

# REL-MR-110DC/21-21/MS - Single relay



1012698

<https://www.phoenixcontact.com/us/products/1012698>

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Plug-in miniature relay, with power contact, 2 changeover contacts, test button, mechanical switch position indicator, status LED, freewheeling diode, polarity A1+, A2, input voltage 110 V DC

## Your advantages

- With detectable manual operation
- DC types with integrated freewheeling diode
- Integrated status LED
- Mechanical switch position indicator

## Commercial data

Item number	1012698
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C460
Product key	CK6191
GTIN	4055626490175
Weight per piece (including packing)	19.3 g
Weight per piece (excluding packing)	19.3 g
Customs tariff number	85364900
Country of origin	CN

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## Technical data

### Product properties

Product type	Single relay
Mechanical service life	5x 10 <sup>6</sup> cycles

### Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.43 W
Test voltage (Winding/contact)	5 kV AC (50 Hz, 1 min., winding/contact)
Test voltage (Contact/contact)	5 kV AC (50 Hz, 1 min., contact/contact)
Test voltage (Changeover contact/changeover contact)	5 kV AC (Changeover contact/changeover contact)

### Input data

#### Coil side

Nominal input voltage $U_N$	110 V DC
Input voltage range	88 V DC ... 242 V DC (20 °C)
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at $U_N$	3.6 mA
Typical response time	9 ms
Typical release time	6 ms

### Output data

#### Switching

Contact switching type	2 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (at 10 mA)
Limiting continuous current	8 A
Maximum inrush current	16 A (20 ms)
Min. switching current	10 mA (at 12 V)
Interrupting rating (ohmic load) max.	2000 VA (for 250 V AC)
Motor load according to UL 508	1/4 HP, 120 V AC (N/O contact) 1/2 HP, 240 V AC (N/O contact)

### Connection data

Connection method	Plug / solder connection
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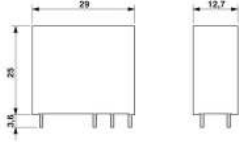
### Dimensions

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Dimensional drawing		
Width		12.7 mm
Height		29 mm
Depth		25 mm

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

## Approvals

### Corrosive gas test

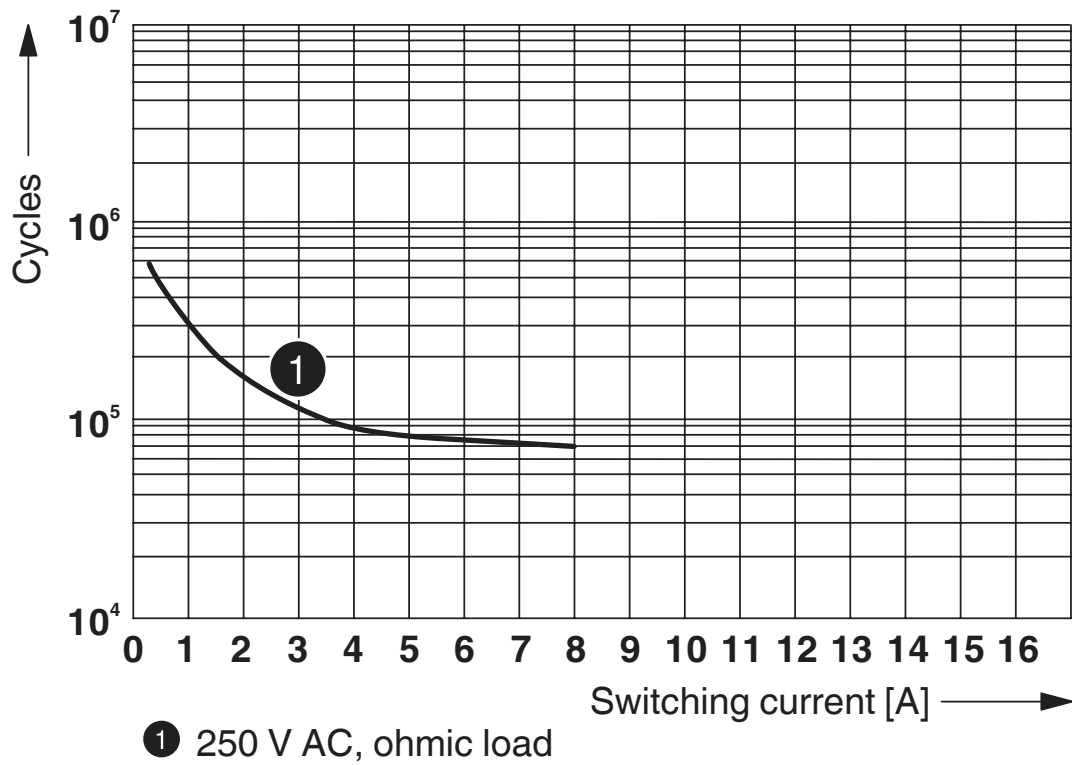
Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

