# PLC-HPT-24DC/220DC/10 - Solid-state relay

2905494

https://www.phoenixcontact.com/us/products/2905494

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PLC-INTERFACE, hybrid solid-state relay incl. bypass relay with push-in connection, for mounting on NS 35/7,5 DIN rail, input: 24 V DC, output: 12 V DC - 250 V DC/10 A

## Commercial data

| | |
|---|---|
| Item number | 2905494 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C461 |
| Product key | DK62B5 |
| GTIN | 4046356957113 |
| Weight per piece (including packing) | 73.7 g |
| Weight per piece (excluding packing) | 89.2 g |
| Customs tariff number | 85364190 |
| Country of origin | DE |

# Technical data

## Product properties

| | |
|---|---|
| Product type | Solid-state relay module |
| Product family | PLC-INTERFACE |
| Application | Output function |
| Operating mode | 100% operating factor |

Insulation characteristics: Air clearances and creepage distances between the power circuits

| | |
|---|---|
| Insulation | safe isolation |
| Overvoltage category | III |
| Pollution degree | 2 |

Data management status

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

## Electrical properties

| | |
|---|---|
| Test voltage | 4 $kV_{rms}$ (50 Hz, 1 min., winding/contact) |

Air clearances and creepage distances between the power circuits

| | |
|---|---|
| Rated insulation voltage | 260 V AC |
| Rated surge voltage | 6 kV |

## Input data

| | |
|---|---|
| Rated control circuit supply voltage $U_S$ | 24 V DC |
| Voltage range with reference to $U_S$ | 0.8 ... 1.2 |
| Rated control supply current $I_S$ | ≤ 19 mA |
| Rated actuating voltage $U_C$ | 24 V DC |
| Voltage range with reference to $U_C$ | 0.8 ... 1.2 |
| Rated actuating current $I_C$ | 6.8 mA |
| Nominal voltage (plugged-in solid-state relay) | 24 V DC |
| "0" signal switching threshold in reference to $U_C$ | < 0.4 |
| "1" signal switching threshold in reference to $U_C$ | > 0.8 |
| Typical response time | 20 ms |
| Typical turn-off time | 40 ms |
| Status display | LED (yellow) |
| Protective circuit | Reverse polarity protection |
| | Surge protection |
| Surge voltage protection | > 33 V DC |
| Transmission frequency | 1 Hz |

## Output data

DC hybrid output

| | |
|---|---|
| Contact switching type | 1 N/O contact |

| | |
|---|---|
| Design of digital output | electronic |
| Output voltage range | 12 V DC ... 250 V DC |
| Limiting continuous current | 10 A (see derating curve) |
| Maximum inrush current | 60 A (5 ms; $T_{amb}$ = 60°C) |
| Min. load current | 100 mA |
| Surge voltage protection | > 275 V |
| Output circuit | 2-conductor / N/O contact in parallel operation (no electrical disconnection) |
| Protective circuit | Inverse diode (No continuous protection against polarity reversal) |
| | Varistor |

## Connection data

| | |
|---|---|
| Connection method | Push-in connection |
| Stripping length | 10 mm |
| Conductor cross-section rigid | 0.14 mm² ... 2.5 mm² |
| Conductor cross-section flexible | 0.14 mm² ... 2.5 mm² |
| | 0.2 mm² ... 2.5 mm² (Single ferrule) |
| | 2x 0.5 mm² ... 1 mm² (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) |

## Environmental and real-life conditions

Ambient conditions

| | |
|---|---|
| Degree of protection (Relay base) | IP20 (Relay base) |
| Degree of protection (Relay) | RT II (Relay) |
| Degree of protection (Installation location) | IP54 (Installation location) |
| Ambient temperature (operation) | -25 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 2000 m |

## Standards and regulations

Air clearances and creepage distances between the power circuits

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

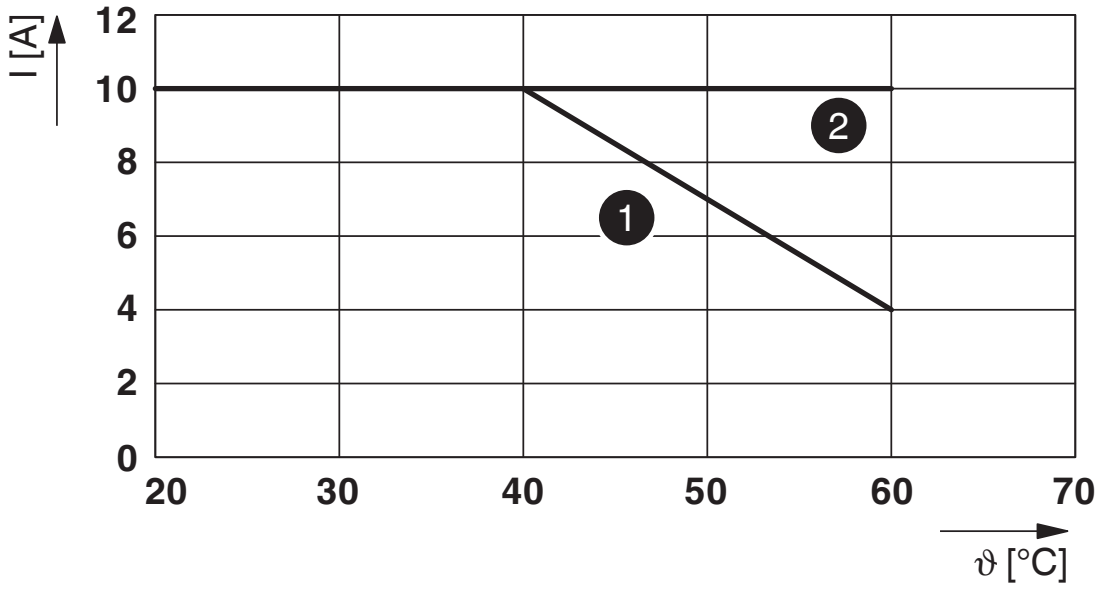
## Mounting

| | |
|---|---|
| Mounting type | DIN rail mounting |

| | |
|---|---|
| Assembly note | See derating curve |
| Mounting position | any |

