

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



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
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: 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	28.03.2025
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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

Switching

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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

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
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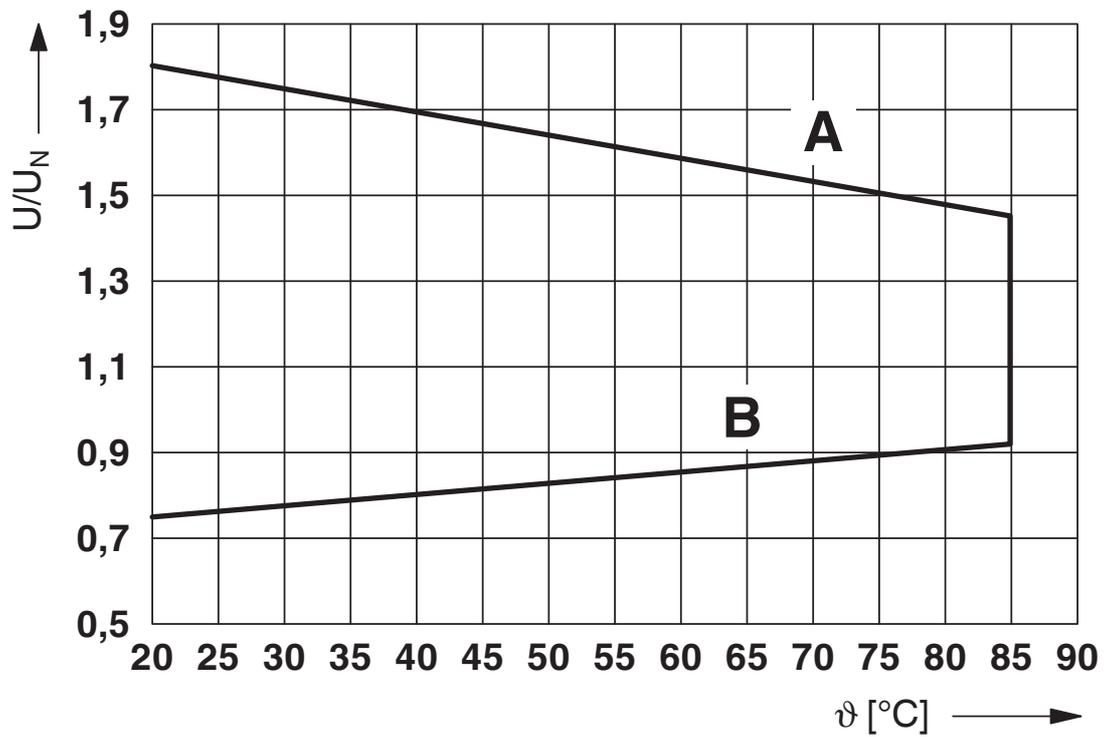
	EN 61810-1
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Mounting

Mounting position	any
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Drawings

