

# RUCT

## relays for railroad industry - industrial



- Relays designed for continuous operation\*
- For plug-in sockets: on 35 mm rail mount acc. to EN 60715 • DC coils, insulation class F: 155 °C • Version: faston 187 (4,8 x 0,5 mm)
- 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** **CIK** **o**

### Contact data

Number and type of contacts		3 CO, 3 NO
Contact material		<b>AgNi</b>
Rated / max. switching voltage	AC	230 V / 250 V
Min. switching voltage		5 V
Rated load	AC1	16 A / 250 V AC
	DC1	16 A / 24 V DC (see Fig. 3)
Min. switching current		5 mA
Max. make current		40 A
Rated current		16 A
Max. breaking capacity	AC1	4 000 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	<b>24, 110 V</b> <b>⊕</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		4 000 V 1,2 / 50 μs
Overvoltage category		III
Insulation pollution degree		2
Flammability class		V-0 UL 94, PN-EN 60695-11-10
Dielectric strength		
• between coil and contacts		2 500 V AC 1 min., type of insulation: basic
• contact clearance		1 500 V AC 1 min., type of clearance: micro-disconnection with contact gap ≥ 0,4 mm
• pole - pole		2 500 V AC 1 min., type of insulation: basic
Contact - coil distance	• clearance	≥ 4 mm
	• creepage	≥ 5 mm
Pole - pole distance	• clearance	≥ 6,3 mm
	• creepage	≥ 8 mm

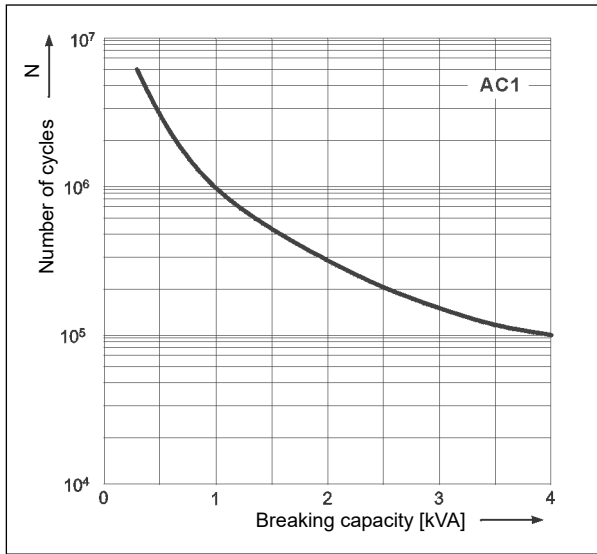
### General data

Operating / release time	• typical values	20 ms / 15 ms
	• max. values	25 ms / 20 ms
Electrical life	• resistive AC1	> 10 <sup>5</sup> 16 A, 250 V AC
		> 10 <sup>5</sup> 10 A, 400 V AC
	• cosφ	see Fig. 2
Mechanical life (cycles)		> 10 <sup>7</sup>
Dimensions (L x W x H)		36,1 x 38,6 x 52,65 mm
Weight		80 g
Ambient temperature	• storage	-40...+85 °C
(non-condensation and/or icing)	• operating	-40...+55 °C
Cover protection category		IP 00 EN 60529
Environmental protection		RTI 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. **⊕** Certification IK for interface set PRUCT (RUCT with socket GUC11S-V0). **⊗** For other voltages, please contact Relpol S.A.

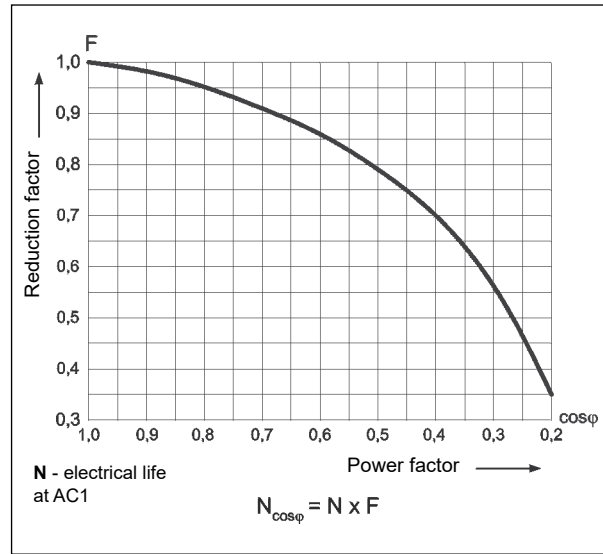
**Electrical life at AC resistive load.**  
Switching frequency: 1 200 cycles/hour

