

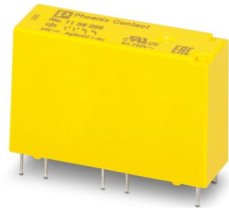
# REL-SR- 24DC/2X1AU/2X2AU/FG - Safety relays



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                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | C460          |
| Product key                          | DK69DA        |
| 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   |
| Set comprises           | 1148699 RIF-RPT-LDP-24DC/2X2/2X1/AU/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)<br>170000 Cycles (250 V / 2 A; 1 NO)   |
| $B_{10d}$ (DC13)        | 318000 Cycles (DC13, 24 V / 1 A, 1 NO)<br>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 <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) |

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                              | 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<br>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)<br>100 W (48 V DC)<br>75 W (60 V DC)<br>55 W (110 V DC)<br>50 W (220 V DC)<br>1500 VA (250 V AC) |
| Switching capacity                                  | 2 A (24 V (DC13))<br>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<br>EN 60068-2-60 |
|----------------|---|

## Standards and regulations

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



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## Air clearances and creepage distances between the power circuits

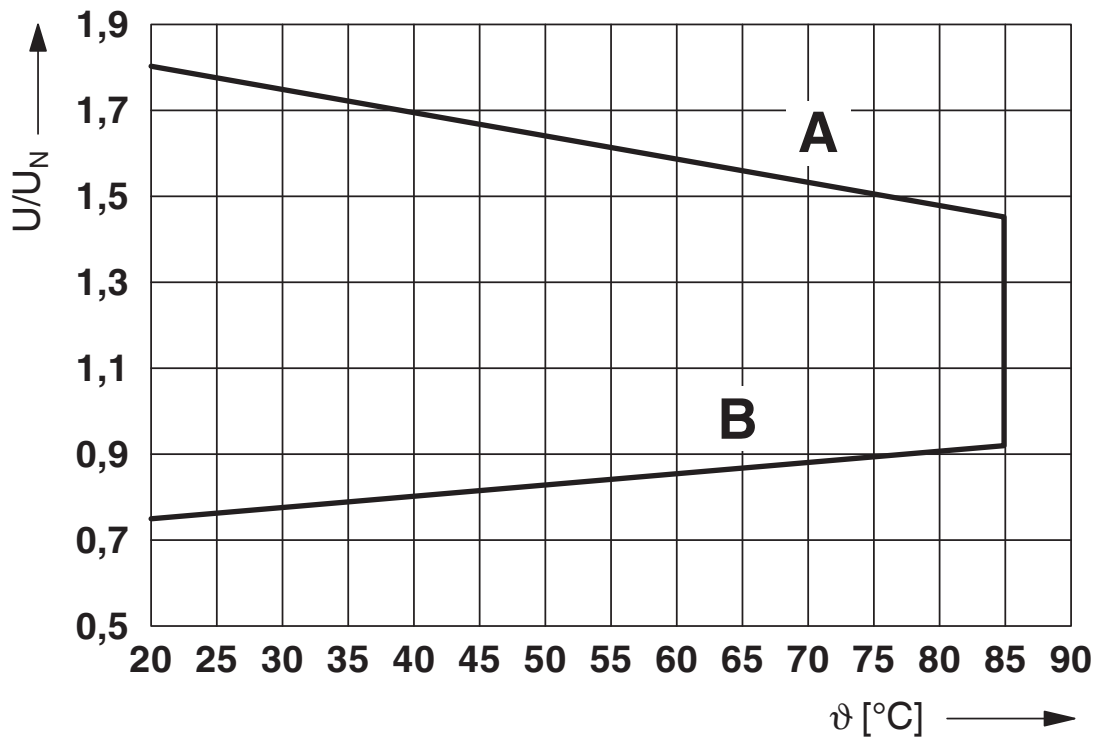
|                       |              |
|-----------------------|--------------|
| Standards/regulations | DIN EN 50178 |
|                       | EN 61810-1   |

