

# RIF-4-RPT-LDP-24DC/2X21 - Relay Module



2903281

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Preamsembled relay module with Push-in connection, consisting of: relay base, power contact relay, and retaining bracket. Contact switching type: 2 changeover contacts. Input voltage: 24 V DC

## Product description

The pluggable electromechanical and solid-state relays in the RIFLINE complete product range and the base are recognized and approved in accordance with UL 508. The relevant approvals can be called up at the individual components in question.

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2903281             |
| Packing unit                         | 5 pc                |
| Minimum order quantity               | 1 pc                |
| Product key                          | CK652C              |
| Catalog page                         | Page 350 (C-5-2019) |
| GTIN                                 | 4046356732864       |
| Weight per piece (including packing) | 208 g               |
| Weight per piece (excluding packing) | 167.06 g            |
| Customs tariff number                | 85364110            |
| Country of origin                    | CN                  |

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## Set consists of

### RIF-4-BPT/3X21 - Relay base

2900961

<https://www.phoenixcontact.com/pc/products/2900961>



Relay base RIF-4..., for high-power relay with 2 or 3 changeover contacts or 3 N/O contacts, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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### REL-PR2- 24DC/2X21 - Single relay

2903698

<https://www.phoenixcontact.com/pc/products/2903698>



Plug-in high-power relay with power contacts, 2 changeover contacts, coil voltage: 24 V DC

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## RIF-LDP-12-24 DC - Plug-in module

2900939

<https://www.phoenixcontact.com/pc/products/2900939>



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with freewheeling diode and yellow LED, polarity: A1+, A2-, input voltage: 12 V DC ... 24 V DC  $\pm 30\%$

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## RIF-RH-4 - Retaining bracket

2900956

<https://www.phoenixcontact.com/pc/products/2900956>



Relay retaining bracket, with holder for marking material, suitable for RIF-4 relay base, for high-power relay

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## Technical data

### Product properties

|                         |                       |
|-------------------------|-----------------------|
| Product type            | Relay Module          |
| Product family          | RIFLINE complete      |
| Application             | Universal             |
| Operating mode          | 100% operating factor |
| Mechanical service life | approx. $10^7$ cycles |

### Insulation characteristics

|            |                  |
|------------|------------------|
| Insulation | Basic insulation |
|------------|------------------|

### Insulation characteristics

|                      |                  |
|----------------------|------------------|
| Insulation           | Basic insulation |
| Overvoltage category | III              |
| Pollution degree     | 2                |

### Electrical properties

|                                                 |                                                        |
|-------------------------------------------------|--------------------------------------------------------|
| Maximum power dissipation for nominal condition | 1.34 W                                                 |
| Test voltage (Winding/contact)                  | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact) |
| Test voltage (Contact/contact)                  | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., contact/contact) |
| Rated insulation voltage                        | 250 V AC                                               |
| Rated surge voltage                             | 4 kV                                                   |

### Input data

#### Coil side

|                                           |                                 |
|-------------------------------------------|---------------------------------|
| Nominal input voltage $U_N$               | 24 V DC                         |
| Input voltage range                       | 20.4 V DC ... 26.4 V DC (20 °C) |
| Input voltage range in reference to $U_N$ | see diagram                     |
| Drive and function                        | monostable                      |
| Typical input current at $U_N$            | 56 mA                           |
| Typical response time                     | 20 ms                           |
| Typical release time                      | 20 ms                           |
| Coil voltage                              | 24 V DC                         |
| Protective circuit                        | Freewheeling diode              |
| Operating voltage display                 | Yellow LED                      |

### Output data

#### Switching

|                           |                       |
|---------------------------|-----------------------|
| Contact switching type    | 2 changeover contacts |
| Type of switch contact    | Single contact        |
| Contact material          | AgNi                  |
| Maximum switching voltage | 440 V AC              |

