

PLC-RSP-110UC/21-21AU/RW - Relay module



2987150

<https://www.phoenixcontact.com/us/products/2987150>

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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 $+70^\circ\text{C}$, 2 changeover contacts, input voltage 110 V DC

Your advantages

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

Commercial data

Item number	2987150
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C461
Product key	DK622D
GTIN	4046356155410
Weight per piece (including packing)	62.6 g
Weight per piece (excluding packing)	61.6 g
Customs tariff number	85364900
Country of origin	DE

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. 3×10^7 cycles

Insulation characteristics

Insulation	Basic insulation
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	0.5 W
Test voltage (Winding/contact)	5 kV _{rms} (50 Hz, 1 min., winding/contact)
Test voltage (Changeover contact/changeover contact)	2.5 kV _{rms} (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	110 V DC
Input voltage range	77 V DC ... 137.5 V DC
Input voltage range in reference to U_N	0.7 ... 1.25
Drive and function	monostable
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
	Freewheeling diode; Freewheeling diode
	Surge protection
	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 (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: 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	2x 6 A (see derating curve)
Maximum inrush current	15 A (300 ms)
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

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
Conductor cross-section AWG	26 ... 14

Contact side

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Dimensions

Width	14 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 base)	IP20 (Relay base)
Degree of protection (Relay)	RT III (Relay)
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

