

# REL-SR- 24DC/2X21/FG - Safety relays



2908777

<https://www.phoenixcontact.com/us/products/2908777>

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Safety relay with force-guided contacts in accordance with DIN EN 61810-3, contact switching type: 2 changeover contacts. The requirements for type A in accordance with DIN EN 61810-3 are satisfied if the circuit is designed as 1 N/O contact / 1 N/C contact.

## Commercial data

Item number	2908777
Packing unit	20 pc
Minimum order quantity	20 pc
Sales key	C460
Product key	DK69D5
GTIN	4055626338651
Weight per piece (including packing)	19.45 g
Weight per piece (excluding packing)	19.45 g
Customs tariff number	85364900
Country of origin	CZ

## Technical data

### Product properties

Product type	Single relay
Application	Forcibly guided contacts
Operating mode	100% operating factor
Mechanical service life	approx. 10 <sup>7</sup> cycles
B <sub>10d</sub>	600000 Cycles (AC1; 250 V / 6 A; 1 NO)
	900000 Cycles (AC1; 250 V / 3 A; 1 NO)
	1800000 Cycles (AC1; 250 V / 1,5 A; 1 NO)
	180000 Cycles (AC15; 250 V / 3 A; 1 NO)
	560000 Cycles (AC15; 250 V / 2 A; 1 NO)
	4600000 Cycles (AC15; 250 V / 0,75 A; 1 NO)
	360000 Cycles (DC13; 24 V / 3 A; 1 NO)
	740000 Cycles (DC13; 24 V / 1,5 A; 1 NO)
	4200000 Cycles (DC13; 24 V / 0,75 A; 1 NO)

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

Insulation	Safe isolation, reinforced insulation
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	0.7 W
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Air clearances and creepage distances between the power circuits

Rated insulation voltage	250 V AC
Rated surge voltage	6 kV

### Input data

#### Coil side

Nominal input voltage U <sub>N</sub>	24 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>	29 mA
Typical response time	10 ms
Typical release time	4 ms

### Output data

#### Switching

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Contact switching type	2 changeover contacts, forcibly actuated
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	15 V
Limiting continuous current	6 A
Maximum inrush current	6 A
Min. switching current	10 mA (5 V)
Interrupting rating (ohmic load) max.	144 W (24 V DC)
	288 W (48 V DC)
	88 W (110 V DC)
	110 W (220 V DC)
	1500 VA (250 V AC)
Switching capacity min.	0.24 W
Switching capacity	2 A (24 V (DC13))
	3 A (230 V (AC15))
Motor load according to UL 508	10 LRA / 0,5 FLA

## Connection data

Connection method	Plug / solder connection
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## Dimensions

Width	12.6 mm
Height	29 mm
Depth	25.5 mm

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 70 °C
Ambient temperature (storage/transport)	-25 °C ... 70 °C