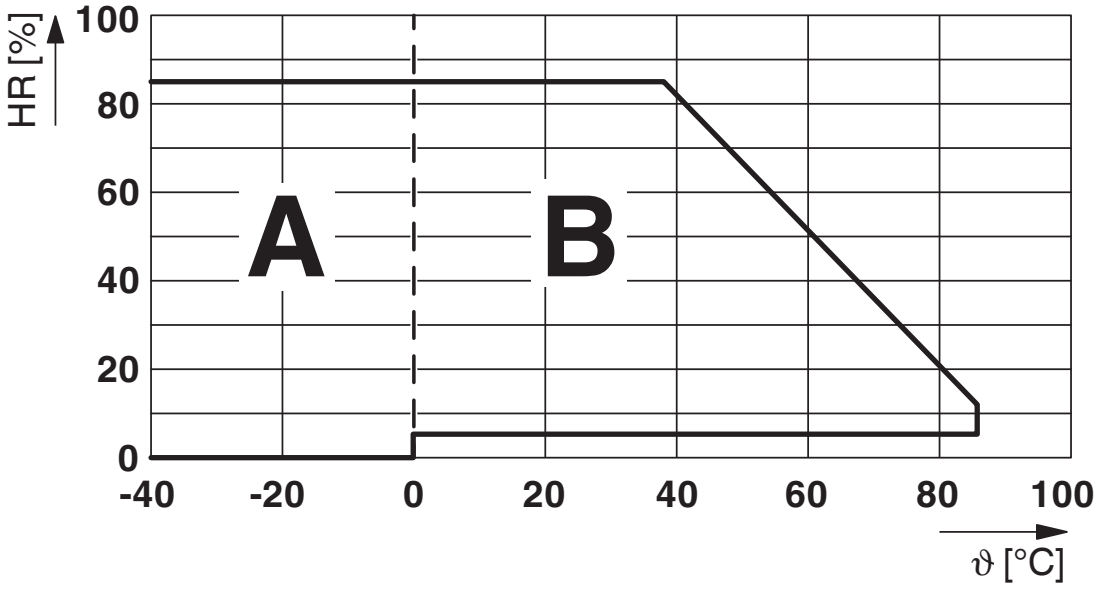
## Drawings

Diagram




Limiting continuous current
1) Aligned without spacing
2) Aligned with >14 mm spacing

Diagram

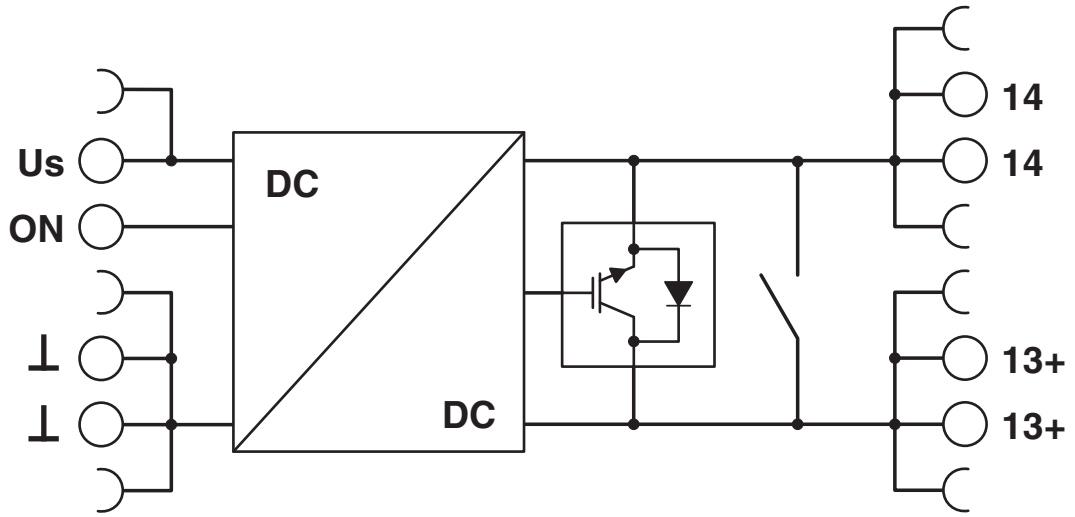



Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures ≤ 0°C must be prevented
Area B: Condensation at ambient temperatures > 0°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 ≤ 25°C.

Circuit diagram



## Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2905494

**cULus Listed**
Approval ID: E140324

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## Classifications

### ECLASS

| | |
|---|---|
| ECLASS-13.0 | 27371604 |
| ECLASS-15.0 | 27371604 |

### ETIM

| | |
|---|---|
| ETIM 10.0 | EC001504 |

### 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.) | Lead(CAS: 7439-92-1) |
| SCIP | 3977d76b-133b-484d-8663-c3a4cfe5e2ea |

EF3.1 Climate Change

| | |
|---|---|
| CO2e kg | 3.34 kg CO2e |

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