

# R15T - 2 CO, 3 CO

## relays for railroad industry - industrial



- Relays designed for continuous operation\*
- For plug-in sockets: on 35 mm rail mount acc. to EN 60715 or on panel mounting • DC coils, insulation class F: 155 °C
- 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: RoHS, **CE** **EAC** **IK**

### Contact data

Number and type of contacts		2 CO, 3 CO
Contact material		<b>AgNi</b>
Rated / max. switching voltage	AC	250 V / 440 V
Min. switching voltage		5 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 ②
	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	AC1	• at rated load                      1 200 cycles/hour
		• no load                                      12 000 cycles/hour

### Coil data

Rated voltage	DC	<b>24, 110 V ③</b>
Must release voltage		≥ 0,1 U <sub>n</sub>
Operating range of supply voltage		0,7...1,25 U <sub>n</sub> EN 50155                      see Table 1
Must operate voltage		≤ 0,7 U <sub>n</sub>
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, PN-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 <sup>5</sup> 10 A, 250 V AC
	• cosφ	see Fig. 2
Mechanical life (cycles)		> 2 x 10 <sup>7</sup>
Dimensions (L x W x H)		35 x 35 x 54,4 mm
Weight		83 g
Ambient temperature	• storage	-40...+85 °C
	• operating	-40...+70 °C
Cover protection category		IP 40                      IP 20 (with socket PZ8-V0, PZ11-V0)                      EN 60529
Environmental protection		RT1                      EN 61810-1
Shock resistance		10 g                      category 1, class B EN 61373
Vibration resistance		5 g                      10...150 Hz                      category 1, class B EN 61373

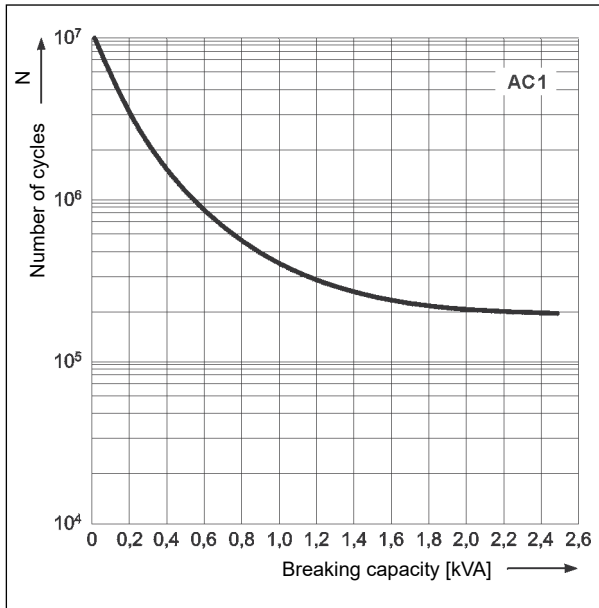
The data in bold type relate to the standard versions of the relays. \*The relays are designed for continuous operation while maintaining the parameters declared in the data sheet. ① Certification IK for interface set PIR15.T (R15T with socket PZ.-V0). ② For single phase motors for 110-120 V AC do not use motors with higher FLA than given for 240 V AC. ③ For other voltages, please contact Relpol S.A.

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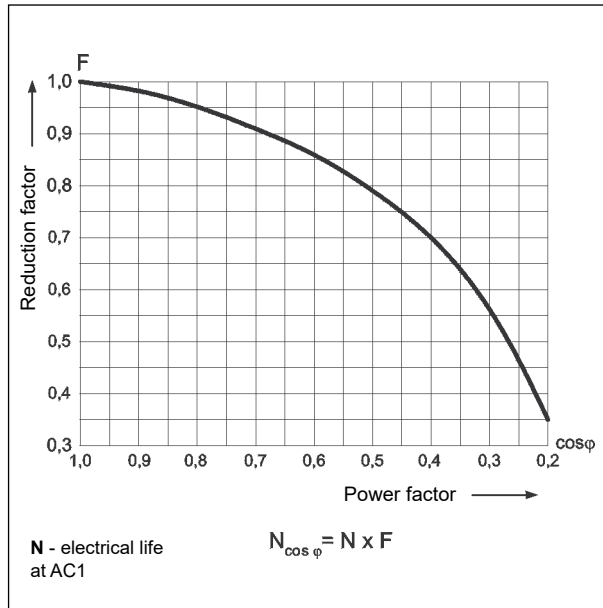
**Electrical life at AC resistive load.**  
Switching frequency: 1 200 cycles/hour