Fig. 1



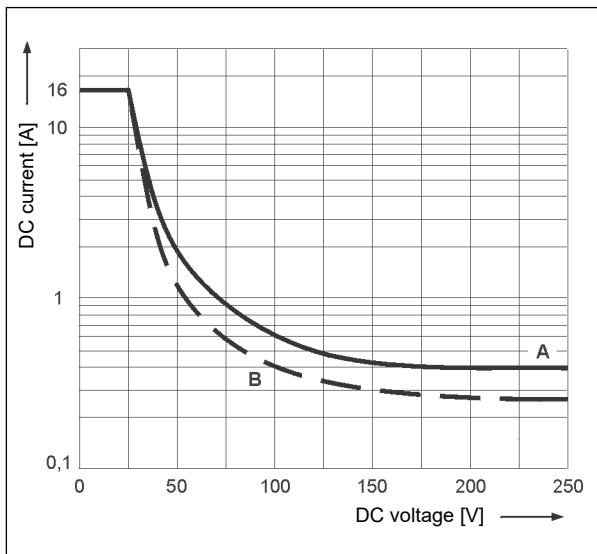
**Electrical life reduction factor at AC inductive load**

Fig. 2

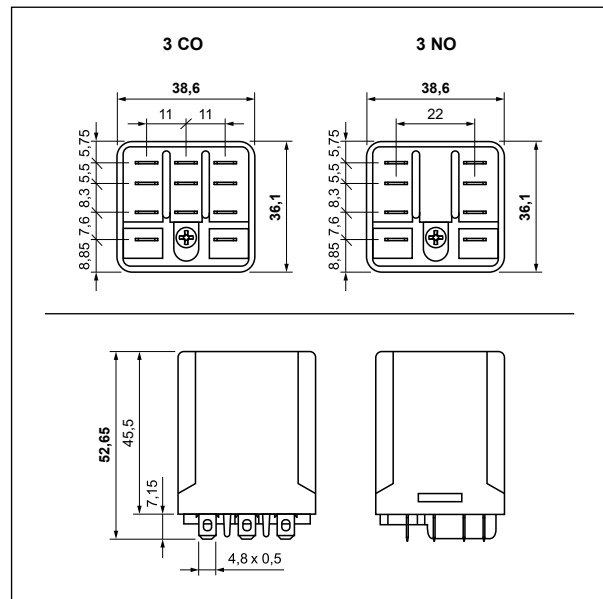


**Max. DC breaking capacity**  
A - resistive load DC1  
B - inductive load L/R = 40 ms

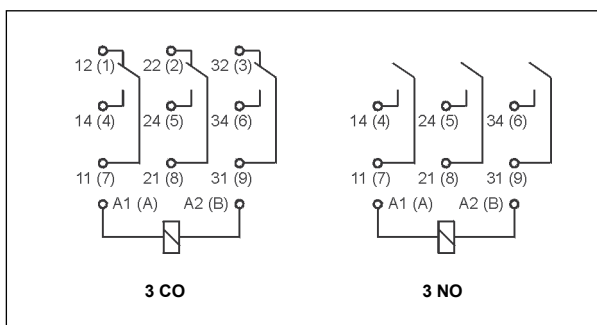
Fig. 3



**Dimensions**

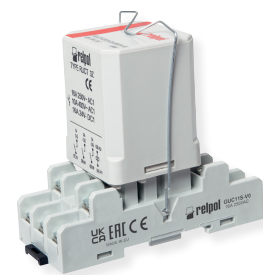


**Connection diagrams (pin side view)**



**PRUCT**

Relays for  
railroad industry  
- interface,  
contacts 3 CO, 3 NO



## Mounting, sockets and accessories for relays

Relays **RUCT** are designed for mounting in plug-in sockets.

Sockets for RUCT	<b>Accessories</b>
	Spring wire clips
<b>Screw terminals sockets, 35 mm rail mount (acc. to EN 60715)</b>	
GUC11S-V0	MBA

