

PLC-RSP- 24UC/21AU/RW - Relay module



2987024

<https://www.phoenixcontact.com/us/products/2987024>

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PLC-INTERFACE for railway applications, consisting of basic terminal block with spring-cage 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°C to $+70^\circ\text{C}$, 1 changeover contact, input voltage 24 V DC

Your advantages

- Optimum relay operation thanks to wide-range electronics
- Safe isolation between coil and contact side
- Certified in accordance with EN 50155
- Vibration and shock resistance 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°C ... $+70^\circ\text{C}$ (short-term 85°C)

Commercial data

Item number	2987024
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C461
Product key	DK622B
GTIN	4046356155151
Weight per piece (including packing)	33.24 g
Weight per piece (excluding packing)	32.37 g
Customs tariff number	85364190
Country of origin	DE

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Technical data

Product properties

Product type	Relay Module
Product family	PLC-INTERFACE
Application	Railway applications
Environment	Attached to the vehicle body
Operating mode	100% operating factor
Mechanical service life	approx. 2×10^7 cycles

Insulation characteristics

Overvoltage category	III
Pollution degree	2

Data management status

Date of last data management	01.04.2026
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Electrical properties

Maximum power dissipation for nominal condition	0.22 W
Test voltage (Winding/contact)	4 kV _{rms} (50 Hz, 1 min., winding/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	16.8 V DC ... 30 V DC
Input voltage range in reference to U_N	0.7 ... 1.25
Drive and function	monostable
Typical input current at U_N	9 mA
Typical response time	4 ms
Typical release time	4 ms
Coil voltage	12 V DC
Protective circuit	Bridge rectifier; Bridge rectifier
	Freewheeling diode; Freewheeling diode
	Surge protection
	RCZ filter
	Wide-range electronics
Operating voltage display	Yellow LED

Output data

Switching

Contact switching type	1 changeover contact
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Type of switch contact	Single contact
Contact material	AgSnO, hard gold-plated
Maximum switching voltage	30 V AC
	36 V DC
Minimum switching voltage	100 mV (at 10 mA)
Limiting continuous current	50 mA
Maximum inrush current	50 mA
Min. switching current	1 mA (at 24 V)
Interrupting rating (ohmic load) max.	1.2 W (at 24 V DC)
Switching capacity	1 A (24 V (DC13))
	0.2 A (110 V (DC13))
	0.1 A (220 V (DC13))
	3 A (24 V (AC15))
	3 A (120 V (AC15))
	3 A (230 V (AC 15))

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	12 V AC/DC
Limiting continuous current	6 A
Min. switching current	10 mA
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	2 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)

Connection data

Coil side

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross-section rigid	0.14 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.14 mm ² ... 2.5 mm ²

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Conductor cross-section AWG	26 ... 14
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Contact side

Connection method	Spring-cage connection
Stripping length	8 mm
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Conductor cross-section flexible	0.14 mm ² ... 2.5 mm ²
Conductor cross-section AWG	26 ... 14

Dimensions

Width	6.2 mm
Height	80 mm
Depth	94 mm

Material specifications

Color	green (RAL 6021)
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

Standards and regulations

Standards/regulations	EN 50155 (VDE 0115 part 200)
	IEC 60947-5-1
	EN 61373
	EN 50121

Mounting

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

Drawings

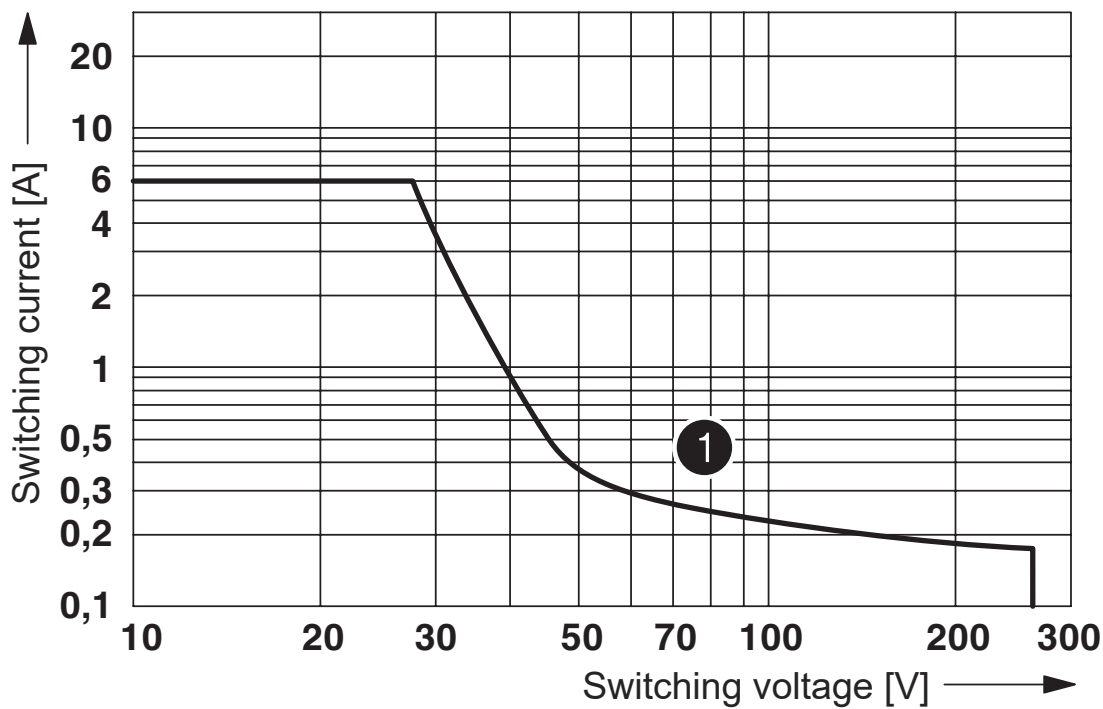
Diagram



① 250 V AC, ohmic load

Electrical service life

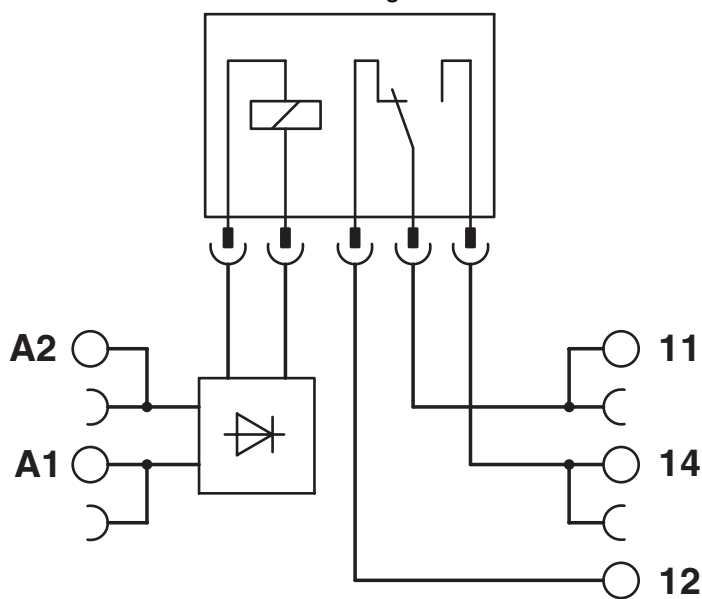
Diagram



① ohmic load

DC interrupting rating

Circuit diagram



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Environmental product compliance

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.)	No substance above 0.1 wt%
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