

# PLC-RPT- 24DC/21-21/EX - Relay module



2909514

<https://www.phoenixcontact.com/us/products/2909514>

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PLC-INTERFACE, consisting of DIN-rail-mountable basic terminal block in 14 mm with Push-in connection and plug-in relay with power contact, 2 changeover contacts, 24 V DC input voltage. Approved according to ATEX/IECEx (Zone 2) and Ex Zone Class I, Div. 2.

## Commercial data

Item number	2909514
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C462
Product key	DK62BK
GTIN	4055626363172
Weight per piece (including packing)	73.31 g
Weight per piece (excluding packing)	64.13 g
Customs tariff number	85364190
Country of origin	DE

## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Relay Module
Product family	PLC-INTERFACE
Application	Class I, Division 2 potentially explosive areas
Operating mode	100% operating factor
Mechanical service life	3x 10 <sup>7</sup> cycles

#### Insulation characteristics: Standards/regulations

Insulation	Safe isolation, reinforced insulation
Overvoltage category	III
Pollution degree	3

#### Data management status

Date of last data management	12.05.2026
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### Electrical properties

Maximum power dissipation for nominal condition	0.43 W
Test voltage (Winding/contact)	4 kV AC (50 Hz, 1 min., winding/contact)
Test voltage (Changeover contact/changeover contact)	2.5 kV AC (50 Hz, 1 min., changeover contact/changeover contact)

#### Standards/regulations

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 (20 °C)
Nominal voltage (plugged-in electromechanical relay)	24 V DC
Drive and function	monostable
Drive (polarity)	polarized
Typical input current at $U_N$	18 mA
Typical response time	8 ms
Typical release time	10 ms
Protective circuit	Reverse polarity protection; Polarity protection diode

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	Surge protection; Freewheeling diode
Operating voltage display	Yellow LED

## Output data

### Switching

Contact switching type	2 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC (The separating plate PLC-ATP should be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or ...FBST 500...)
Minimum switching voltage	5 V AC/DC (10 mA)
Limiting continuous current	2x 6 A (Derating)
Maximum inrush current	15 A (300 ms)
Min. switching current	10 mA (5 V)
Interrupting rating (ohmic load) max.	140 W (24 V DC) 85 W (48 V DC) 60 W (60 V DC) 44 W (110 V DC) 60 W (220 V DC) 1500 VA (250 V AC)
Switching capacity	2 A (24 V (DC13)) 0.2 A (250 V (DC13)) 3 A (24 V (AC15)) 3 A (120 V (AC15)) 3 A (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

## Dimensions

### Item dimensions

Width	14 mm
Height	80 mm
Depth	94 mm

## Material specifications

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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
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m

## Approvals

### CE

Certificate	CE-compliant
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### ATEX

Identification	⊕ II 3G Ex ec nC IIC T4 Gc
Certificate	IBExU16ATEXB015 X

### IECEX

Identification	Ex ec nC IIC T4 Gc
Certificate	IECEX IBE 16.0029X

### CCC / China-Ex

Identification	Ex ec nC IIC T4 Gc
Certificate	2021122304114118

### INMETRO

Identification	Ex ec nC IIC T4 Gc
Certificate	DNV 25.0067 X

### UL, USA/Canada

Identification	Class I, Zone 2, AEx ec nC IIC Gc T4
	Class I, Zone 2, Ex ec nC IIC Gc T4 X

### 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

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Enclosure	Required protection according to the Rules shall be provided upon installation on board
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## EMC data

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

## Standards and regulations

### Standards/regulations

Standards/regulations	IEC 60664
	IEC 60947-5-1
	IEC/EN 60079-0
	IEC/EN 60079-7
	IEC/EN 60079-15

