

RIF-1-RPT-LV-120AC/2X21 - Relay Module



2903332

<https://www.phoenixcontact.com/us/products/2903332>

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Preassembled relay module with Push-in connection, consisting of: relay base, power contact relay, plug-in display/interference suppression module, and retaining bracket. Contact switching type: 2 changeover contacts. Input voltage: 120 V AC

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 | 2903332 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C465 |
| Product key | CK6529 |
| Catalog page | Page 327 (C-5-2019) |
| GTIN | 4046356732291 |
| Weight per piece (including packing) | 68 g |
| Weight per piece (excluding packing) | 68 g |
| Customs tariff number | 85364900 |
| Country of origin | CN |

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Set consists of

RIF-1-BPT/2X21 - Relay base

2900931

<https://www.phoenixcontact.com/us/products/2900931>

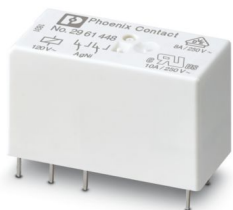


Relay base RIF-1..., for miniature power relay with 1 or 2 changeover contacts or solid-state relays of the same design, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

REL-MR-120AC/21-21 - Single relay

2961448

<https://www.phoenixcontact.com/us/products/2961448>



Plug-in miniature power relay, with power contact, 2 changeover contacts, input voltage 120 V AC

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RIF-LV-120-230 AC/110 DC - Plug-in module

2900944

<https://www.phoenixcontact.com/us/products/2900944>



Plug-in module, for mounting on RIF-1, RIF-2, RIF-3, and RIF-4, with varistor and yellow LED, input voltage: 120 V AC... 230 V AC / 110 V DC \pm 20 %

RIF-RH-1 - Retaining bracket

2900953

<https://www.phoenixcontact.com/us/products/2900953>



Relay retaining bracket, with ejector function and holder for marking material, suitable for RIF-1 relay base, for 16 mm tall miniature power relay and solid-state relay

Technical data

Notes

| | |
|--------------------|---|
| Notes on operation | FBS 2-6... plug-in bridge for the input side (A2) and FBS-2-8... plug-in bridge for the output side (11/21) |
|--------------------|---|

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 | Safe isolation between input and output |
| | Basic insulation between the changeover contacts |

Insulation characteristics

| | |
|----------------------|--|
| Insulation | Safe isolation between input and output |
| | Basic insulation between the changeover contacts |
| Overvoltage category | III |
| Pollution degree | 2 |

Electrical properties

| | |
|--|--|
| Service life electrical | see diagram |
| Maximum power dissipation for nominal condition | 1 W |
| Test voltage (Winding/contact) | 4 kV _{rms} (50 Hz, 1 min., winding/contact) |
| Test voltage (Changeover contact/changeover contact) | 2.5 kV _{rms} (50 Hz, 1 min., changeover contact/changeover contact) |
| Rated surge voltage | 6 kV (Input/output) |
| | 4 kV (between the changeover contacts) |

Input data

Coil side

| | |
|---|------------------------------|
| Nominal input voltage U_N | 120 V AC |
| Input voltage range | 96 V AC ... 138 V AC (20 °C) |
| Input voltage range in reference to U_N | see diagram |
| Mains frequency | 50/60 Hz |
| Drive and function | monostable |
| Drive (polarity) | polarized |
| Typical input current at U_N | 8 mA |
| Typical response time | 3 ms ... 12 ms |
| Typical release time range | 3 ms ... 20 ms |
| Coil voltage | 120 V AC |

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| | |
|---------------------------|------------|
| Protective circuit | Varistor |
| 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 | 250 V AC/DC |
| Minimum switching voltage | 5 V (10 mA) |
| Limiting continuous current | 8 A (see diagram) |
| Maximum inrush current | 12 A (20 ms, N/O contacts) |
| Min. switching current | 10 mA (5 V) |
| Interrupting rating (ohmic load) max. | 192 W (at 24 V DC) 124 W (at 48 V DC) 60 W (at 60 V DC) 44 W (at 110 V DC) 57 W (at 220 V DC) 2000 VA (for 250 V AC) |
| Utilization category CB Scheme (IEC 60947-5-1) | AC15, 1.5 A/240 V (N/O contact) AC15, 2 A/250 V (N/C contact) DC13, 2 A/24 V (N/C contact) DC13, 0.2 A/250 V (N/O contact) |

