

Relay Module - PLC-RSP-110UC/21/RW - 2987053

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PLC-INTERFACE for railway applications, consisting of basic terminal block with spring-cage connection and plug-in miniature relay with power contact, range: $0.7 \times U_N$ to $1.25 \times U_N$, temperature class TX: -40°C to $+70^\circ\text{C}$, 1 PDT, input voltage 110 V DC

The illustration shows the version PLC-RSP-24UC/21/RW

Why buy this product

- ✓ Optimum relay operation thanks to wide-range electronics
- ✓ Vibration and shock resistance according to EN 50155
- ✓ Certified according to EN 50155
- ✓ Safe isolation according to DIN EN 50178 between coil and contact
- ✓ Spring-cage and Push-in connection technology
- ✓ Temperature range from -40°C to $+70^\circ\text{C}$ ($+85^\circ\text{C}$ briefly)
- ✓ Input voltage range of 0.7 to $1.25 \times U_N$ ($1.4 \times U_N$ briefly)



Key commercial data

Packing unit	10 pc
GTIN	 4 046356 155281
Weight per Piece (excluding packing)	34.02 g
Custom tariff number	85364900
Country of origin	Germany

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	6.2 mm
Height	80 mm
Depth	94 mm

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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C (Temperature class TX)
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Coil side

Nominal input voltage U_N	110 V DC
Input voltage range in reference to U_N	0.7 ... 1.25
Typical input current at U_N	2 mA
Typical response time	4 ms
Typical release time	4 ms
Operating voltage display	Yellow LED
Protective circuit	Bridge rectifier Bridge rectifier
	Free-wheeling diode Damping diode
	Surge protection
	RCZ filter
	Wide-range electronics

Contact side

Contact type	1 PDT
Contact material	AgSnO
Maximum switching voltage	250 V AC/DC (Separating plate PLC-ATP must be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules.)
Minimum switching voltage	5 V (at 100 mA)
Maximum inrush current	on request
Min. switching current	10 mA (at 12 V)
Limiting continuous current	6 A (see derating curve)
Interrupting rating (ohmic load) max.	140 W (at 24 V DC)
	20 W (at 48 V DC)
	18 W (at 60 V DC)
	23 W (at 110 V DC)
	40 W (at 220 V DC)
	1500 VA (for 250 V AC)
Switching capacity in acc. with DIN VDE 0660/IEC 60947	1 A (at 24 V, DC13)
	0.2 A (at 110 V, DC13)
	0.1 A (at 220 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 230 V, AC15)

General

Test voltage relay winding/relay contact	4 kV _{rms} (50 Hz, 1 min.)
Operating mode	100% operating factor
Degree of protection	RT III (relay)

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Technical data

General

	IP20 (basic terminal block)
Mechanical service life	Approx. 2×10^7 cycles
Inflammability class according to UL 94	V0
Standards/regulations	EN 50155 (VDE 0115 part 200)
	EN 50178
	IEC 62103
	EN 61373
	EN 50121
Rated surge voltage/insulation	6 kV
Rated insulation voltage	250 V AC
Pollution degree	2
Surge voltage category	III
Mounting position	any
Assembly instructions	In rows with zero spacing

Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross section stranded min.	0.14 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section AWG/kcmil max	14
Conductor cross section AWG/kcmil min.	26

Classifications

eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371001
eCl@ss 5.1	27371001
eCl@ss 6.0	27371001
eCl@ss 7.0	27371001
eCl@ss 8.0	27371601

ETIM

ETIM 2.0	EC000196
ETIM 3.0	EC000196
ETIM 4.0	EC000196
ETIM 5.0	EC001437

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Classifications

UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121515
UNSPSC 11	39121515
UNSPSC 12.01	39121515
UNSPSC 13.2	39121515

Approvals

Approvals

Approvals

UL Listed / cUL Listed / GL / UL Recognized / cUL Recognized / EAC / RC FRT / cULus Recognized / cULus Listed

