

Relays installation



 **relpol**® S.A.

Electromagnetic relays of the MT-PI-... series in modular covers, designed for direct mounting on 35 mm rail mount acc. to EN 60715.



They meet the requirements of REACH and RoHS Directive. The relays are recognized and certified by:



MT-PI-..... 262



- Installation relays - electromagnetic • AC, DC and AC/DC coils
- Cover - modular, width 17,5 mm • Load of AC1 up to 16 A / 250 V (versions 1 CO, 1 NO) and up to 8 A / 250 V (versions 2 CO, 2 NO)
- Light indicator (LED diode) - supply voltage
- Applications: automatic systems in buildings - in cooperation with control timers, switches, control switches; electric systems; industrial automation and power engineering automation; switchgears of modular equipment
- Recognitions, certifications, directives: RoHS,

Contact data

Number and type of contacts		1 CO, 1 NO	2 CO, 2 NO
Contact material		AgSnO₂	
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. inrush current		30 A	15 A
Rated current		16 A	
Max. breaking capacity	AC1	4 000 VA	2 000 VA
Min. breaking capacity		1 W	
Contact resistance		≤ 100 mΩ	
Max. operating frequency			
• at rated load	AC1	600 cycles/hour	
• no load		72 000 cycles/hour	

Coil data

Rated voltage	• versions 1 CO, 2 CO	50/60 Hz AC	24, 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 2, 3, 4
Rated power consumption	• versions 1 CO, 2 CO	AC	≤ 1,0 VA 115 V AC, 230 V AC, AC: 50 Hz
		DC	≤ 0,5 W 12 V DC
		DC	≤ 0,65 W 24 V DC, 48 V DC
	• versions 1 NO, 2 NO	AC	≤ 5,5 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 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 class		contact plate: V-0 cover: V-1 UL 94
Dielectric strength	• between coil and contacts	3 000 V AC contacts 1 CO and 2 CO, 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 contacts 2 CO, type of insulation: basic
		2 500 V AC contacts 2 NO, type of insulation: basic

General data

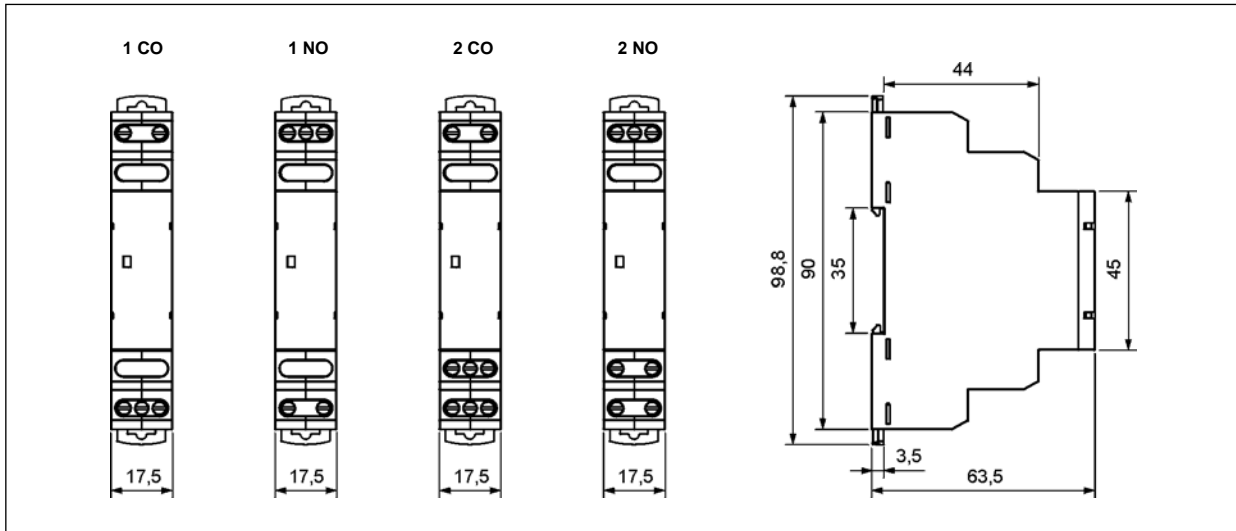
Operating / release time (typical values)		15 ms / 20 ms
Mechanical life (cycles)		> 10 ⁷
Dimensions (L x W x H)		90 x 17,5 x 63,5 mm
Weight		60 g 65 g
Ambient temperature (non-condensation and/or icing)	• storage	-40...+70 °C
	• operating	-20...+45 °C
Cover protection category		IP 20 EN 60529
Relative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

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

UL only for 15 A.

Length with 35 mm rail catches: 98,8 mm.