Connection data

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

Dimensions

Drill hole

| | |
|----------|--------|
| Diameter | 3.2 mm |
| Width | 16 mm |
| Height | 96 mm |
| Depth | 75 mm |

Material specifications

| | |
|-------|-----------------|
| Color | gray (RAL 7042) |
|-------|-----------------|

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| | |
|--|--------------|
| 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 III (Relay) |
| Ambient temperature (operation) | -40 °C ... 50 °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

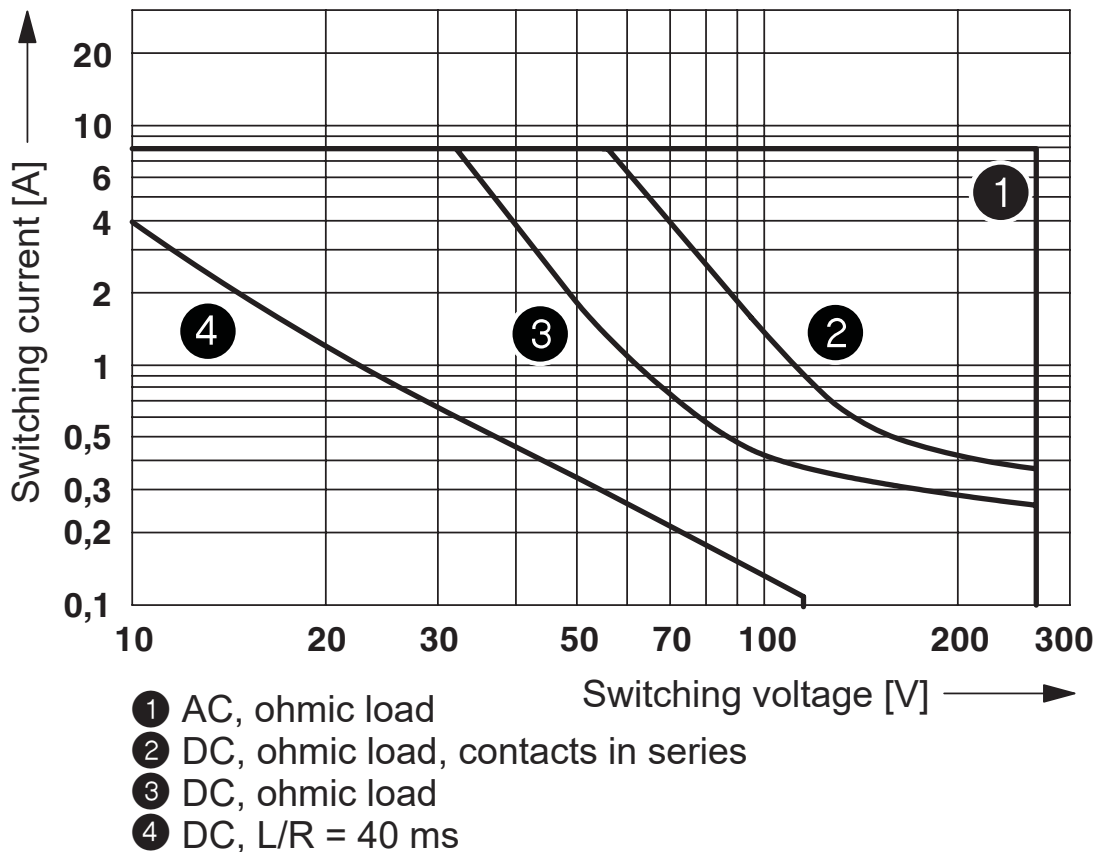
| | |
|-----------------------|---------------|
| Standards/regulations | IEC 60947-5-1 |
|-----------------------|---------------|