Ex Approvals

Approvals submitted

Approval details

UL Listed

cUL Listed

GL

UL Recognized

cUL Recognized

EAC

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Approvals

RC FRT

cULus Recognized

cULus Listed

Accessories

Accessories

Bridge

Continuous plug-in bridge - FBST 500-PLC RD - 2966786



Continuous plug-in bridge, Length: 500 mm, Color: red

Continuous plug-in bridge - FBST 500-PLC BU - 2966692



Continuous plug-in bridge, Length: 500 mm, Color: blue

Continuous plug-in bridge - FBST 500-PLC GY - 2966838



Continuous plug-in bridge, Length: 500 mm, Color: gray

Single plug-in bridge - FBST 6-PLC RD - 2966236



Single plug-in bridge, Length: 6 mm, Number of positions: 2, Color: red

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Accessories

Single plug-in bridge - FBST 6-PLC BU - 2966812



Single plug-in bridge, Length: 6 mm, Number of positions: 2, Color: blue

Single plug-in bridge - FBST 6-PLC GY - 2966825



Single plug-in bridge, Length: 6 mm, Number of positions: 2, Color: gray

Single plug-in bridge - FBST 8-PLC GY - 2967688



Single plug-in bridge, Length: 8 mm, Number of positions: 2, Color: gray

Labeled terminal marker

Zack marker strip - ZB 6,LGS:FORTL.ZAHLEN - 1051016



Zack marker strip, Strip, white, labeled, can be labeled with: Plotter, Printed horizontally: Consecutive numbers 1 - 10, 11 - 20, etc. up to 491 - 500, Mounting type: Snap into tall marker groove, for terminal block width: 6.2 mm, Lettering field: 6.15 x 10.5 mm

Mounting rail

DIN rail, unperforated - NS 35/ 7,5 V2A UNPERF 2000MM - 0801377



DIN rail, unperforated, Width: 35 mm, Height: 7.5 mm, Length: 2000 mm, Color: silver

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Accessories

DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 7.5 mm, width 35 mm, length: 2000 mm

DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, material: Copper, unperforated, height 7.5 mm, width 35 mm, length: 2 m

DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, material: Steel, unperforated, height 15 mm, width 35 mm, length: 2 m

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, material: Copper, unperforated, 1.5 mm thick, height 15 mm, width 35 mm, length: 2 m

DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, material: Steel, unperforated, 2.3 mm thick, height 15 mm, width 35 mm, length: 2 m

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Accessories

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, deep drawn, high profile, unperforated, 1.5 mm thick, material: aluminum, height 15 mm, width 35 mm, length 2000 mm

DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail, material: steel galvanized and passivated with a thick layer, perforated, height 15 mm, width 35 mm, length: 2000 mm

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, material: Steel, unperforated, height 7.5 mm, width 35 mm, length: 2 m

Partition plate

Separating plate - PLC-ATP BK - 2966841



Separating plate, 2 mm thick, required at the start and end of a PLC terminal strip. Furthermore, it is used for: visual separation of groups, safe isolation of different voltages of neighboring PLC relays in acc. with DIN VDE 0106-101, isolation

Power module

Power terminal block - PLC-ESK GY - 2966508



Power terminal block, for the input of up to four potentials, for mounting on NS 35/7.5

Screwdriver tools

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Accessories

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

Terminal marking

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 6.2 mm, Lettering field: 6.15 x 10.5 mm

Zack marker strip - ZB 6/WH-100:UNBEDRUCKT - 5060935



Zack marker strip, Strip, white, unlabeled, can be labeled with: Plotter, Mounting type: Snap into tall marker groove, for terminal block width: 6.2 mm, Lettering field: 6.15 x 10.5 mm

Spare parts

Single relay - REL-MR- 60DC/21 - 2961118

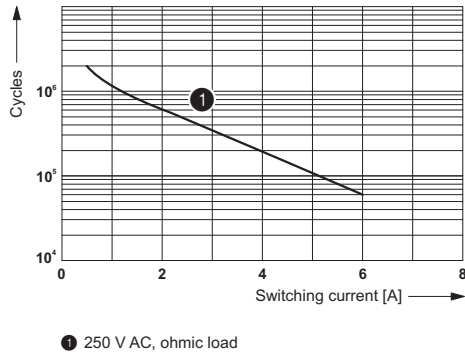


Plug-in miniature power relay, with power contact, 1 PDT, input voltage 60 V DC

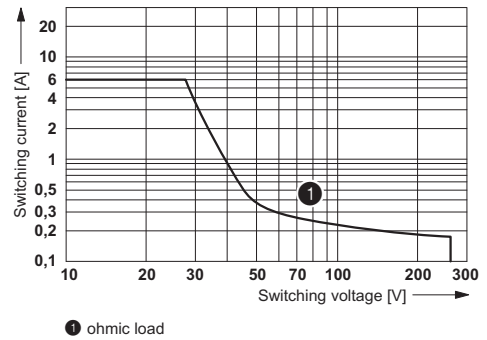
Drawings

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Diagram



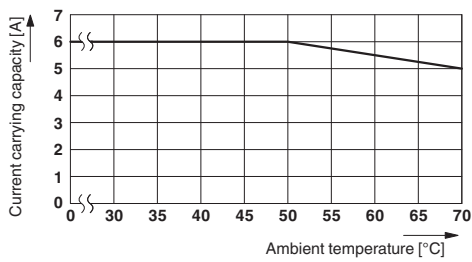
Diagram



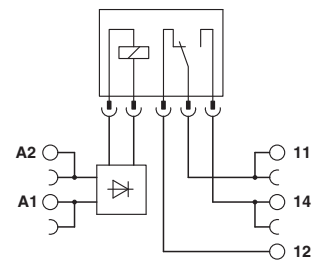
Electrical service life

DC interrupting rating

Diagram



Circuit diagram



Derating diagram