REL-MR- 24DC/21-21AU/MS - Single relay

2987985

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Plug-in miniature relay, with multi-layer contact with hard gold coating, 2 changeover contacts, test button, mechanical switching position indicator, status LED, freewheeling diode, polarity A1+, A2-, input voltage 24 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	2987985
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C460
Product key	DK6938
GTIN	4046356480994
Weight per piece (including packing)	19.4 g
Weight per piece (excluding packing)	18.41 g
Customs tariff number	85364190
Country of origin	CN

Technical data

Product properties

Product type	Single relay
Mechanical service life	5x 10^6 cycles

Data management status

Date of last data management	03.08.2026

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.)
Test voltage (Contact/contact)	2.5 kV AC (50 Hz, 1 min.)
Test voltage (open contact)	1 kV (50 Hz, 1 min.)

Input data

Coil side

Nominal input voltage U_N	24 V DC
Input voltage range	19.2 V DC ... 52.8 V DC
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at U_N	18 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, hard gold-plated
Maximum switching voltage	30 V AC
	36 V DC
Minimum switching voltage	12 V (At 1 mA)
Limiting continuous current	50 mA
Maximum inrush current	50 mA
Min. switching current	1 mA (at 12 V)
Switching capacity	1.5 A (at 240 V, AC15)
Motor load according to UL 508	1/4 HP, 120 V AC (N/O contact)
	1/2 HP, 240 V AC (N/O contact)

Switching: when the gold layer is destroyed

Note	the following values are applicable if a gold layer is destroyed
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)
Switching capacity	1 A (at 24 V, DC13)
	1.5 A (at 24 V, AC15)
	1.5 A (at 120 V, AC15)
	1.5 A (at 240 V, AC15)

Connection data

Connection method	Plug / solder connection

Dimensions

Item dimensions

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

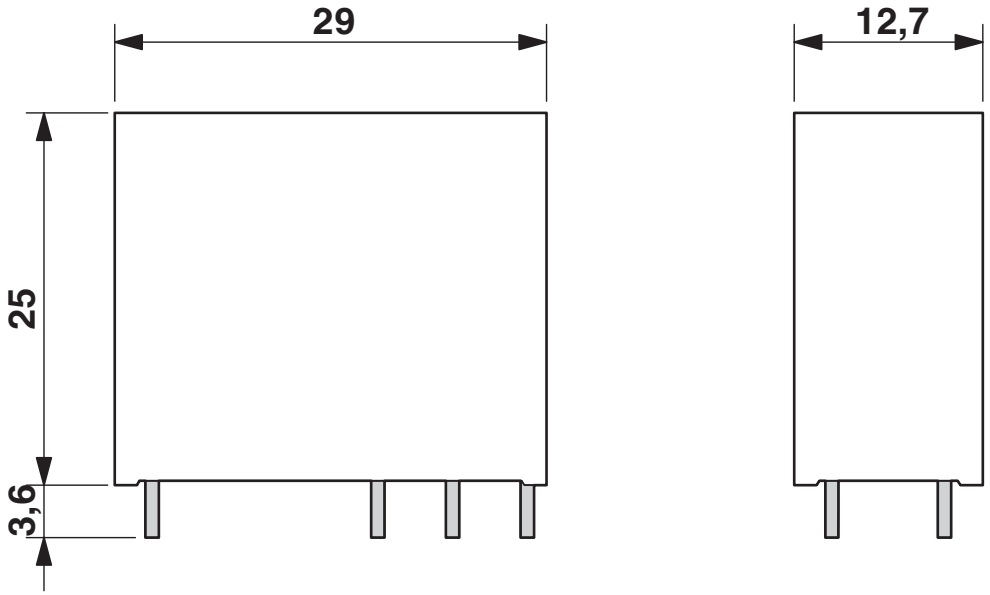
Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