Mounting

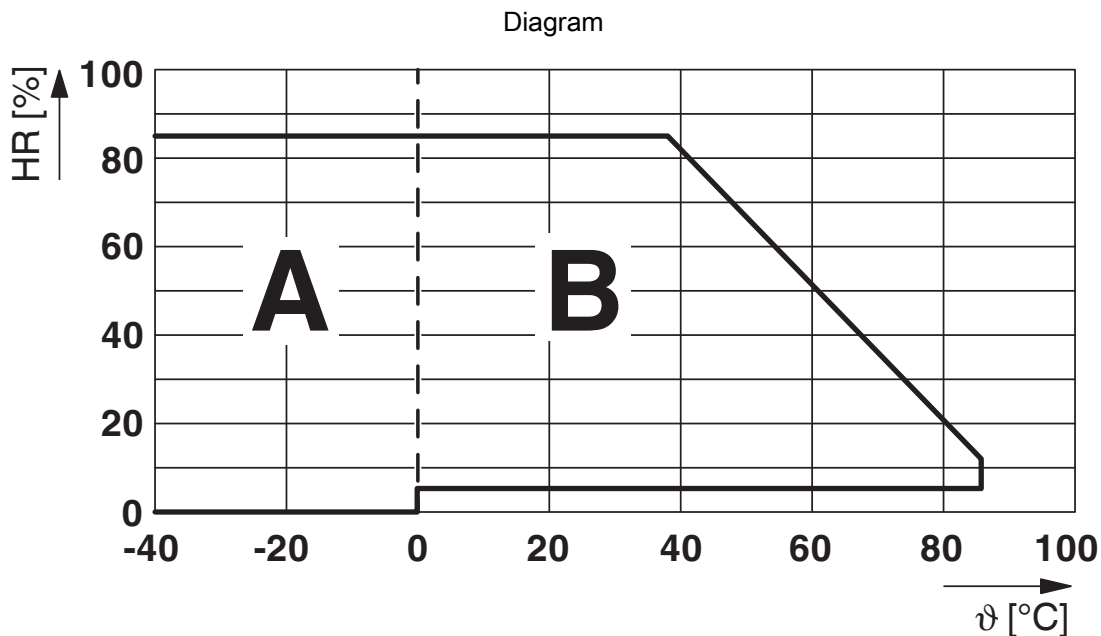
| | |
|-----------------------|---------------------------|
| Mounting type | DIN rail mounting |
| Assembly instructions | in rows with zero spacing |
| Mounting position | any |

Drawings

Diagram



Interrupting rating



Permissible humidity for operation and storage.

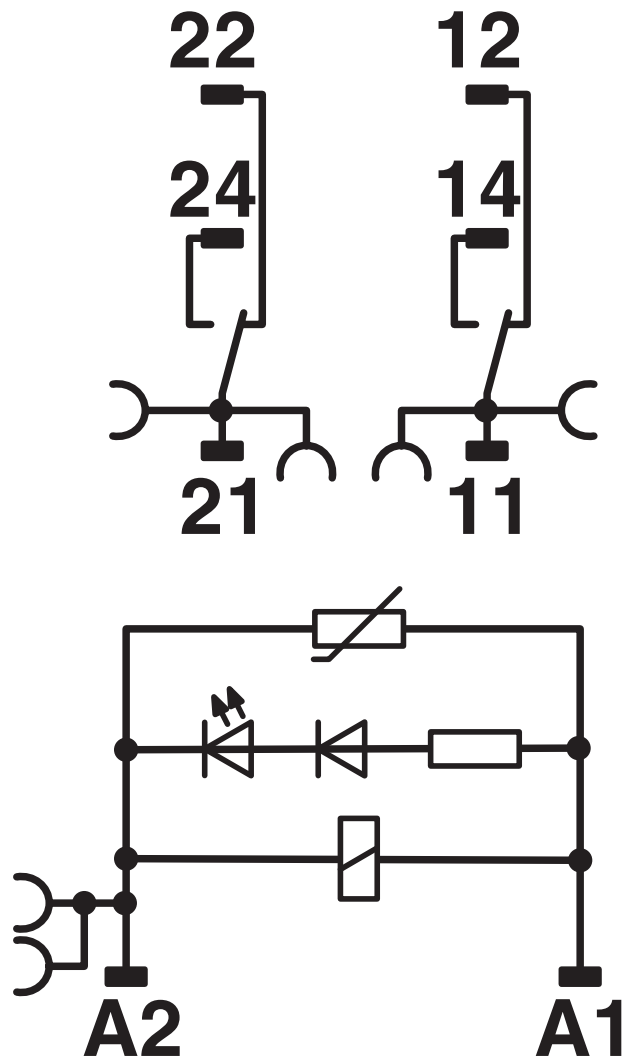
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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 $\leq 25^\circ\text{C}$.

