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

2961545

https://www.phoenixcontact.com/pc/products/2961545

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Plug-in miniature power relay, with multi-layer gold contact for high continuous currents, 1 changeover contact, input voltage 24 V DC

Your advantages

- RT III-proof (wash-proof)
- Switching current of up to 16 A

Commercial data

Item number	2961545
Packing unit	10 pc
Minimum order quantity	10 pc
Product key	DK6932
Catalog page	Page 290 (C-5-2019)
GTIN	4017918937942
Weight per piece (including packing)	16.893 g
Weight per piece (excluding packing)	16.05 g
Customs tariff number	85364900
Country of origin	AT

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Technical data

Product properties

Product type	Single relay
Operating mode	100% operating factor
Mechanical service life	3x 10^7 cycles

Insulation characteristics

Overvoltage category	III
Pollution degree	3

Data management status

Date of last data management	20.06.2024

Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.41 W
Test voltage (Winding/contact)	5 kV AC (50 Hz, 1 min., winding/contact)

Input data

Coil side

Nominal input voltage U_N	24 V DC
Input voltage range	15.6 V DC ... 57.6 V DC
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at U_N	17 mA
Typical response time	7 ms
Typical release time	3 ms
Coil resistance	1440 Ω ±10 % (at 20 °C)

Output data

Switching

Contact switching type	1 changeover contact
Type of switch contact	Single contact
Contact material	AgNi, hard gold-plated
Maximum switching voltage	30 V AC
	36 V DC
Minimum switching voltage	100 mV (at 10 mA)
Limiting continuous current	50 mA
Maximum inrush current	50 mA
Min. switching current	1 mA (at 24 V)
Interrupting rating (ohmic load) max.	1.2 W (at 24 V DC)
Switching capacity	2 A (at 24 V, AC15)

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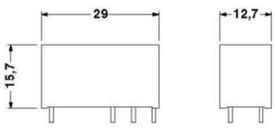
Switching: when the gold layer is destroyed

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	16 A
Maximum inrush current	15 A (300 ms)
Min. switching current	10 mA (at 12 V)
Interrupting rating (ohmic load) max.	384 W (at 24 V DC)
	58 W (at 48 V DC)
	48 W (at 60 V DC)
	50 W (at 110 V DC)
	80 W (at 220 V DC)
	4000 VA (for 250 V AC)
Switching capacity	2 A (at 24 V, DC13)
	0.2 A (at 110 V, DC13)
	0.2 A (at 250 V, DC13)
	2 A (at 24 V, AC15)
	2 A (at 120 V, AC15)
	2 A (at 250 V, AC15)

Connection data

Connection method	Plug / solder connection

Dimensions

Dimensional drawing	
Width	12.7 mm
Height	29 mm
Depth	15.7 mm

Material specifications

Color	white (RAL 9010)

Environmental and real-life conditions

Ambient conditions

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Ambient temperature (operation)	-40 °C ... 85 °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	IEC 60664
	EN 50178
	EN 61810-1

Mounting

Assembly note	Can be aligned without spacing (> 70 °C ≥ 2.5 mm)
Mounting position	any

