

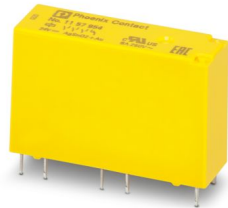
REL-SR- 24DC/3X1AU/1X2AU/FG - Safety relays



1157954

<https://www.phoenixcontact.com/us/products/1157954>

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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, 3 N/O contacts and 1 N/C contacts

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1157954 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C460 |
| Product key | DK69DA |
| GTIN | 4063151163617 |
| Weight per piece (including packing) | 22.08 g |
| Weight per piece (excluding packing) | 22.08 g |
| Customs tariff number | 85364190 |
| Country of origin | CN |

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Technical data

Product properties

| | |
|-------------------------|---|
| Product type | Single relay |
| Set comprises | 1157954 REL-SR- 24DC/3X1AU/1X2AU/FG |
| Operating mode | 100% operating factor |
| Mechanical service life | approx. 10^7 cycles |
| B _{10d} (AC15) | 810000 Cycles (AC15, 250 V / 0.5 A, 1 NO) |
| | 170000 Cycles (250 V / 2 A; 1 NO) |
| B _{10d} (DC13) | 318000 Cycles (DC13, 24 V / 1 A, 1 NO) |
| | 208000 Cycles (DC13, 24 V / 2 A, 1 NO) |

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 |

Data management status

| | |
|------------------------------|------------|
| Date of last data management | 01.04.2026 |
|------------------------------|------------|

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 |

Output data

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Switching

| | |
|---|--|
| Contact switching type | 3 N/O contacts, 1 N/C contact, 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

Item 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 |
|----------------|---|

Standards and regulations

REL-SR- 24DC/3X1AU/1X2AU/FG - Safety relays



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Air clearances and creepage distances between the power circuits

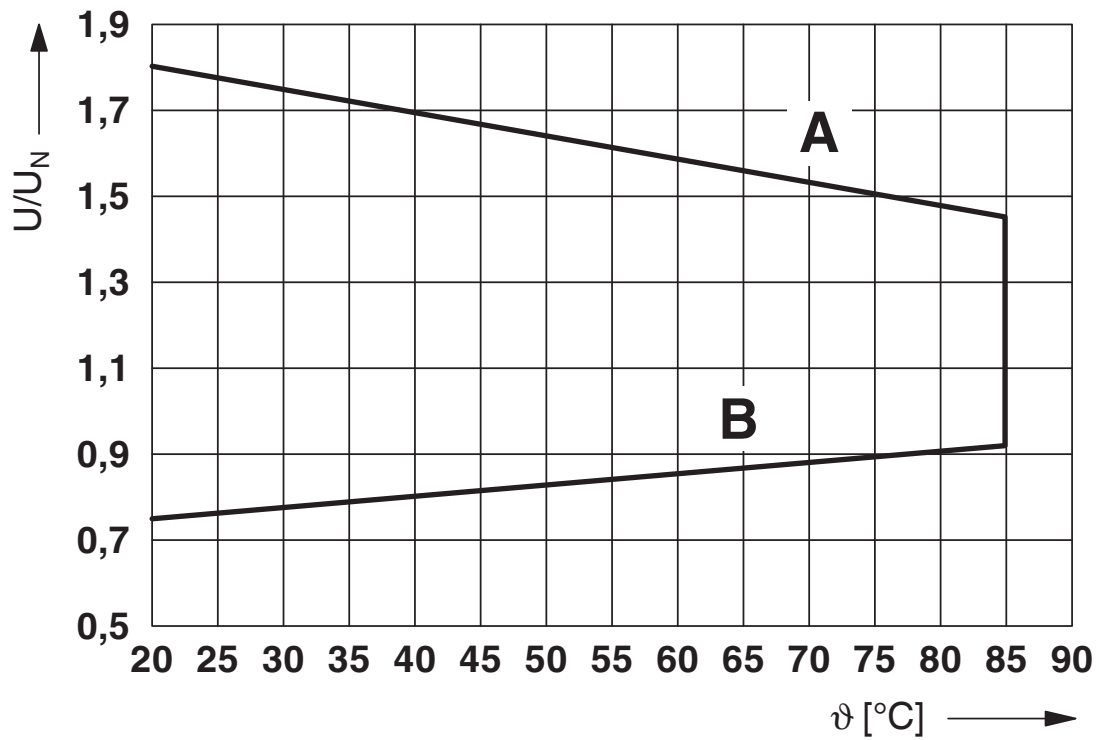
| | |
|-----------------------|--------------|
| Standards/regulations | DIN EN 50178 |
| | EN 61810-1 |