## Standards and regulations

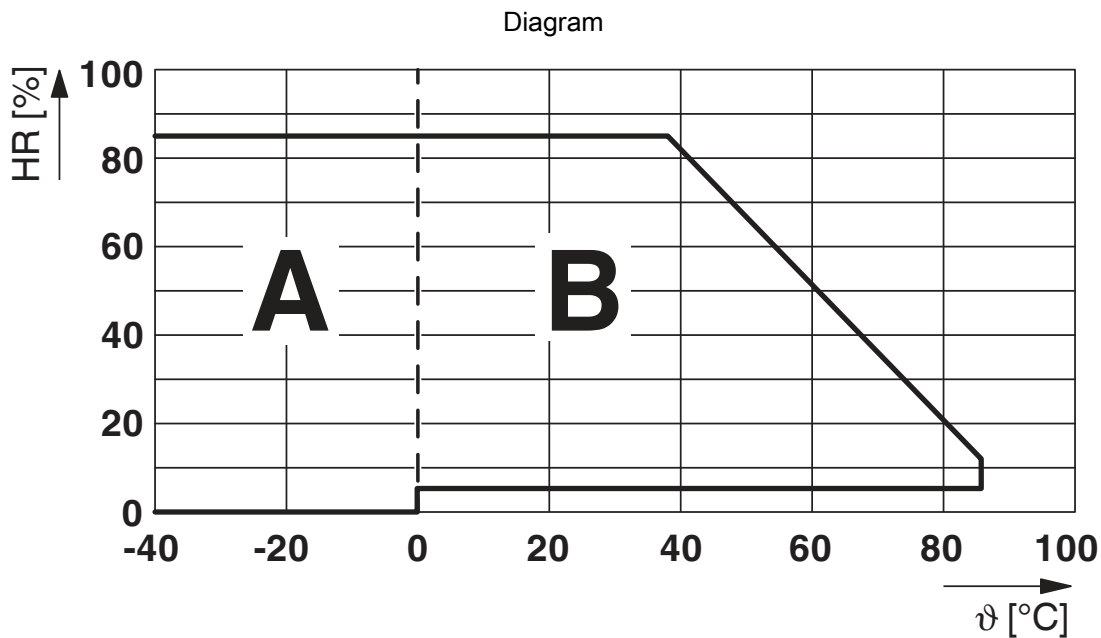
Standards/regulations	EN 61810-1
	VDE 0435-201
	EN 50178