## Approvals

### Corrosive gas test

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

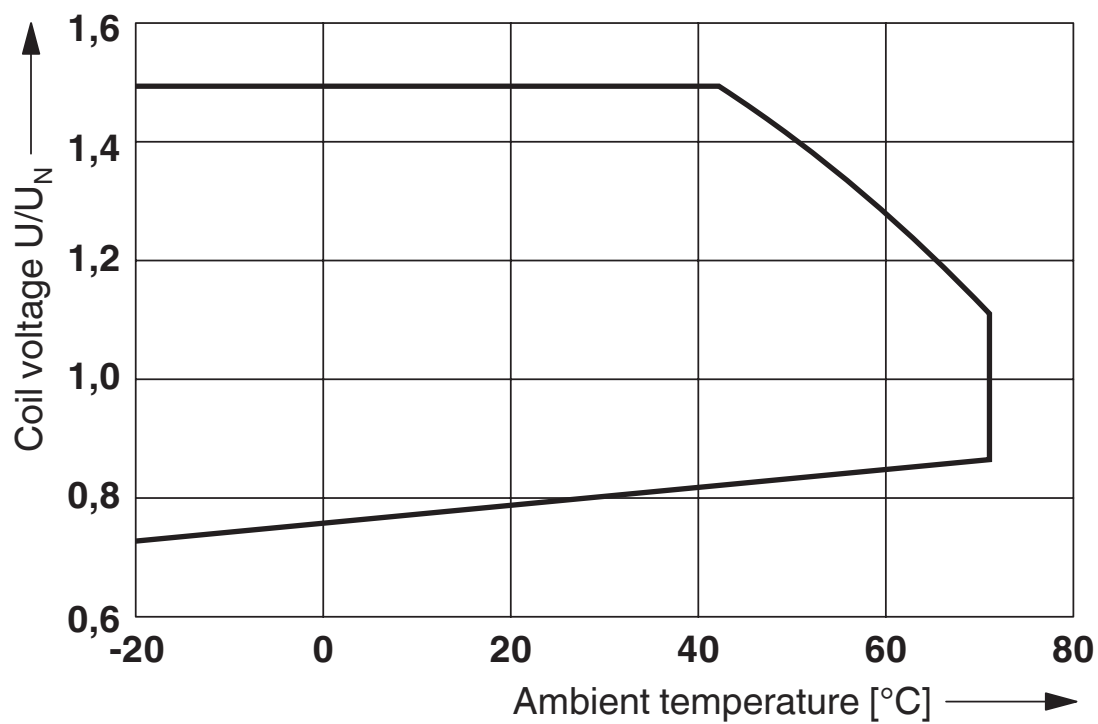
## Standards and regulations

### Air clearances and creepage distances between the power circuits

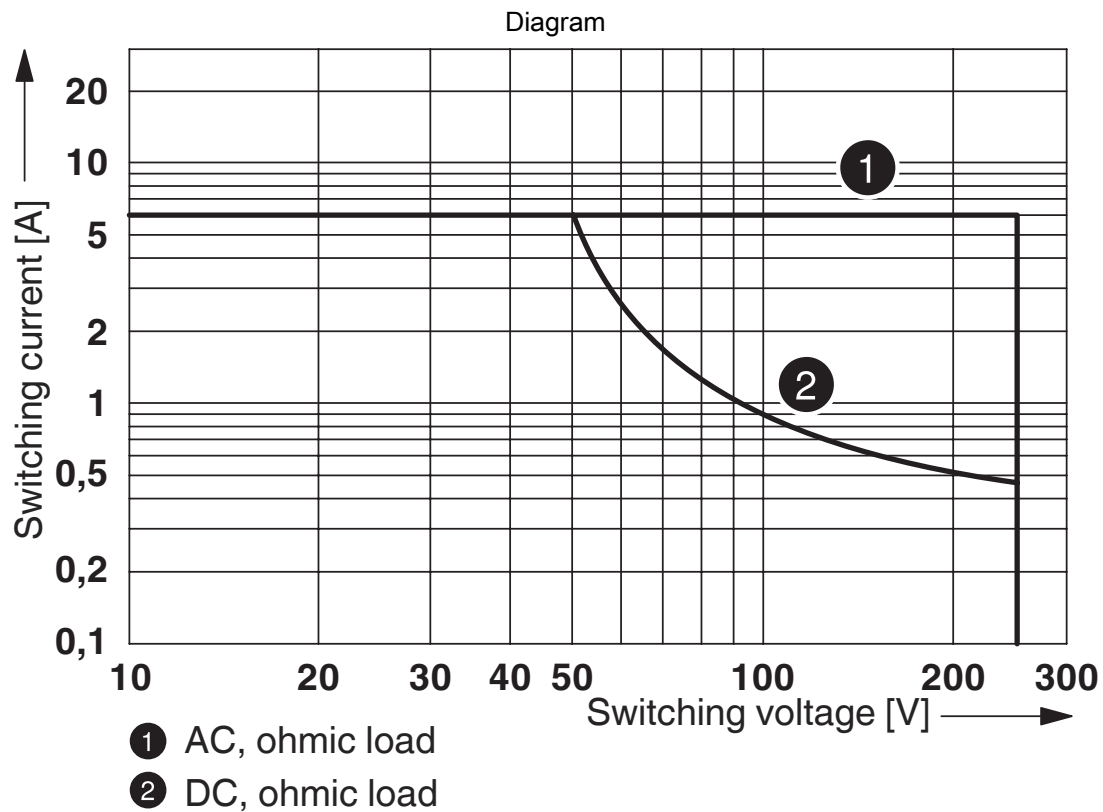
Standards/regulations	DIN EN 50178
	DIN EN 61810-3
	IEC 60664-1