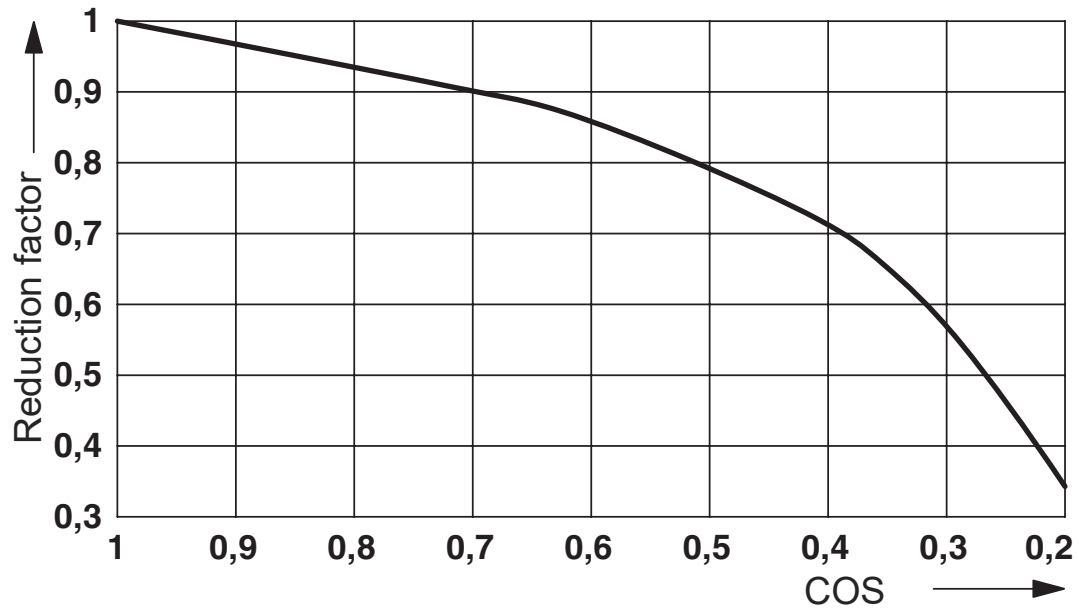
Circuit diagram



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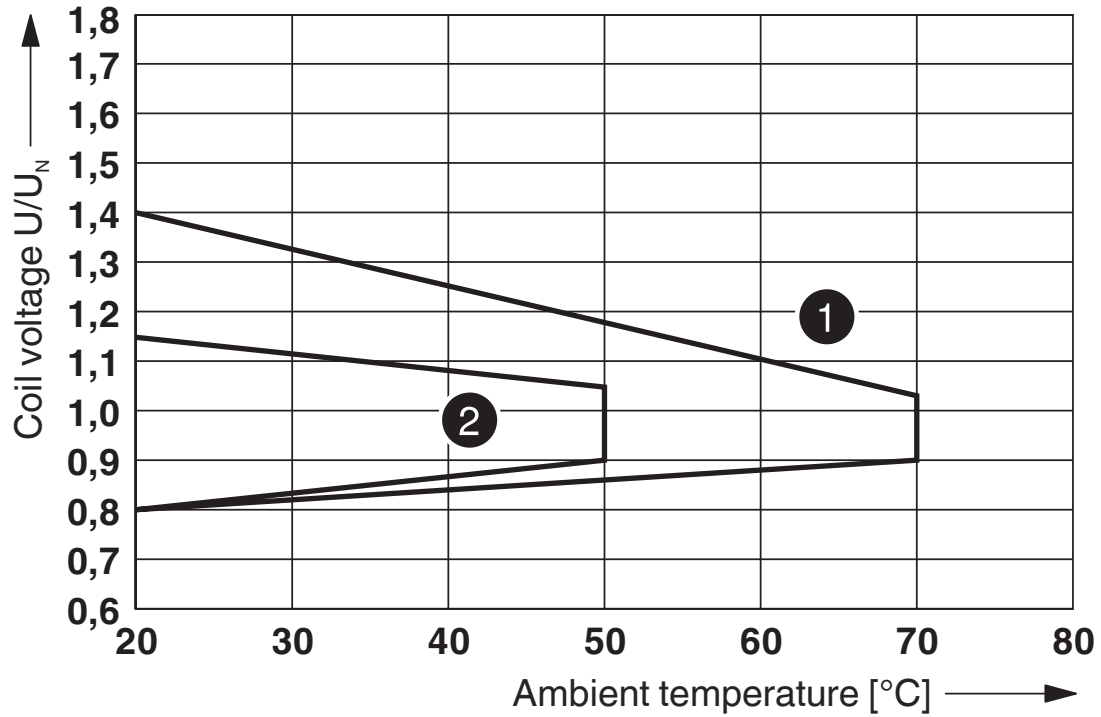
<https://www.phoenixcontact.com/us/products/2903332>

