

# PLC-RPT-12DC/21/EX - Relay module



2909527

<https://www.phoenixcontact.com/us/products/2909527>

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PLC-INTERFACE, consisting of DIN-rail-mountable basic terminal block in 6.2 mm with Push-in connection and plug-in miniature relay with 6 A power contact, 1 changeover contact, 12 V DC input voltage. Approved according to ATEX/IECEx (Zone 2) and Ex Zone Class I, Div. 2.

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2909527       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | C462          |
| Product key                          | DK62AK        |
| GTIN                                 | 4055626363646 |
| Weight per piece (including packing) | 37.36 g       |
| Weight per piece (excluding packing) | 36.8 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 |
|----------|---|

### Product properties

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

#### Insulation characteristics: Standards/regulations

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree     | 3   |

#### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 01.04.2026 |
|------------------------------|------------|

### Electrical properties

|   |  |
|---|--|
| Maximum power dissipation for nominal condition | 0.18 W                                   |
| Test voltage (Winding/contact)                  | 4 kV AC (50 Hz, 1 min., winding/contact) |

### Input data

#### Coil side

|  |  |
|--|--|
| Nominal input voltage $U_N$                          | 12 V DC  |
| Input voltage range                                  | 9.72 V DC ... 16.8 V DC (20 °C)  |
| Nominal voltage (plugged-in electromechanical relay) | 12 V DC  |
| Drive and function                                   | monostable   |
| Drive (polarity)                                     | polarized  |
| Typical input current at $U_N$                       | 15.3 mA  |
| Typical response time                                | 5 ms   |
| Typical release time                                 | 8 ms   |
| Protective circuit                                   | Reverse polarity protection; Polarity protection diode<br>Surge protection; Freewheeling diode |
| 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 connection type               | Power contact   |
| Contact material                      | AgSnO   |
| 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 (100 mA)  |
| Limiting continuous current           | 6 A (Derating)  |
| Maximum inrush current                | 10 A (4 s)  |
| Min. switching current                | 10 mA (12 V)  |
| Interrupting rating (ohmic load) max. | 140 W (24 V DC)<br>20 W (48 V DC)<br>18 W (60 V DC)<br>23 W (110 V DC)<br>40 W (220 V DC)<br>1500 VA (250 V AC)   |
| Switching capacity                    | 2 A (24 V (DC13))<br>0.2 A (110 V (DC13))<br>0.1 A (220 V (DC13))<br>3 A (24 V (AC15))<br>3 A (120 V (AC15))<br>3 A (230 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><br>0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule)<br>2x 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> (TWIN ferrule) |
| Conductor cross-section AWG      | 26 ... 14   |

## Dimensions

### Item dimensions

|        |        |
|--------|--------|
| Width  | 6.2 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

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## Ambient conditions

|   |                   |
|---|-------------------|
| Degree of protection (Relay)            | RT III (Relay)    |
| Degree of protection (Relay base)       | IP20 (Relay base) |
| Ambient temperature (operation)         | -40 °C ... 60 °C  |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C  |
| Altitude                                | ≤ 2000 m          |

## Approvals

### CE

|             |              |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

### 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 |
|-------------|------------|

### 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

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|                               |  |
|-------------------------------|--|
| 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

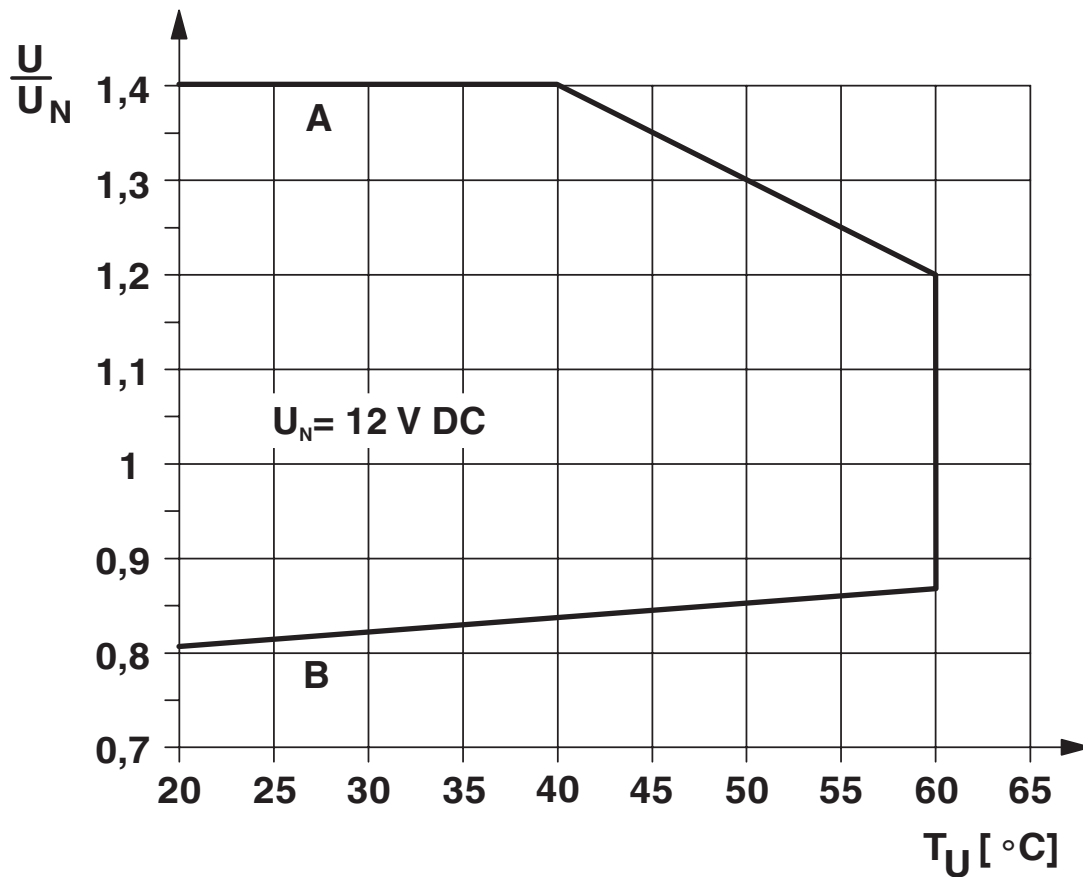
|                       |             |
|-----------------------|-------------|
| Standards/regulations | GB/T 3836.1 |
|                       | GB/T 3836.3 |
|                       | GB/T 3836.8 |

## Mounting

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

Drawings

Diagram



Curve A

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

Curve B

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



Interrupting rating



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  $\leq 25^\circ\text{C}$ .

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2909527>



**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



**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 |
|-----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39122300 |
|-------------|----------|

## 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                                | 10c212eb-d0d0-4b66-bd90-457bfae79a7b        |

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.561 kg CO2e |
|---------|---------------|