

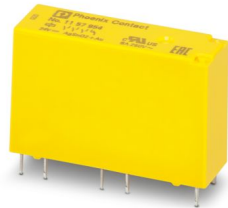
# REL-SR- 24DC/3X1AU/1X2AU/FG - Safety relays



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 <sub>10d</sub> (AC15)	810000 Cycles (AC15, 250 V / 0.5 A, 1 NO)
	170000 Cycles (250 V / 2 A; 1 NO)
B <sub>10d</sub> (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
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### 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 <sub>N</sub>	24 V DC
Input voltage range	19.2 V DC ... 26.4 V DC
Input voltage range in reference to U <sub>N</sub>	see diagram
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at U <sub>N</sub>	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
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## 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
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## Standards and regulations

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



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## Air clearances and creepage distances between the power circuits

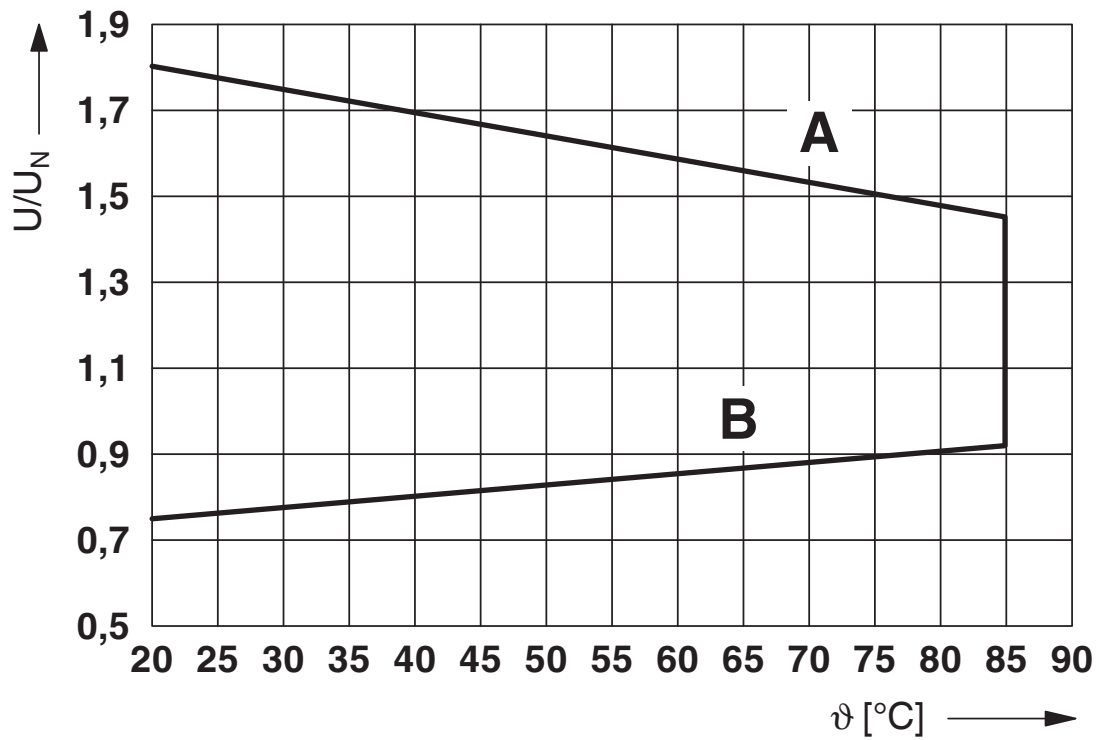
Standards/regulations	DIN EN 50178
	EN 61810-1

## Mounting

Mounting position	any
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Drawings

