

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



2987943

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Plug-in miniature relay, with power contact, 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	2987943
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	CK6937
Product key	CK6937
Catalog page	Page 292 (C-5-2019)
GTIN	4046356480659
Weight per piece (including packing)	19.576 g
Weight per piece (excluding packing)	18.64 g
Customs tariff number	85364190
Country of origin	CN

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Technical data

Product properties

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

Data management status

Date of last data management	20.06.2024
Article revision	02

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 (50 Hz, 1 min., changeover contact/changeover contact)

Input data

Coil side

Nominal input voltage U_N	24 V DC
Input voltage range	19.2 V DC ... 52.8 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	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
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)

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Motor load according to UL 508	1/4 HP, 120 V AC (N/O contact)
	1/2 HP, 240 V AC (N/O contact)
	1/4 HP, 120 V AC (N/C contact)
	1/3 HP, 240 V AC (N/C contact)

Connection data

Connection method	Plug / solder connection
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Dimensions

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

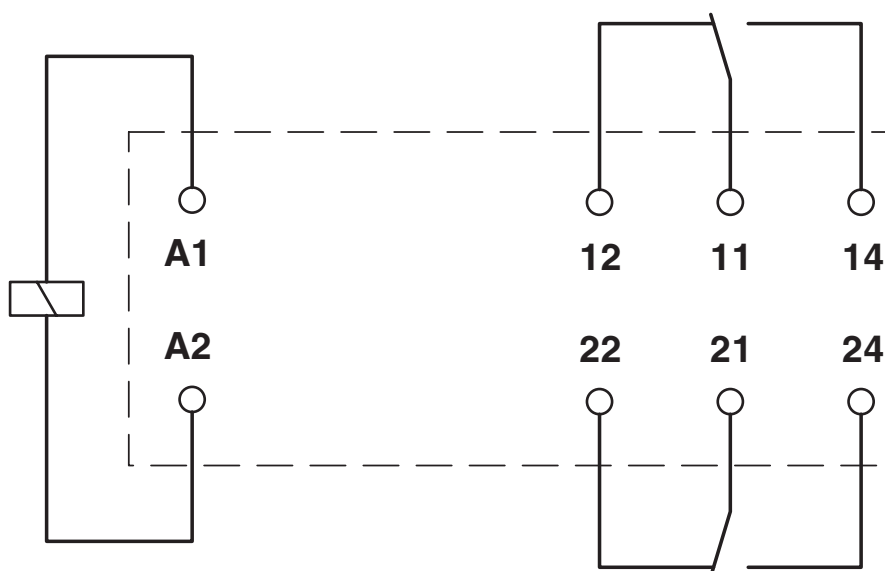
Identification	ISA-S71.04. G3 Harsh Group
	EN 60068-2-60

Standards and regulations

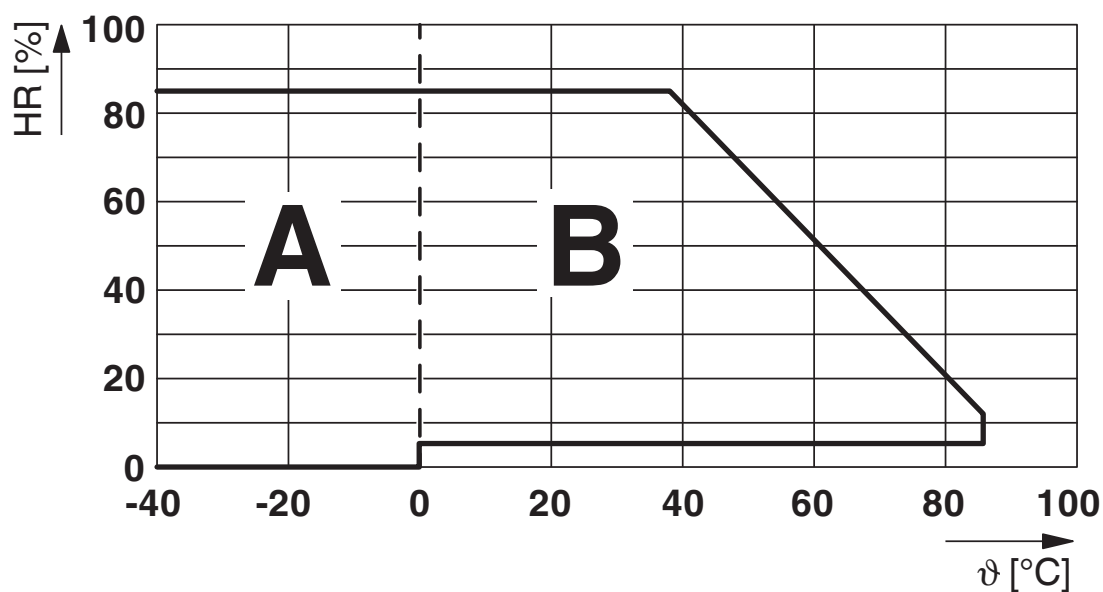
Standards/regulations	EN 61810-1
	VDE 0435-201
	EN 50178

Drawings

Circuit diagram



Diagram



Permissible humidity for operation and storage.