### GB Standard

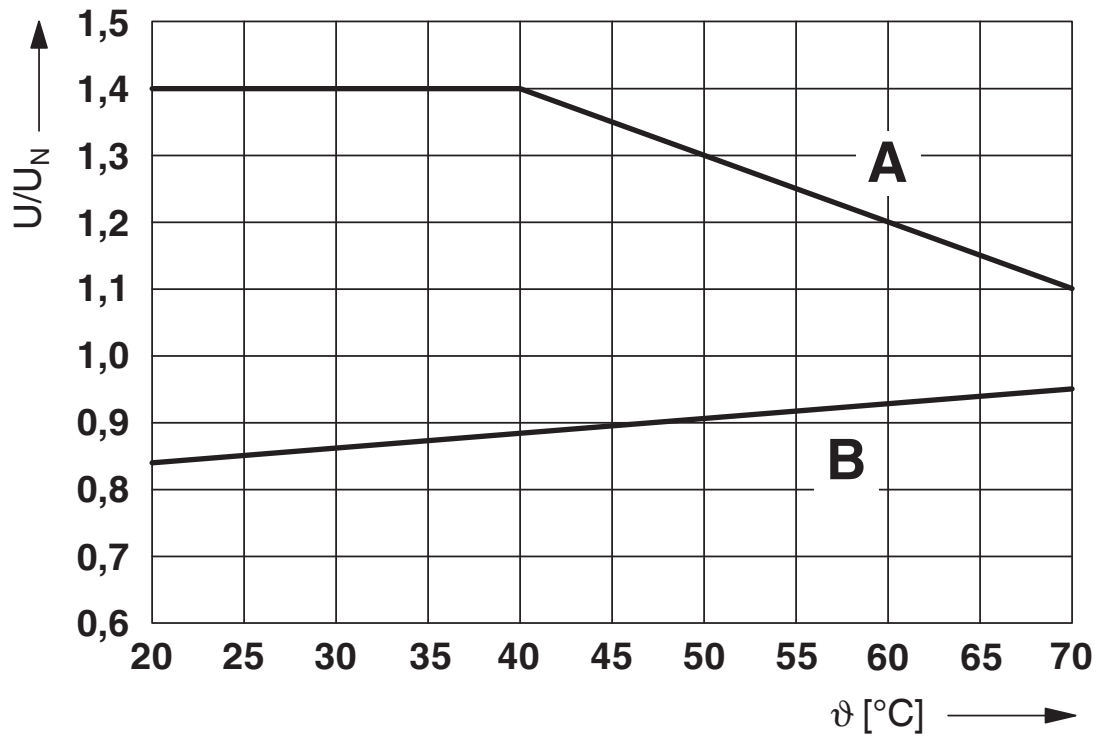
Standards/regulations	GB/T 3836.1
	GB/T 3836.3
	GB/T 3836.8

