

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

2900316

<https://www.phoenixcontact.com/us/products/2900316>



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PLC-INTERFACE, consisting of PLC-BPT.../21 basic terminal block with Push-in connection and plug-in miniature relay with power contact, for mounting on DIN rail NS 35/7,5, 1 changeover contact, input voltage 12 V DC

## Your advantages

- Slim design
- Efficient connection to system cabling using V8 adapter
- RT III sealed relay
- Safe isolation between coil and contact side
- Functional plug-in bridges
- Integrated input circuit and interference suppression circuit

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2900316             |
| Packing unit                         | 10 pc               |
| Minimum order quantity               | 1 pc                |
| Sales key                            | C462                |
| Product key                          | CK62A6              |
| Catalog page                         | Page 364 (C-5-2019) |
| GTIN                                 | 4046356506984       |
| Weight per piece (including packing) | 35.1 g              |
| Weight per piece (excluding packing) | 32.12 g             |
| Customs tariff number                | 85364190            |
| Country of origin                    | DE                  |

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## Technical data

### Notes

|                    |                                                                                                                                                                                                                         |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notes on operation | Separating plate PLC-ATP must 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.... |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Product properties

|                         |                           |
|-------------------------|---------------------------|
| Product type            | Relay Module              |
| Product family          | PLC-INTERFACE             |
| Application             | Universal                 |
| Operating mode          | 100% operating factor     |
| Mechanical service life | 2x 10 <sup>7</sup> cycles |

### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 01.07.2024 |
| Article revision             | 05         |

### Electrical properties

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

### Insulation characteristics: Coil/contact

|                                 |       |
|---------------------------------|-------|
| Rated insulation voltage        | 250 V |
| Rated impulse withstand voltage | 6 kV  |
| Overvoltage category            | III   |
| Degree of pollution             | 3     |

### Input data

#### Coil side

|                                                      |                                                                                                |
|------------------------------------------------------|------------------------------------------------------------------------------------------------|
| Nominal input voltage U <sub>N</sub>                 | 12 V DC                                                                                        |
| Input voltage range                                  | 9.7 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 <sub>N</sub>              | 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

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## Switching

|                                       |                                                                                                                                                                                                                                               |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact switching type                | 1 changeover contact                                                                                                                                                                                                                          |
| Type of switch contact                | Single 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 (100 mA)                                                                                                                                                                                                                                  |
| Limiting continuous current           | 6 A                                                                                                                                                                                                                                           |
| Maximum inrush current                | 10 A (4 s)                                                                                                                                                                                                                                    |
| Min. switching current                | 10 mA (12 V)                                                                                                                                                                                                                                  |
| Short-circuit current                 | 200 A (conditional short-circuit current)                                                                                                                                                                                                     |
| 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)                                                                                                                                                                                                                        |
| Output fuse                           | 4 A gL/gG NEOZED                                                                                                                                                                                                                              |
| 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

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

|        |        |
|--------|--------|
| Width  | 6.2 mm |
| Height | 80 mm  |
| Depth  | 94 mm  |

## Material specifications

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

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## 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 ... 60 °C  |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C  |

## Approvals

### CE

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

### UKCA

|             |                |
|-------------|----------------|
| Certificate | UKCA-compliant |
|-------------|----------------|

### Shipbuilding approval

|             |            |
|-------------|------------|
| Certificate | TAE0000196 |
|-------------|------------|

