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REL-MR-120AC/21-21/MS - Single relay

2987969

https://www.phoenixcontact.com/pc/products/2987969

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Plug-in miniature relay, with power contact, 2 changeover contacts, test button, mechanical switching position indicator, status LED, coil voltage 120 V AC

Your advantages

- With detectable manual operation
- Mechanical switch position indicator
- DC types with integrated freewheeling diode
- Switching current of up to 16 A
- Integrated status LED

Commercial data

Item number	2987969
Packing unit	10 pc
Minimum order quantity	10 pc
Product key	DK6937
Catalog page	Page 292 (C-5-2019)
GTIN	4046356480970
Weight per piece (including packing)	18.43 g
Weight per piece (excluding packing)	17.48 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 10^6 cycles

Data management status

Date of last data management	20.06.2024

Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.84 W
Test voltage (Winding/contact)	5 kV AC (50 Hz, 1 min., winding/contact)
Test voltage (Contact/contact)	2.5 kV AC (50 Hz, 1 min., contact/contact)

Input data

Coil side

Nominal input voltage U_N	120 V AC
Input voltage range	93.6 V AC ... 174 V AC
Mains frequency	50/60 Hz
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at U_N	7 mA
Typical response time	3 ms ... 12 ms (depending on phase relation)
Typical release time range	2 ms ... 8 ms (depending on phase relation)

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

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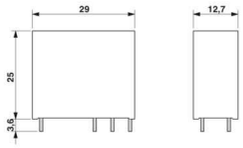
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	1/4 HP, 120 V AC (N/C contact)
	1/3 HP, 240 V AC (N/C contact)

Connection data

Connection method	Plug / solder connection

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

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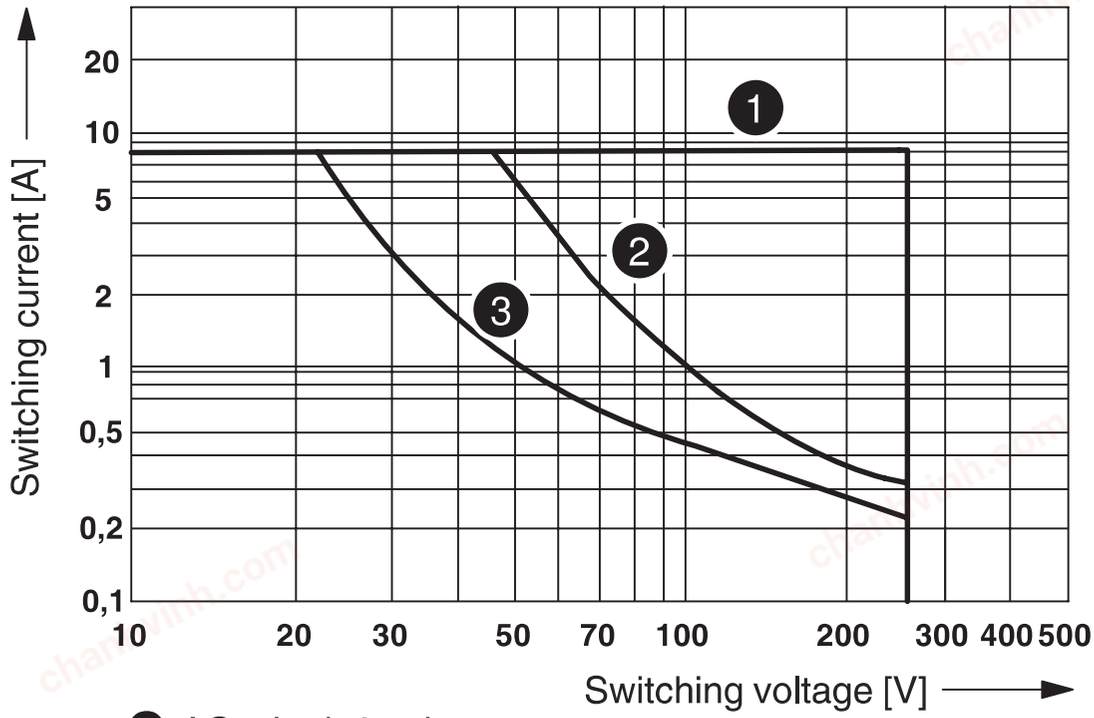
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Drawings

