

1125985  
<https://www.phoenixcontact.com/us/products/1125985>

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PLC-INTERFACE for protection against interference currents/voltages on the control side. Consisting of PLC-BSC-120UC/21-21/SO46 basic terminal block with screw connection and plug-in miniature relay with power contact up to 2x 8 A, 2 changeover contacts, 120 V AC input voltage

Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1125985       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | C461          |
| Product key                          | CK623M        |
| GTIN                                 | 4063151052515 |
| Weight per piece (including packing) | 77.47 g       |
| Weight per piece (excluding packing) | 56.43 g       |
| Customs tariff number                | 85364900      |
| Country of origin                    | DE            |

# PLC-RSC-120UC/21-21/SO46 - Relay module



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## Technical data

### Notes

#### Note on the material

|                    |                                                                                                                                                                                                                         |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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.... |
| Notes on operation | The PLC-ATP separating plate should be installed for safe isolation between adjacent modules                                                                                                                            |
| Assembly note      | The PLC-ATP separating plate is required at the start and end of every PLC terminal strip.                                                                                                                              |
| Notes on operation | The system installer must ensure the touch protection of the product (at voltages > 25 V AC/60 V DC). The product is a built-in device without protection against direct contact.                                       |

### Product properties

|                         |                                |
|-------------------------|--------------------------------|
| Product type            | Relay Module                   |
| Product family          | PLC-INTERFACE                  |
| Application             | Filter to prevent interference |
| Operating mode          | 100% operating factor          |
| Mechanical service life | 3x 10 <sup>7</sup> cycles      |

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

|                      |                  |
|----------------------|------------------|
| Insulation           | Basic insulation |
| Overvoltage category | III              |
| Pollution degree     | 3                |

#### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 01.08.2024 |
|------------------------------|------------|

### Electrical properties

|                                                 |                                                      |
|-------------------------------------------------|------------------------------------------------------|
| Maximum power dissipation for nominal condition | 0.84 W                                               |
| Test voltage (Winding/contact)                  | 4 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact) |

#### Air clearances and creepage distances between the power circuits

|                          |                                                                                                               |
|--------------------------|---------------------------------------------------------------------------------------------------------------|
| Rated insulation voltage | 250 V AC                                                                                                      |
| Rated surge voltage      | 4 kV (Safe isolation, reinforced insulation, and 6 kV between input circuit and output contact current paths) |

### Input data

#### Coil side

|                                      |                                  |
|--------------------------------------|----------------------------------|
| Nominal input voltage U <sub>N</sub> | 120 V AC                         |
|                                      | 110 V DC                         |
| Input voltage range                  | 94.8 V AC ... 168 V AC (20 °C)   |
|                                      | 93.5 V DC ... 168.3 V DC (20 °C) |

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|                                                      |                  |
|------------------------------------------------------|------------------|
| Nominal voltage (plugged-in electromechanical relay) | 60 V DC          |
| Mains frequency                                      | 50/60 Hz         |
| Drive and function                                   | monostable       |
| Drive (polarity)                                     | polarized        |
| 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          |
| Protective circuit                                   | Bridge rectifier |
|                                                      | RC element       |
| Status display                                       | LED (yellow)     |

## Output data

### Switching

|                                       |                        |
|---------------------------------------|------------------------|
| Contact switching type                | 2 changeover contacts  |
| Type of switch contact                | Single contact         |
| Contact material                      | AgNi                   |
| Maximum switching voltage             | 250 V AC/DC            |
| Minimum switching voltage             | 5 V (10 mA)            |
| Limiting continuous current           | 6 A                    |
| Maximum inrush current                | 15 A (300 ms)          |
| Min. switching current                | 10 mA (5 V)            |
| Interrupting rating (ohmic load) max. | 144 W (24 V DC)        |
|                                       | 96 W (48 V DC)         |
|                                       | 60 W (60 V DC)         |
|                                       | 44 W (110 V DC)        |
|                                       | 57 W (220 V DC)        |
|                                       | 1500 VA (250 V AC)     |
| Switching capacity min.               | 0.12 W                 |
| Switching capacity                    | 2 A (at 24 V, DC13)    |
|                                       | 0.2 A (at 250 V, DC13) |
|                                       | 3 A (at 24 V, AC15)    |
|                                       | 3 A (at 250 V, AC15)   |

