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Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

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PLC-INTERFACE for railway applications, consisting of basic terminal block with push-in 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°C, 2 PDTs, input voltage 110 V DC

Your advantages

☑ Optimum relay operation thanks to wide-range electronics

☑ Safe isolation according to DIN EN 50178 between coil and contact

☑ Vibration and shock resistance according to EN 50155

☑ Certified according to EN 50155

☑ Input voltage range of 0.7 to 1.25 x UN (1.4 x UN briefly)

☑ Temperature range from -40°C to +70°C (+85°C briefly)

☑ Spring-cage and Push-in connection technology

RoHS

Key Commercial Data

Packing unit	10 pc
GTIN	4 046356 507523
GTIN	4046356507523
Weight per Piece (excluding packing)	64.800 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

Dimensions

Width	14 mm
Height	80 mm
Depth	94 mm

PHŒNIX CONTACT

Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

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	4.5 mA
Typical response time	5 ms
Typical release time	11 ms
Coil voltage	60 V DC
Protective circuit	Bridge rectifier Bridge rectifier
	Free-wheeling diode Damping diode
	Surge protection
	RCZ filter
	Wide-range electronics
Operating voltage display	Yellow LED
Power dissipation for nominal condition	0.5 W

Contact side

Contact type	2 PDT
Type of switch contact	Single contact
Contact material	AgNi
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 10 mA)
Min. switching current	10 mA (At 5 V)
Maximum inrush current	15 A (300 ms)
Limiting continuous current	6 A
Interrupting rating (ohmic load) max.	140 W (at 24 V DC)
	85 W (at 48 V DC)
	60 W (at 60 V DC)
	44 W (at 110 V DC)
	60 W (at 220 V DC)
	1500 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13)
	0.2 A (at 250 V, DC13)
	3 A (at 24 V, AC15)
	3 A (at 120 V, AC15)
	3 A (at 250 V, AC15)

Connection data input side

Connection name	Coil side

Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

Technical data

Connection data input side

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	0.14 mm² ... 2.5 mm²
Conductor cross section flexible	0.14 mm² ... 2.5 mm²
	0.2 mm² ... 2.5 mm² ()
	2x 0.5 mm² ... 1 mm² ()
Conductor cross section AWG	26 ... 14

Connection data output side

Connection name	Contact side
Connection method	Push-in connection
Stripping length	8 mm
Conductor cross section solid	0.14 mm² ... 2.5 mm²
Conductor cross section flexible	0.14 mm² ... 2.5 mm²
	0.2 mm² ... 2.5 mm² ()
	2x 0.5 mm² ... 1 mm² ()
Conductor cross section AWG	26 ... 14

General

Test voltage relay winding/relay contact	5 kV$_{rms}$ (50 Hz, 1 min.)
Test voltage PDT/PDT	2.5 kV$_{rms}$ (50 Hz, 1 min.)
Operating mode	100% operating factor
Degree of protection	RT III (Relay)
	IP20 (Relay base)
Mechanical service life	approx. 3x 10^7 cycles
Mounting position	any
Assembly instructions	In rows with zero spacing

Standards and Regulations

Connection in acc. with standard	CUL
Standards/regulations	EN 50155 (VDE 0115 part 200)
	EN 50178
	EN 61373
	EN 50121
Rated insulation voltage	250 V AC
Rated surge voltage	6 kV
Insulation	Basic insulation
Degree of pollution	2
Overvoltage category	III
Flammability rating according to UL 94	V0