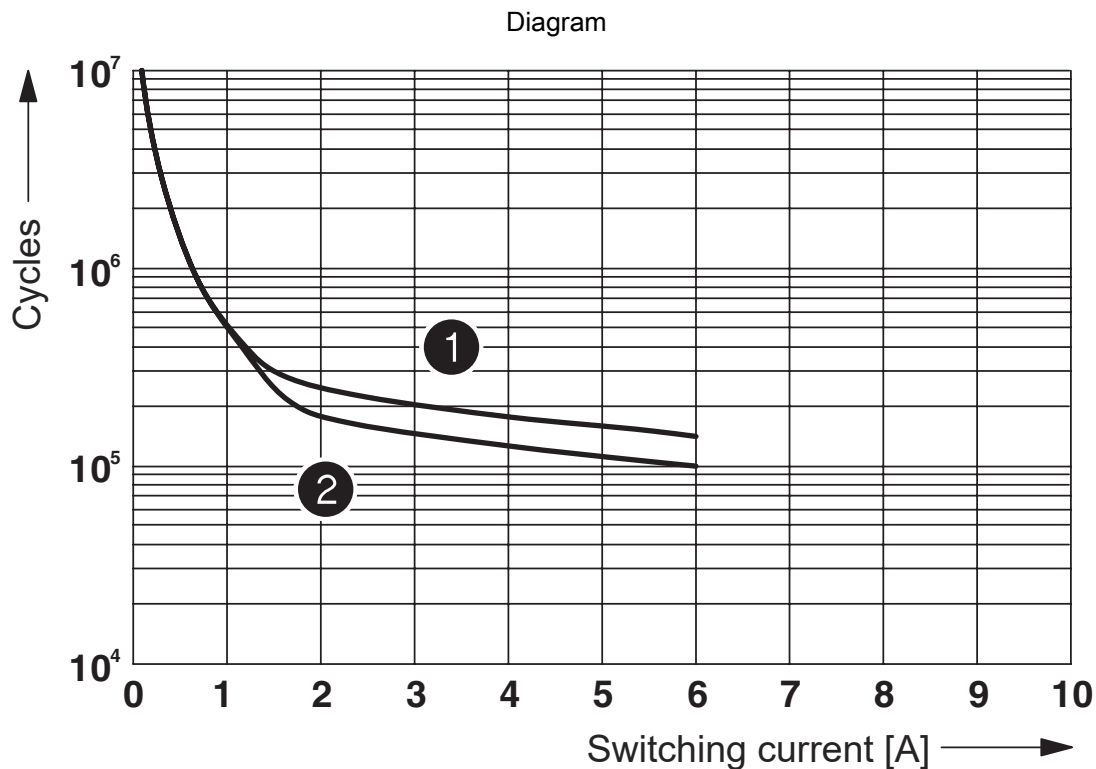
Drawings

Diagram



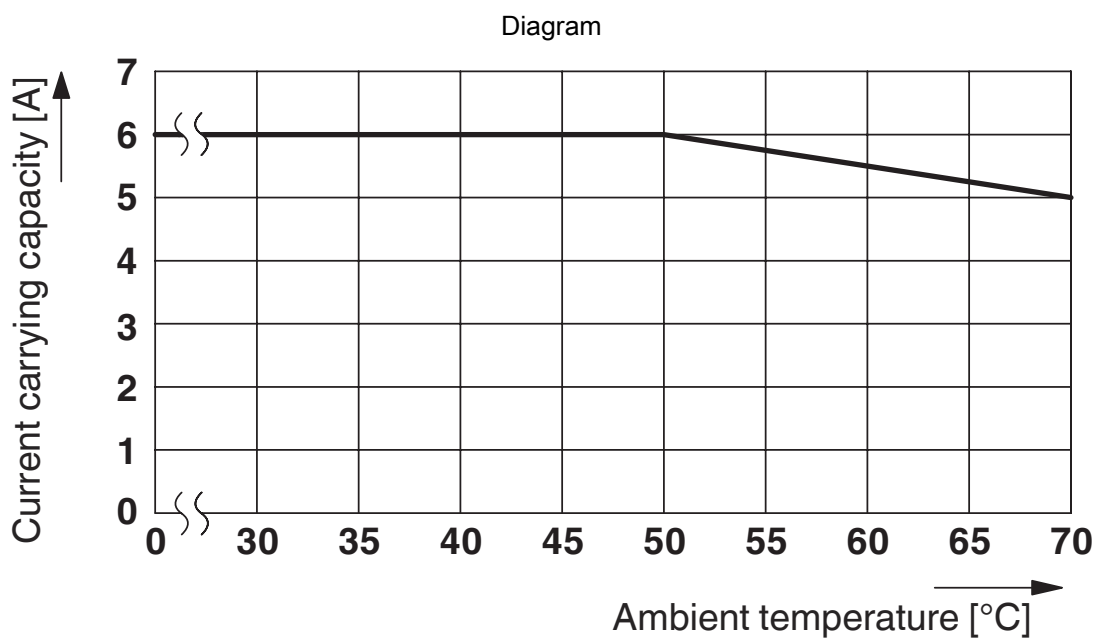
- ① AC, ohmic load
- ② DC, ohmic load, contacts in series
- ③ DC, ohmic load
- ④ DC, L/R = 40 ms

Interrupting rating



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

Electrical service life



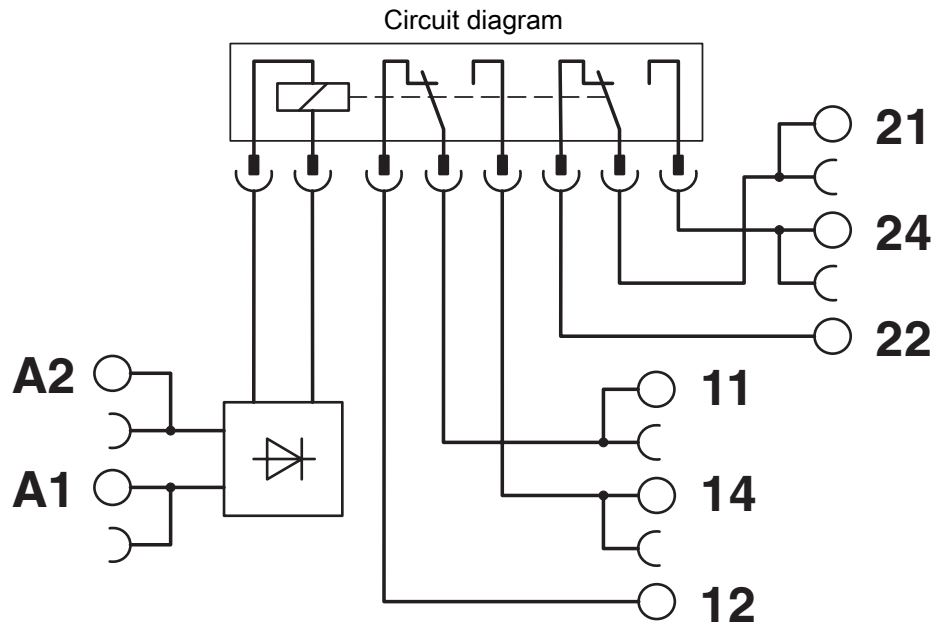
Derating diagram

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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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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com