

Relays for railroad industry

for rail-vehicles and railroad tractions



 **reipol**® S.A.

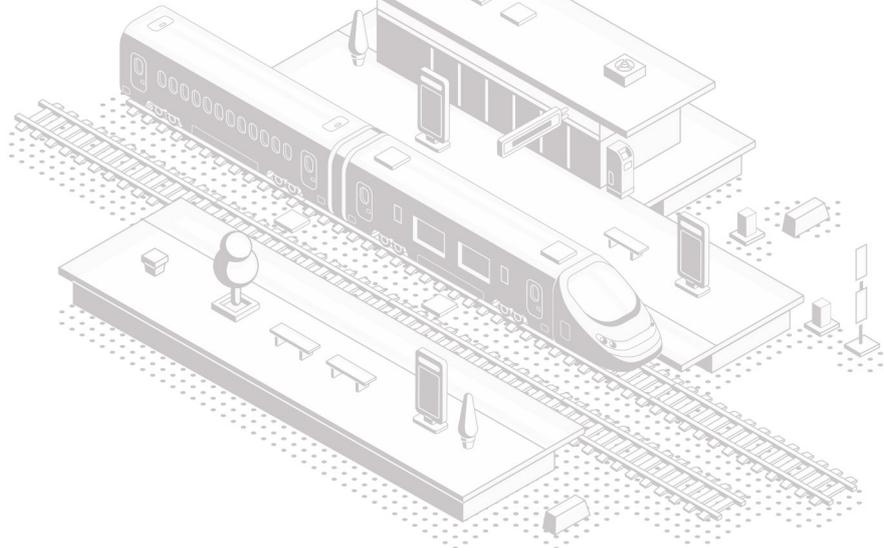
Relays for control systems

- passenger information devices
- internal wagon lighting circuit
- air conditioning, ventilation and heating
- monitoring circuit
- mobile device chargers



■ Trusted us:





- doors
- supply circuit
- control switchboard
- external wagon lighting circuit
- operator's panel and cabin systems



■ **Distinctive features:**

- constructed with materials of flammability class V-0,
- wide range of coil supply voltages from 0.7 Un up to 1.25 Un over the entire range of operational temperatures according to EN 50155, EN 60077-1,
- capability to operate in variable humidity and temperature conditions according to EN 50155,
- resistance to increased random vibration levels with effective acceleration up to 5.72 m/s² over a test for 5 hours in three axes (x, y, z) in the frequency range from 5 Hz up to 150 Hz according to EN 61373, category 1, class B,
- resistance to single mechanical impacts in three axes (x, y, z) with a peak acceleration value up to 50 m/s² in the lengthwise direction according to EN 61373, category 1, class B,
- resistance to random vibration levels in the frequency range from 5 Hz up to 150 Hz in three axes (x, y, z) and with effective acceleration up to 1.01 m/s² according to EN 61373, category 1, class B.

■ **Compliance with latest standards:**

- EN 45545-2 (category EL10 [EL5 ❶], requirement R26 [R23 ❶] - flammability class V-0 acc. to EN 60695-11-10) (fire protection in railway vehicles),
- PN-EN 61373 category 1, class B (mechanical shock and vibration resistance),
- PN-EN 50155 (electronic equipment used in rolling stock),
- PN-EN 50121-3-2 (railway applications - electromagnetic compatibility) ❶.

❶ Only for time relays MT-W...M

interface relays

PI84T | PI85T

relays RM84 / RM85
+ sockets GZT80-V0

CE ENEC IK



PI84T
(RM84 + GZT80-V0)



PI85T
(RM85 + GZT80-V0)

most frequent uses:
supply circuits
lighting circuits
doors control
operator's panel
and cabin systems
passenger
information devices

		PI84T	PI85T
Number & type of contacts		2 CO	1 CO
Rated load	AC1	8 A / 250 V AC	16 A / 250 V AC ¹
	DC1	8 A / 24 V DC	16 A / 24 V DC
Codes	coil 24 V DC	PI84T-024DC-M41G-TS-3012-V0 (862574)	PI85T-024DC-M41G-TS-3011-V0 (862576)
	coil 110 V DC	PI84T-110DC-M43G-TS-3012-V0 (862575)	PI85T-110DC-M43G-TS-3011-V0 (862577)
for other voltages contact Relpol S.A., please: export@relpol.com.pl			
Dimensions	mm	80 x 15,6 x 61	
Mounting		on 35 mm rail mount or on panel mounting (screw terminals)	

interface relays

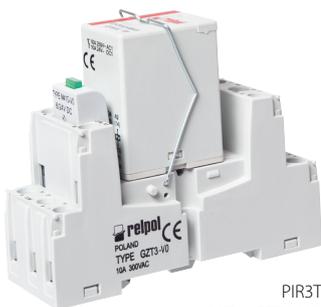
PIR2T | PIR3T | PIR4T

relays R2T/3T/4T
+ sockets GZT2/3/4-V0

CE ENEC IK



PIR2T
(R2T + GZT2-V0)