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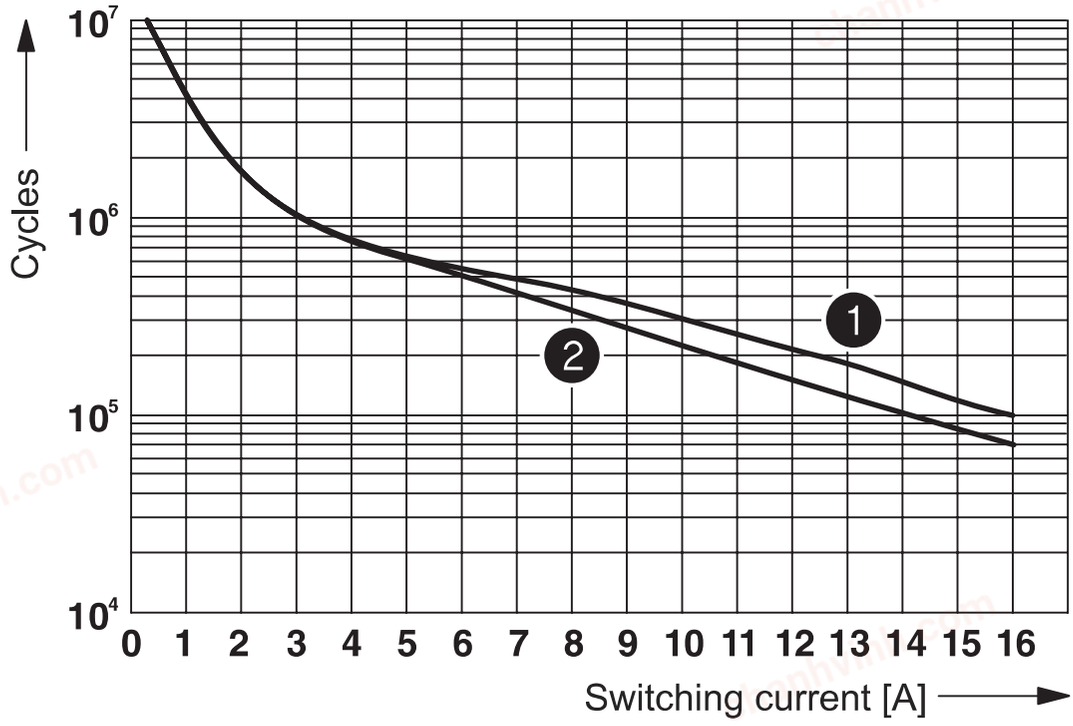
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Drawings

Diagram

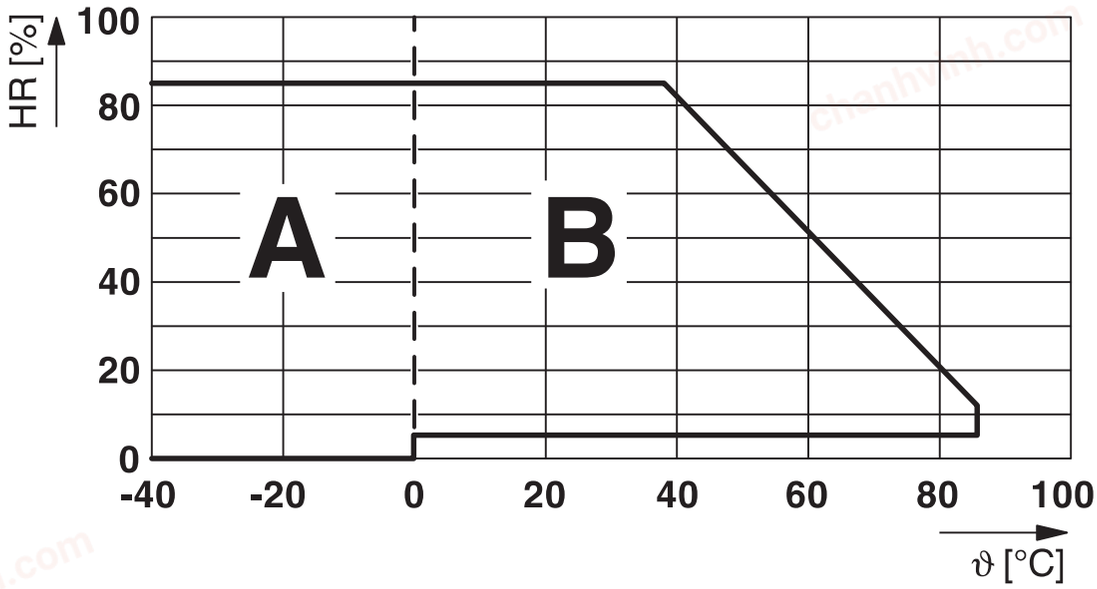


1 250 V AC, ohmic load (DC coils)
2 250 V AC, ohmic load (AC coils)

Electrical service life

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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.