Diagram

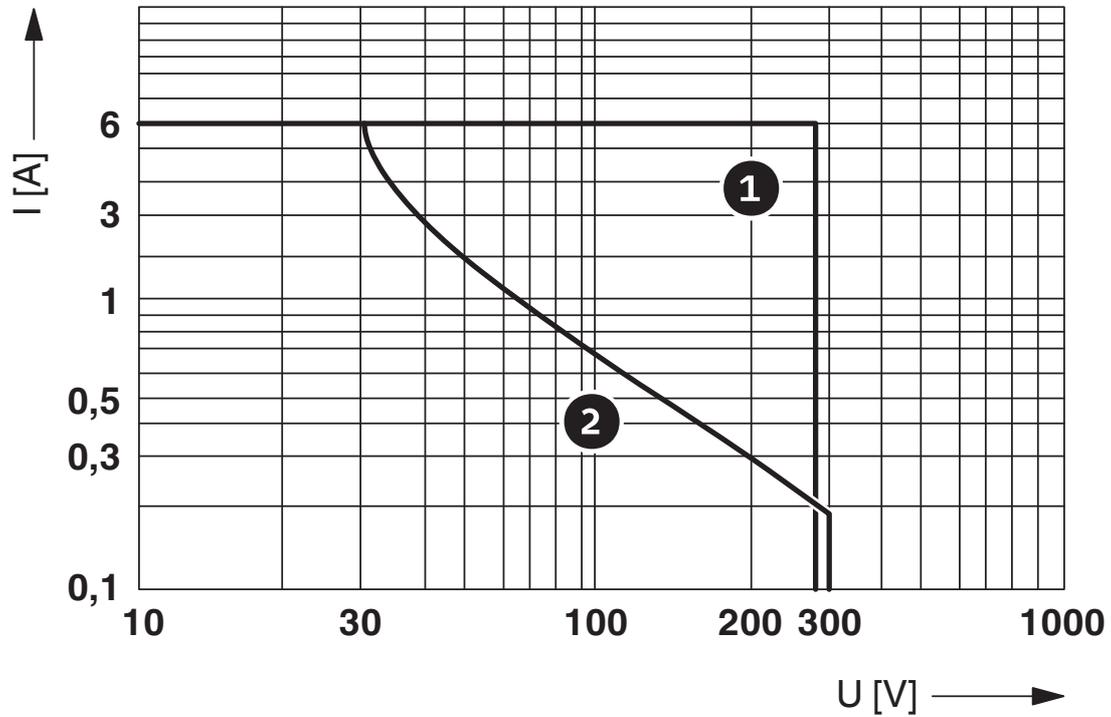


Operating voltage range

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Diagram

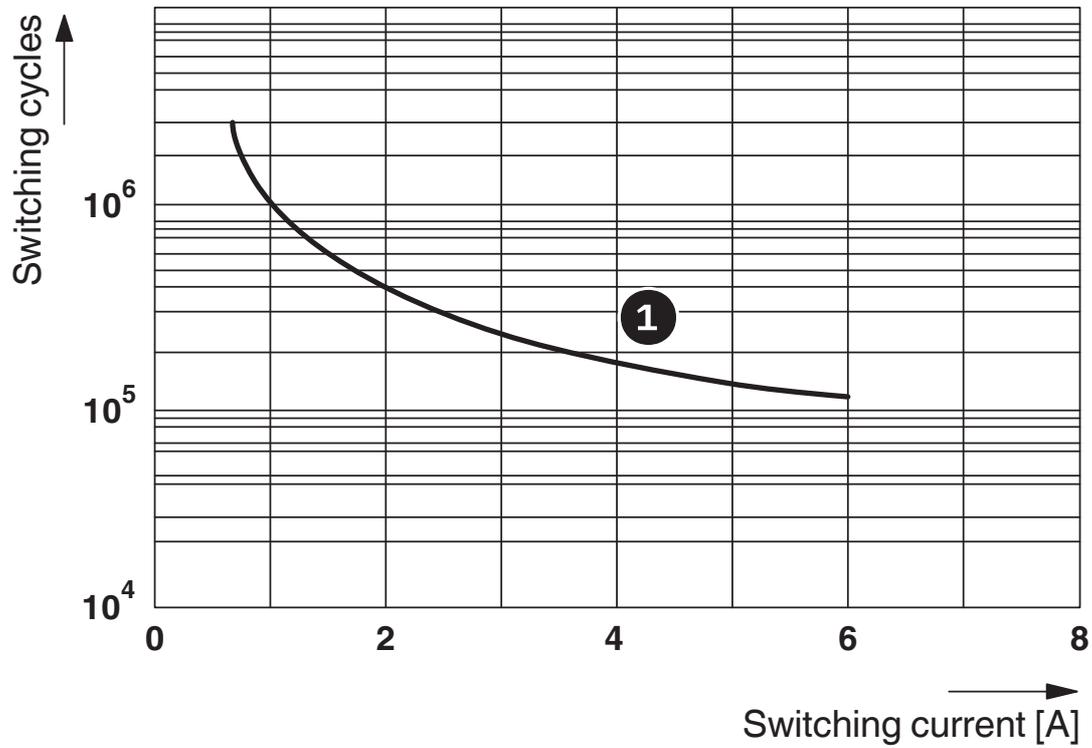


Interrupting rating

Curve 1: AC, ohmic load

Curve 2: DC, ohmic load

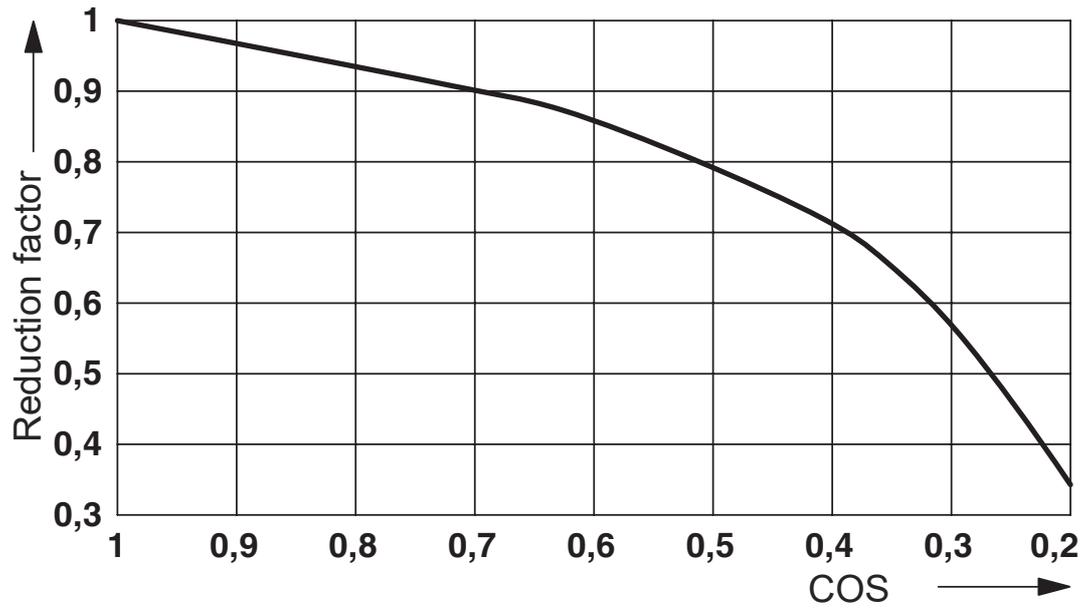
Diagram



① 250 V AC, Ohmic load

Electrical service life