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|                                                |                                          |
|------------------------------------------------|------------------------------------------|
|                                                | 250 V DC                                 |
| Minimum switching voltage                      | 10 V (24 mA)                             |
| Limiting continuous current                    | 11 A (see diagram)                       |
| Maximum inrush current                         | 50 A (20 ms, N/O contacts)               |
| Min. switching current                         | 10 mA (24 V)                             |
| Interrupting rating (ohmic load) max.          | 240 W (24 V DC)                          |
|                                                | 124 W (48 V DC)                          |
|                                                | 108 W (60 V DC)                          |
|                                                | 52 W (110 V DC)                          |
|                                                | 70 W (220 V DC)                          |
|                                                | 2500 VA (250 V AC)                       |
|                                                | 4000 VA (440 V AC)                       |
| Single-phase motor load                        | 800 W                                    |
| Motor load according to UL 508                 | 1/3 HP, 120 V AC (single-phase AC motor) |
|                                                | 1/2 HP, 240 V AC (single-phase AC motor) |
| Utilization category CB Scheme (IEC 60947-5-1) | AC15, 1.5 A/240 V (N/O contact)          |
|                                                | DC13, 2 A/240 V (N/O contact)            |

## Connection data

### Coil side

|                                  |                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Connection method                | Push-in connection                                                                                                |
| Stripping length                 | 8 mm                                                                                                              |
| Conductor cross section rigid    | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                                                      |
| Conductor cross section flexible | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>                                                                      |
|                                  | 0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> (Ferrule with plastic sleeve)                                        |
|                                  | 0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup> (Ferrule with plastic sleeve, two conductors on double terminal block) |
| Conductor cross section AWG      | 26 ... 16 (solid)                                                                                                 |
|                                  | 26 ... 16 (flexible)                                                                                              |

### Contact side

|                                  |                                                                                                                   |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------|
| 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>                                                                      |
|                                  | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Ferrule with plastic sleeve)                                        |
|                                  | 0.14 mm <sup>2</sup> ... 1 mm <sup>2</sup> (Ferrule with plastic sleeve, two conductors on double terminal block) |
| Conductor cross section AWG      | 26 ... 14 (solid)                                                                                                 |
|                                  | 26 ... 14 (flexible)                                                                                              |

## Dimensions

### Drill hole

|          |        |
|----------|--------|
| Diameter | 3.2 mm |
|----------|--------|

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|        |        |
|--------|--------|
| Width  | 43 mm  |
| Height | 111 mm |
| Depth  | 90 mm  |

## Material specifications

|                                        |                 |
|----------------------------------------|-----------------|
| Color                                  | gray (RAL 7042) |
| Flammability rating according to UL 94 | V2 (Housing)    |

## Environmental and real-life conditions

### Ambient conditions

|                                         |                   |
|-----------------------------------------|-------------------|
| Degree of protection (Relay base)       | IP20 (Relay base) |
| Degree of protection (Relay)            | RT I (Relay)      |
| Ambient temperature (operation)         | -40 °C ... 60 °C  |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C  |