PIR3T
(R3T + GZT3-V0)



PIR4T
(R4T + GZT4-V0)

most frequent uses:
supply circuits
lighting circuits
air conditioning circuits
doors control
operator's panel
and cabin systems
passenger
information devices

		PIR2T	PIR3T	PIR4T
Number & type of contacts		2 CO	3 CO	4 CO
Rated load	AC1	12 A / 250 V AC	10 A / 250 V AC	6 A / 250 V AC ²
	DC1	12 A / 24 V DC	10 A / 24 V DC	6 A / 24 V DC
Codes	coil 24 V DC	PIR2T-024DC-M41G-V0 (862558)	PIR3T-024DC-M41G-V0 (862560)	PIR4T-024DC-M41G-V0 (862562)
	coil 110 V DC	PIR2T-110DC-M43G-V0 (862559)	PIR3T-110DC-M43G-V0 (862561)	PIR4T-110DC-M43G-V0 (862563)
for other voltages contact Relpol S.A., please: export@relpol.com.pl				
Dimensions	mm	76,3 x 27 x 65		
Mounting		on 35 mm rail mount or on panel mounting (screw terminals)		

¹ PI85T: loads above 12 A require bridging pairs of screw terminals: 11 with 21, 12 with 22, 14 with 24 – see www.relpol.com.pl ² PIR4T: 7 A / 230 V AC acc. to VDE

interface relays

PRUCT

relays RUCT
+ sockets GUC11S-V0



PRUCT
(RUCT + GUC11S-V0)

most frequent uses:
supply circuits
lighting circuits
air conditioning, ventilation
and heating circuits
doors control
operator's panel
and cabin systems
passenger
information devices
mobile device chargers

PRUCT

Number & type of contacts	3 CO		3 NO
Rated load	AC1	16 A / 250 V AC	16 A / 24 V DC
	DC1		
Codes	coil 24 V DC	PRUCT-2013-26-W024-V0 (862278)	PRUCT-2023-26-W024-V0 (862275)
	coil 110 V DC	PRUCT-2013-26-W110-V0 (862280)	PRUCT-2023-26-W110-V0 (862277)
		for other voltages contact Relpol S.A., please: export@relpol.com.pl	
Dimensions	mm	84,5 x 41,5 x 77,3	
Mounting		on 35 mm rail mount (screw terminals)	

interface relays – for high DC loads

PRUCT-M

relays RUCT-M
+ sockets GUC11S-V0



PRUCT-M
(RUCT-M + GUC11S-V0)

most frequent uses:
supply circuits
lighting circuits
air conditioning, ventilation
and heating circuits
doors control
operator's panel
and cabin systems
passenger
information devices
mobile device chargers

PRUCT-M

Number & type of contacts	1 NO		2 NO
Rated load	AC1	16 A / 250 V AC	16 A / 24 V DC [⊕]
	DC1		
Codes	coil 24 V DC	PRUCT-M-2051-26-W024-V0 (862281)	PRUCT-M-2052-26-W024-V0 (862284)
	coil 110 V DC	PRUCT-M-2051-26-W110-V0 (862283)	PRUCT-M-2052-26-W110-V0 (862286)
		for other voltages contact Relpol S.A., please: export@relpol.com.pl	
Dimensions	mm	84,5 x 41,5 x 77,3	
Mounting		on 35 mm rail mount (screw terminals)	

[⊕] PRUCT-M: relays with permanent magnet whose magnetic field blows the electric arc between the contacts: DC loads possible up to 13 A / 110 V and 10 A / 220 V – see www.relpol.com.pl

interface relays

PIR152T | PIR153T

relays R15T
+ sockets PZ8/11-V0

CE ENEC IK



PIR152T
(R15T 2 CO + PZ8-V0)



PIR153T
(R15T 3 CO + PZ11-V0)

most frequent uses:
supply circuits
monitoring circuits
lighting circuits
air conditioning, ventilation
and heating circuits
doors control
operator's panel
and cabin systems
passenger
information devices

		PIR152T	PIR153T
Number & type of contacts		2 CO	3 CO
Rated load	AC1	10 A / 250 V AC ¹	
	DC1	10 A / 24 V DC	
Codes	coil 24 V DC	PIR152T-024DC-V0 (862541)	PIR153T-024DC-V0 (862543)
	coil 110 V DC	PIR152T-110DC-V0 (862542)	PIR153T-110DC-V0 (862544)
for other voltages contact Relpol S.A., please: export@relpol.com.pl			
Dimensions	mm	68,2 x 38 x 82	
Mounting		on 35 mm rail mount or on panel mounting (screw terminals)	