## Drawings

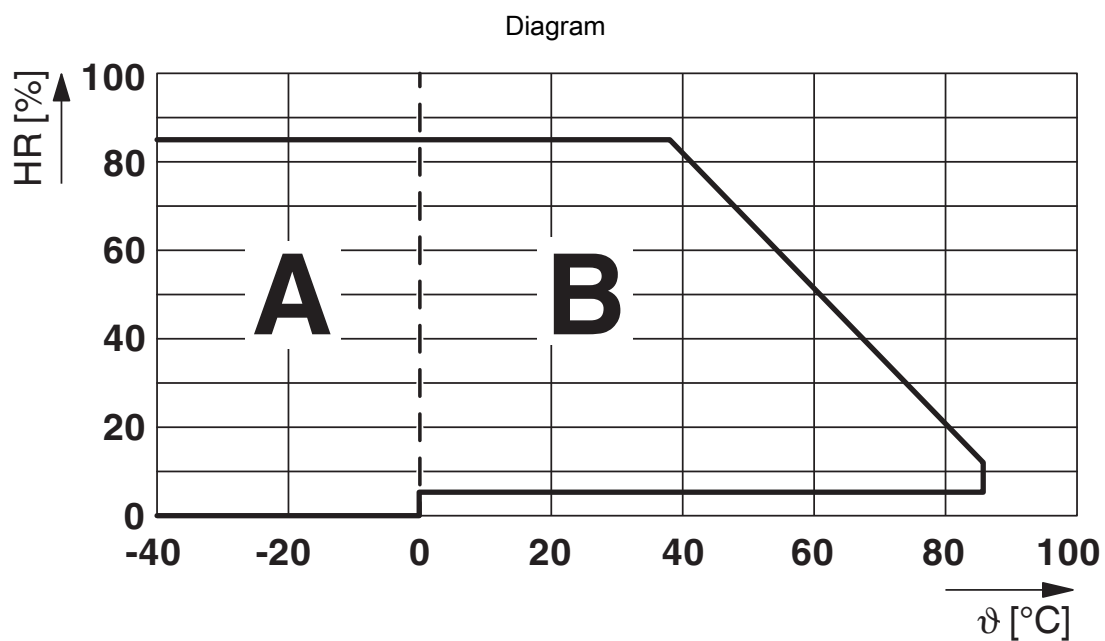
Diagram



Operating voltage range



## Interrupting rating



Permissible humidity for operation and storage.

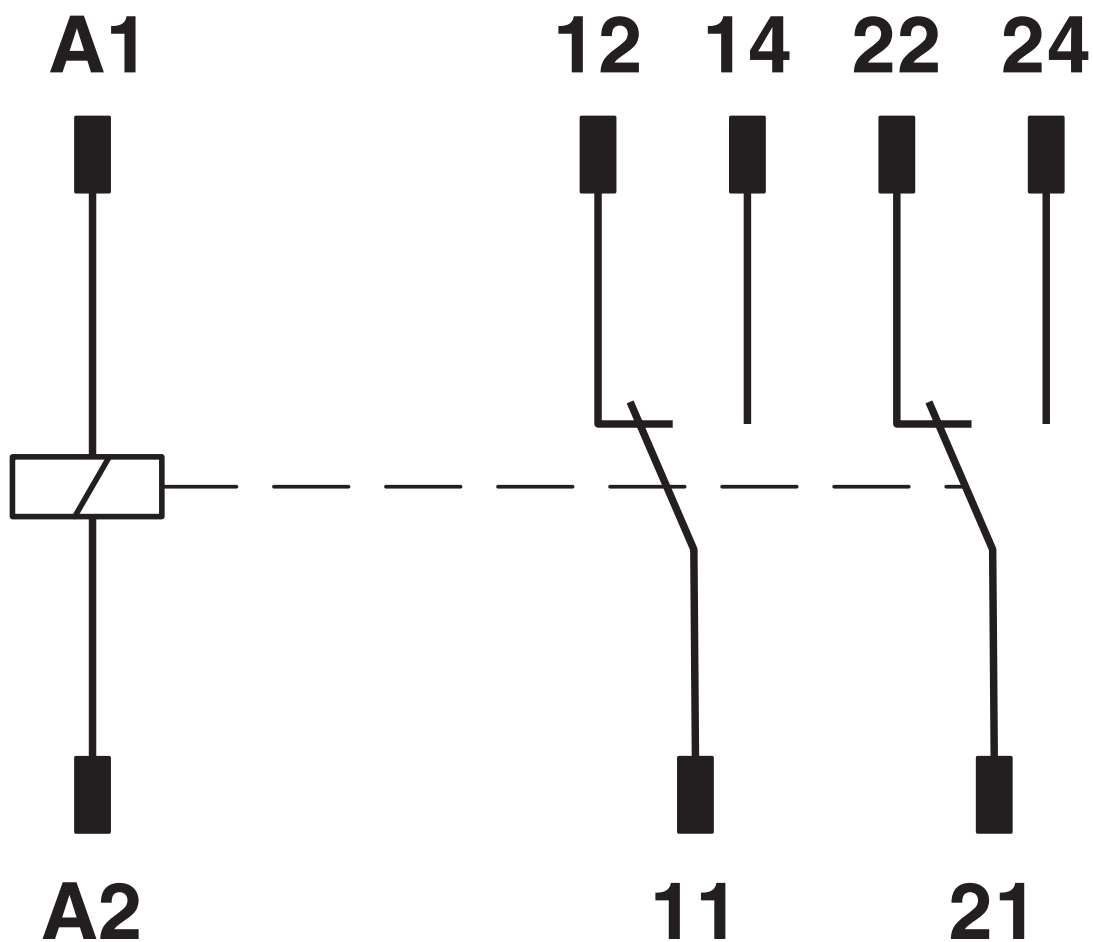
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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

Circuit diagram




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## Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2908777>



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



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



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

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## Classifications

### ECLASS

ECLASS-13.0	27371601
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### 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
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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