

PIR15.T with socket PZ..-V0

relays for railroad industry - interface



- Relays designed for continuous operation* • 35 mm rail mount acc. to EN 60715 or on panel mounting with two M3 screws
- Compliance with standards: EN 45545-2 (category EL10, requirement R26 - flammability class V-0 acc. to EN 60695-11-10); EN 61373 category 1, class B (mechanical shock and vibration resistance); EN 50155; EN 60077-1; EN 61810-1
- Recognitions, certifications, directives: recognitions R15T, RoHS,  

Contact data

Number and type of contacts	2 CO, 3 CO
Contact material	AgNi
Rated switching voltage	AC 250 V
Min. switching voltage	10 V
Rated load (capacity)	AC1 10 A / 250 V AC
	AC15 3 A / 120 V 1,5 A / 240 V (B300)
	DC1 10 A / 24 V DC (see Fig. 3)
	DC13 0,22 A / 120 V 0,1 A / 250 V (R300)
Motor load	acc. to UL 508 1/2 HP 240 V AC, 4,9 FLA, single-phase motor ❶
	AC3 acc. to IEC 60947-4-1 0,37 kW 240 V AC, single-phase motor
Min. switching current	5 mA
Max. make current	20 A
Rated current	10 A
Max. breaking capacity	AC1 2 500 VA
Min. breaking capacity	0,3 W
Contact resistance	≤ 100 mΩ
Max. operating frequency	
• at rated load	AC1 1 200 cycles/hour
• no load	12 000 cycles/hour

Coil data

Rated voltage	DC 24 , 110 V ❷
Must release voltage	≥ 0,1 U _n
Operating range of supply voltage	0,7...1,25 U _n EN 50155 see Table 1
Must operate voltage	≤ 0,7 U _n
Rated power consumption	DC 1,7 W reinforced version

Insulation according to EN 60664-1

Insulation rated voltage	250 V AC
Rated surge voltage	2 500 V 1,2 / 50 μs
Overvoltage category	III
Insulation pollution degree	3
Flammability class	V-0 UL 94, EN 60695-11-10
Dielectric strength	
• between coil and contacts	2 500 V AC type of insulation: basic
• contact clearance	1 500 V AC type of clearance: micro-disconnection
• pole - pole	2 000 V AC type of insulation: basic
Contact - coil distance	• clearance ≥ 3 mm
	• creepage ≥ 4,2 mm

General data

Operating / release time (typical values)	18 ms / 7 ms
Electrical life	
• resistive AC1	> 2 x 10 ⁵ 10 A, 250 V AC
• cosφ	see Fig. 2
Mechanical life (cycles)	> 2 x 10 ⁷
Dimensions (L x W x H)	68,2 x 38 x 82 mm
Weight	PIR152T: 150 g PIR153T: 159 g
Ambient temperature	• storage -40...+85 °C
(non-condensation and/or icing)	• operating -40...+55 °C
Cover protection category	IP 20 EN 60529
Environmental protection	R15T: RTI PZ8-V0, PZ11-V0: RT0 EN 61810-1
Shock / vibration resistance	category 1, class B EN 61373
	(set: relay in socket with clip)

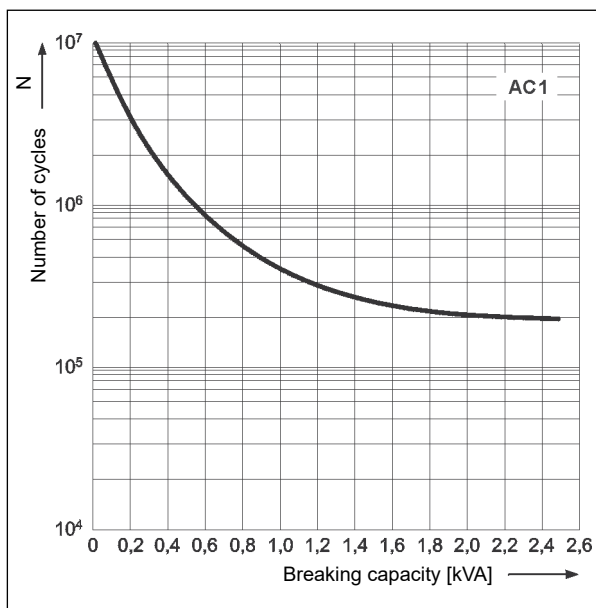
The data in bold type relate to the standard versions of the relays. *The relays are designed for continuous operation while maintaining the parameters declared in the data sheet. ❶ For single phase motors for 110-120 V AC do not use motors with higher FLA than given for 240 V AC. ❷ For other voltages, please contact Relpol S.A.