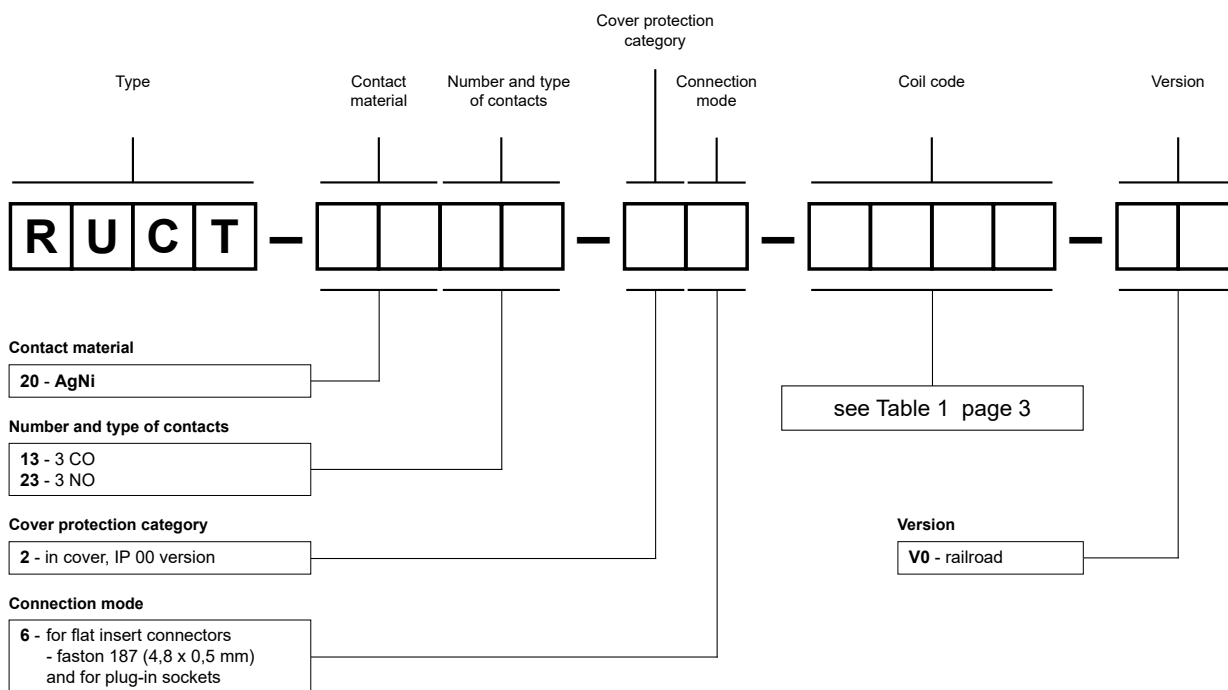
## Coil data - DC voltage version

Table 1

Coil code	Rated voltage V DC ②	Coil resistance at 20 °C $\Omega$	Acceptable resistance	Coil operating range V DC EN 50155 ③	
				min.	max.
<b>W024</b>	<b>24</b>	<b>345</b>	<b><math>\pm 10\%</math></b>	<b>16,8</b>	<b>30,0</b>
W110	110	7 300	$\pm 10\%$	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  $U_n$  below 0,1 s and changes of voltage within the range 1,25...1,4  $U_n$  below 1 s are admissible and they do not distort operation of the relays.

## Ordering codes



Examples of ordering codes:

**RUCT-2013-26-W024-V0**

relay **RUCT** (railroad version), faston 187 (4,8 x 0,5 mm), for plug-in sockets, three changeover contacts, contact material AgNi, reinforced coil voltage 24 V DC, in cover IP 00

**RUCT-2023-26-W110-V0**

relay **RUCT** (railroad version), faston 187 (4,8 x 0,5 mm), for plug-in sockets, three normally open contacts, contact material AgNi, reinforced coil voltage 110 V DC, in cover IP 00

## Sockets and accessories

### GUC11S-V0

For RUCT, RUCT-M

Screw terminals

Cross section of the cables: max.  $1 \times 4 \text{ mm}^2$   
/  $2 \times 2,5 \text{ mm}^2$  (1 x 12 / 2 x 14 AWG),  
min.  $1 \times 0,25 \text{ mm}^2$  (1 x 23 AWG)

Max. tightening moment  
for the terminal: 0,7 Nm

35 mm rail mount

acc. to EN 60715

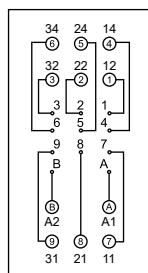
81,5 x 35,5 x 26,5 mm

Three poles

16 A, 250 V AC



### Connection diagram

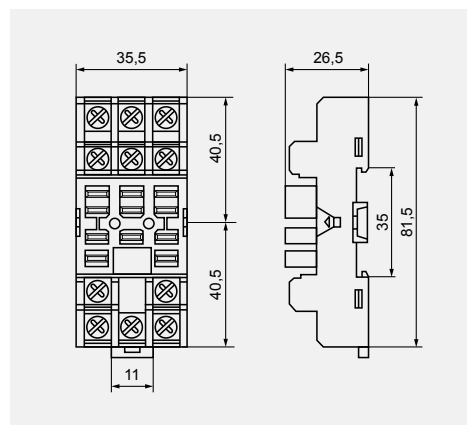


### Accessories

MBA

### 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.