Mounting

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

Drawings

Diagram

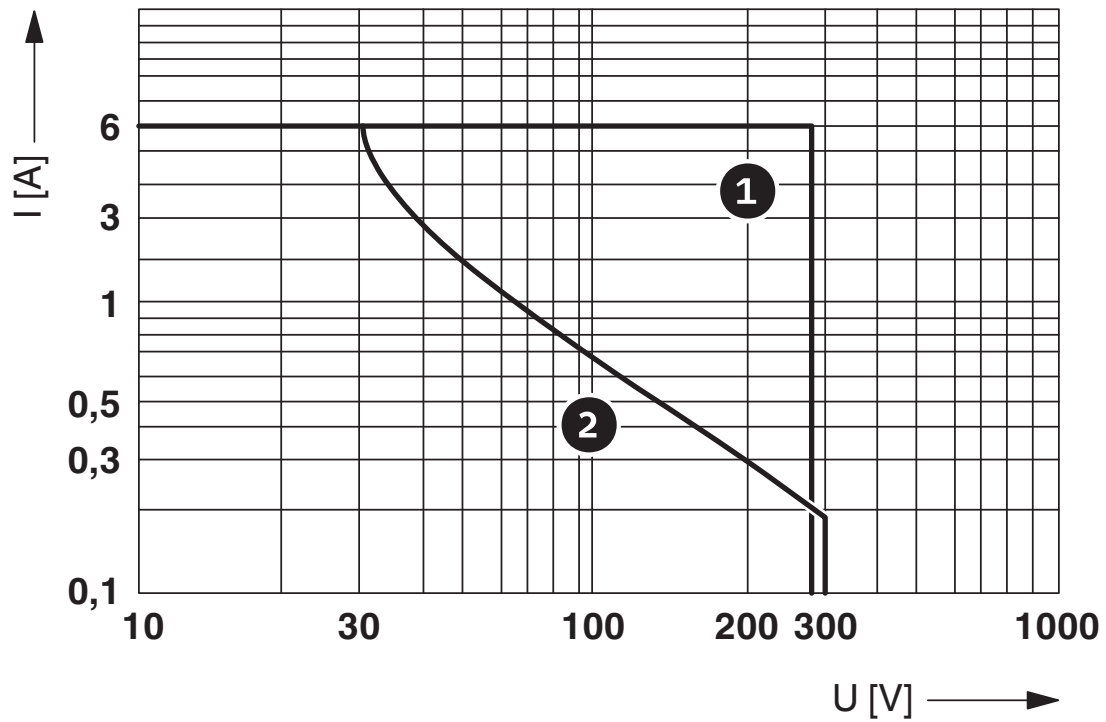


Operating voltage range

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Diagram

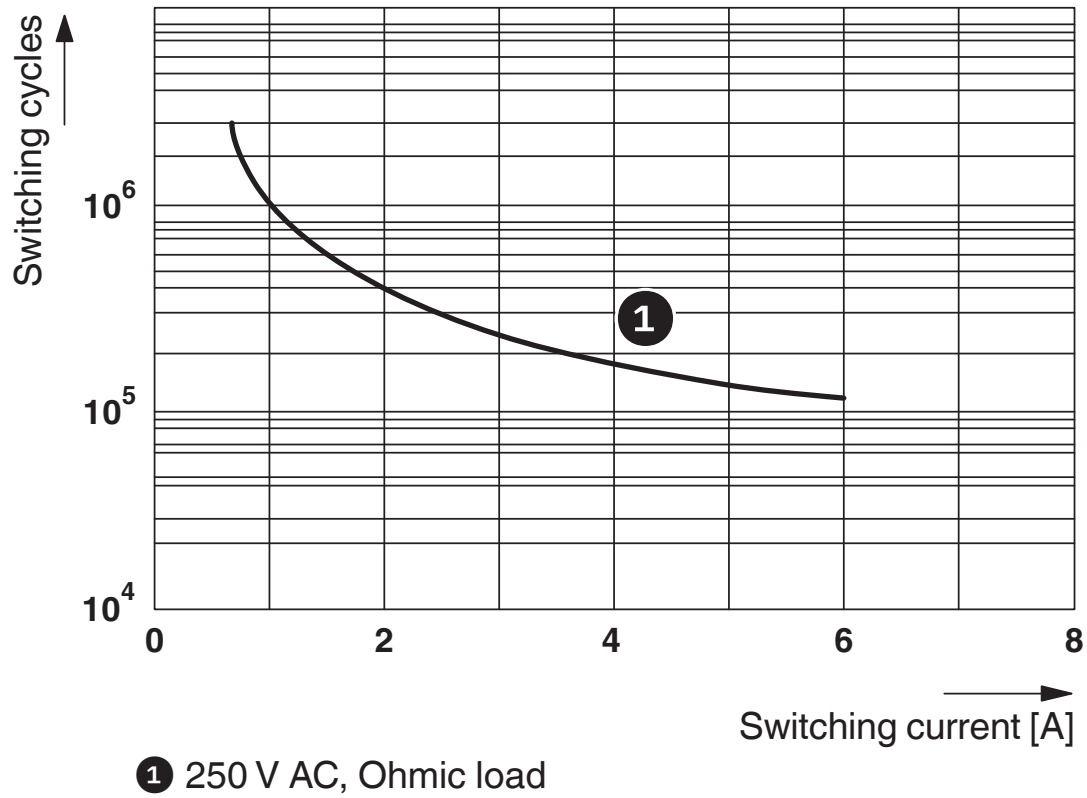


Interrupting rating

Curve 1: AC, ohmic load

Curve 2: DC, ohmic load

Diagram



Electrical service life

Diagram



Service life reduction factor with various cos phi

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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/1157954>



cUL Recognized

Approval ID: FILE E 228652



UL Recognized

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EAC

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

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 27371601 |
| ECLASS-15.0 | 27371601 |

ETIM

| | |
|-----------|----------|
| ETIM 10.0 | EC001437 |
|-----------|----------|

UNSPSC

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

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Environmental product compliance

EU RoHS

| | |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

China RoHS

| | |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E |
| | No hazardous substances above the limits |

EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.876 kg CO2e |
|---------|---------------|

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