

PLC-RPT-120UC/21HC - Relay module



2900296

<https://www.phoenixcontact.com/us/products/2900296>

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PLC-INTERFACE for high continuous currents, consisting of PLC-BPT.../21 HC basic terminal block with Push-in connection and plug-in miniature relay, for mounting on DIN rail NS 35/7,5, limiting continuous current up to 10 A, 1 changeover contact, input voltage 120 V AC/DC

Your advantages

- Efficient connection to system cabling using V8 adapter
- All common input voltages of 12 V DC ... 230 V AC
- Long electrical service life thanks to 16 A relay
- Safe isolation between coil and contact side
- Max. continuous current of 10 A
- Functional plug-in bridges

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2900296 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C461 |
| Product key | DK62B6 |
| GTIN | 4046356507172 |
| Weight per piece (including packing) | 73.25 g |
| Weight per piece (excluding packing) | 61.5 g |
| Customs tariff number | 85364900 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|-------------------------|---------------------------|
| Product type | Relay Module |
| Product family | PLC-INTERFACE |
| Application | High continuous currents |
| Operating mode | 100% operating factor |
| Mechanical service life | 3x 10 ⁷ cycles |

Insulation characteristics

| | |
|----------------------|---------------------------------------|
| Insulation | Safe isolation, reinforced insulation |
| 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 | 0.54 W |
| Rated surge voltage | 6 kV |

Input data

Coil side

| | |
|--|------------------------------------|
| Nominal input voltage U _N | 120 V AC |
| | 110 V DC |
| Input voltage range | 102 V AC ... 168 V AC (20 °C) |
| | 85.8 V DC ... 154 V DC (20 °C) |
| Nominal voltage (plugged-in electromechanical relay) | 110 V DC |
| Drive and function | monostable |
| Drive (polarity) | polarized |
| Typical input current at U _N | 4.2 mA (at 110 V DC) |
| | 4.5 mA (at 120 V AC) |
| Typical response time | 7 ms |
| Typical release time | 10 ms |
| Protective circuit | Bridge rectifier; Bridge rectifier |
| Operating voltage display | Yellow LED |

Output data

Switching

| | |
|---------------------------|---|
| Contact switching type | 1 changeover contact |
| 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 |

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| | |
|---|---|
| | terminal blocks in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or ...FBST 500...) |
| Minimum switching voltage | 12 V (10 mA) |
| Limiting continuous current | 10 A |
| | 6 A (value applies to connections 12. If connections 12 are bridged, the normal value applies.) |
| Maximum inrush current | 30 A (300 ms) |
| Min. switching current | 10 mA (12 V) |
| Interrupting rating (ohmic load) max. | 240 W (at 24 V DC) |
| | 58 W (at 48 V DC) |
| | 48 W (at 60 V DC) |
| | 50 W (at 110 V DC) |
| | 80 W (at 220 V DC) |
| | 2500 VA (for 250 V AC) |
| Interrupting rating (ohmic load) max. bridged | 144 W (for 24 V DC. Value applies to connections 12. If connections 12 are bridged, the normal value applies.) |
| | 1500 VA (for 250 V AC. Value applies to connections 12. If connections 12 are bridged, the normal value applies.) |
| Switching capacity | 2 A (at 24 V, DC13) |
| | 0.2 A (at 110 V, DC13) |
| | 0.2 A (at 250 V, DC13) |
| | 6 A (at 24 V, AC15) |
| | 6 A (at 120 V, AC15) |
| | 6 A (at 250 V, AC15) |

Connection data

| | |
|----------------------------------|--|
| Connection method | Push-in connection |
| Stripping length | 10 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 |
| | 0.2 mm ² ... 2.5 mm ² (Single ferrule) |
| | 2x 0.5 mm ² ... 1 mm ² (TWIN ferrule) |
| Conductor cross-section AWG | 26 ... 14 |