Diagram



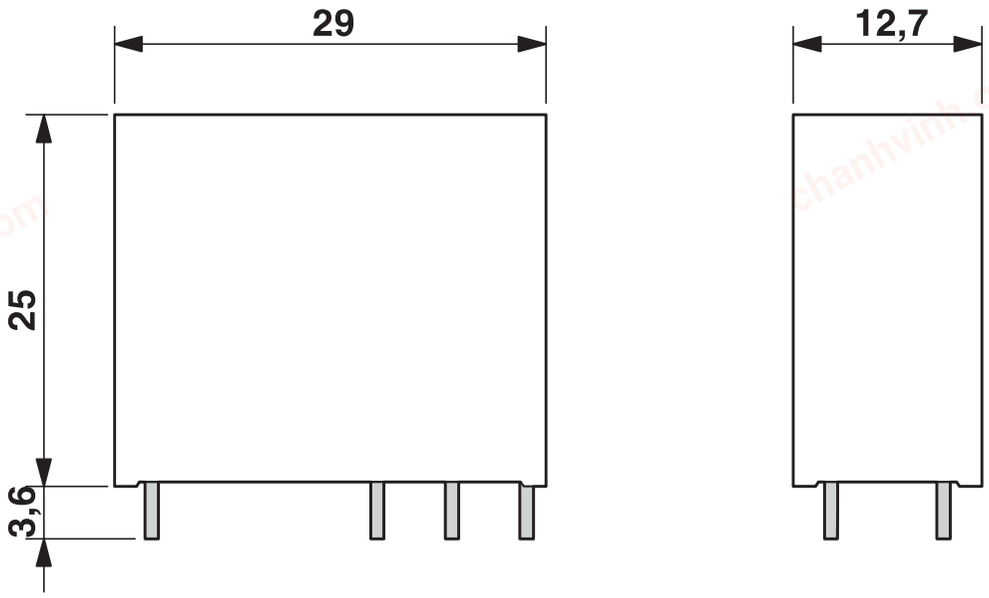
1 AC, ohmic load

2 DC, ohmic load, contacts in series

3 DC, ohmic load

Interrupting rating

Dimensional drawing



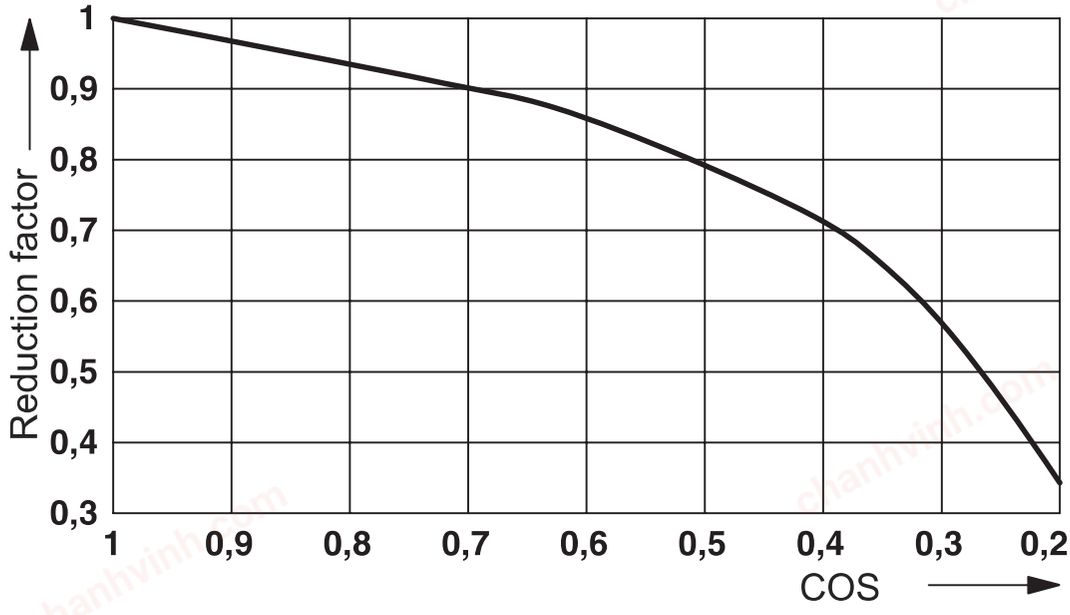
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Diagram