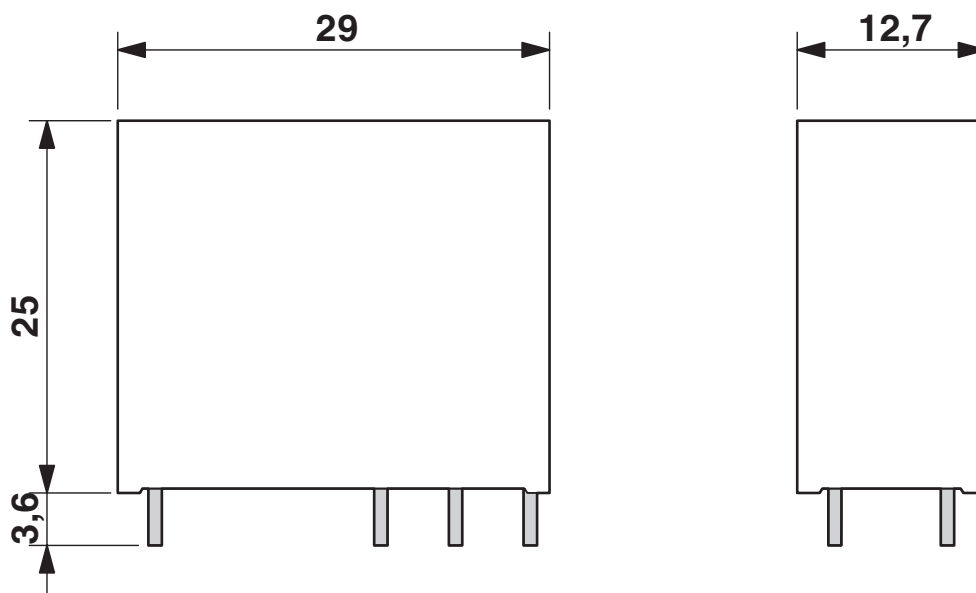
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures $\leq 0^\circ\text{C}$ must be prevented

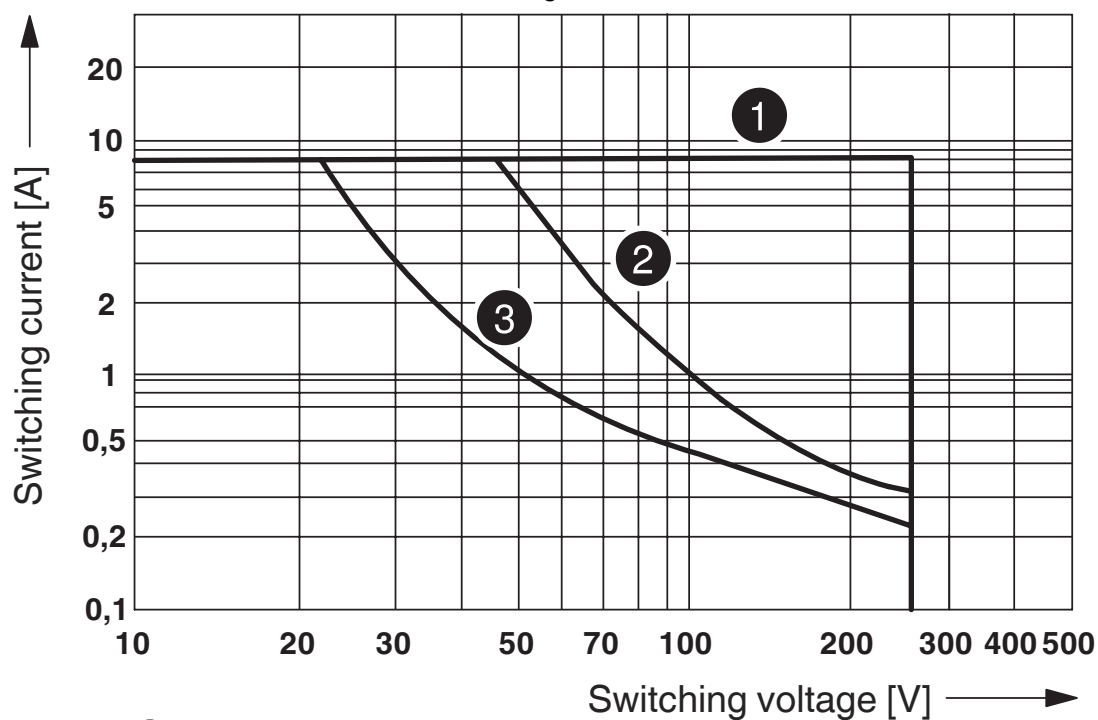
Area B: Condensation at ambient temperatures $> 0^\circ\text{C}$ must be prevented