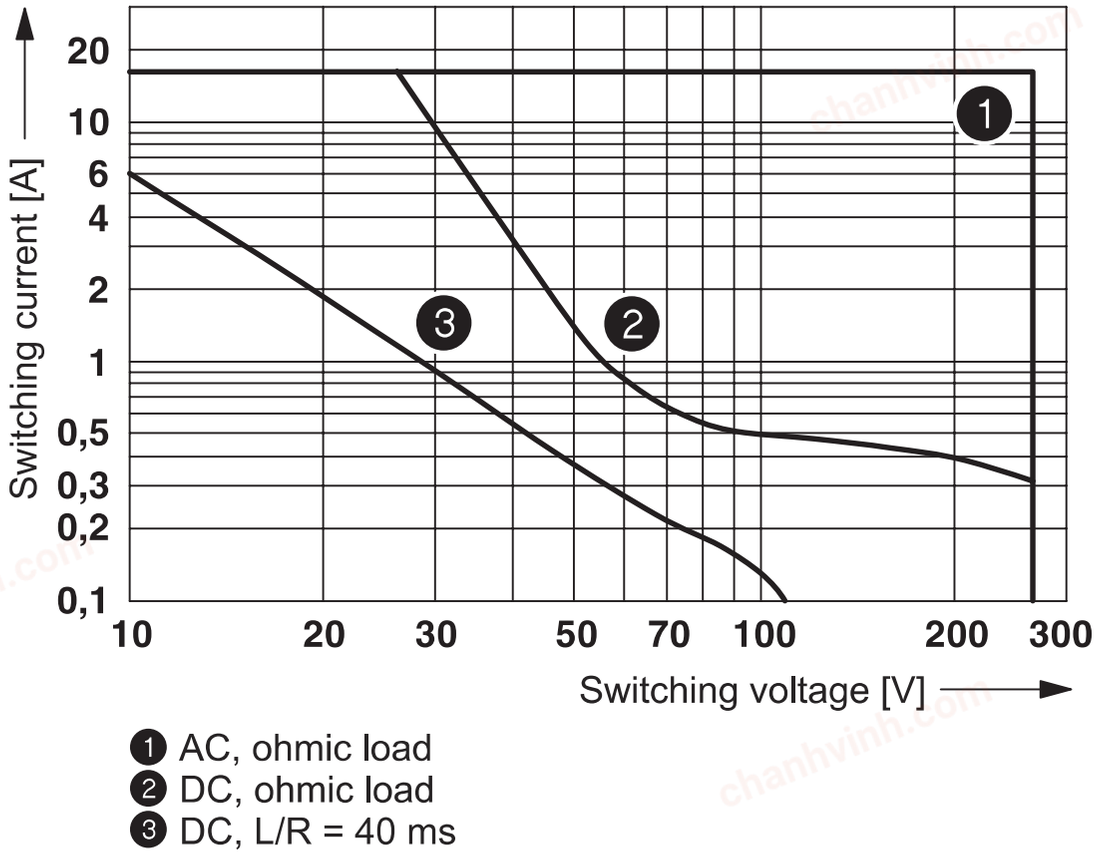
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Diagram



1 AC, ohmic load
2 DC, ohmic load
3 DC, L/R = 40 ms

Interrupting rating

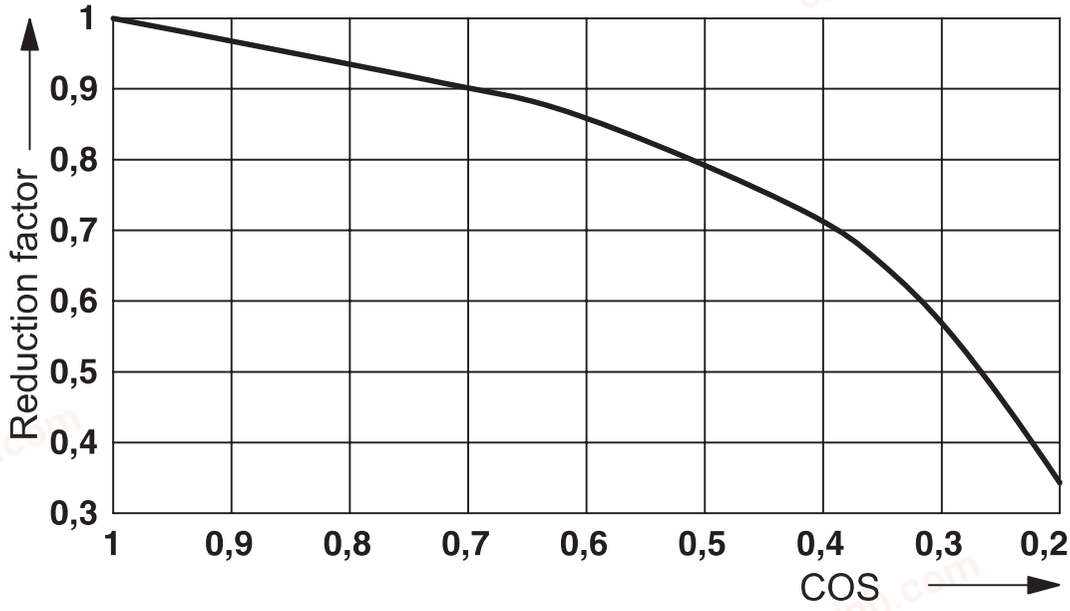
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Diagram