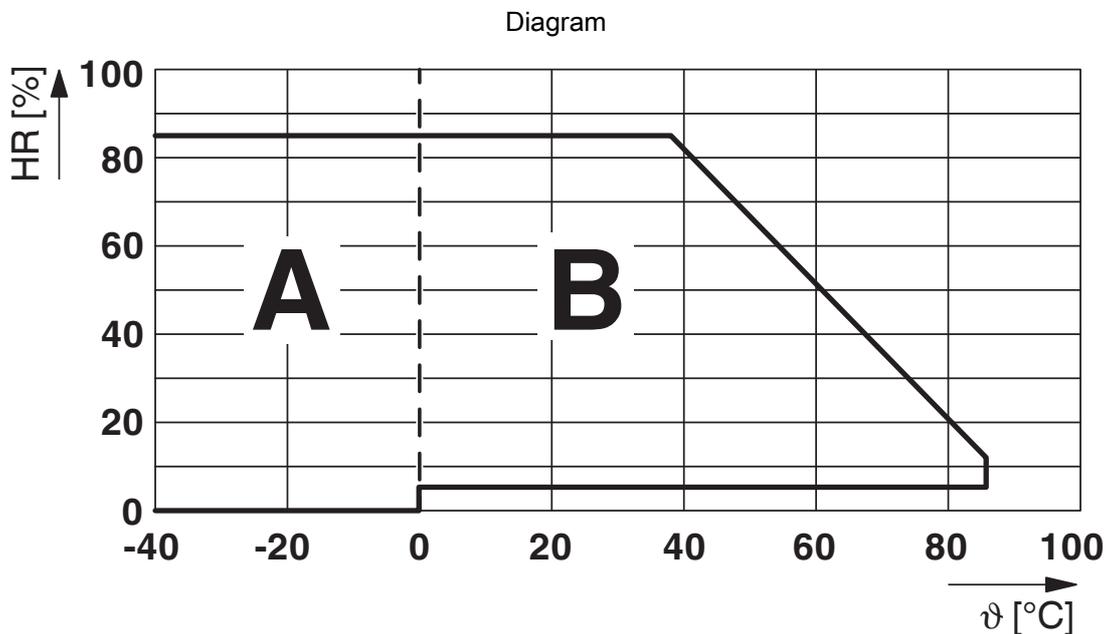
Diagram



Service life reduction factor with various cos phi

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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
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 9.0	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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