Standards and regulations

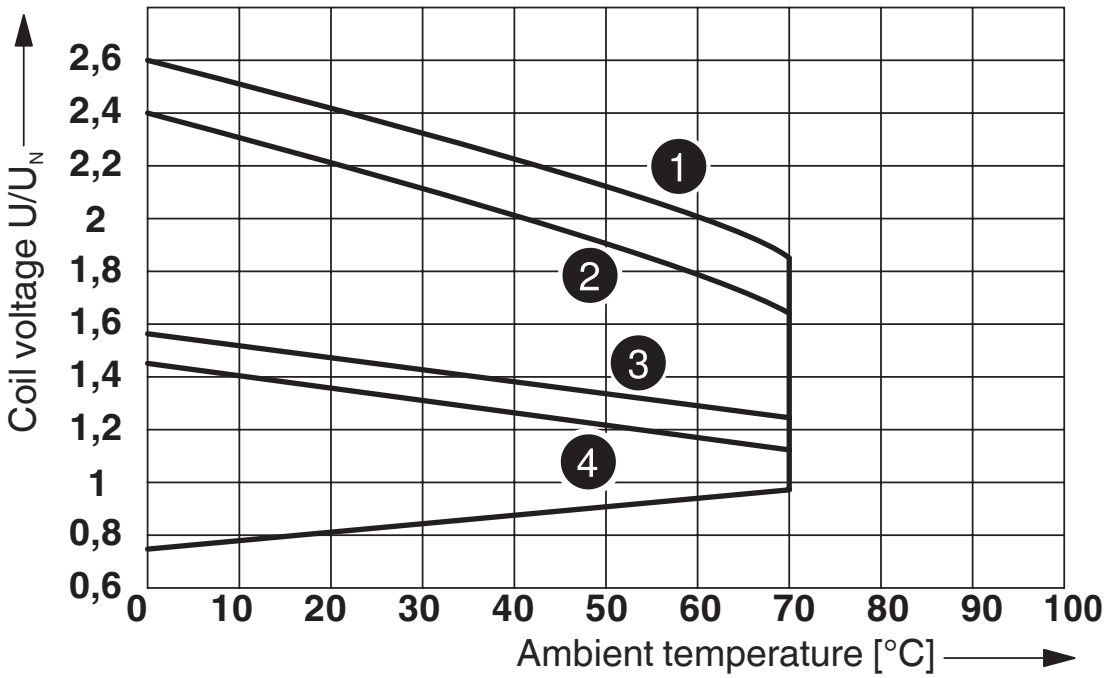
Standards/regulations	EN 61810-1
	VDE 0435-201
	EN 50178