## Mounting

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

## Drawings

Diagram

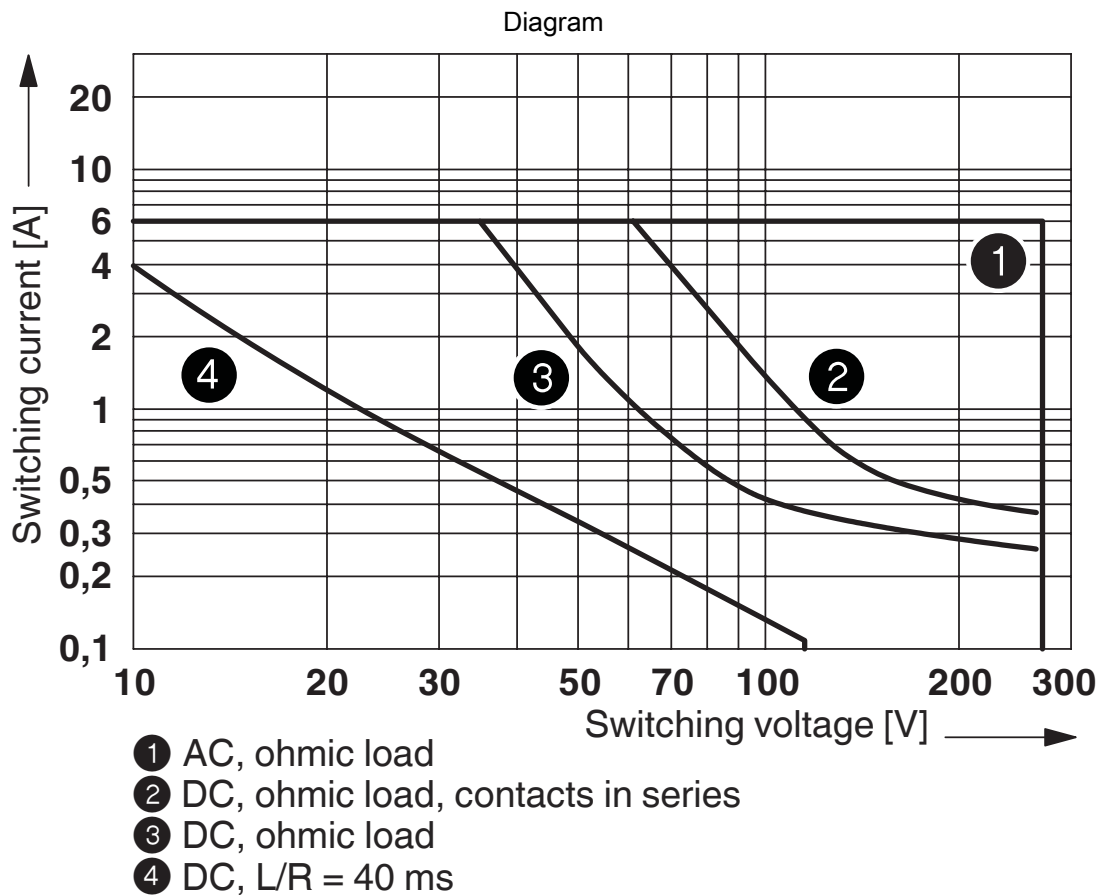


### Curve A

Maximum permissible continuous voltage  $U_{max}$  with limiting continuous current on the contact side (see relevant technical data)

### Curve B

Minimum permissible operate voltage  $U_{op}$  after pre-excitation (see relevant technical data)



Interrupting rating

Diagram



Permissible humidity for operation and storage.

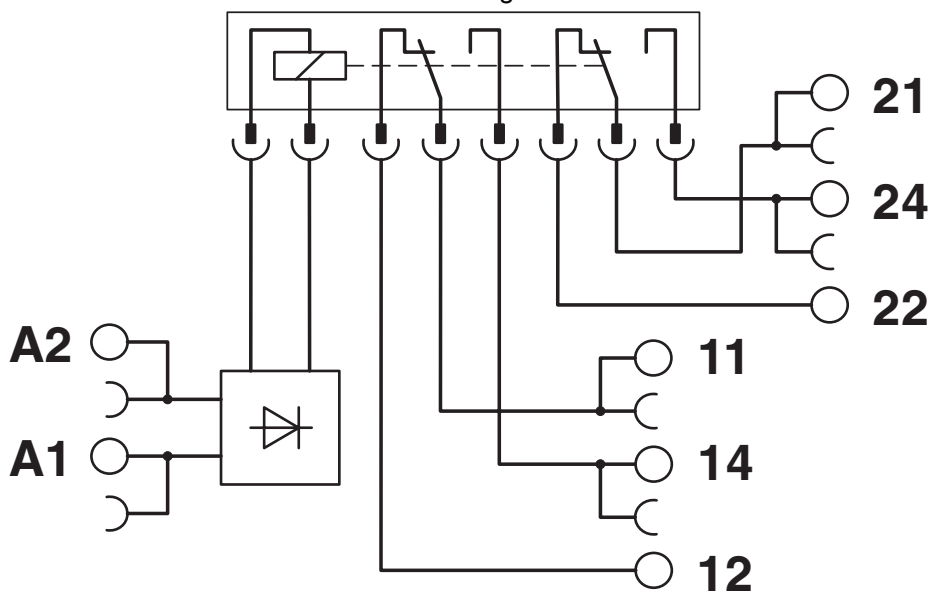
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2909514>



**cULus Listed**

Approval ID: E140324



**cULus Listed**

Approval ID: E140324



**EAC Ex**

Approval ID: RU C-DE.AB72.B.02328



**IECEx**

Approval ID: IECEx IBE 16.0029X



**ATEX**

Approval ID: 16ATEXB015X



**cULus Listed**

Approval ID: E199827



**KC-s**

Approval ID: 18-KA4BO-0620X



**CCC**

Approval ID: 2021122304114118



**IECEx**

Approval ID: IECEx IBE 16.0029X



**ATEX**

Approval ID: IBExU16ATEXB015X

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## Classifications

### ECLASS

ECLASS-13.0	27371601
ECLASS-15.0	27371601

### ETIM

ETIM 10.0	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.)	Hexahydromethylphthalic anhydride(CAS: n/a)
	Lead(CAS: 7439-92-1)
SCIP	b0637d75-cd8f-4708-9869-4fc631b101fe

### EF3.1 Climate Change

CO2e kg	1.008 kg CO2e
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