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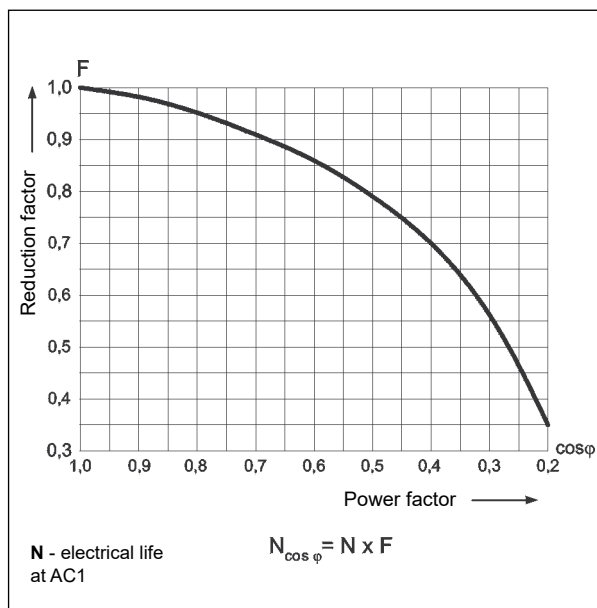
Electrical life at AC resistive load.
Switching frequency: 1 200 cycles/hour

Fig. 1



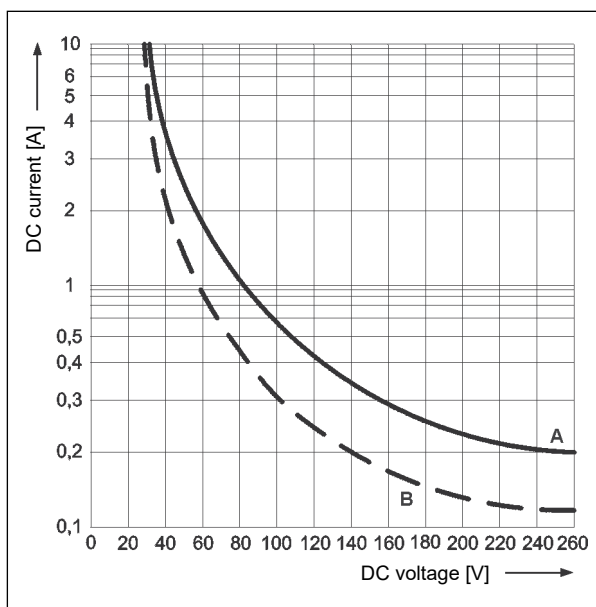
Electrical life reduction factor at AC inductive load