Environmental Product Compliance

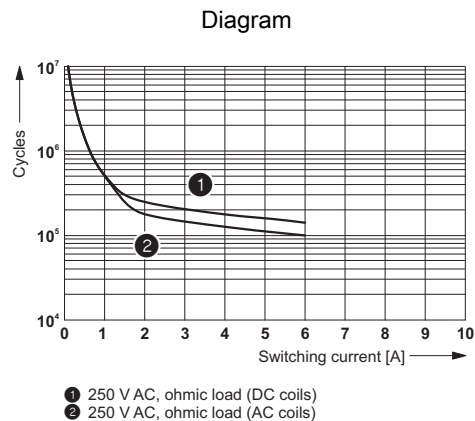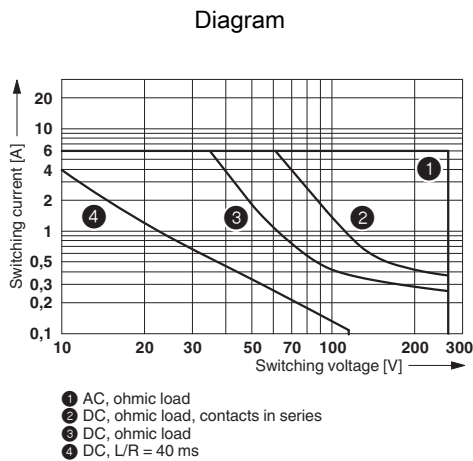| China RoHS	Environmentally Friendly Use Period = 50

PHŒNIX CONTACT

Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

Technical data

Environmental Product Compliance

	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Diagram

① AC, ohmic load
② DC, ohmic load, contacts in series
③ DC, ohmic load
④ DC, L/R = 40 ms

Interrupting rating

Diagram

① 250 V AC, ohmic load (DC coils)
② 250 V AC, ohmic load (AC coils)

Electrical service life

Circuit diagram
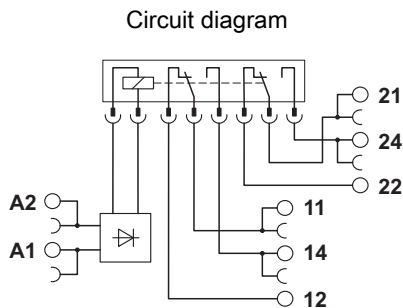
Classifications

eCl@ss

eCl@ss 5.0	27371601
eCl@ss 5.1	27371600
eCl@ss 6.0	27371600
eCl@ss 7.0	27371601
eCl@ss 8.0	27371601
eCl@ss 9.0	27371601

ETIM

ETIM 2.0	EC001437
ETIM 3.0	EC001437
ETIM 4.0	EC001437

PHŒNIX CONTACT

Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

Classifications

ETIM

ETIM 5.0	EC001437
ETIM 6.0	EC001437

UNSPSC

UNSPSC 6.01	30211916
UNSPSC 7.0901	39121515
UNSPSC 11	39121515
UNSPSC 12.01	39121515
UNSPSC 13.2	39122334

Approvals

Approvals

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

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Ex Approvals

Approval details

DNV GL		http://exchange.dnv.com/tari/	TAE0000196-01

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 172140

UL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705

cUL Recognized		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705

cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 172140

PHŒNIX CONTACT

Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

Approvals

EAC	EAC	RU C-DE.A*30.B.01082

RC FRT		B.00094

cULus Recognized	c **RU** us

cULus Listed	c **UL** us 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

Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

Accessories

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

Single plug-in bridge, length: 6 mm, number of positions: 2, color: red

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

Single plug-in bridge - FBST 14-PLC BK - 2967691

Single plug-in bridge, length: 14 mm, number of positions: 2, color: black

DIN rail

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Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

Accessories

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

DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Stainless steel V2A, uncoated, length: 2000 mm, color: silver

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

DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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

DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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

DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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

DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

Accessories

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

DIN rail, unperforated, Standard profile 2.3 mm, width: 35 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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

DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

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

DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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

DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

Labeled terminal marker

Zack marker strip - ZB10,LGS:FORTL.ZAHLEN - 1053014

Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 991 ... 1000, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm

Partition plate

Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

Accessories

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

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 - ZB10/WH-100:UNBEDRUCKT - 5060883

Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm

Zack marker strip - ZB 10:UNBEDRUCKT - 1053001

Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.5 x 10.15 mm

Relay Module - PLC-RPT-110UC/21-21/RW - 2900348

Accessories

Marker for terminal blocks - UC-TM 12 - 0819194

Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 12 mm, lettering field size: 11.45 x 10.5 mm

Marker for terminal blocks - UCT-TM 12 - 0829144

Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into tall marker groove, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm

Spare parts

Single relay - REL-MR- 60DC/21-21 - 2961273

Plug-in miniature power relay, with power contact, 2 PDTs, input voltage 60 V DC

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