Fig. 1



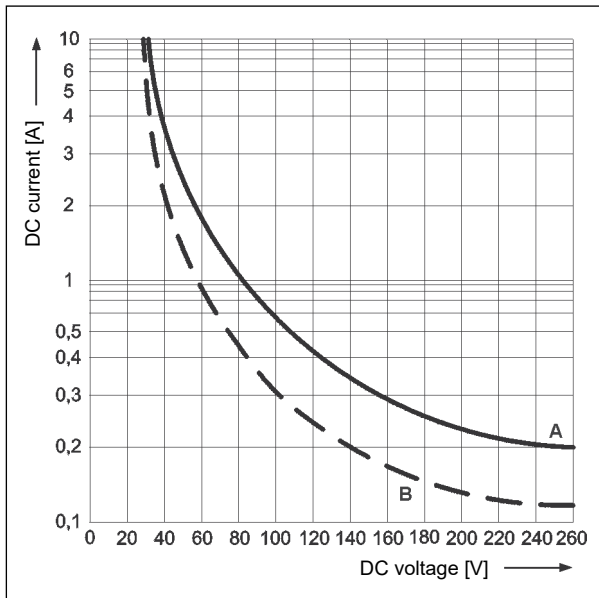
**Electrical life reduction factor at AC inductive load**

Fig. 2

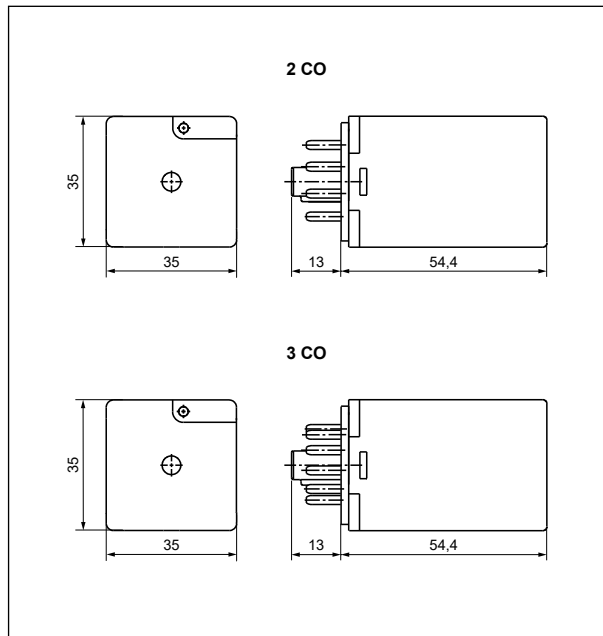


**Max. DC breaking capacity**  
A - resistive load DC1  
B - inductive load L/R = 40 ms

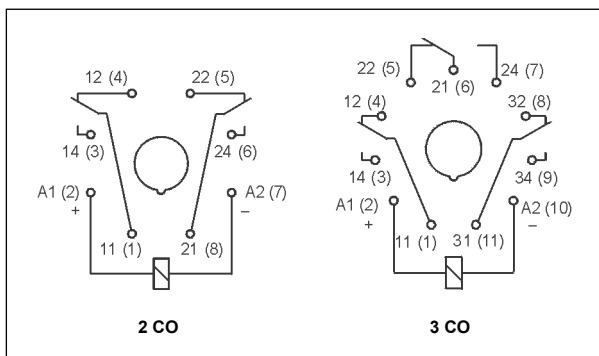
Fig. 3



## Dimensions



## Connection diagrams (pin side view)



## PIR15.T

Relays for railroad industry - interface, contacts 2 CO, 3 CO



# R15T - 2 CO, 3 CO

## relays for railroad industry - industrial

### Mounting, sockets and accessories for relays

Relays **R15T - 2 CO, 3 CO** are designed for mounting in plug-in sockets.

Sockets for R15T - 2 CO	Sockets for R15T - 3 CO	Accessories
		Spring wire clips
<b>Screw terminals sockets</b> , 35 mm rail mount (acc. to EN 60715) or on panel mounting (two M3 screws)		
PZ8-V0	PZ11-V0	PZ11 0031

