

# Single relay - REL-PR3-48DC/3X21



2908894

<https://www.phoenixcontact.com/us/products/2908894>

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Plug-in high-power relay with power contacts, 3 N/O contacts, coil voltage: 48 V DC



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## Commercial Data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2908894       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales Key                            | C05           |
| Product Key                          | CK6193        |
| GTIN                                 | 4055626353920 |
| Weight per Piece (including packing) | 85.1 g        |
| Weight per Piece (excluding packing) | 85.1 g        |
| Customs tariff number                | 85364190      |
| Country of origin                    | PL            |

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## Technical Data

### Notes

|                    |  |
|--------------------|--|
| Notes on operation | The outputs are not suitable for switching different outer conductors.                                     |
| Notes on operation | Do not use to separate SELV / PELV circuits from other circuits, because safe isolation is not guaranteed. |

### Product properties

|                         |                       |
|-------------------------|-----------------------|
| Product type            | Single relay          |
| Operating mode          | 100% operating factor |
| Mechanical service life | approx. $10^7$ cycles |

### Insulation characteristics

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

### Electrical properties

|  |  |
|--|--|
| Service life electrical                            | see diagram  |
| Test voltage                                       | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)                       |
| Test voltage Changeover contact/changeover contact | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., changeover contact/changeover contact) |
| Rated insulation voltage                           | 250 V AC   |
| Rated surge voltage                                | 4 kV   |

### Input data

#### Coil side

|                                   |                                 |
|-----------------------------------|---------------------------------|
| Nominal input voltage $U_N$       | 48 V DC                         |
| Input voltage range               | 40.8 V DC ... 52.8 V DC (20 °C) |
| Typical input current at $U_N$    | 28 mA                           |
| Input power dissipation for $U_N$ | 1.32 W                          |
| Typical response time             | 20 ms                           |
| Typical release time              | 15 ms                           |
| Coil resistance                   | 1750 $\Omega$ $\pm$ 10 %        |

### Output data

#### Switching

|                           |                       |
|---------------------------|-----------------------|
| Contact type              | 3 changeover contacts |
| Type of switch contact    | Single contact        |
| Drive and function        | monostable            |
| Drive (polarity)          | bipolar               |
| Contact material          | AgNi                  |
| Maximum switching voltage | 440 V AC              |

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|                                       |  |
|---------------------------------------|--|
|                                       | 250 V DC                                       |
| Minimum switching voltage             | 10 V (At 24 mA)                                |
| Limiting continuous current           | 16 A   |
| Maximum inrush current                | 50 A (20 ms, N/O contacts)                     |
| Min. switching current                | 10 mA (at 24 V)                                |
| Interrupting rating (ohmic load) max. | 384 W (at 24 V DC)                             |
|                                       | 124 W (at 48 V DC)                             |
|                                       | 108 W (at 60 V DC)                             |
|                                       | 52 W (at 110 V DC)                             |
|                                       | 70 W (at 220 V DC)                             |
|                                       | 4000 VA (for 250 V AC)                         |
|                                       | 4000 VA (at 440 V AC)                          |
| 3-phase motor load                    | 1500 W (at 400 V, AC3)                         |
| 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)       |
|                                       | 1/2 HP, 240 V AC (three-phase induction motor) |

## Connection data

|                   |                    |
|-------------------|--------------------|
| Connection method | Plug-in connection |
|-------------------|--------------------|

## Dimensions

|        |         |
|--------|---------|
| Width  | 38.6 mm |
| Height | 36.1 mm |
| Depth  | 45.5 mm |

## Environmental and real-life conditions

### Ambient conditions

|   |                                |
|---|--------------------------------|
| Degree of protection                    | RT I                           |
|   | ≥ IP54 (Installation location) |
| Ambient temperature (operation)         | -40 °C ... 70 °C               |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C               |
| Altitude                                | ≤ 2000 m                       |

## Approval data

### Corrosive gas test

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

## Standards and regulations

|                       |           |
|-----------------------|-----------|
| Standards/regulations | IEC 60664 |
|                       | IEC 61810 |

## Mounting

|                   |     |
|-------------------|-----|
| Mounting position | any |
|-------------------|-----|