¹ PIR152T, PIR153T: 10 A / 277 V AC acc. to UL 508

industrial relays – for power industry

R2/3/4N | R15 | RUC

applications:

secondary circuits, relay and control cabinets of 110 kV/MV 15...20 kV AC, 3 kV DC transformer stations (as auxiliary, signalling, intermediary and multiplying)

low voltage sections of 15...20 kV AC, 3 kV DC switchgears



time relays – universal, multifunctions

MT-W...M

relays in modular covers

CE ENEC IK



MT-W-17S-11-9240-M

most frequent uses:
 monitoring circuits
 lighting circuits
 doors control
 operator's panel
 and cabin systems
 passenger
 information devices

MT-W-17S-11-9240-M ⑤

Number & type of contacts	1 CO	
Rated load	AC1	10 A / 250 V AC
	DC1	10 A / 24 V DC
Input rated voltage	AC/DC	AC: 50/60 Hz: 12...240 V
Dimensions	mm	90(98,8) x 17,5 x 65,5 ⑥
Mounting	on 35 mm rail mount (screw terminals)	

⑤ MT-W...M: two digit LED display, programming with two buttons only
 ⑥ In the bracket the length with 35 mm rail taps is shown

MT-W...M: time functions, independent times T1, T2, T3 ⑦

B	Cyclical operation with the control contact S.
E	ON delay.
ER	ON delay and OFF delay with the control contact S.
E(r)	ON delay with the Reset function.
E(S)	ON delay, with time measurement stopped with contact S.
Es	ON delay with the control contact S.
Esp	ON delay - one cycle, with closing of the control contact S.
Est	ON delay with closing of the control contact S, with the interval T1 extended.
EWa	OFF delay and breaking time delay with opening of the control contact S.
EWf	ON delay and OFF delay with the control contact S.
EWs	ON delay and ON for the set time with closing of the control contact S.
EWu	ON delay for the set interval.
OFF	Permanent switching off.
ON	Permanent switching on.
Pi	Cyclical operation pulse first.
Pi(S)	Cyclical operation pulse first with the control contact S.
Pp	Cyclical operation pause first.
Pp(S)	Cyclical operation pause first with the control contact S.
R	OFF delay with the control contact S.
Wa	ON for the set interval triggered with the control contact S.
Wi	ON for the set interval controlled by closing of the control contact S.
Ws	Single shot for the set interval triggered by closing of the control contact S.
WsWa	ON for the set intervals T1 and T2 with the control contact S.
Wt	Monitoring of the sequence of pulses.
Wu	ON for the set interval.
Wu(r)	ON for the set interval with the Reset function.
Wu(S)	ON for the set interval, with time measurement stopped with closing of contact S.

⑦ MT-W...M: descriptions and diagrams of time functions – see www.relpol.com.pl

The offer of Relpol S.A. includes the following products:

subminiature signal relays

rated switching capacity: from 0,5 A to 3 A, coil voltage range: from 3 V to 48 V DC

miniature relays

rated switching capacity: from 5 A to 20 A

industrial relays

rated switching capacity: from 5 A to 48 A, mounting: to plug-in sockets on 35 mm rail mount acc. to EN 60715 or on panel mounting, for PCB

plug-in sockets for relays

for PCB, for 35 mm rail mount acc. to EN 60715 or on panel mounting

interface relays

rated switching capacity: from 0,05 A to 16 A, number of contacts: from 1 to 4

installation relays

rated switching capacity: 8 A, 16 A, number of contacts: from 1 to 3

relays for railroad industry

for rail-vehicles and railroad tractions, rated switching capacity: from 6 A to 16 A, number of contacts: from 1 to 4

programmable relays

versions: 8 inputs / 4 outputs, 16 inputs / 8 outputs, with LCD display, without display, supply voltages: 12, 24, 220 V DC, 230 V AC, programming: LAD, STL, LED indicators of the relay and input / output status

time relays

single- and multifunction time relays, wide range of time adjustments

monitoring relays

monitoring of current, voltage, temperature

signal lamps

single-phase 130...260 V AC/DC (one LED), three-phase 3(N)~ 400/230 V AC (three LEDs)

solid state relays

rated load currents: from 0,1 A to 80 A, zero-crossing or random-on switching

installation contactors

rated switching power: from 2,2 kW to 15 kW (at 400 V AC3)

power supplies

for automation systems, output circuit: 12, 24 V DC, rated currents: from 0,42 A to 40 A

overvoltage arresters

classes I, II and III, available with changeover signal contact

protection relays CZIP®-PRO

digital protection, automation, measurement, control and communication system for MV switchgears

systems SMP

radiation portal monitors



Due to the permanent development policy, Relpol S.A. reserves the right to introduce changes of data and characteristics of the products. The devices shall be operated by skilled personnel in accordance with the regulations in force pertaining to electrical systems. The technical data are of informational nature. Thus, Relpol S.A. does not accept any liability for inappropriate use of the presented products.

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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.

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