## Approvals

### Corrosive gas test

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

## Standards and regulations

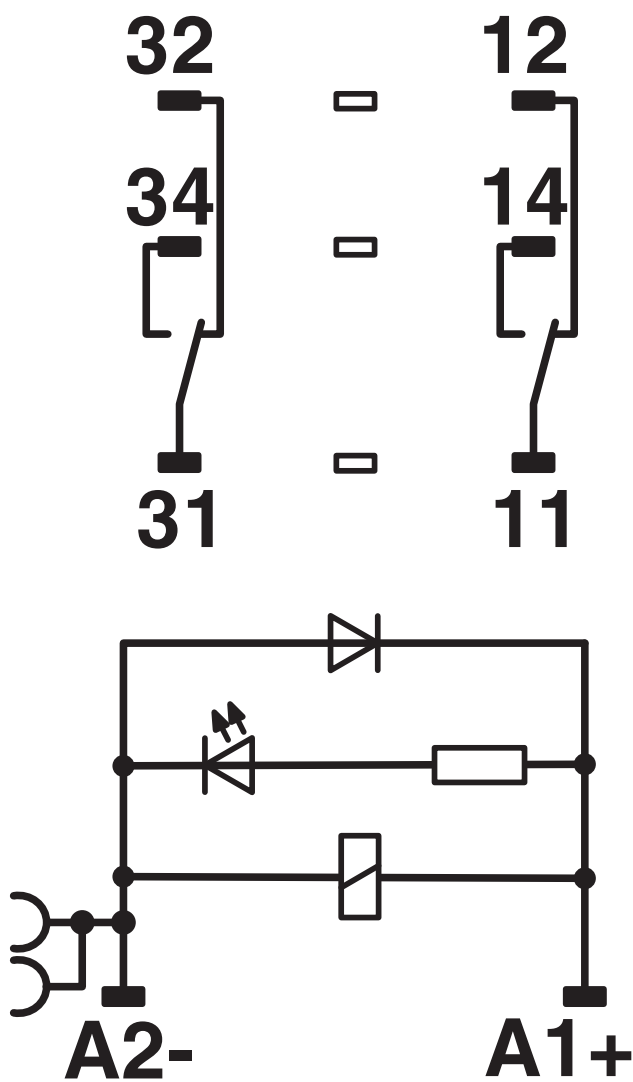
|                       |              |
|-----------------------|--------------|
| Standards/regulations | DIN EN 50178 |
|-----------------------|--------------|

## Mounting

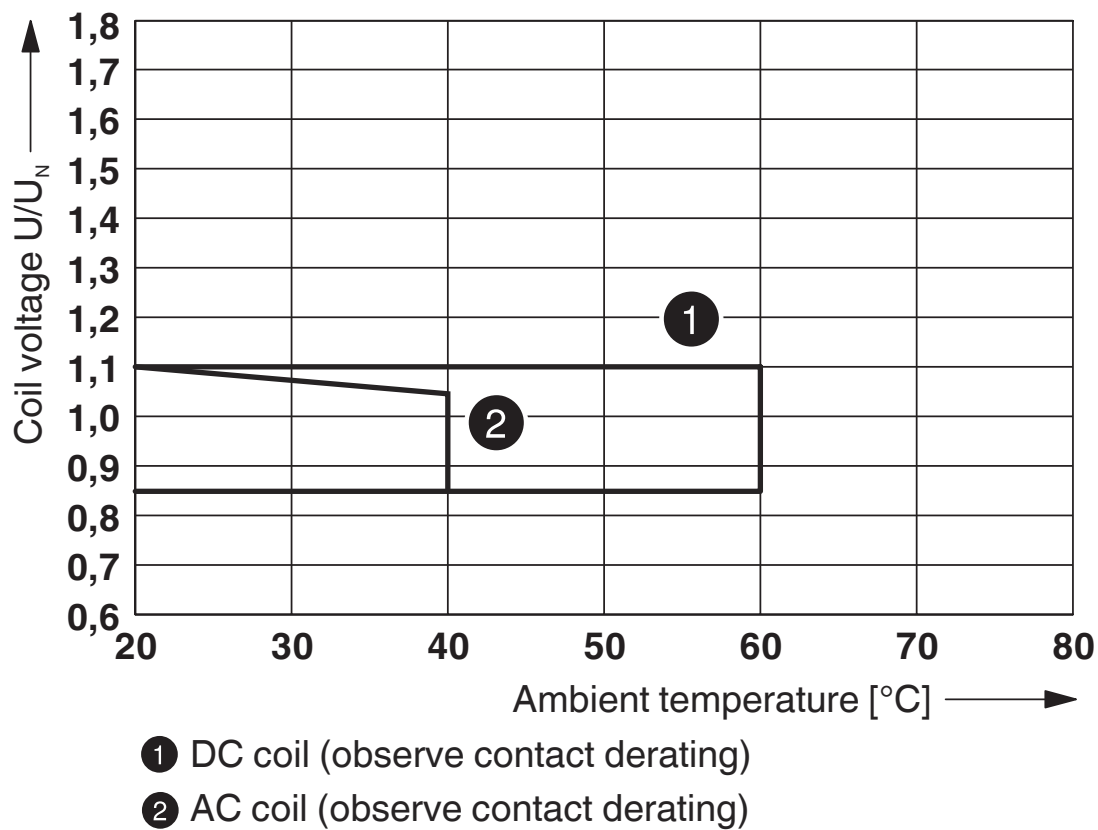
|                       |                           |
|-----------------------|---------------------------|
| Mounting type         | DIN rail mounting         |
| Assembly instructions | in rows with zero spacing |
| Mounting position     | any                       |