Diagram

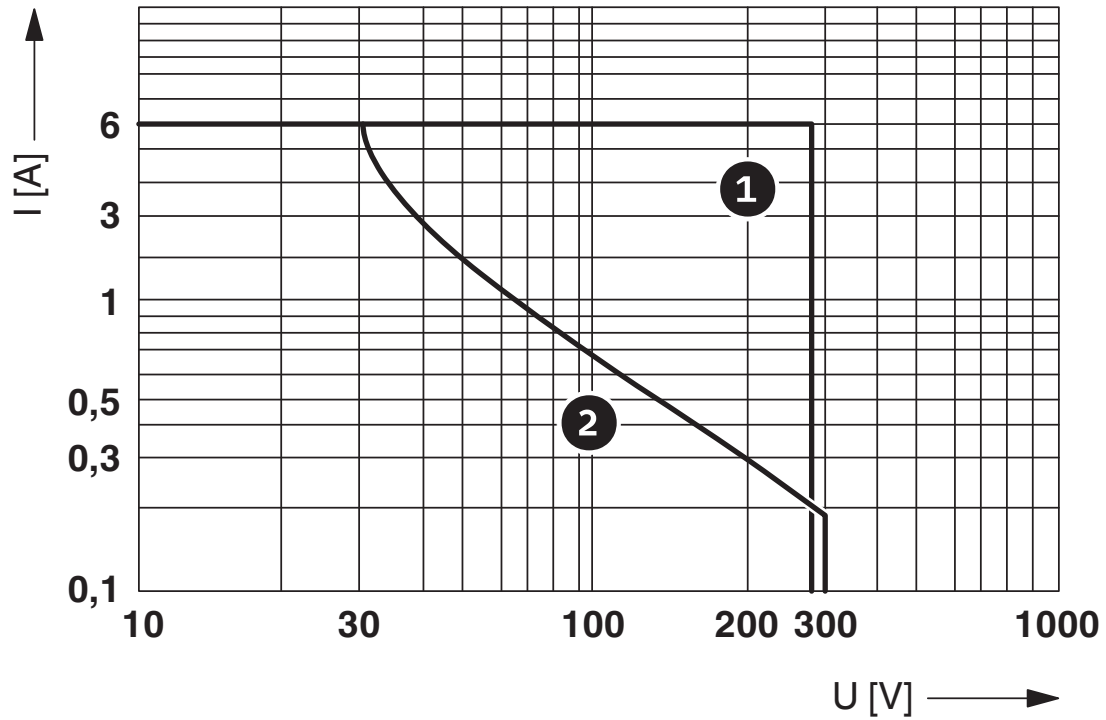


Operating voltage range

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Diagram

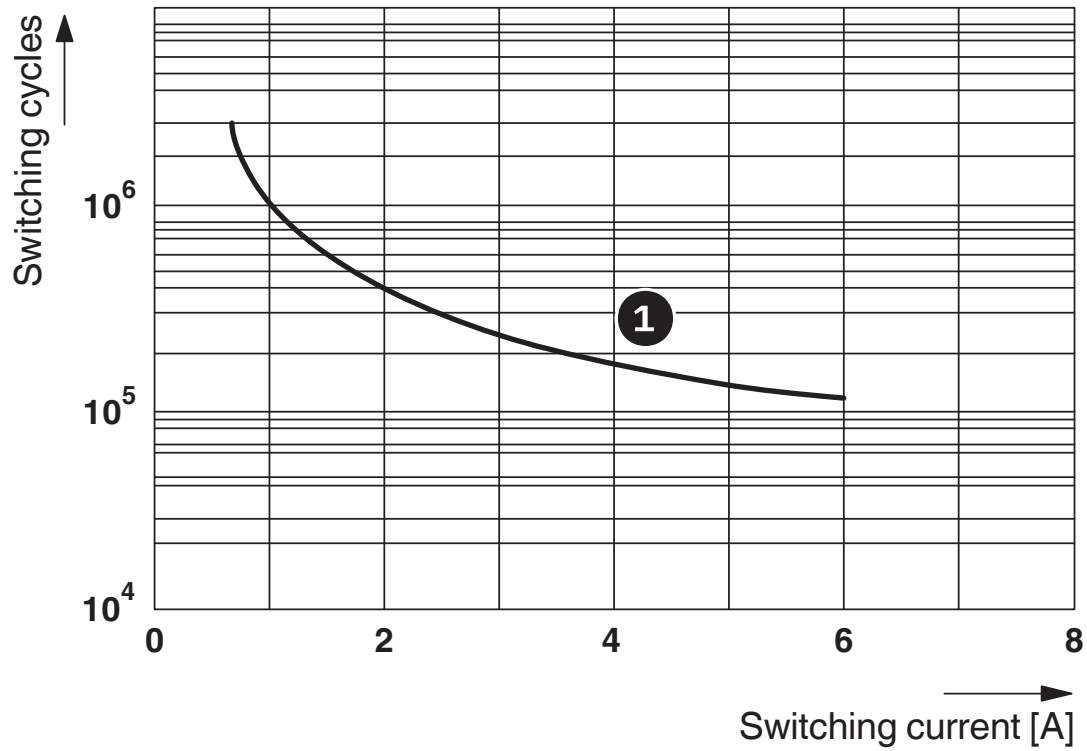


Interrupting rating

Curve 1: AC, ohmic load

Curve 2: DC, ohmic load

Diagram



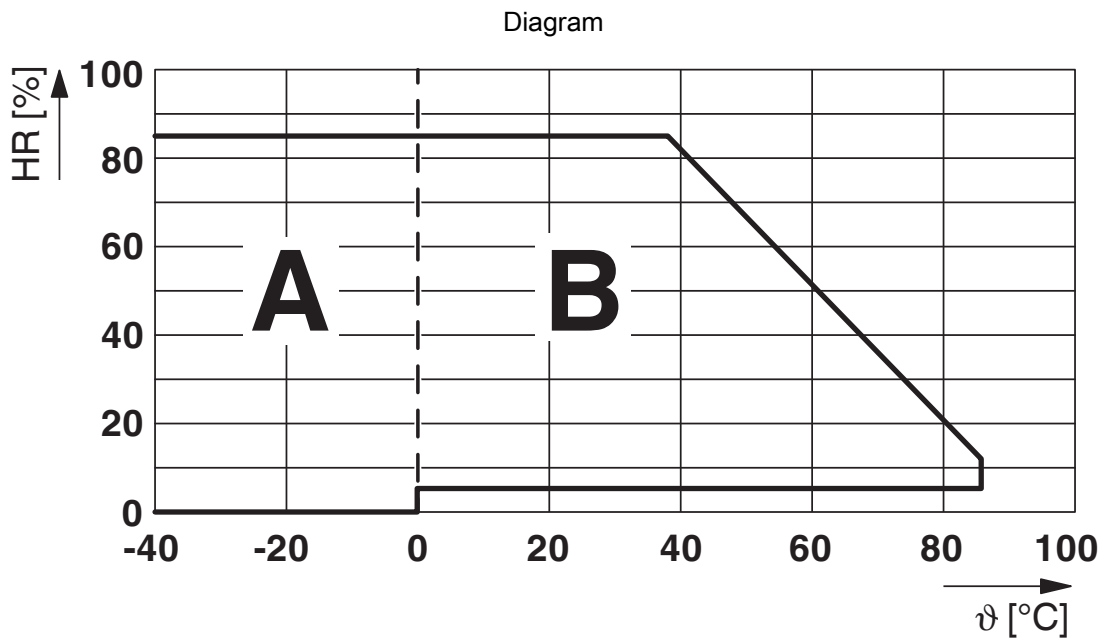
① 250 V AC, Ohmic load

Electrical service life

Diagram



Service life reduction factor with various cos phi



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



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Approval ID: FILE E 228652



**EAC**

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



**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
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### 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%
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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)