

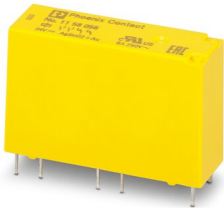
REL-SR- 24DC/2X1AU/2X2AU/FG - Safety relays



1158056

<https://www.phoenixcontact.com/us/products/1158056>

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Safety relay with force-guided contacts in accordance with DIN EN 61810-3 (type A), input voltage 24 V DC, with multi-layer gold contact, 2 N/O contacts and 2 N/C contacts

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1158056 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | C460 |
| Product key | CK6194 |
| GTIN | 4063151164010 |
| Weight per piece (including packing) | 22.14 g |
| Weight per piece (excluding packing) | 22.14 g |
| Customs tariff number | 85364190 |
| Country of origin | CN |

Technical data

Product properties

| | |
|-------------------------|---|
| Product type | Single relay |
| Application | Forcibly guided contacts |
| Operating mode | 100% operating factor |
| Mechanical service life | approx. 10 ⁷ cycles |
| B _{10d} | 810000 Cycles (AC15, 250 V / 0.5 A, 1 NO) |
| | 170000 Cycles (AC15; 250 V / 2 A; 1 NO) |
| | 318000 Cycles (DC13, 24 V / 1 A, 1 NO) |
| | 208000 Cycles (DC13, 24 V / 2 A, 1 NO) |

Insulation characteristics

| | |
|------------|--|
| Insulation | Basic insulation |
| | Safe isolation, reinforced insulation and 6 kV between the coil and the contact circuit and between the contacts 3-4, 5-6 to 7-8, 9-10 |

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

| | |
|----------------------|--|
| Insulation | Basic insulation |
| | Safe isolation, reinforced insulation and 6 kV between the coil and the contact circuit and between the contacts 3-4, 5-6 to 7-8, 9-10 |
| Overvoltage category | III |
| Pollution degree | 2 |

Electrical properties

| | |
|---|--|
| Maximum power dissipation for nominal condition | 0.36 W |
| Test voltage (Winding/contact) | 4 kV _{rms} (50 Hz, 1 min., winding/contact) |
| Test voltage (Contact/contact) | 2.5 kV _{rms} (50 Hz, 1 min., contact/contact) |

Air clearances and creepage distances between the power circuits

| | |
|--------------------------|----------|
| 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 | 19.2 V DC ... 26.4 V DC |
| Input voltage range in reference to U _N | see diagram |
| Drive and function | monostable |
| Drive (polarity) | non-polarized |
| Typical input current at U _N | 15 mA |
| Typical response time | 10 ms |
| Typical release time | 5 ms |

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Output data

Switching

| | |
|---|--|
| Contact switching type | 2 N/O contacts, 2 N/C contacts, force-guided |
| Type of switch contact | Single contact |
| Contact material | AgSnO, hard gold-plated |
| Maximum switching voltage | 250 V AC 300 V DC |
| Minimum switching voltage | 10 V |
| Limiting continuous current | 6 A |
| Maximum inrush current | 35 A (20 ms) |
| Min. switching current | 5 mA (10 V) |
| Interrupting rating (ohmic load) max. | 144 W (24 V DC) 100 W (48 V DC) 75 W (60 V DC) 55 W (110 V DC) 50 W (220 V DC) 1500 VA (250 V AC) |
| Switching capacity | 2 A (24 V, DC13) 3 A (230 V, AC15) |
| Force-guided contacts in accordance with EN 61810-3 | Type A |

Connection data

| | |
|-------------------|--------------------------|
| Connection method | Plug / solder connection |
|-------------------|--------------------------|