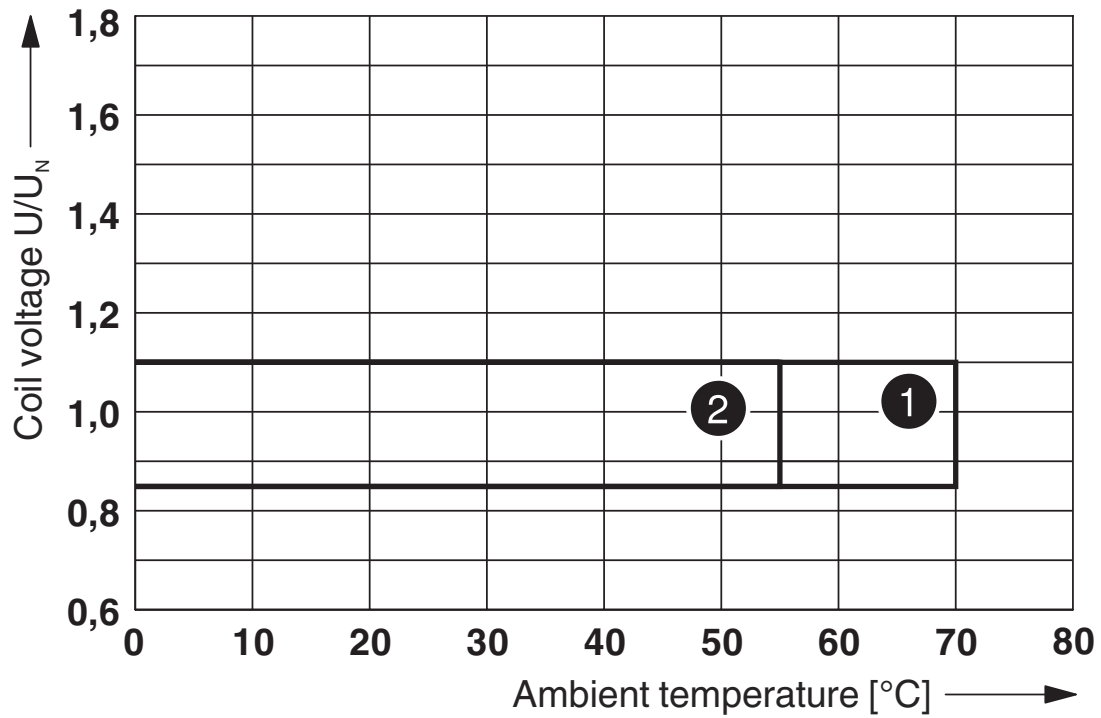
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## Drawings

Diagram



- ① DC coils
- ② AC coils

Operating voltage range

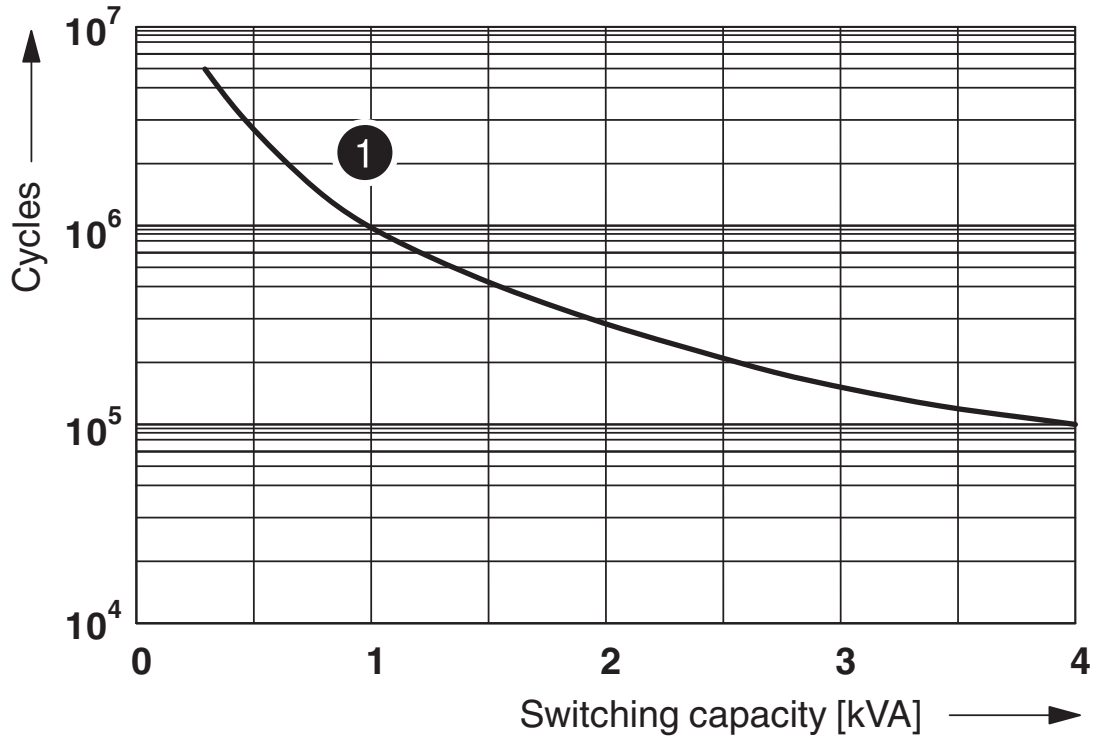
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Diagram