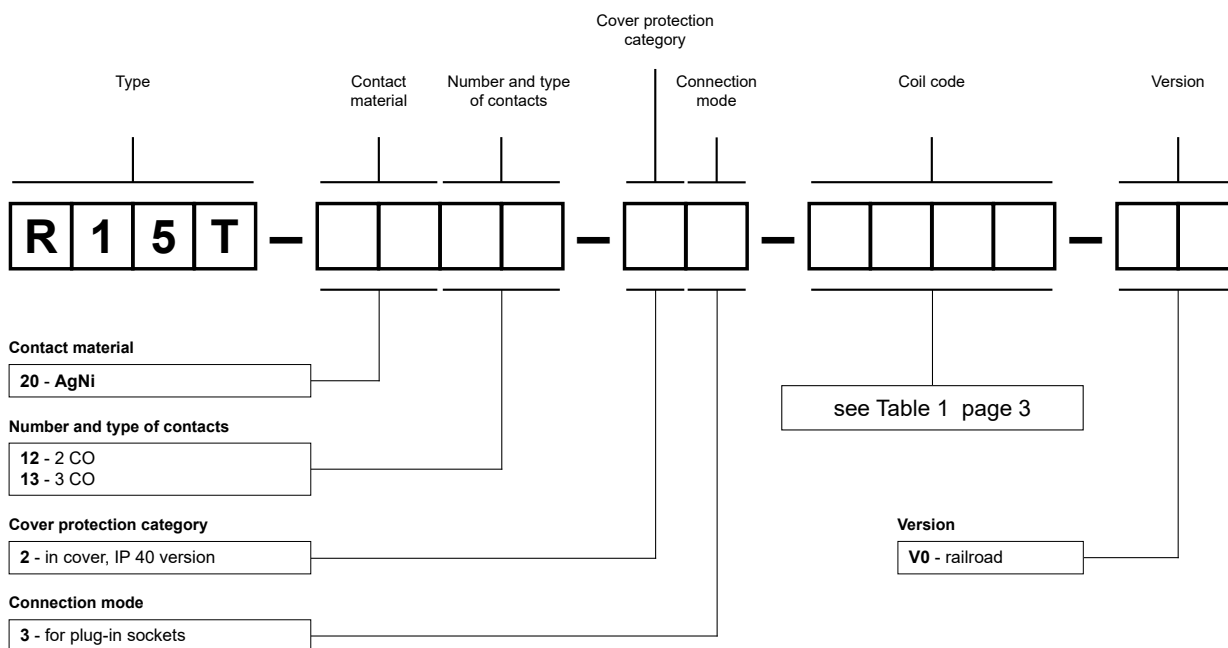
### Coil data - DC voltage version

Table 1

Coil code	Rated voltage V DC ③	Coil resistance at 20 °C Ω	Acceptable resistance	Coil operating range V DC EN 50155 ④	
				min.	max.
<b>W024</b>	<b>24</b>	<b>345</b>	<b>± 10%</b>	<b>16,8</b>	<b>30,0</b>
W110	110	7 300	± 10%	77,0	137,5

The data in bold type relate to the standard versions of the relays. ③ For other voltages, please contact Relpol S.A. ④ 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:

**R15T-2012-23-W024-V0**

relay **R15T** (railroad version), for plug-in sockets, two changeover contacts, contact material AgNi, reinforced coil voltage 24 V DC, in cover IP 40

**R15T-2013-23-W110-V0**

relay **R15T** (railroad version), for plug-in sockets, three changeover contacts, contact material AgNi, reinforced coil voltage 110 V DC, in cover IP 40

# Sockets and accessories

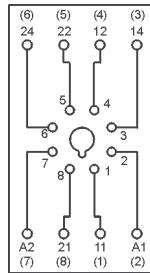
## PZ8-VO

For R15T - 2 CO

Screw terminals  
Max. tightening moment  
for the terminal: 0,7 Nm  
35 mm rail mount  
acc. to EN 60715  
or on panel mounting  
68,2 x 38 x 24,2 mm  
Two poles  
10 A, 250 V AC



### Connection diagram

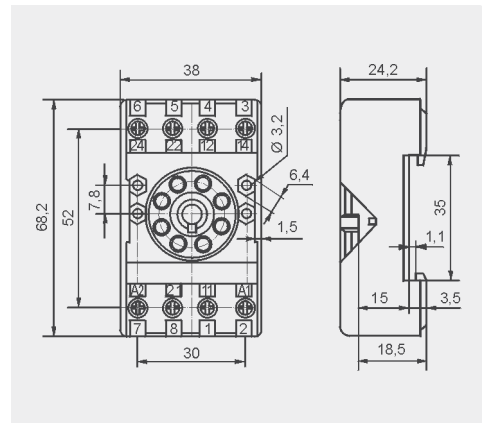


PZ11 0031

### Accessories

### Dimensions

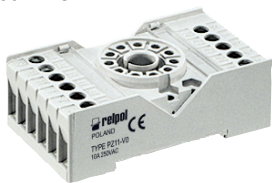
CE ENEC



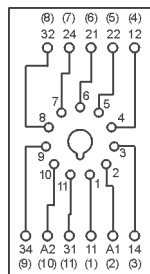
## PZ11-VO

For R15T - 3 CO

Screw terminals  
Max. tightening moment  
for the terminal: 0,7 Nm  
35 mm rail mount  
acc. to EN 60715  
or on panel mounting  
68,2 x 38 x 24,2 mm  
Three poles  
10 A, 250 V AC



### Connection diagram

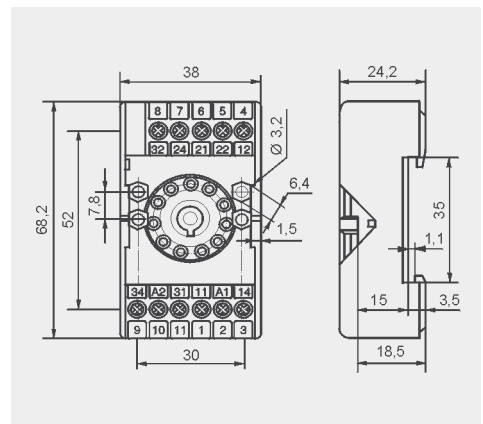


PZ11 0031

### Accessories

### Dimensions

CE ENEC



### 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.