### Corrosive gas test

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

### DNV GL 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

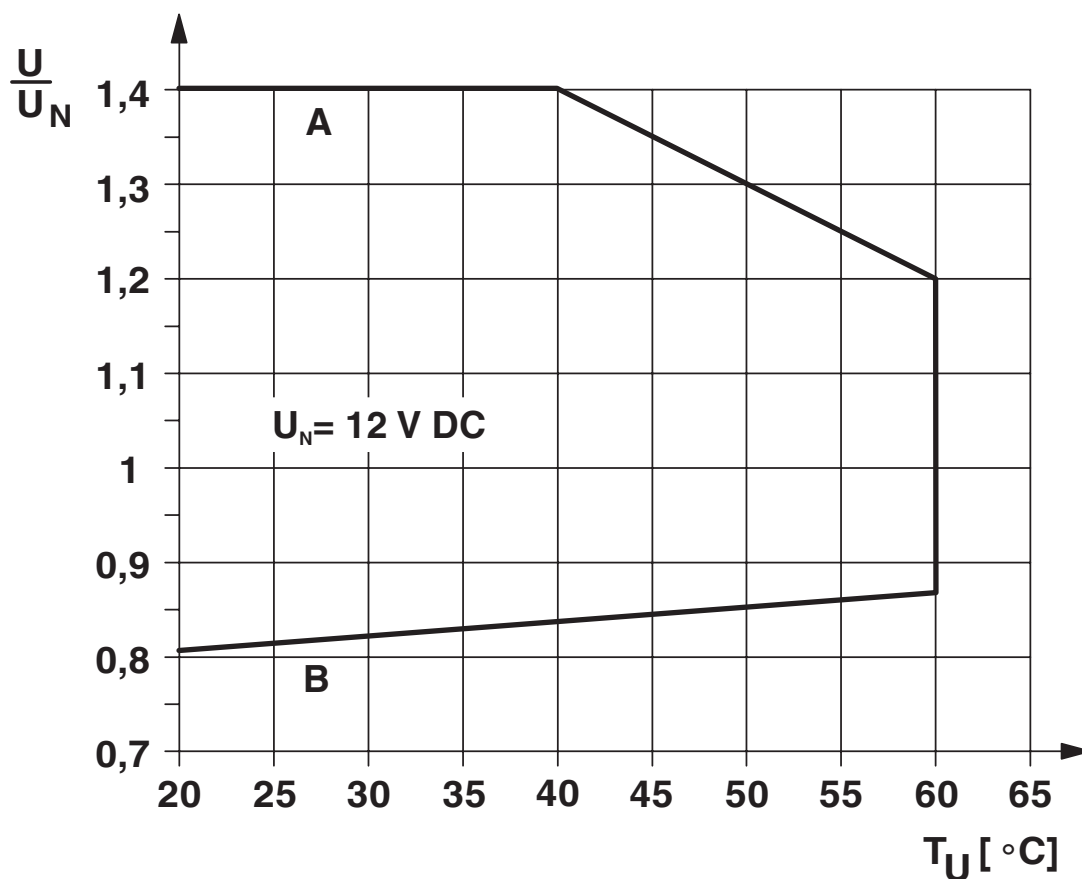
|                       |               |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

## Mounting

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

## Drawings

Diagram

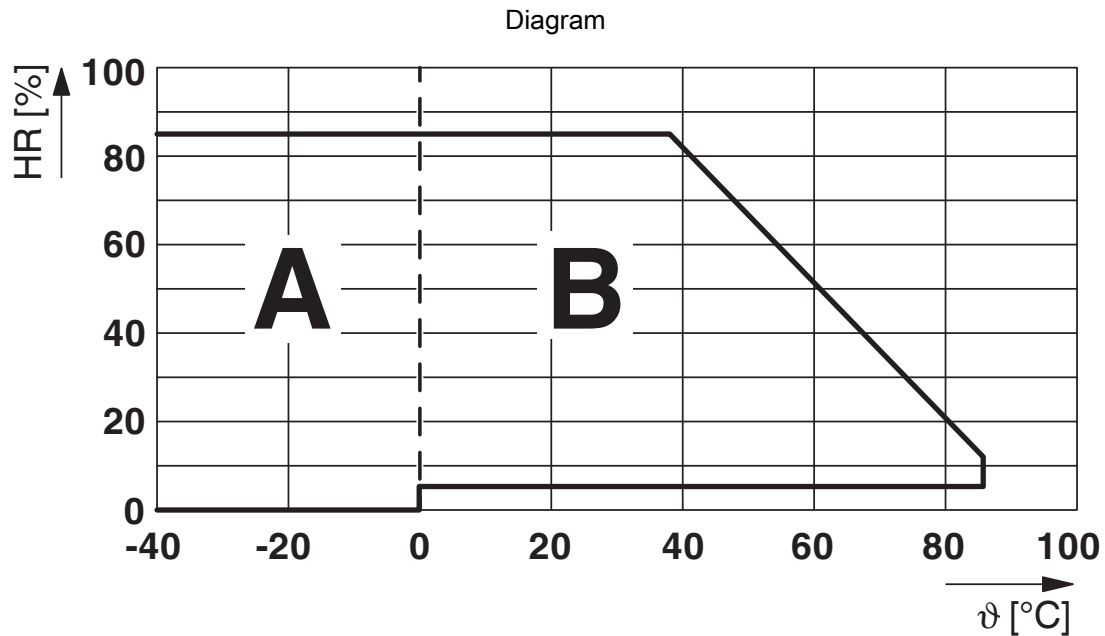


### Curve A

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)