Dimensions



Connection diagrams

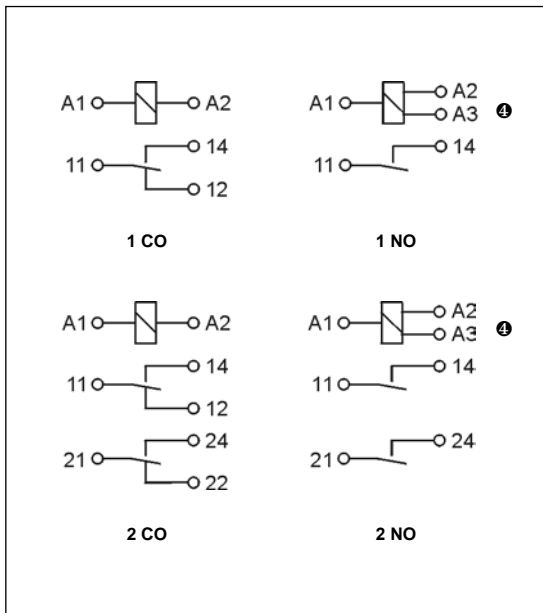


Table of codes

Table 1

Installation relay code		Rated coil voltage
with 1 CO contact	with 2 CO contacts	
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-11-5024	MT-PI-17S-12-5024	24 V AC 50/60 Hz
MT-PI-17S-11-5115	MT-PI-17S-12-5115	115 V AC 50/60 Hz
MT-PI-17S-11-5230	MT-PI-17S-12-5230	230 V AC 50/60 Hz
with 1 NO contact	with 2 NO contacts	
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	MT-PI-17S-22-9024	24 V AC/DC
Ⓜ	Ⓜ	230 V AC 50 Hz

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

Ⓜ Terminal A3 occurs only in versions MT-PI-17S-21-9024, MT-PI-17S-22-9024; used to supply relays with rated voltage 230 V AC 50 Hz - connection to the terminals A1-A3.

Mounting

Relays **MT-PI-...** 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 mm² / 2 x 1,5 mm² (1 x 14 / 2 x 16 AWG), stripping length: 6,5 mm, max. tightening moment for the terminal: 0,6 Nm.



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



Green LED:
signalling the operation
status of the relay.

Coil data - DC voltage version (1 CO, 2 CO contacts)

Table 2

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

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

Table 3

Coil code	Coil operating range V AC	Coil operating range V AC	
		min. (at 20 °C)	max. (at 55 °C)
5024	24	20,4	26,4
5115	115	97,8	126,5
5230	230	195,5	253,0

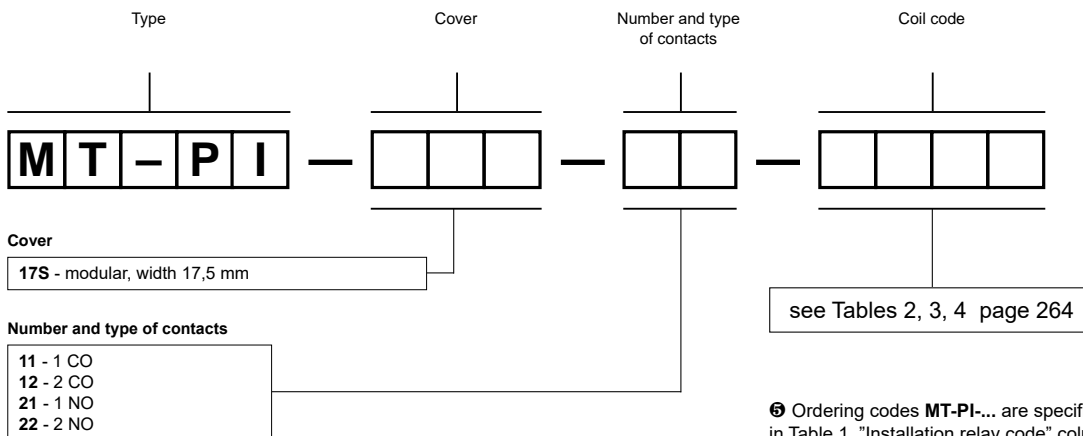
Coil data - AC/DC 50 Hz voltage version (1 NO, 2 NO contacts)

Table 4

Coil code	Coil operating range V AC/DC	Coil operating range V AC/DC	
		min. (at 20 °C)	max. (at 55 °C)
8012	12	10,2	13,2
9024 ⑤	24 V AC/DC ⑤	20,4	26,4
	230 V AC ⑤	195,5	253,0
8048	48	40,8	52,8
8115	115	97,8	126,5

⑤ Selection of supply voltage via wires connection: 24 V AC/DC - to the terminals A1-A2; 230 V AC - to the terminals A1-A3.

Ordering codes ⑤



Example of ordering code ⑤:

MT-PI-17S-22-9024

relay **MT-PI-...**, cover - modular, width 17,5 mm, two normally open contacts, contact material AgSnO₂, coil voltage 230 V AC 50 Hz or 24 V AC/DC AC: 50 Hz ⑤