

# PLC-RPT- 24UC/21-21AU/RW - Relay module



2900349

<https://www.phoenixcontact.com/us/products/2900349>

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PLC-INTERFACE for railway applications, consisting of basic terminal block with Push-in connection and plug-in miniature relay with multi-layer gold contact, range:  $0.7 \times U_N$  to  $1.25 \times U_N$ , temperature class TX:  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ , 2 changeover contacts, input voltage 24 V DC

## Your advantages

- Optimum relay operation thanks to wide-range electronics
- Vibration and shock resistance in accordance with EN 50155
- Safe isolation between coil and contact side
- Certified in accordance with EN 50155
- Input voltage range of  $0.7$  to  $1.25 \times U_N$  ( $1.4 \times U_N$  briefly)
- Temperature range:  $-40^{\circ}\text{C}$  ...  $+70^{\circ}\text{C}$  (short-term  $85^{\circ}\text{C}$ )

## Commercial data

Item number	2900349
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C461
Product key	DK62BL
GTIN	4046356507530
Weight per piece (including packing)	64.16 g
Weight per piece (excluding packing)	60.49 g
Customs tariff number	85364190
Country of origin	DE

## Technical data

### Product properties

Product type	Relay Module
Product family	PLC-INTERFACE
Application	Railway applications
Installation location	Attached to the vehicle body
Operating mode	100% operating factor
Mechanical service life	approx. $3 \times 10^7$ cycles

### Insulation characteristics

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	2

### Data management status

Date of last data management	12.09.2025
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### Electrical properties

Maximum power dissipation for nominal condition	0.48 W
Test voltage (Winding/contact)	5 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)
Test voltage (Changeover contact/changeover contact)	2.5 kV <sub>rms</sub> (50 Hz, 1 min., changeover contact/changeover contact)
Rated insulation voltage	250 V AC
Rated surge voltage	6 kV

### Input data

#### Coil side

Nominal input voltage $U_N$	24 V DC
Input voltage range	20.2 V DC ... 33.6 V DC
Input voltage range in reference to $U_N$	0.7 ... 1.25
Nominal voltage (plugged-in electromechanical relay)	12 V DC
Drive and function	monostable
Drive (polarity)	polarized
Typical input current at $U_N$	20 mA
Typical response time	5 ms
Typical release time	11 ms
Protective circuit	Bridge rectifier
	Surge protection; Freewheeling diode
	RCZ filter
	Wide-range electronics
Operating voltage display	Yellow LED

### Output data

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## Switching

Contact switching type	2 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi, hard gold-plated
Maximum switching voltage	30 V AC 36 V DC
Minimum switching voltage	100 mV (10 mA)
Limiting continuous current	50 mA
Maximum inrush current	50 mA
Min. switching current	1 mA (24 V)
Interrupting rating (ohmic load) max.	1.2 W (at 24 V DC)

## Switching: when the gold layer is destroyed

Note	the following values are applicable if a gold layer is destroyed
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 AC/DC
Limiting continuous current	6 A
Maximum inrush current	8 A
Min. switching current	10 mA
Interrupting rating (ohmic load) max.	140 W (at 24 V DC) 100 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 110 V, DC13) 0.2 A (at 250 V, DC13) 2 A (at 24 V, AC15) 2 A (at 120 V, AC15) 2 A (at 250 V, AC15)

## Connection data

Connection method	Push-in connection
Stripping length	10 mm
Conductor cross-section rigid	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section flexible	0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule) 2x 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> (TWIN ferrule)
Conductor cross-section AWG	26 ... 14

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## Dimensions

Width	14 mm
Height	80 mm
Depth	94 mm

## Material specifications

Color	gray (RAL 7042)
Flammability rating according to UL 94 (Housing)	V0 (Housing)

## Environmental and real-life conditions

### Ambient conditions

Degree of protection (Relay)	RT III (Relay)
Degree of protection (Relay base)	IP20 (Relay base)
Ambient temperature (operation)	-40 °C ... 70 °C (Temperature class TX)
Ambient temperature (storage/transport)	-40 °C ... 85 °C

## Approvals

### CE

Certificate	CE-compliant
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### UKCA

Certificate	UKCA-compliant
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### Shipbuilding approval

Certificate	TAE0000196
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### Corrosive gas test

Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

### Shipbuilding data

Temperature	D
Humidity	A
Vibration	B/C
EMC	B
Enclosure	Required protection according to the Rules shall be provided upon installation on board

## EMC data

Electromagnetic compatibility	Conformance with EMC directive
Low Voltage Directive	Conformance with Low Voltage Directive

## Standards and regulations

Standards/regulations	IEC 60947-5-1
	EN 50155 (VDE 0115 part 200)

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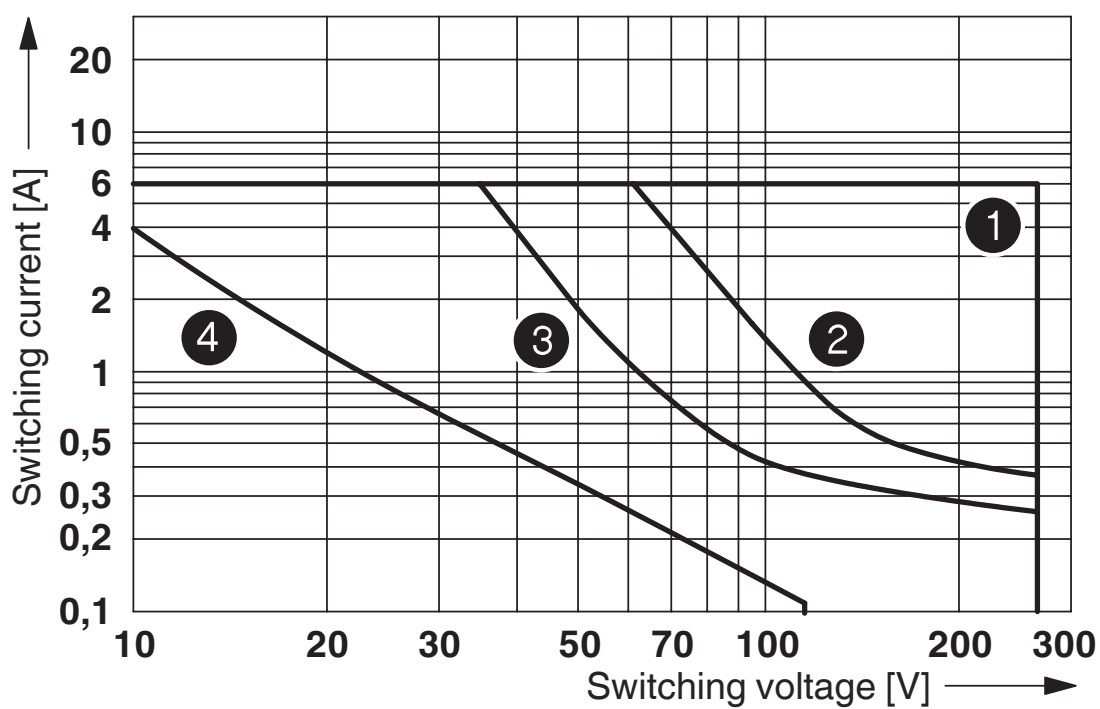
	EN 61373
	EN 50121

## Mounting

Mounting type	DIN rail mounting
Assembly note	in rows with zero spacing
Mounting position	any