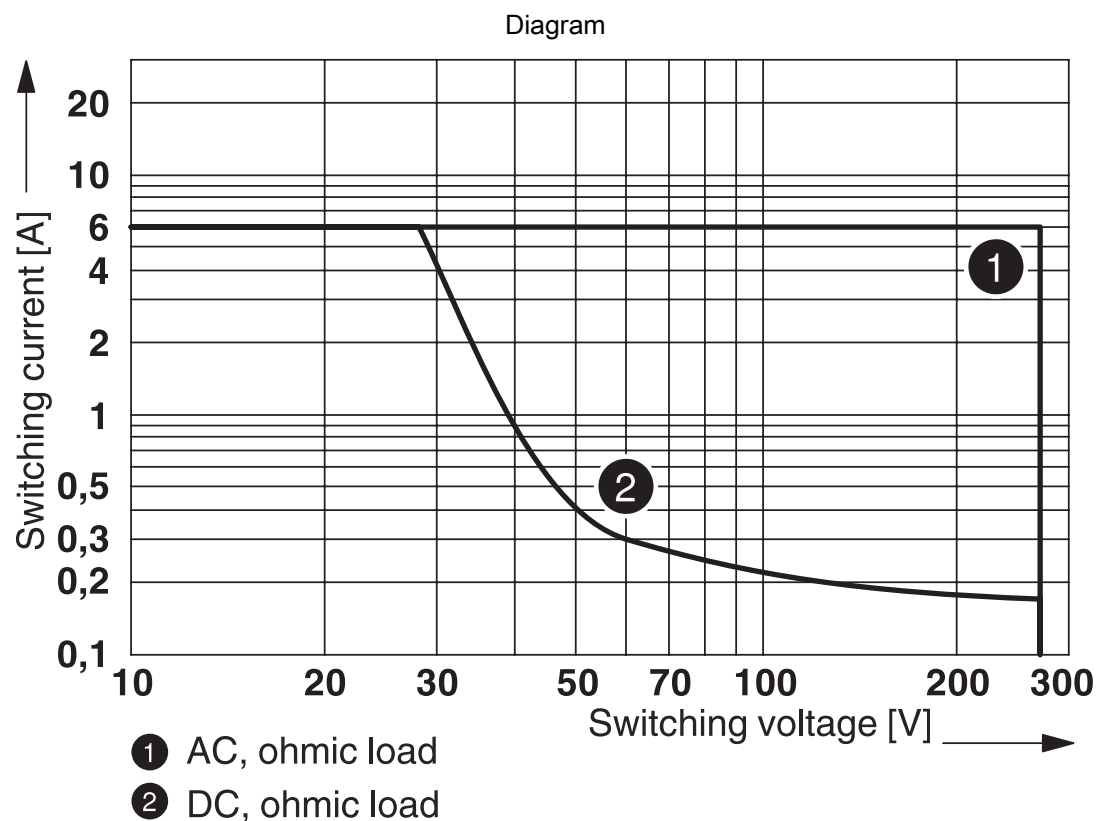
Permissible humidity for operation and storage.