Service life reduction factor with various cos phi

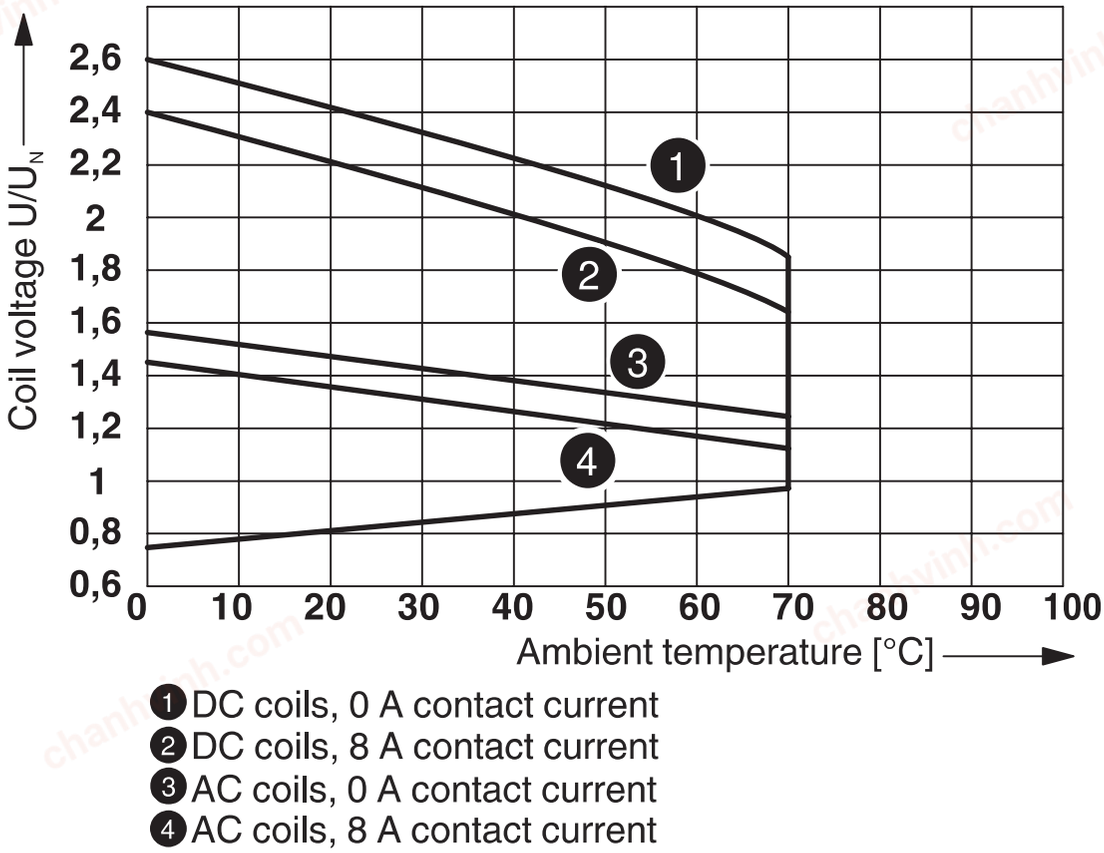
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Diagram