## 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                                                     |

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|                   |                   |
|-------------------|-------------------|
| Tightening torque | 0.6 Nm ... 0.8 Nm |
|-------------------|-------------------|

## 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)                 | RT III (Relay)               |
| Degree of protection (Relay base)            | IP20 (Relay base)            |
| Degree of protection (Installation location) | IP54 (Installation location) |
| Ambient temperature (operation)              | -40 °C ... 55 °C             |
| Ambient temperature (storage/transport)      | -40 °C ... 85 °C             |
| Altitude                                     | ≤ 2000 m                     |

## Approvals

### CE

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

### UKCA

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

### Shipbuilding approval

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

### Corrosive gas test

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

Air clearances and creepage distances between the power circuits

# PLC-RSC-120UC/21-21/SO46 - Relay module



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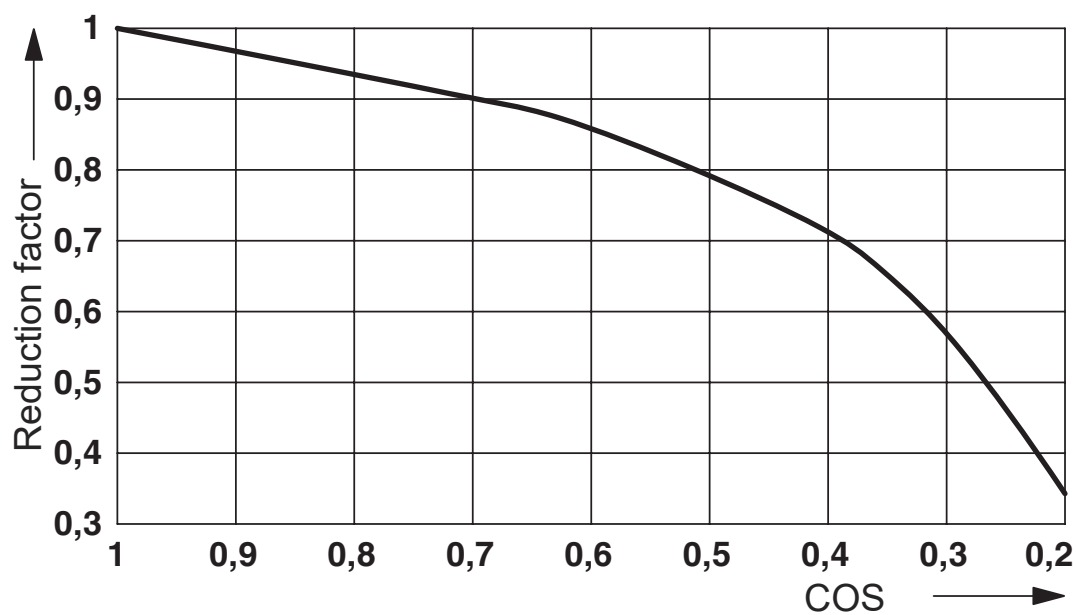
|                       |               |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

### Mounting

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

## Drawings

Diagram



Service life reduction factor

Diagram



Permissible humidity for operation and storage.

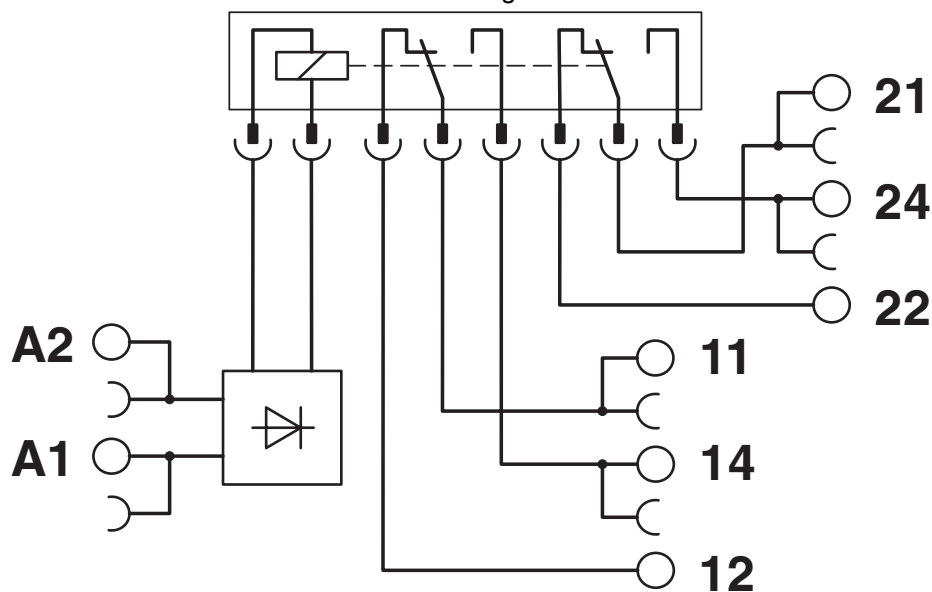
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures  $\leq 0^{\circ}\text{C}$  must be prevented