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

Dimensional drawing

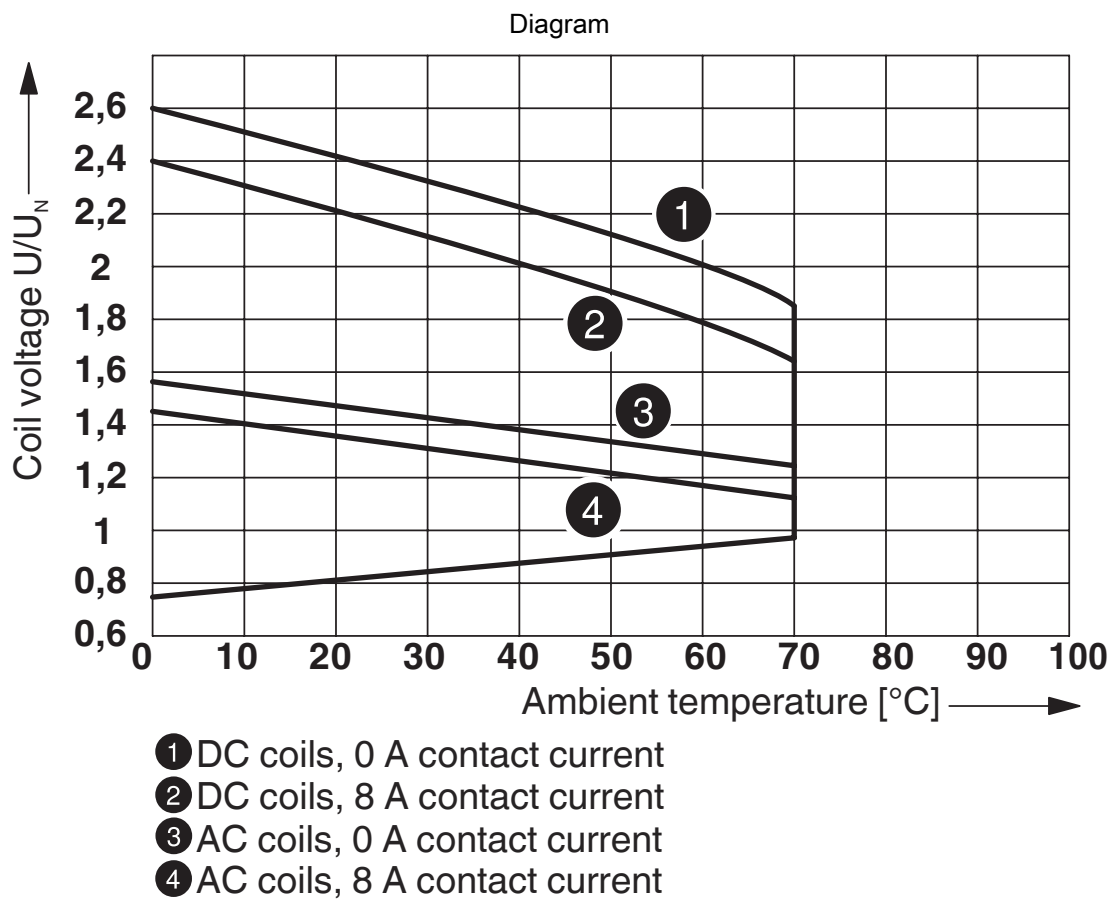


Diagram



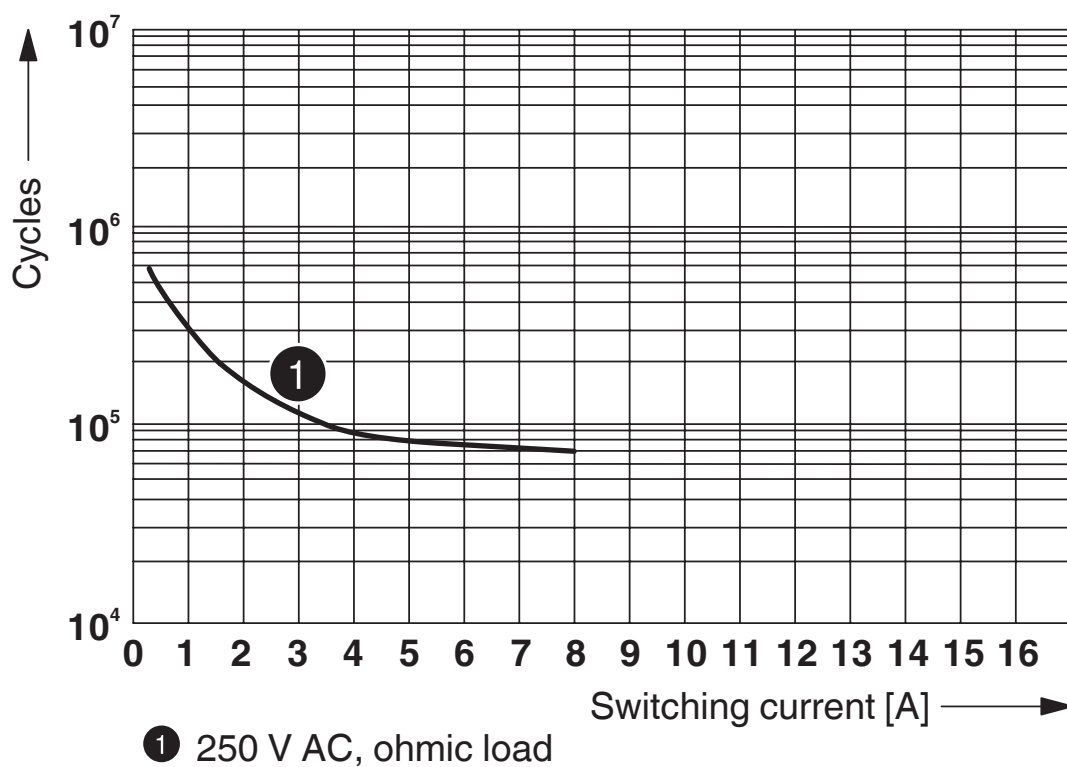
- ① AC, ohmic load
- ② DC, ohmic load, contacts in series
- ③ DC, ohmic load

Interrupting rating



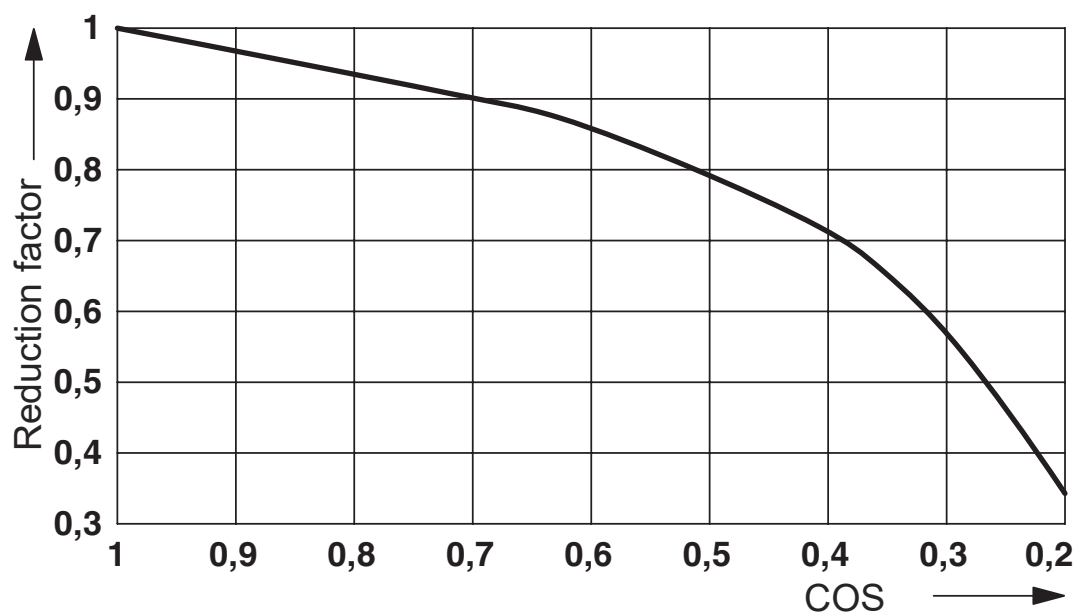
Operating voltage range

Diagram



Electrical service life

Diagram



Service life reduction factor with various cos phi

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2987943>



cUL Recognized
Approval ID: FILE E 195083



UL Recognized
Approval ID: FILE E 195083



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



VDE Zeichengenehmigung
Approval ID: 40027210

cULus Recognized

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Classifications

ECLASS

ECLASS-11.0	27371601
ECLASS-12.0	27371601
ECLASS-13.0	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
Exemption	7(c)-I
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%
EF3.0 Climate Change	
CO2e kg	0.2 kg CO2e

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