

# PLC-BSC-120UC/21-21/SO46 - Relay base



2980416

<https://www.phoenixcontact.com/us/products/2980416>

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14 mm PLC basic terminal block with interference current and interference voltage protection on the control side, with screw connection, without relay or solid-state relay, for mounting on DIN rail NS 35/7,5, with integrated RCZ filter, 2 changeover contacts, input voltage 120 V AC

## Your advantages

- High relay release voltage
- Resistant to interference currents

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2980416       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | C461          |
| Product key                          | DK623M        |
| GTIN                                 | 4017918921217 |
| Weight per piece (including packing) | 64.61 g       |
| Weight per piece (excluding packing) | 56.43 g       |
| Customs tariff number                | 85366990      |
| 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 socket                   |
| Product family | PLC-INTERFACE                  |
| Application    | Filter to prevent interference |
| Operating mode | 100% operating factor          |

#### Insulation characteristics

|                  |   |
|------------------|---|
| Pollution degree | 3 |
|------------------|---|

### Electrical properties

|                    |                                    |
|--------------------|------------------------------------|
| Protective circuit | Bridge rectifier; Bridge rectifier |
|                    | RC element                         |

### Input data

|   |  |
|---|--|
| Nominal input voltage $U_N$               | 120 V AC   |
|   | The nominal voltage of the plug-on electromechanical relay or solid-state relay (see necessary accessories) deviates from the nominal input voltage of the base with integrated upstream circuit |
| Input voltage range in reference to $U_N$ | 0.78 ... 1.4 (at 20 °C)  |
| Typical input current at $U_N$            | 9 mA   |
| Typical response time                     | 7 ms   |
| Typical release time                      | 10 ms  |
| Nominal input voltage $U_N$               | 120 V AC   |
|   | The nominal voltage of the plug-on electromechanical relay or solid-state relay (see necessary accessories) deviates from the nominal input voltage of the base with integrated upstream circuit |

### Relay assembly

|   |                                    |
|---|------------------------------------|
| Nominal input voltage $U_N$               | 120 V AC                           |
| Input voltage range in reference to $U_N$ | 0.78 ... 1.4                       |
| Typical input current at $U_N$            | 8.5 mA (50 Hz)                     |
|   | 9.5 mA (60 Hz)                     |
| Typical response time                     | 8 ms                               |
| Typical release time                      | 15 ms                              |
| Typical release voltage                   | 45 V AC                            |
| Operating voltage display                 | Yellow LED                         |
| Protective circuit                        | Bridge rectifier; Bridge rectifier |
|   | Filter; Filter                     |

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## Optocoupler assembly

|                           |                                    |
|---------------------------|------------------------------------|
| Operating voltage display | Yellow LED                         |
| Protective circuit        | Bridge rectifier; Bridge rectifier |
|                           | Filter; Filter                     |

## Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Screw connection  |
| Stripping length                 | 8 mm  |
| Screw thread                     | M3  |
| 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> ... 1.5 mm <sup>2</sup> (TWIN ferrule) |
| Conductor cross-section AWG      | 26 ... 14   |
| Tightening torque                | 0.6 Nm ... 0.8 Nm   |

## Signaling

|                |     |
|----------------|-----|
| Status display | LED |
|----------------|-----|

## 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

### Ambient conditions

|   |                  |
|---|------------------|
| Ambient temperature (operation)         | -40 °C ... 55 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

## Approvals

### CE

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

### UKCA

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

### 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   |
| 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/EN 60664-1 |
|-----------------------|----------------|

## Mounting

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

Drawings

Application drawing



Occurrence of interference signals  
Scenario 1: controller - AC output card

Application drawing



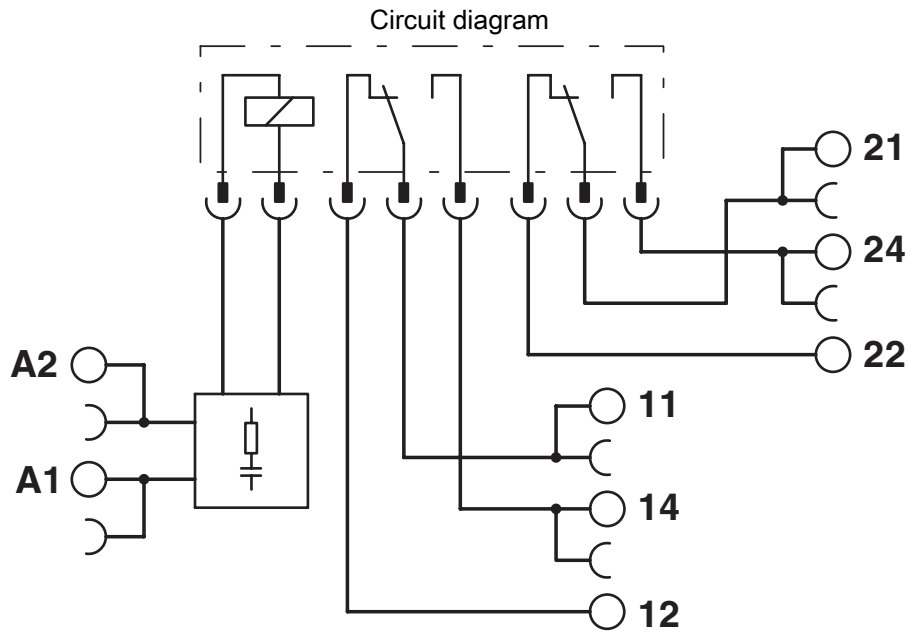
Occurrence of interference signals  
Scenario 2: long signal cables

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2980416>



**cUL Recognized**  
Approval ID: E238705



**UL Recognized**  
Approval ID: E238705



**EAC**  
Approval ID: RU D-DE.B\*00573/18



**DNV GL**  
Approval ID: TAE0000196

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371603 |
| ECLASS-15.0 | 27371603 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001456 |
|-----------|----------|

### 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                                | 7bc9fb1e-275b-470d-9400-8f251c7cc5ae        |

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Phoenix Contact USA  
 586 Fulling Mill Road  
 Middletown, PA 17057, United States  
 (+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)