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



Interrupting rating

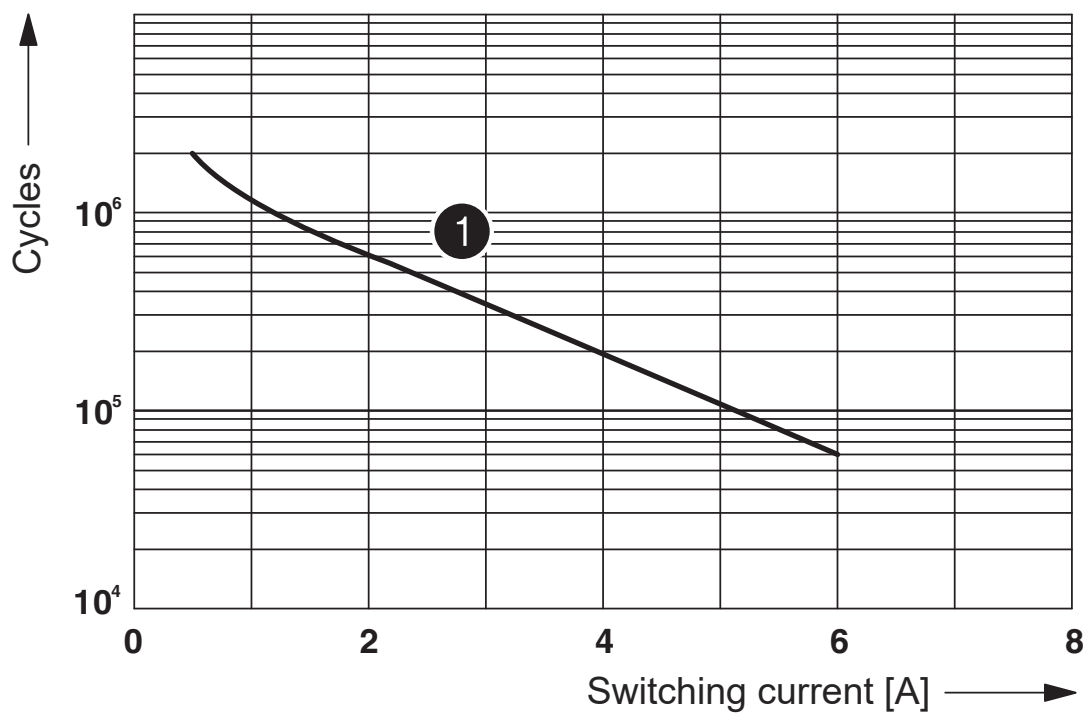
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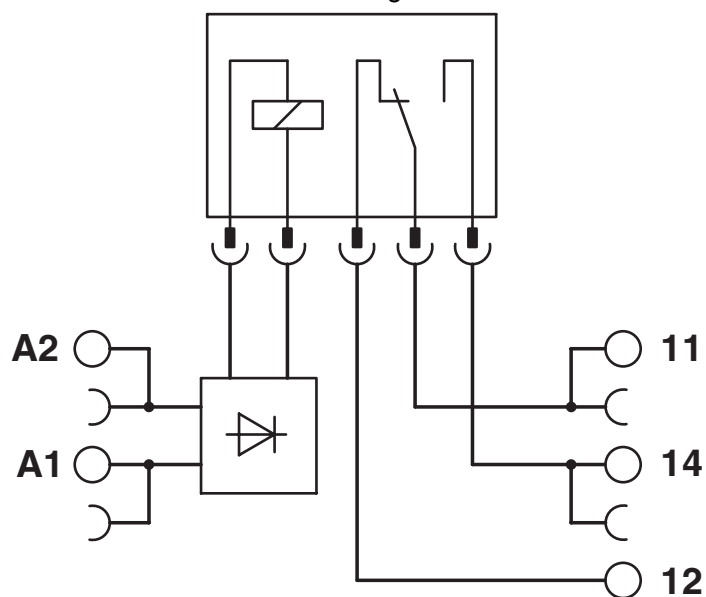
Diagram



① 250 V AC, ohmic load

Electrical service life

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2900316>



**cUL Recognized**  
Approval ID: E238705



**UL Recognized**  
Approval ID: E238705



**DNV GL**  
Approval ID: TAE0000196



**UL Listed**  
Approval ID: FILE E 172140



**cUL Listed**  
Approval ID: FILE E 172140



**cULus Listed**  
Approval ID: E140324

**cULus Recognized**

**cULus Listed**

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27371601 |
| ECLASS-12.0 | 27371601 |
| ECLASS-13.0 | 27371601 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001437 |
|----------|----------|

### 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                                | 019a4f2f-1e85-4293-98ce-0c7f495d4552        |

### EF3.0 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 0.446 kg CO2e |
|---------|---------------|

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