Diagram



Service life reduction factor

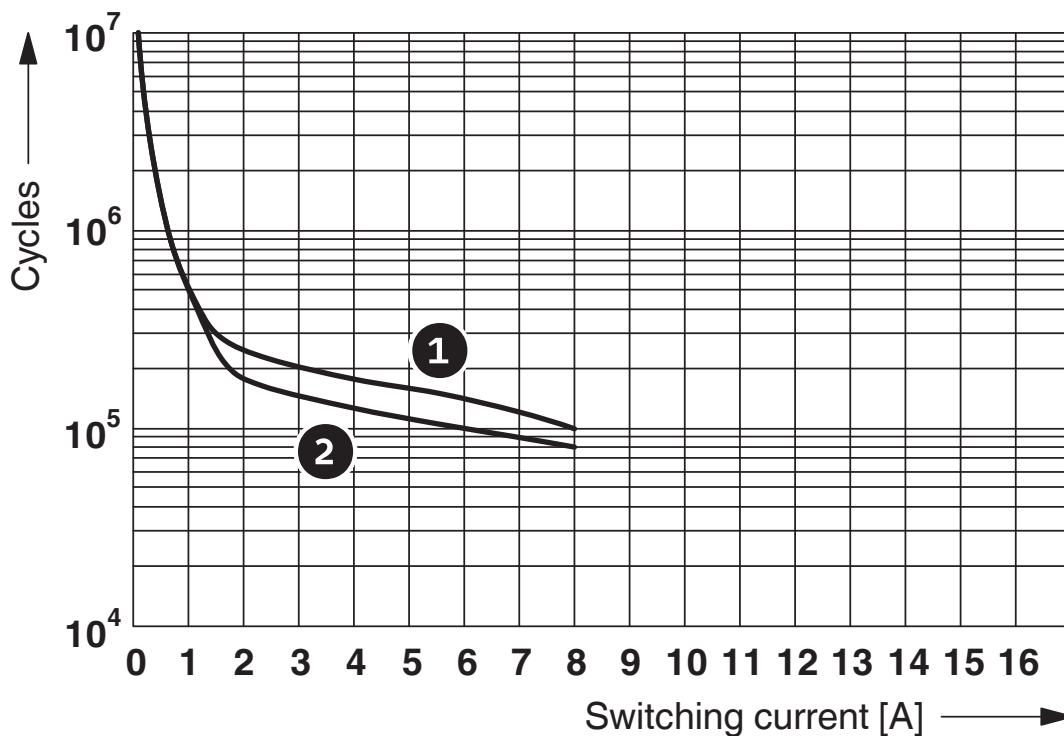
Diagram



- ① DC coils
- ② AC coils

Operating voltage range

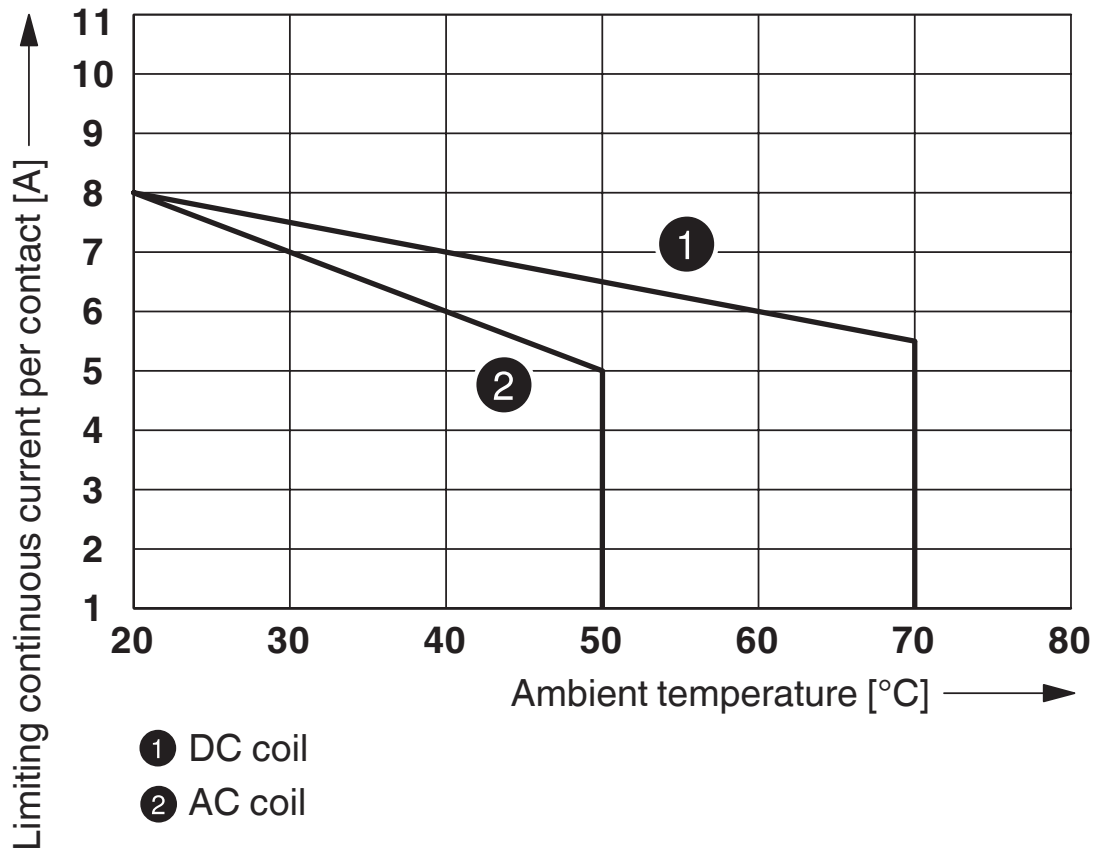
Diagram



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

Electrical service life

Diagram



Contact derating

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2903332>



EAC

Approval ID: TR_TS_D_00573_c



DNV GL

Approval ID: TAA000018V



EAC

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



DNV GL

Approval ID: TAA000018V

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

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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.) | Lead(CAS: 7439-92-1) |
|-------------------------------------|----------------------|

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