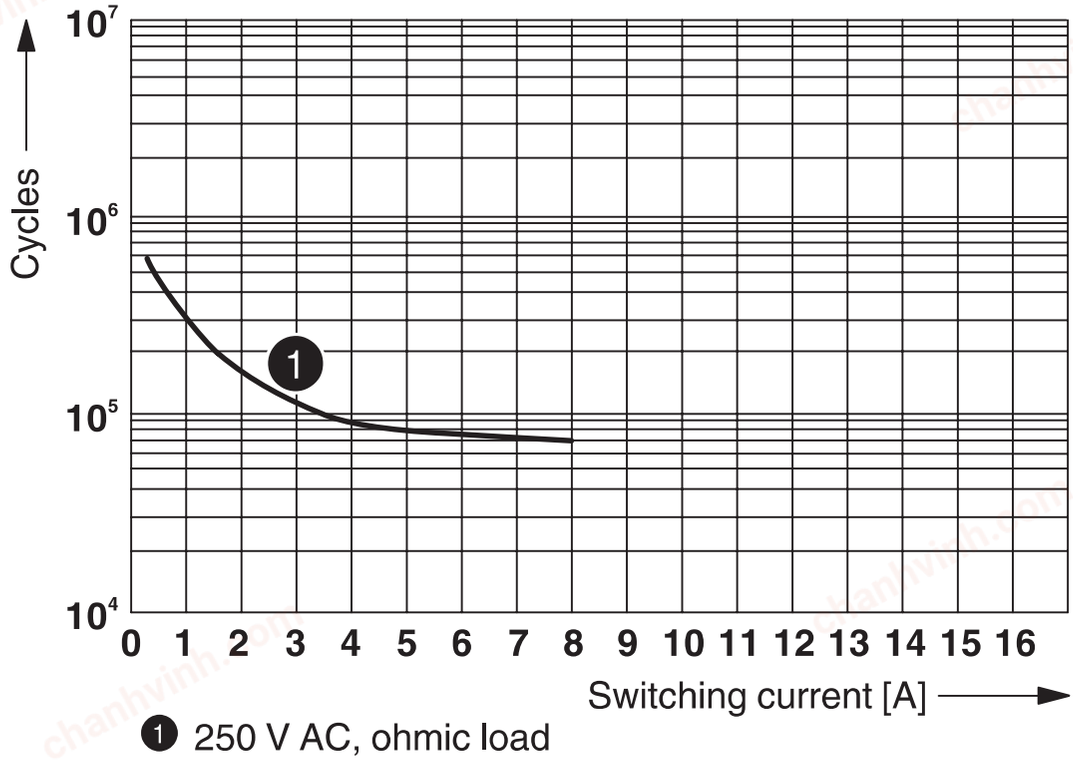


1 DC coils, 0 A contact current
2 DC coils, 8 A contact current
3 AC coils, 0 A contact current
4 AC coils, 8 A contact current

Operating voltage range

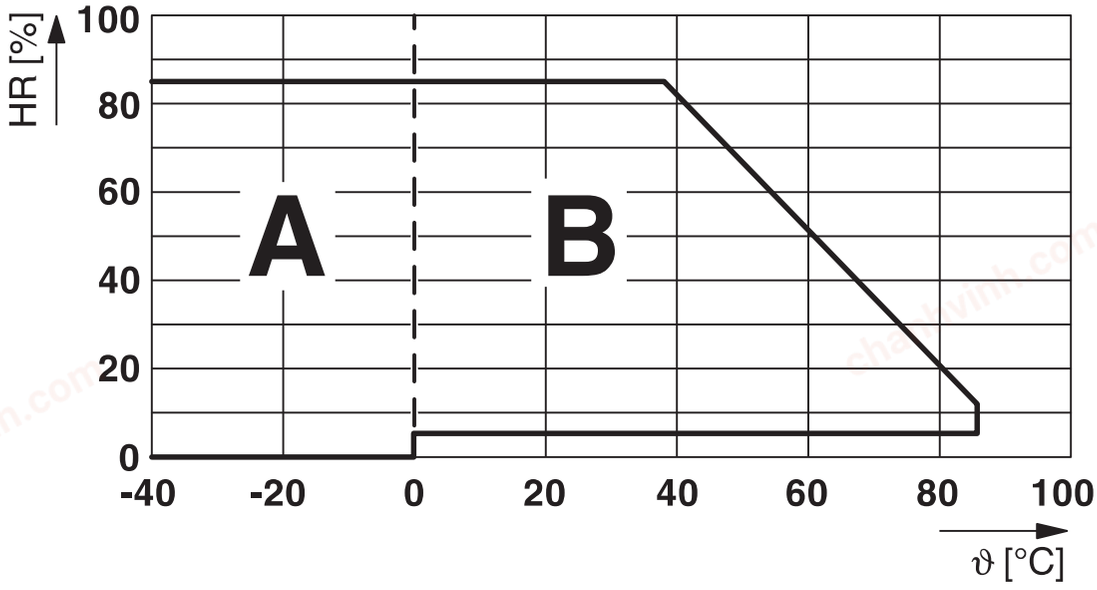
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Diagram



Electrical service life

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.

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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/pc/products/2987969

cUL Recognized
Approval ID: FILE E 195083

UL Recognized
Approval ID: FILE E 195083

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

VDE approval of drawings
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

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%

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