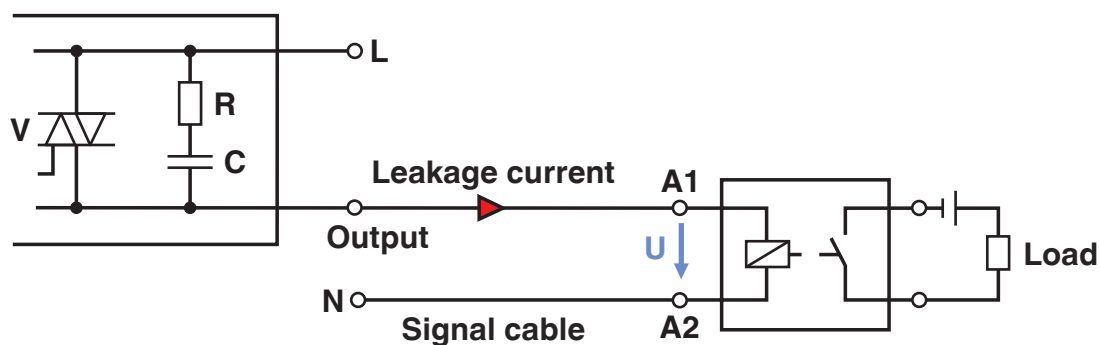
Area B: Condensation at ambient temperatures  $> 0^{\circ}\text{C}$  must be prevented