Drawings

Dimensional drawing



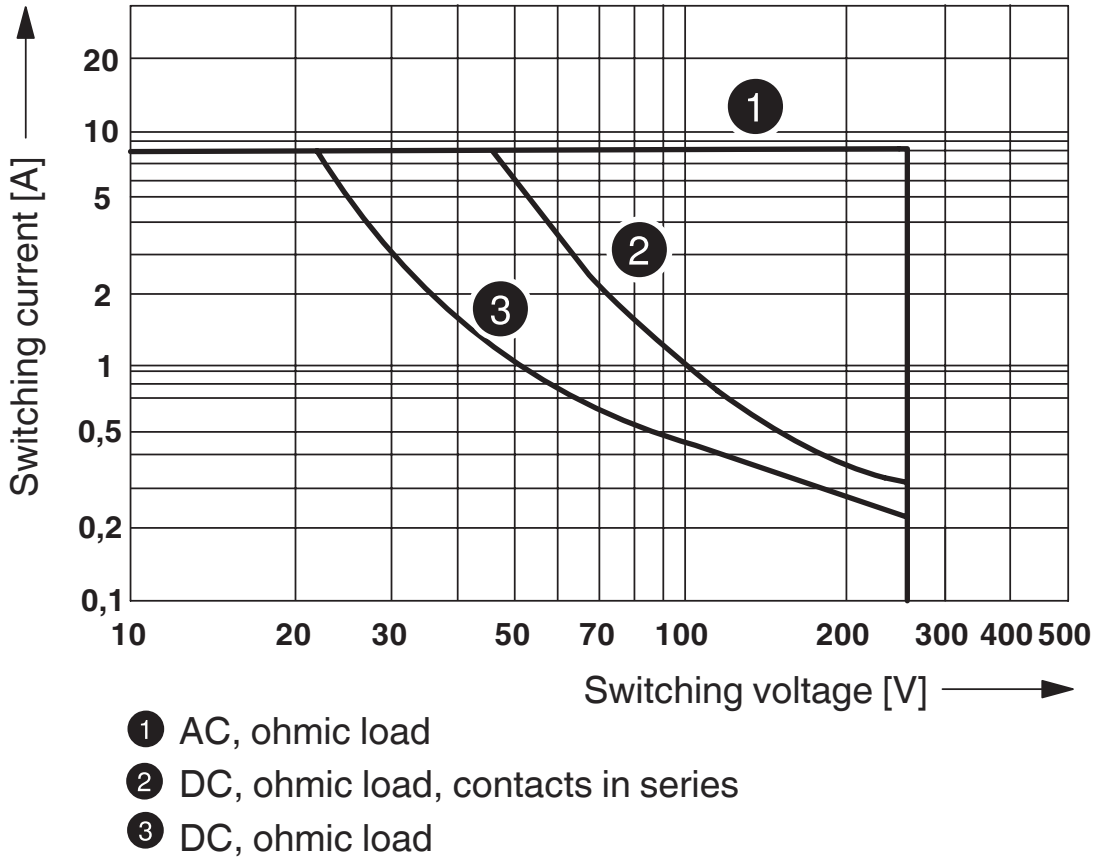
Diagram



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

Diagram



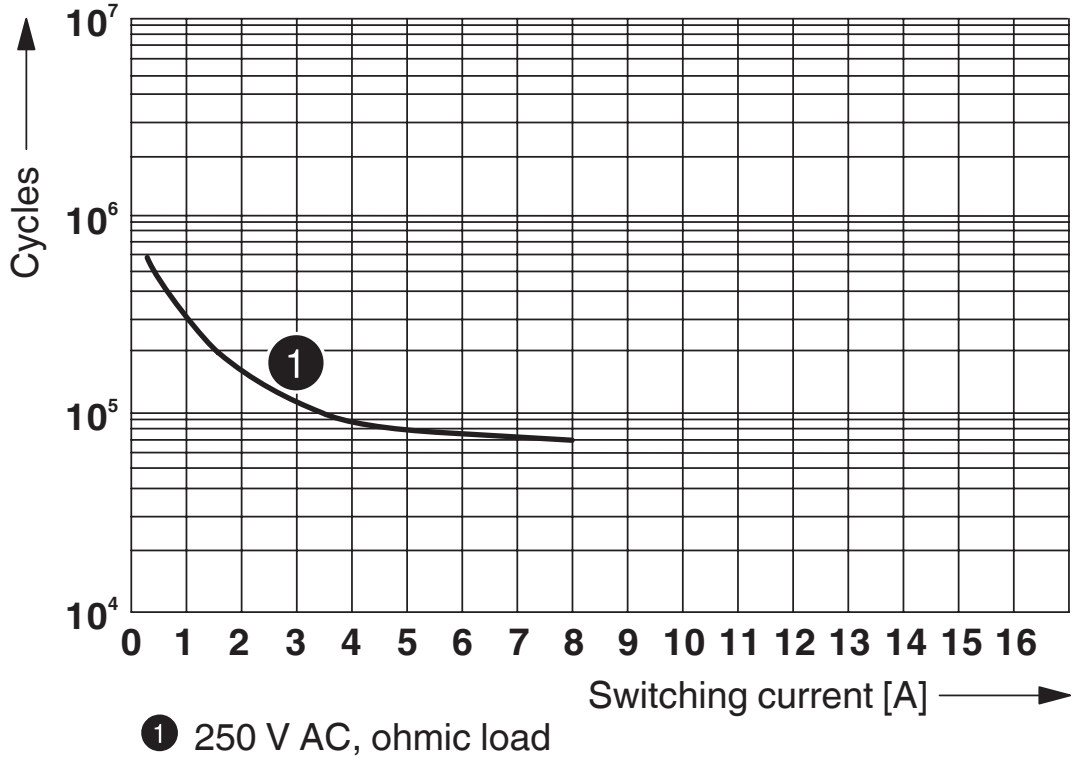
1 AC, ohmic load

2 DC, ohmic load, contacts in series

3 DC, ohmic load

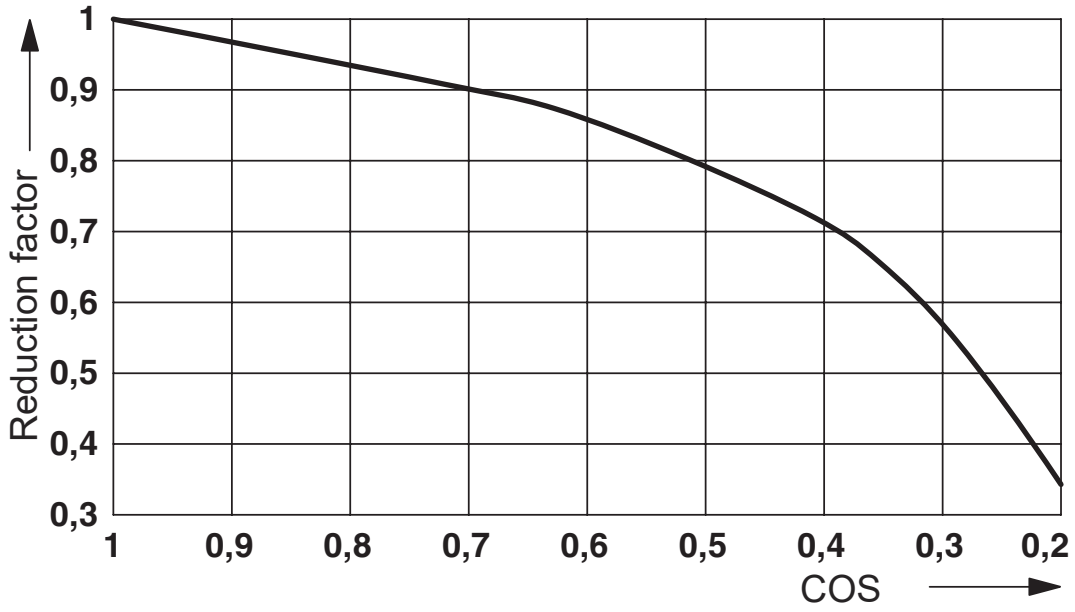
Interrupting rating

Diagram



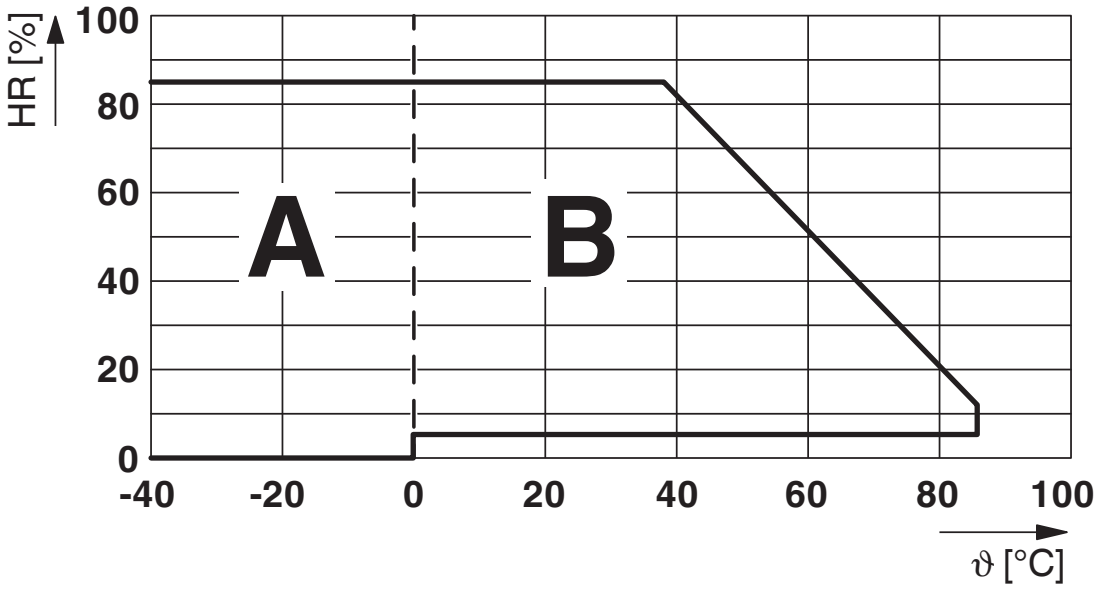
Electrical service life

Diagram



Service life reduction factor with various cos phi

Diagram

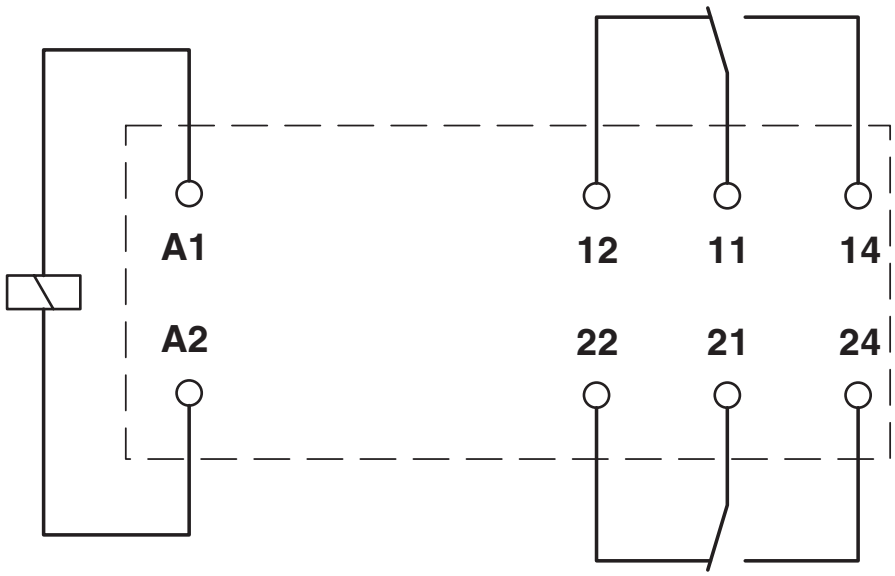


Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures ≤ 0°C must be prevented
Area B: Condensation at ambient temperatures > 0°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 ≤ 25°C.

Circuit diagram



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/2987985

cUL Recognized
Approval ID: FILE E 195083

UL Recognized
Approval ID: FILE E 195083

VDE Zeichengenehmigung
Approval ID: 40027210

Classifications

ECLASS

ECLASS-13.0	27371601
ECLASS-15.0	27371601

ETIM

ETIM 10.0	EC001437

UNSPSC

UNSPSC 21.0	39122300

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%

EF3.1 Climate Change

CO2e kg	1.27 kg CO2e

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