Dimensions

Item dimensions

| | |
|--------|-------|
| Width | 14 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 II (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 |

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

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

Standards and regulations

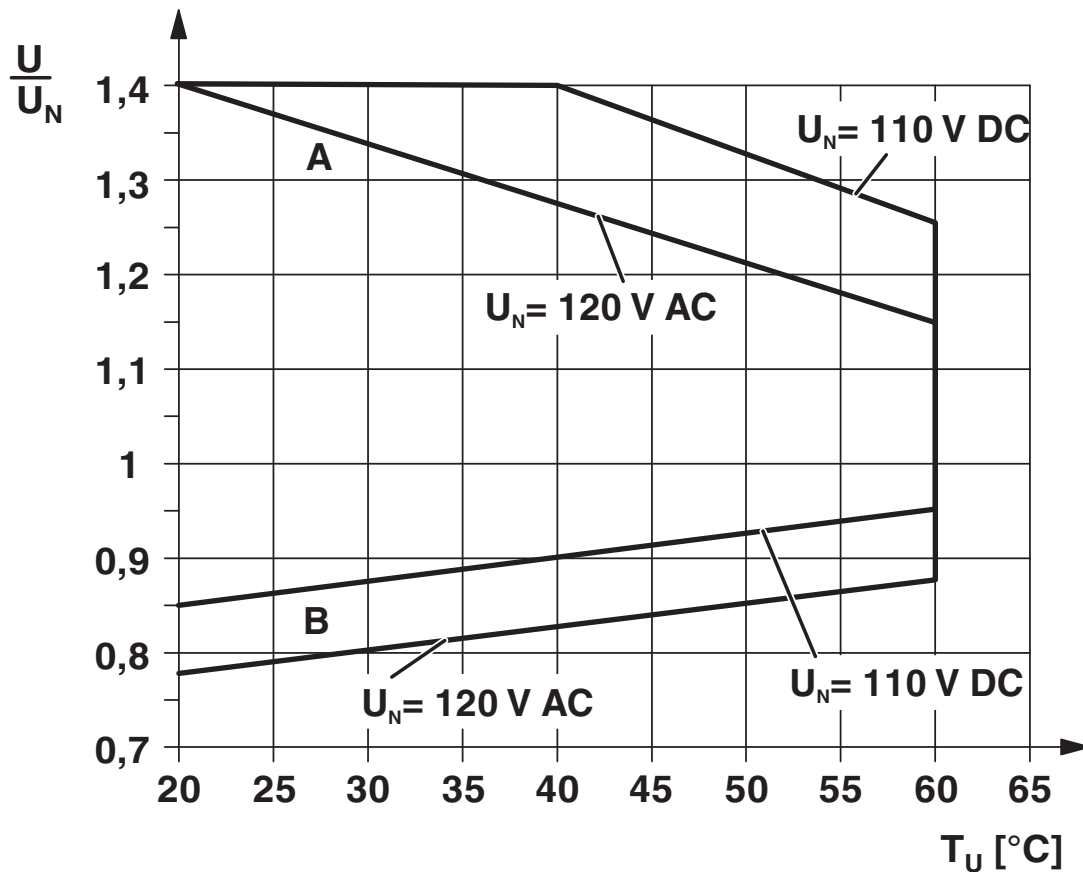
| | |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

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_{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)



- ① AC, ohmic load
- ② DC, ohmic load
- ③ DC, L/R = 40 ms

Interrupting rating

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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

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EAC

Approval ID: RU*C-DE.*08.B.00010



cULus Listed

Approval ID: E140324



cULus Listed

Approval ID: E140324



cULus Listed

Approval ID: E140324

DNV

Approval ID: TAE0000196

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27371601 |
| ECLASS-15.0 | 27371601 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | 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 | f595633d-9ee5-453b-9a8d-4fc0a43de909 |

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 1.189 kg CO2e |
|---------|---------------|

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