① 250 V AC, Ohmic load

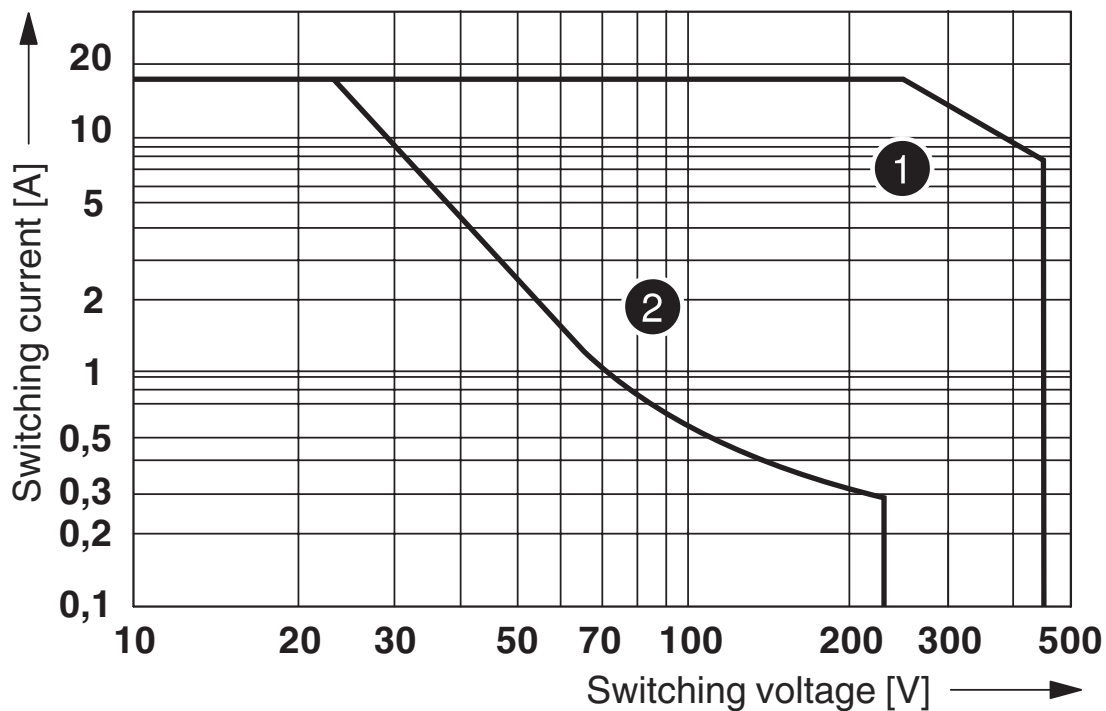
Electrical service life

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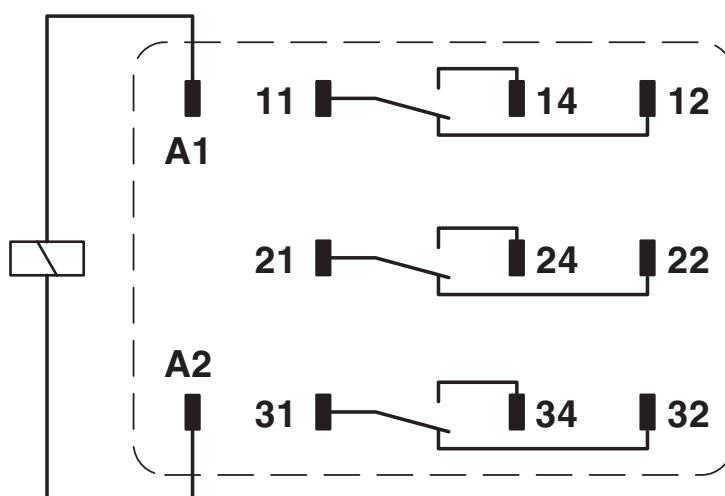
Diagram



- ① AC, ohmic load
- ② DC, ohmic load

Interrupting rating

Circuit diagram



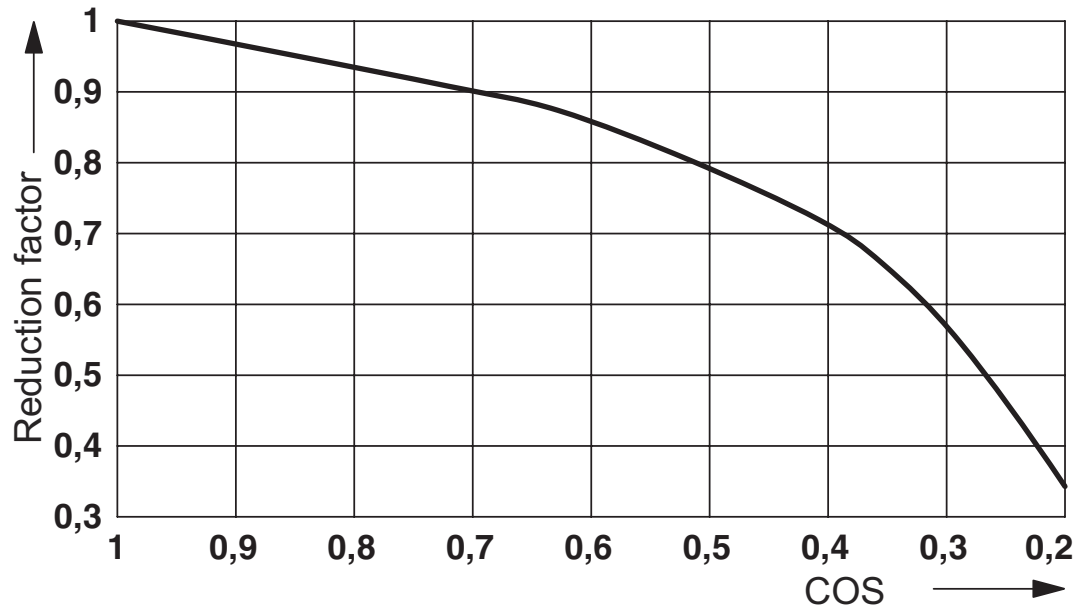
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Diagram



Service life reduction factor

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## Approvals

 **CSA**  
Approval ID: 2554095

 **cUL Recognized**  
Approval ID: FILE E 172140

 **UL Recognized**  
Approval ID: FILE E 172140

 **EAC**  
Approval ID: TR\_TS\_D\_00573\_c

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

**cULus Recognized**

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## Classifications

### ECLASS

|               |          |
|---------------|----------|
| ECLASS-9.0    | 27371601 |
| ECLASS-10.0.1 | 27371601 |
| 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: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

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## Accessories

### Relay base

Relay base - RIF-4-BPT/3X21 - 2900961

<https://www.phoenixcontact.com/us/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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### Relay base

Relay base - RIF-4-BSC/3X21 - 2900960

<https://www.phoenixcontact.com/us/products/2900960>



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

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