Fig. 2

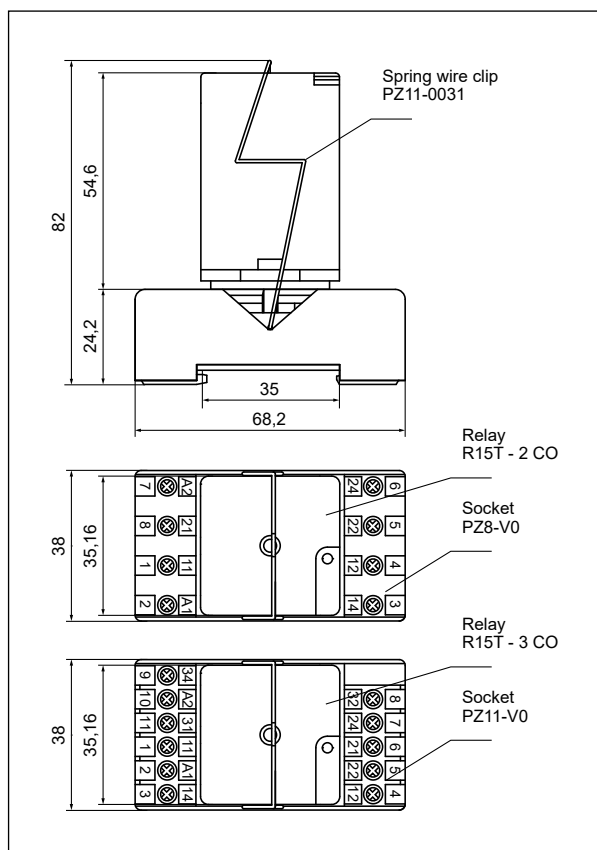


Max. DC breaking capacity
A - resistive load DC1
B - inductive load L/R = 40 ms

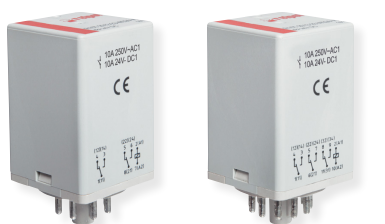
Fig. 3



Dimensions



Relays for
railroad industry
- industrial

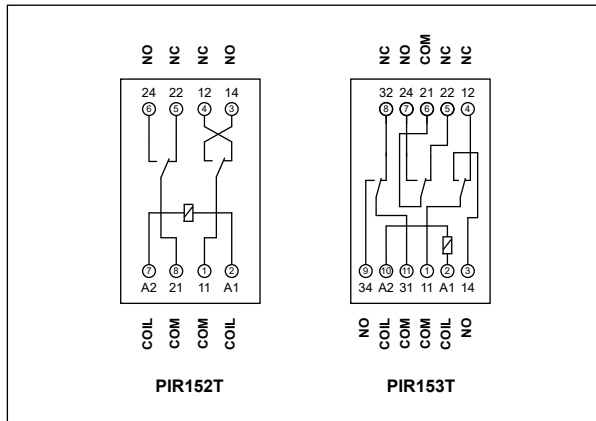


R15T - 2 CO R15T - 3 CO

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Connection diagrams (screw terminals side view)



Mounting

Relays **PIR152T with socket PZ8-V0**, **PIR153T with socket PZ11-V0** are designed for direct mounting on 35 mm rail mount acc. to EN 60715 or on panel mounting with two M3 screws. **Connections:** max. cross section of the cables (stranded): 2 x 2,5 mm² (2 x 14 AWG), stripping length: 7 mm, max. tightening moment for the terminal: 0,7 Nm.

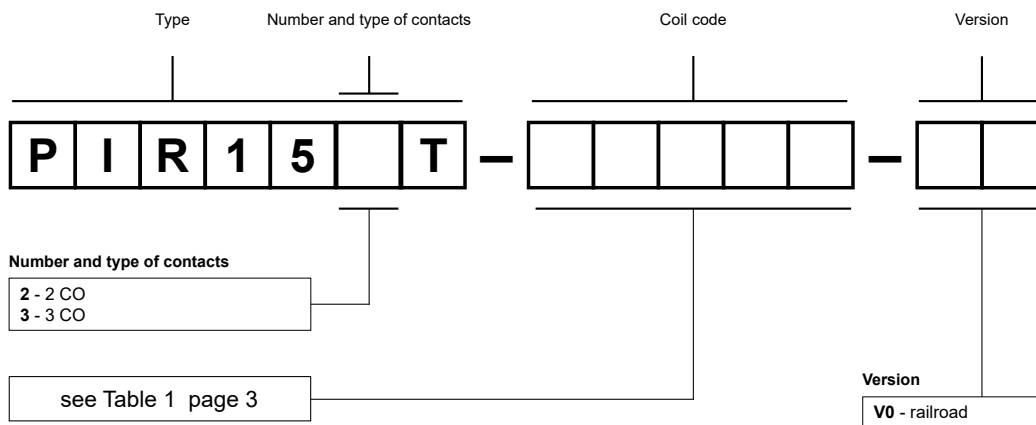
Coil data - DC voltage version

Table 1

Coil code	Rated voltage V DC ②	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V DC according to EN 50155 ③	
				min.	max.
024DC	24	345	± 10%	16,8	30,0
110DC	110	7 300	± 10%	77,0	137,5

The data in bold type relate to the standard versions of the relays. ② For other voltages, please contact Relpol S.A. ③ Changes of voltage within the range 0,6...1,4 Un below 0,1 s and changes of voltage within the range 1,25...1,4 Un below 1 s are admissible and they do not distort operation of the relays.

Ordering codes



Examples of ordering codes:

PIR152T-024DC-V0

interface relay **PIR152T** (railroad version) consists of: relay **R15T - 2 CO** (two change-over contacts, contact material AgNi, reinforced coil voltage 24 V DC), socket **PZ8-V0** (grey, screw terminals), spring wire clip **PZ11-0031**

PIR153T-110DC-V0

interface relay **PIR153T** (railroad version) consists of: relay **R15T - 3 CO** (three change-over contacts, contact material AgNi, reinforced coil voltage 110 V DC), socket **PZ11-V0** (grey, screw terminals), spring wire clip **PZ11-0031**

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.