Dimensions

| | |
|--------|-------|
| Width | 13 mm |
| Height | 24 mm |
| Depth | 40 mm |

Environmental and real-life conditions

Ambient conditions

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

Approvals

Corrosive gas test

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

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Standards and regulations

Air clearances and creepage distances between the power circuits

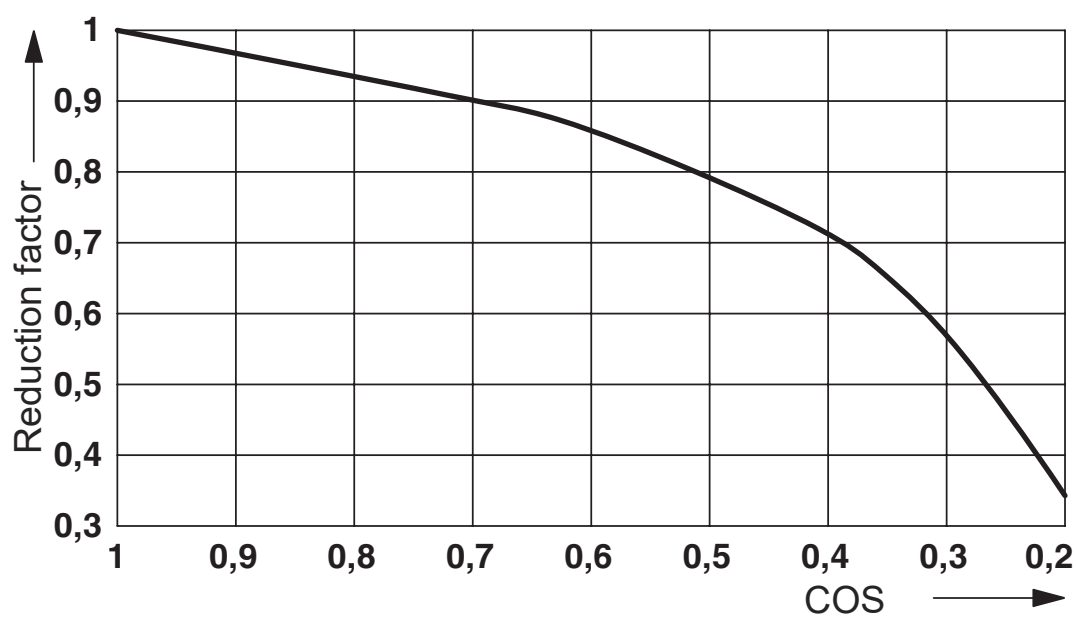
| | |
|-----------------------|--------------|
| Standards/regulations | DIN EN 50178 |
| | EN 61810-1 |

