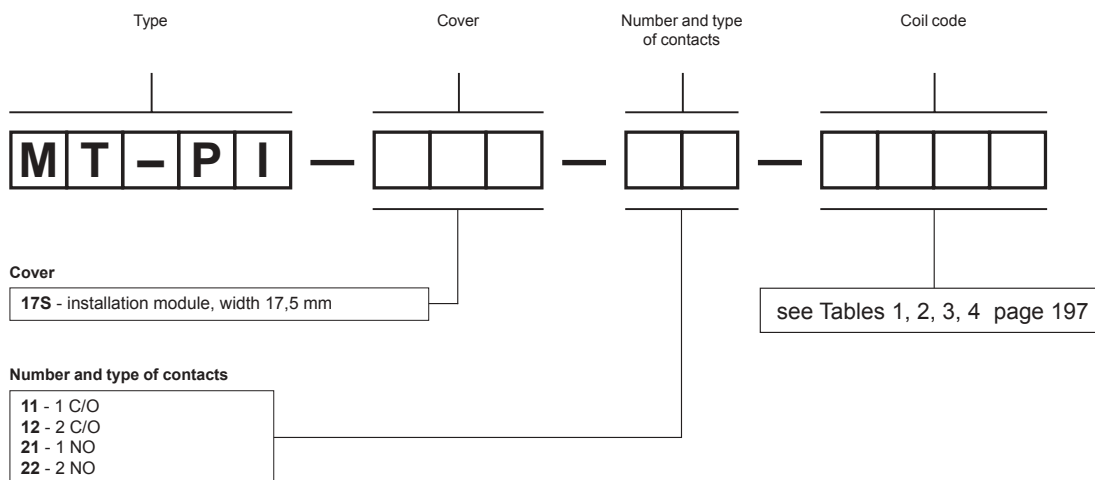
Relays **MT-PI-...** are designed for direct mounting on 35 mm rail mount acc. to PN-EN 60715. Operational position - any. Maximum size of wires 1 x 2,5 mm<sup>2</sup> (1 x 14 AWG). Rated cross-sectional area of conductors 2 x 1,5 mm<sup>2</sup> (2 x 16 AWG). Maximum screw torque: 0,6 Nm.



**Two taps::**  
easy assembly on 35 mm rail,  
firm tapping (top and bottom).

**Green LED:**  
signalling the operation  
status of the relay.

### Ordering codes ⑥



Example of ordering code ⑥:

**MT-PI-17S-22-9024** relay **MT-PI-...**, cover - installation module, width 17,5 mm, with two normally open contacts, voltage version 230 V AC 50 Hz or 24 V AC/DC 50 Hz ④, contact material AgNi

⑥ Ordering codes **MT-PI-...** are specified in Table 5, "Installation relay code" column.