Drawings

Diagram



Electrical service life



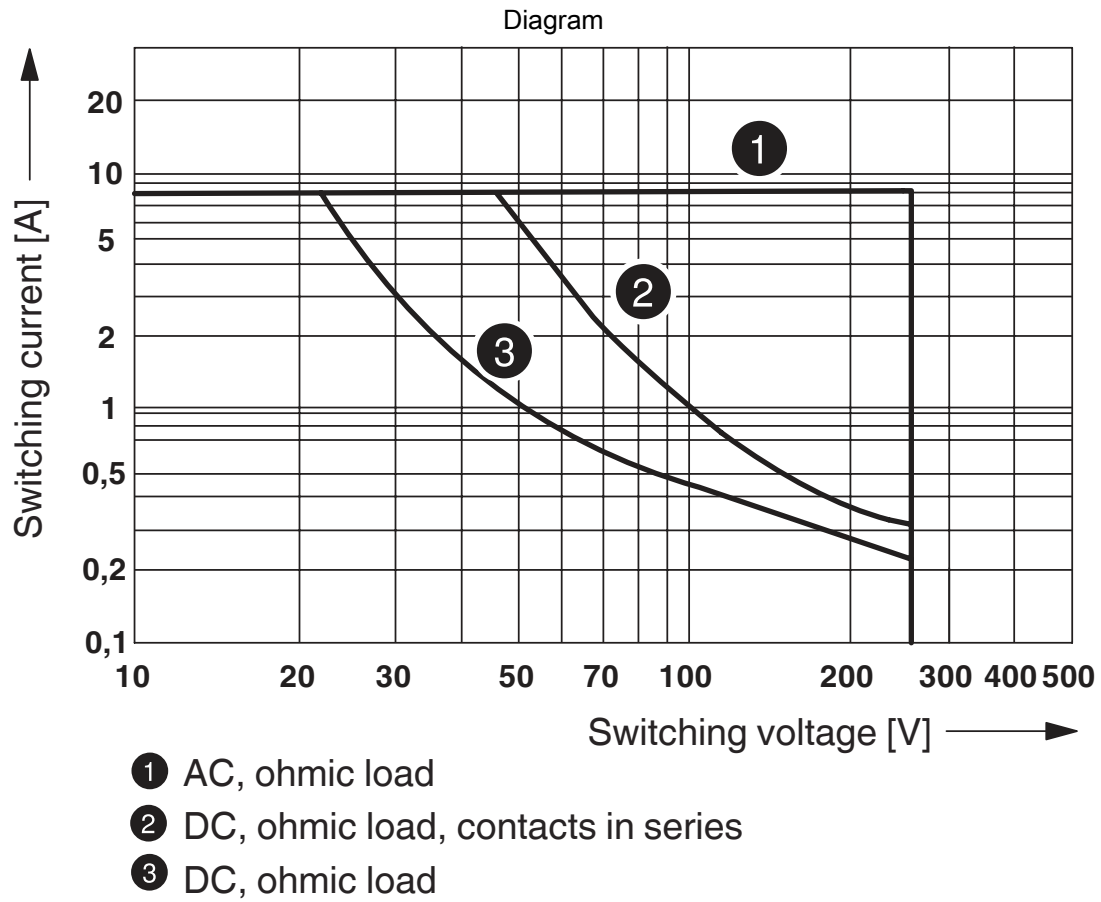
Permissible humidity for operation and storage.

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

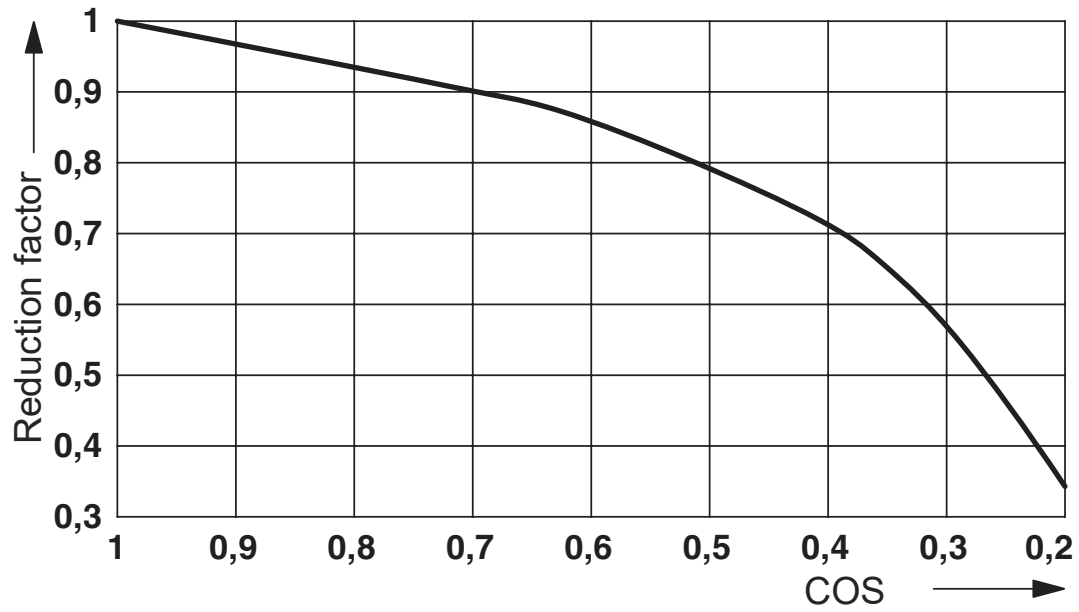
Area B: Condensation at ambient temperatures  $> 0^\circ\text{C}$  must be prevented