## Mounting

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

Drawings

Diagram



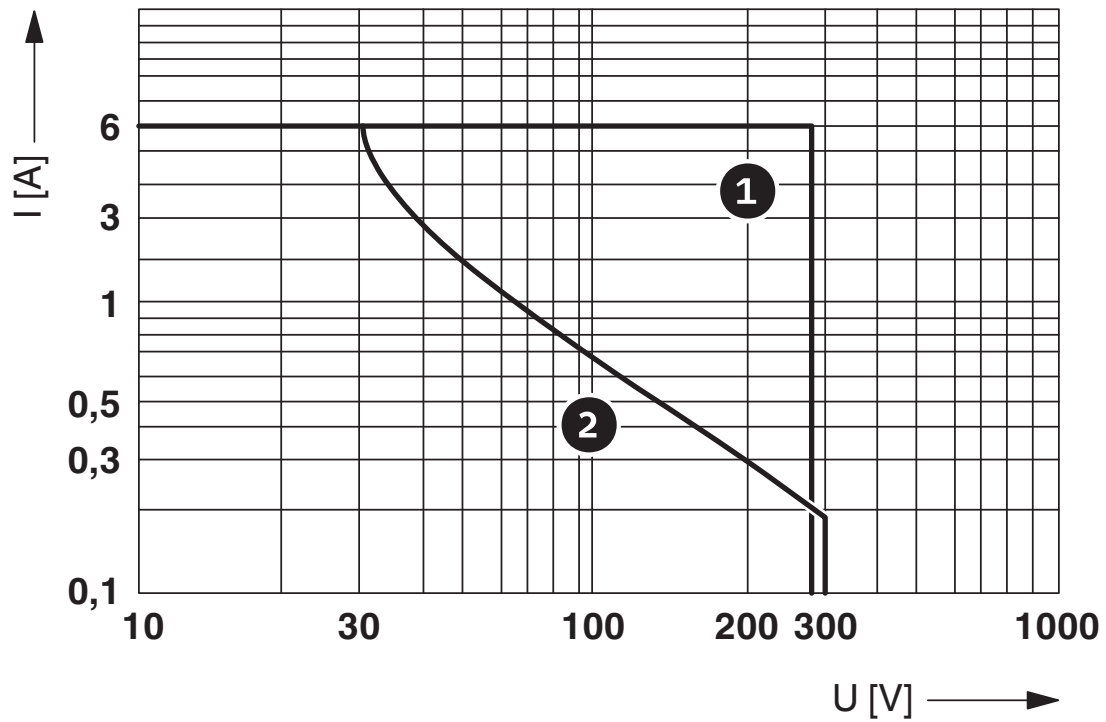
Curve A: maximum continuous voltage at limiting continuous current

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

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Diagram

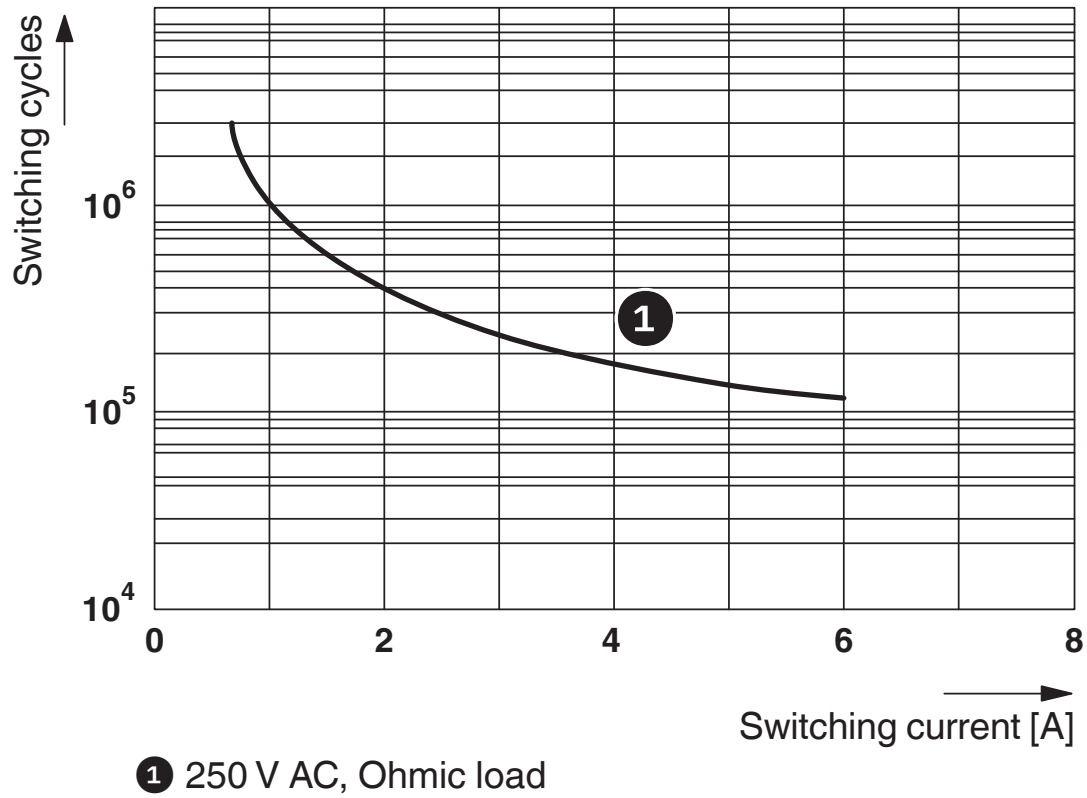


Interrupting rating

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/1158056>



**cUL Recognized**  
Approval ID: FILE E 228652



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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 | 0.832 kg CO2e |
|---------|---------------|

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