## Drawings

Circuit diagram

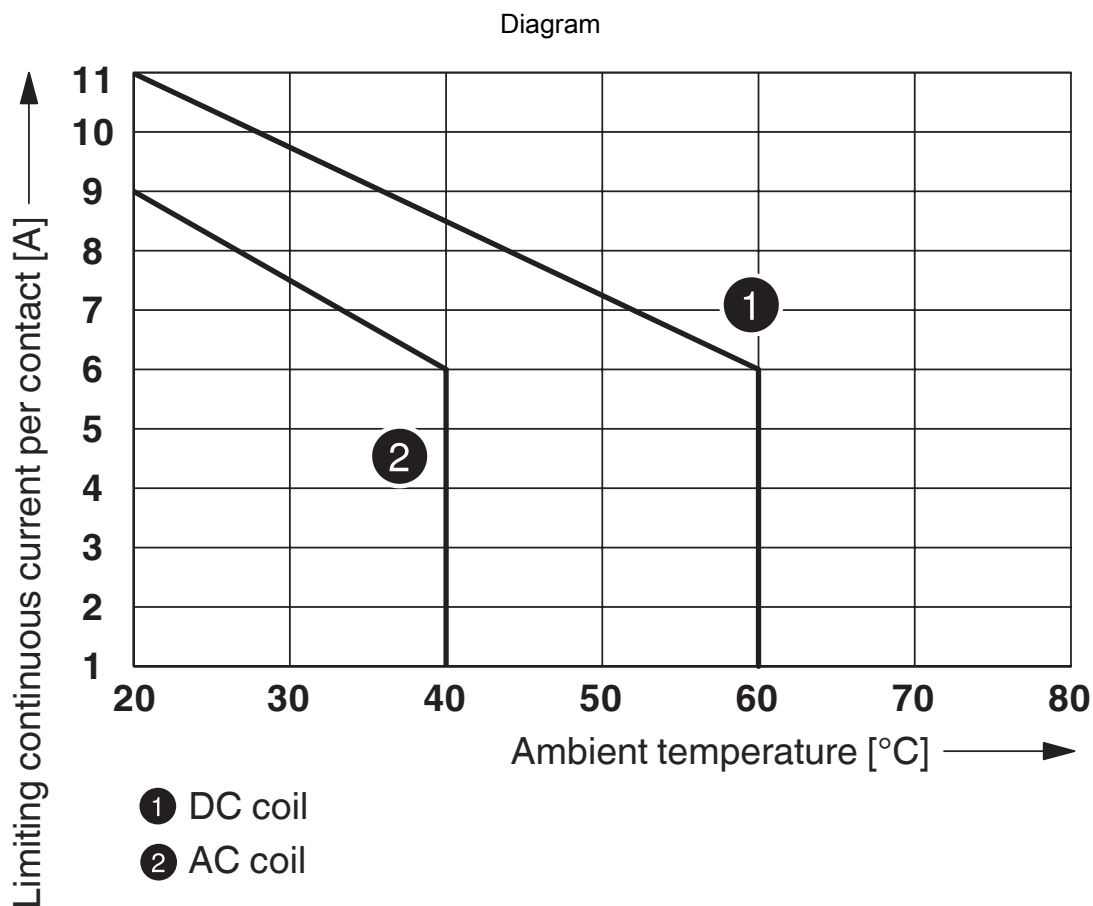


Diagram



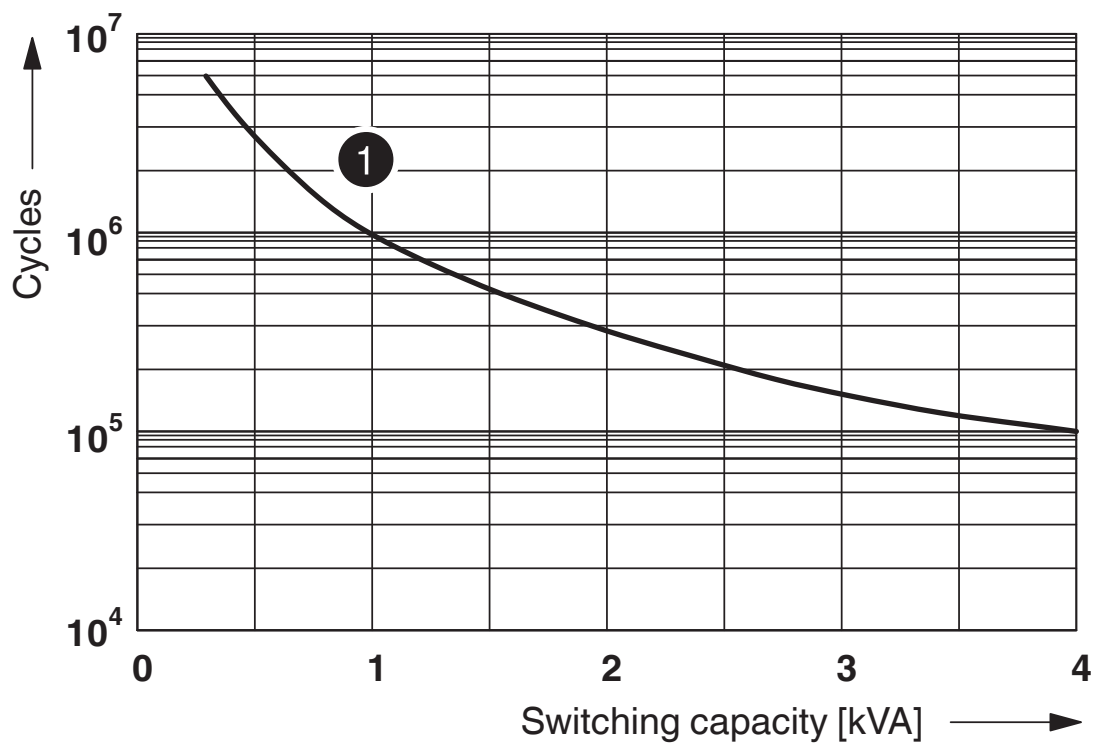
Operating voltage range





Contact derating

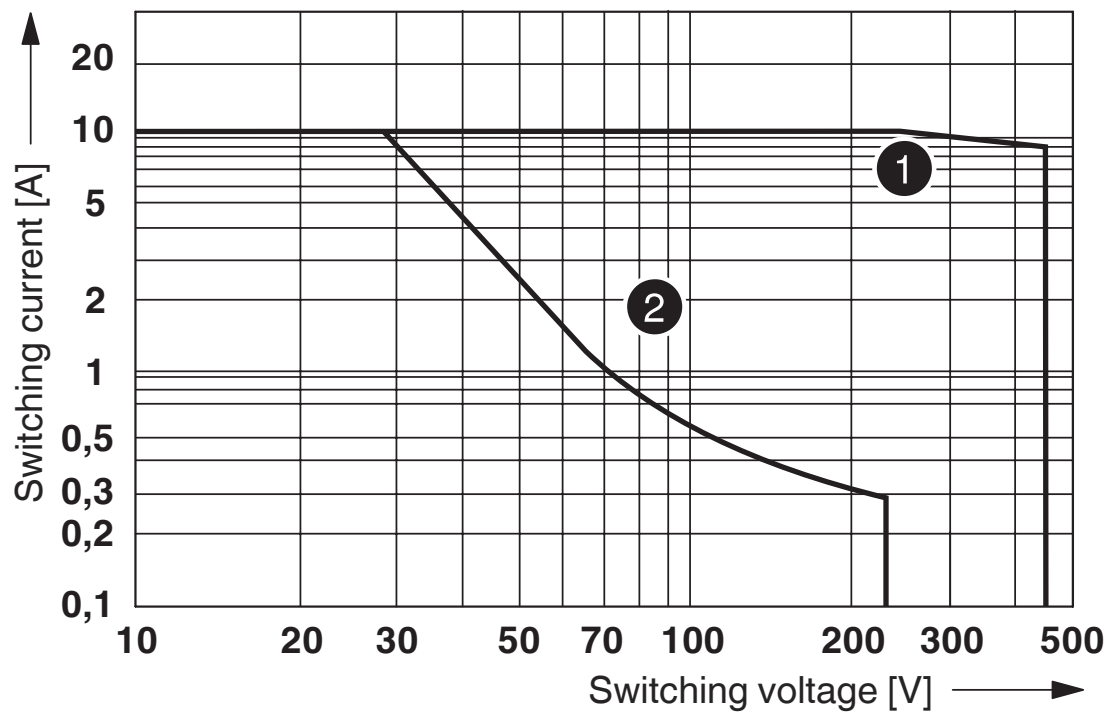
Diagram



① 250 V AC, Ohmic load

Electrical service life

Diagram

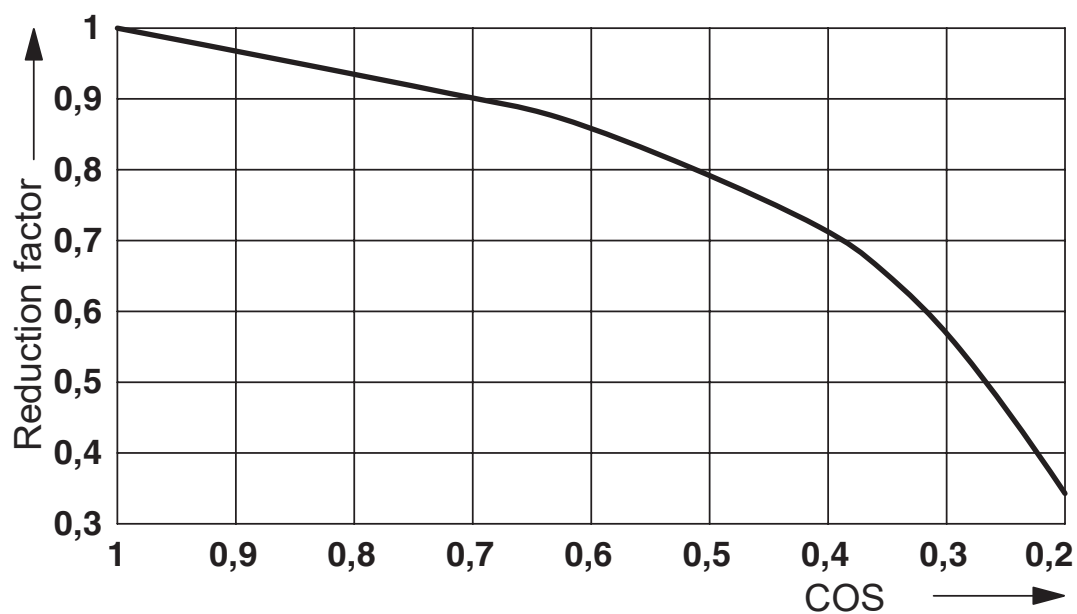


① AC, ohmic load

② DC, ohmic load

Interrupting rating

Diagram



Service life reduction factor

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27371601 |
|-------------|----------|

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC001437 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39122300 |
|-------------|----------|

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## Environmental product compliance

|            |                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50 years                                                               |
|            | For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads" |

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