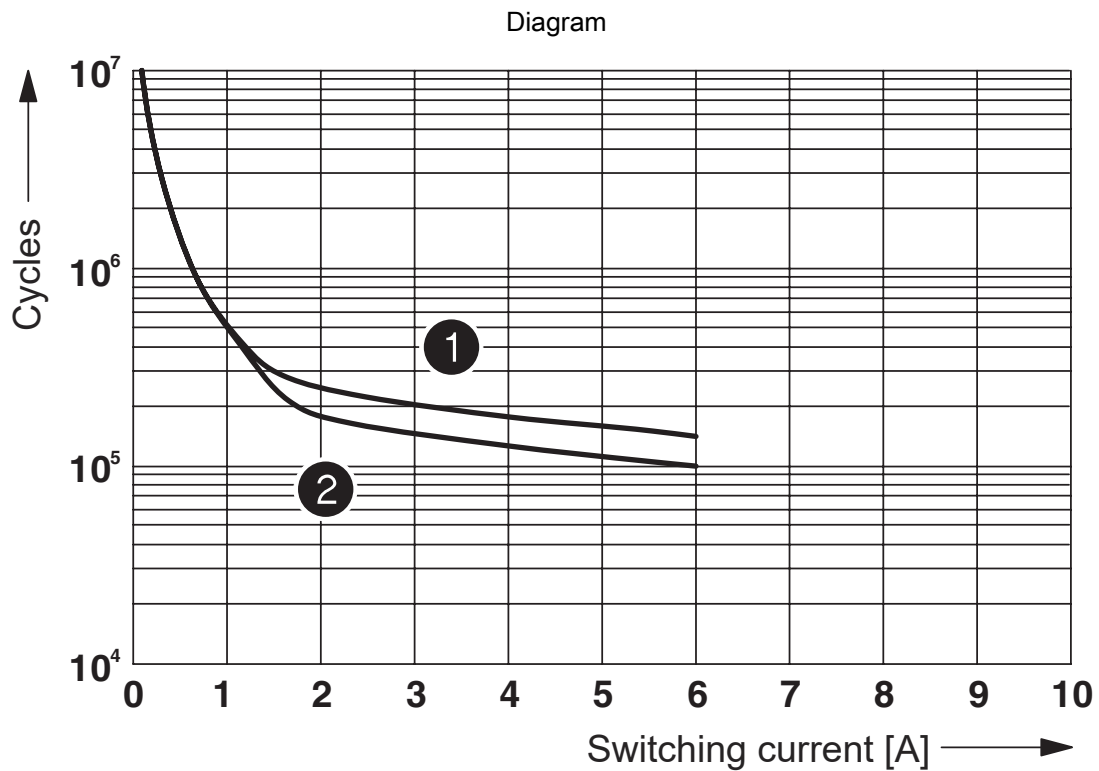
## Drawings

Diagram



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

Interrupting rating



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

Electrical service life

Diagram



Permissible humidity for operation and storage.

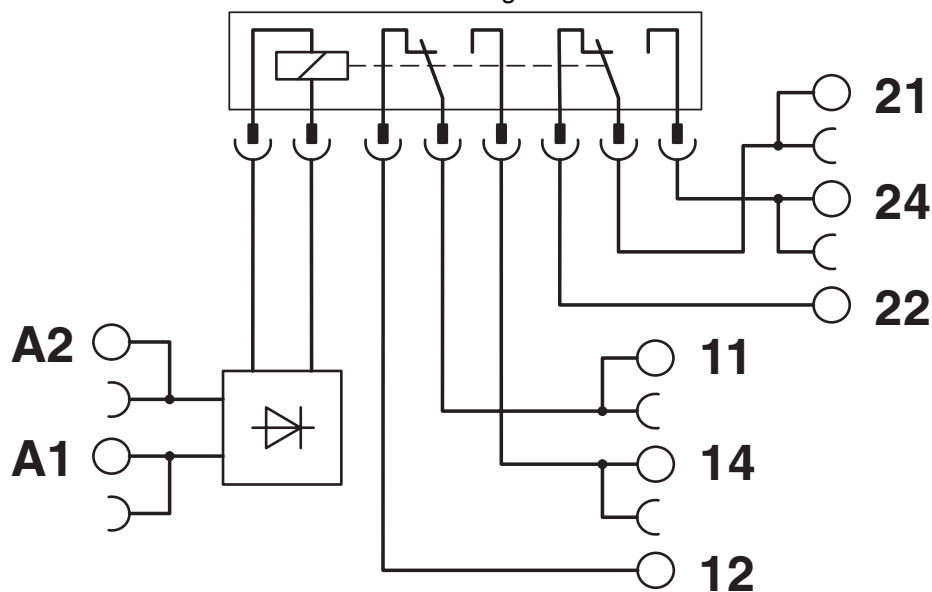
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures  $\leq 0^{\circ}\text{C}$  must be prevented

Area B: Condensation at ambient temperatures  $> 0^{\circ}\text{C}$  must be prevented

On 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature  $\leq 25^{\circ}\text{C}$ .

Circuit diagram





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**DNV GL**

Approval ID: TAE0000196



**cULus Listed**

Approval ID: E140324



**cUL Recognized**

Approval ID: E238705



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**UL Listed**

Approval ID: FILE E 172140



**cUL Listed**

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## Classifications

### ECLASS

ECLASS-13.0	27371601
ECLASS-15.0	27371601

### ETIM

ETIM 9.0	EC001437
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	3c0201e5-beaa-49f6-8e8d-1c6c6bd59949