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

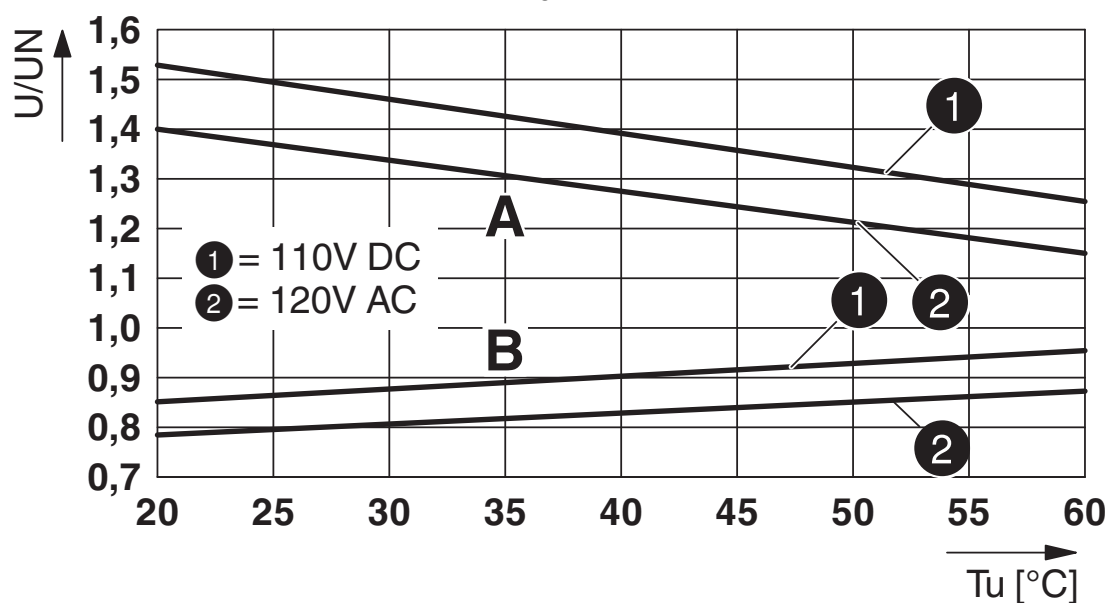


Application drawing



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

Diagram

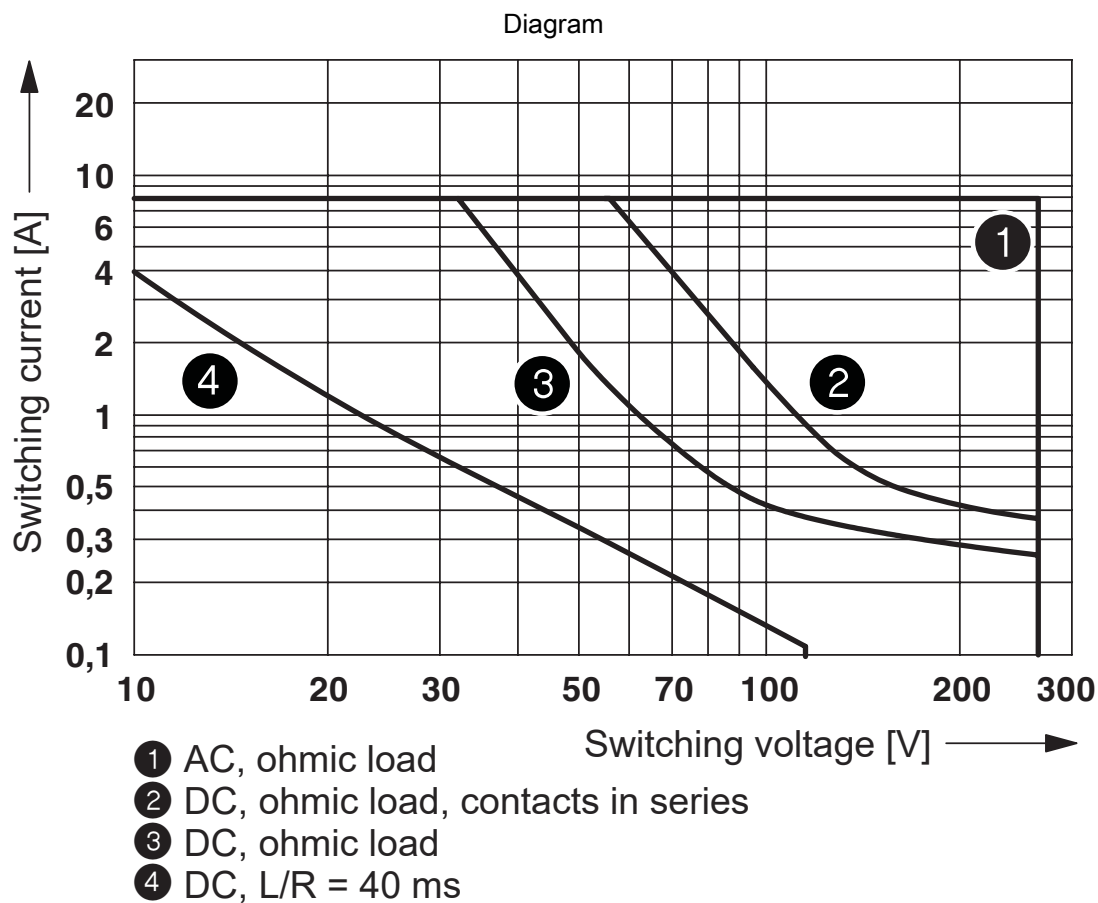


## Curve A

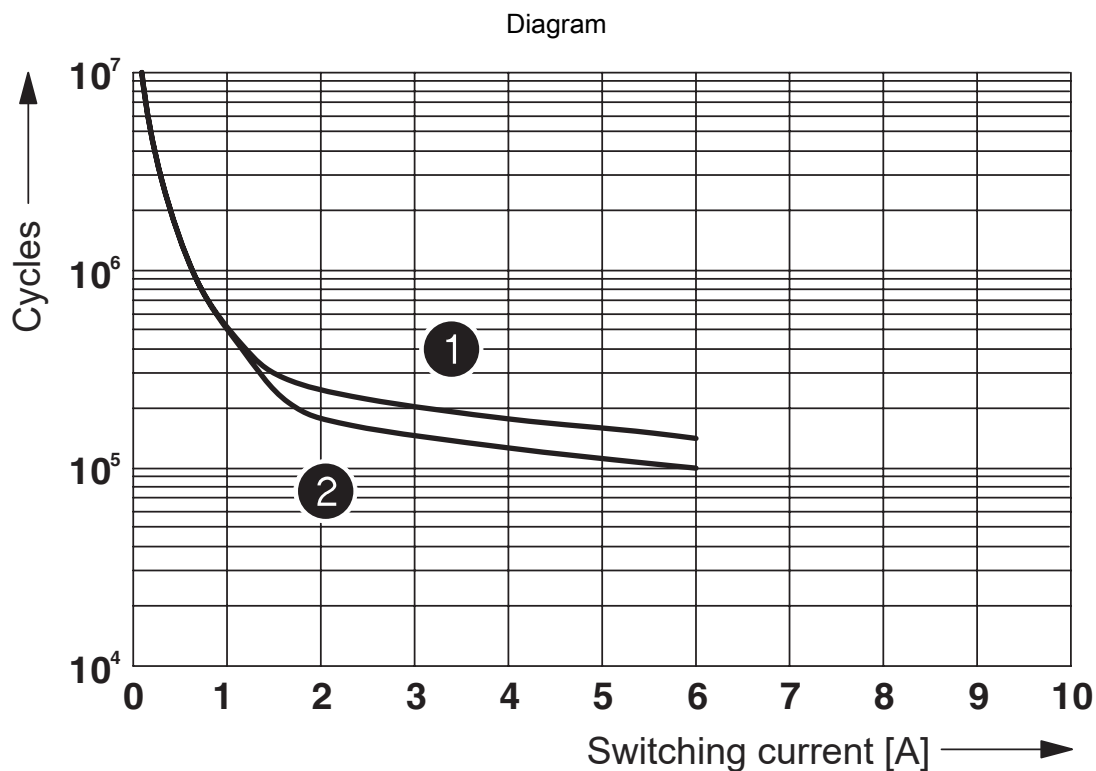
Maximum permissible continuous voltage  $U_{\max}$  with limiting continuous current on the contact side (see relevant technical data)

## Curve B

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



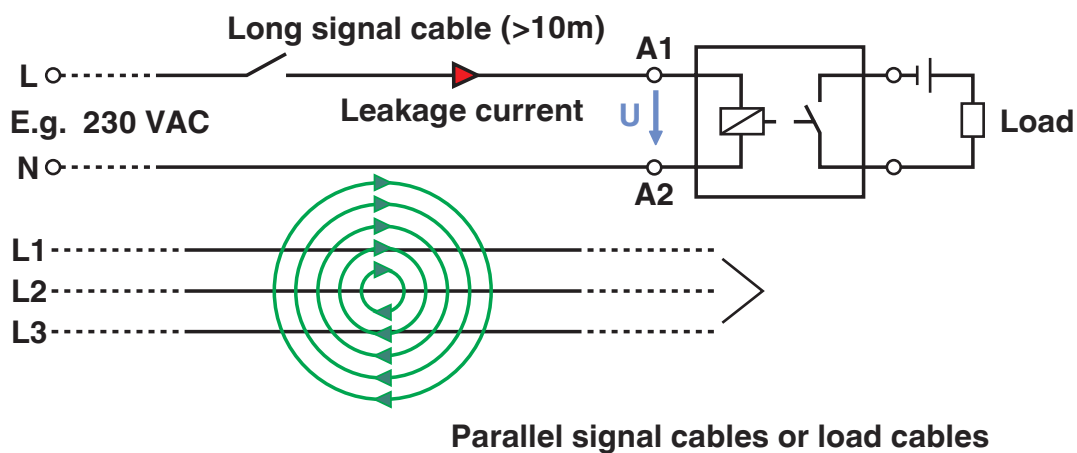
Interrupting rating



- ① 250 V AC, ohmic load (DC coils)
- ② 250 V AC, ohmic load (AC coils)

Electrical service life

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/1125985>



**EAC**

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



**DNV GL**

Approval ID: TAE0000196



**EAC**

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



**cULus Listed**

Approval ID: E140324

# PLC-RSC-120UC/21-21/SO46 - Relay module



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

## 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                                | 7f77ec3c-763f-4abc-aa1d-d3b806db8f66        |