On 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature  $\leq 25^\circ\text{C}$ .

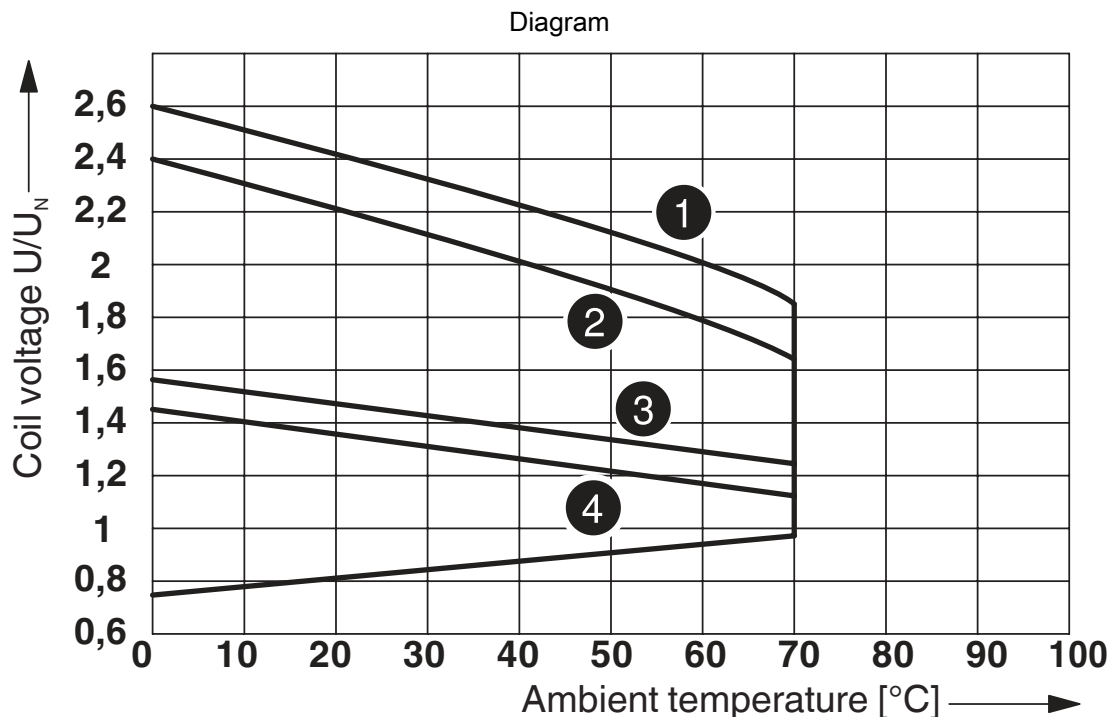


Interrupting rating

Diagram



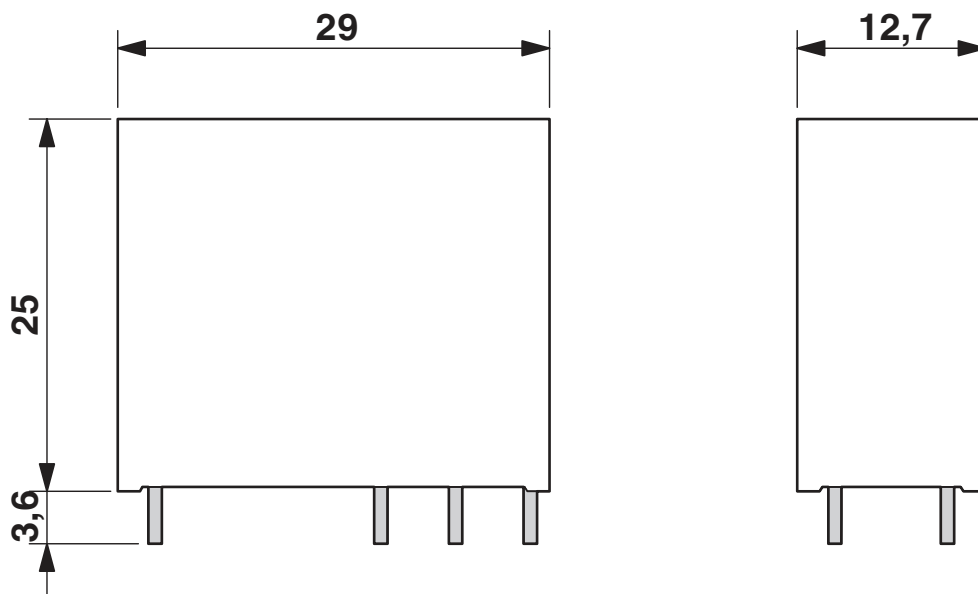
Service life reduction factor with various cos phi



- ① DC coils, 0 A contact current
- ② DC coils, 8 A contact current
- ③ AC coils, 0 A contact current
- ④ AC coils, 8 A contact current

Operating voltage range

Dimensional drawing





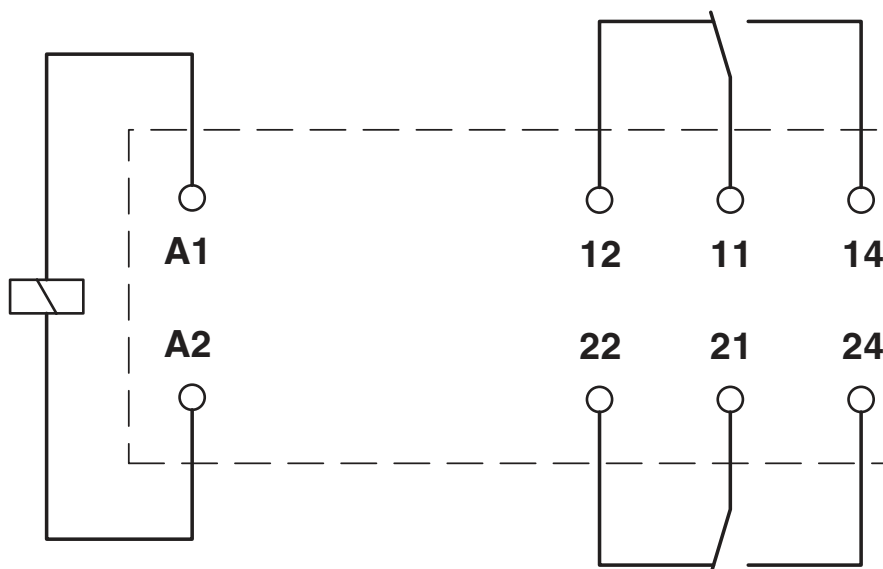
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Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1012698>



**cUL Recognized**

Approval ID: FILE E 172140



**UL Recognized**

Approval ID: FILE E 172140



**EAC**

Approval ID: TR\_TS\_D\_00573\_c



**EAC**

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

**cULus Recognized**

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## Classifications

### ECLASS

ECLASS-11.0	27371601
ECLASS-12.0	27371601
ECLASS-13.0	27371601

### ETIM

ETIM 8.0	EC001437
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### UNSPSC

UNSPSC 21.0	39122300
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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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