Mounting

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

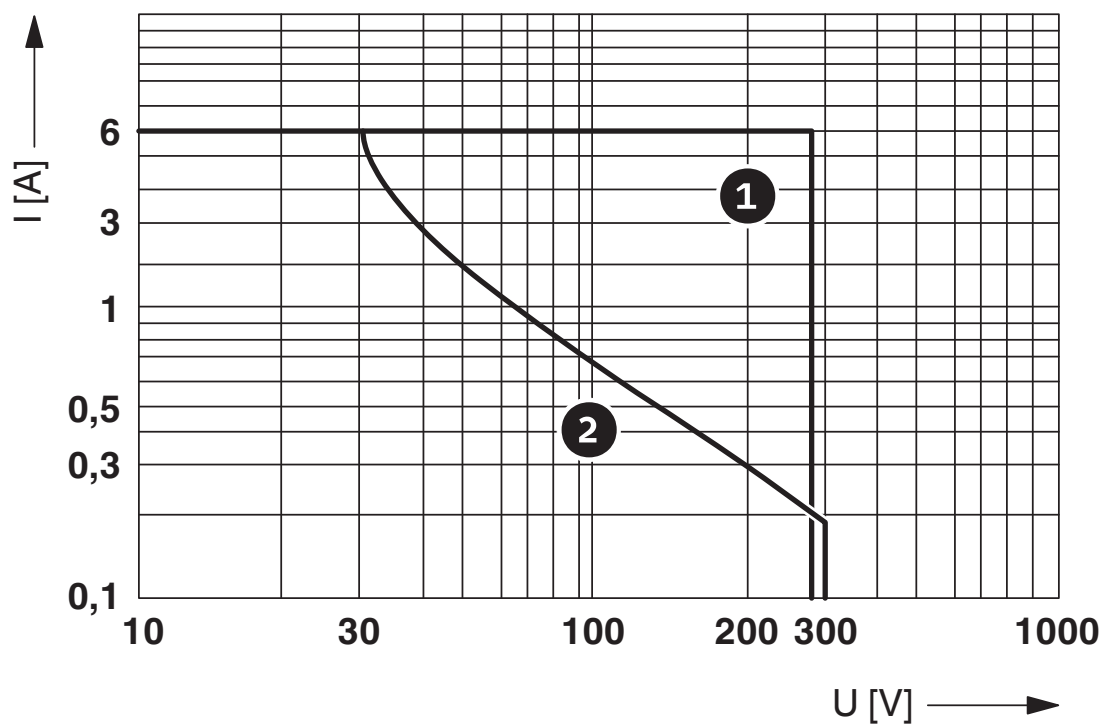
Drawings

Diagram



Service life reduction factor with various cos phi

Diagram

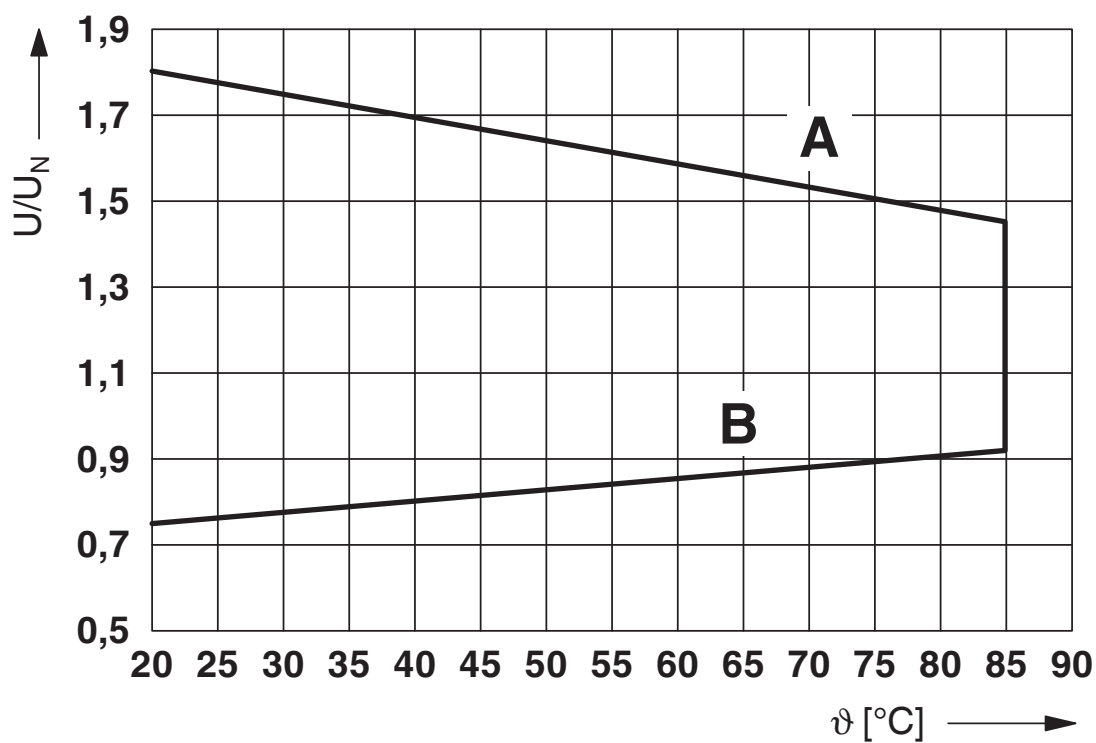


Interrupting rating

Curve 1: AC, ohmic load

Curve 2: DC, ohmic load

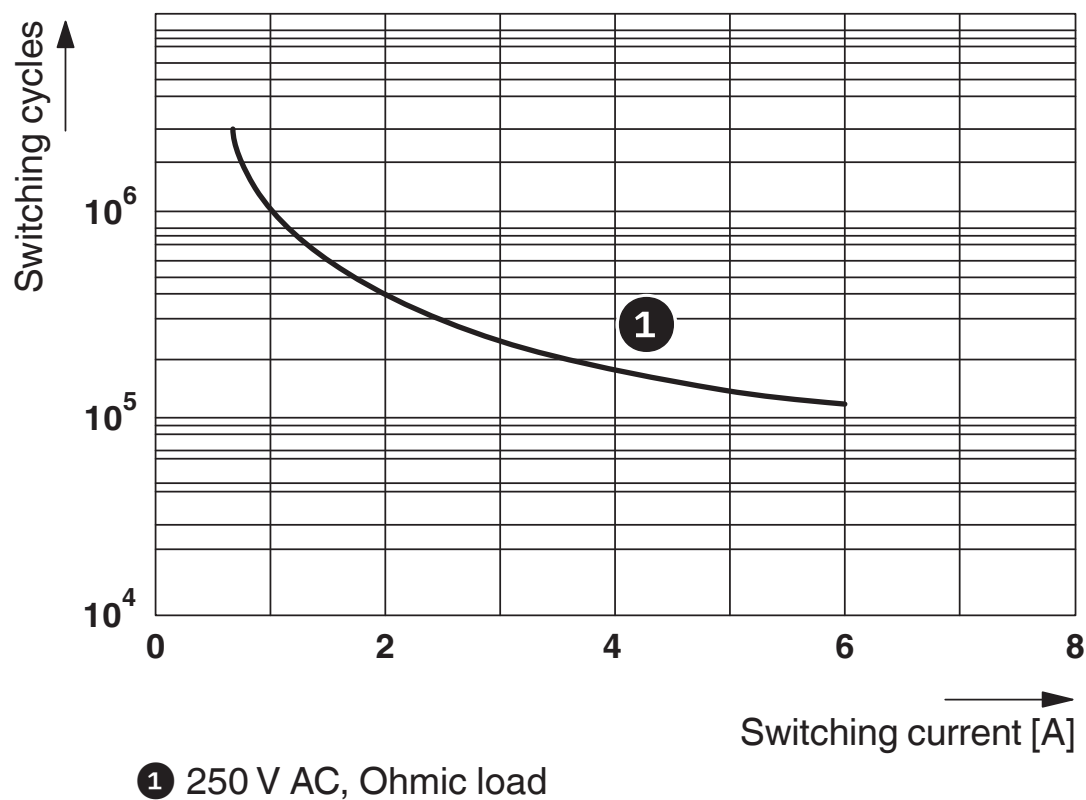
Diagram



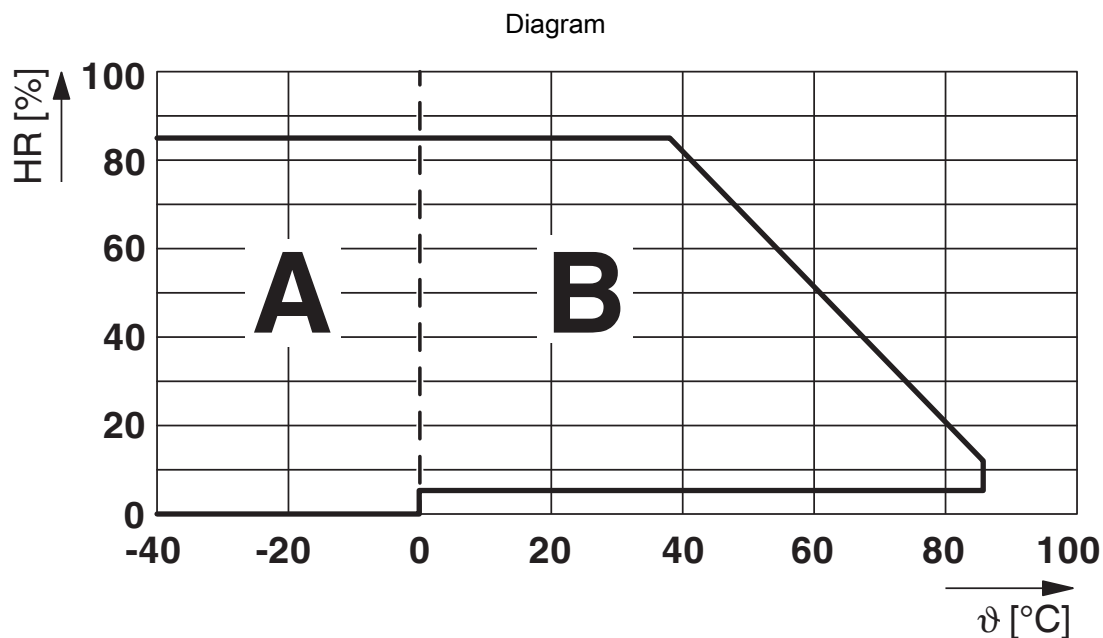
Curve A: maximum continuous voltage at limiting continuous current

Curve B: minimum pick-up voltage for pre-excitation with U_N and limiting continuous current

Diagram



Electrical service life



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

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1158056>



cUL Recognized

Approval ID: FILE E 228652



UL Recognized

Approval ID: FILE E 228652



EAC

Approval ID: TR_TS_D_00573_c



EAC

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

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-11.0 | 27371601 |
| ECLASS-12.0 | 27371601 |
| ECLASS-13.0 | 27371601 |

ETIM

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

UNSPSC

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

Environmental product compliance

| | |
|------------|---|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

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