Service life reduction factor with various cos phi

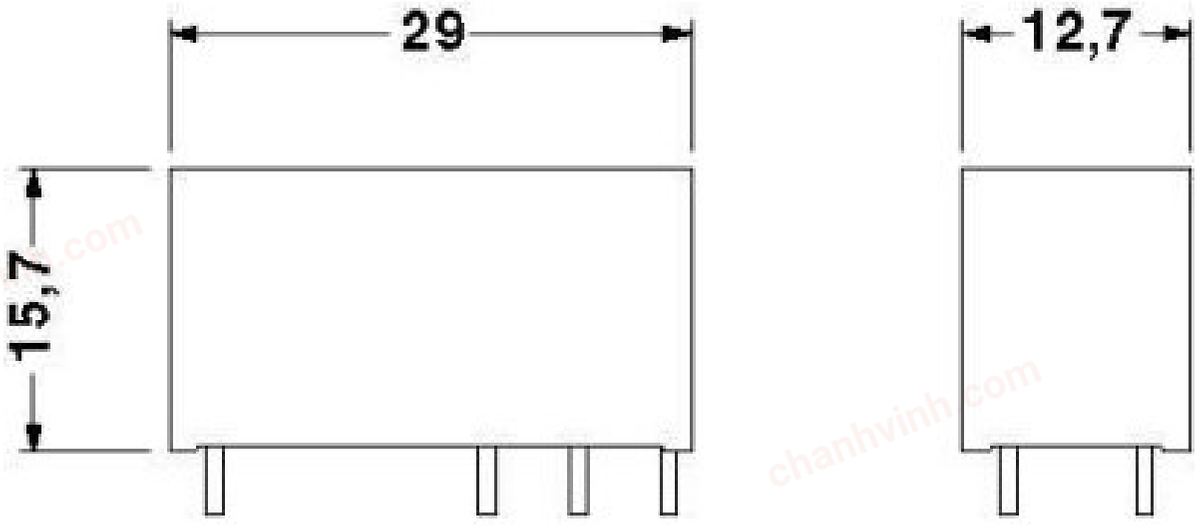
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Dimensional drawing



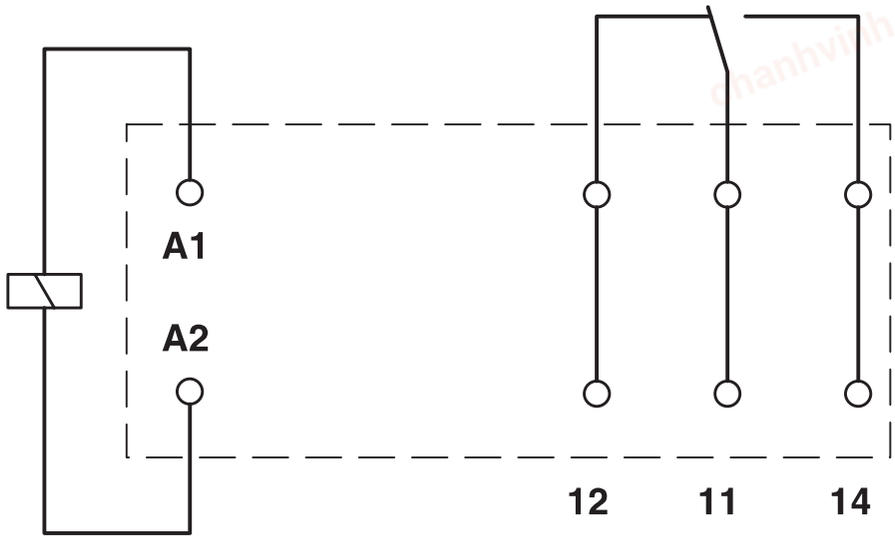
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Circuit diagram



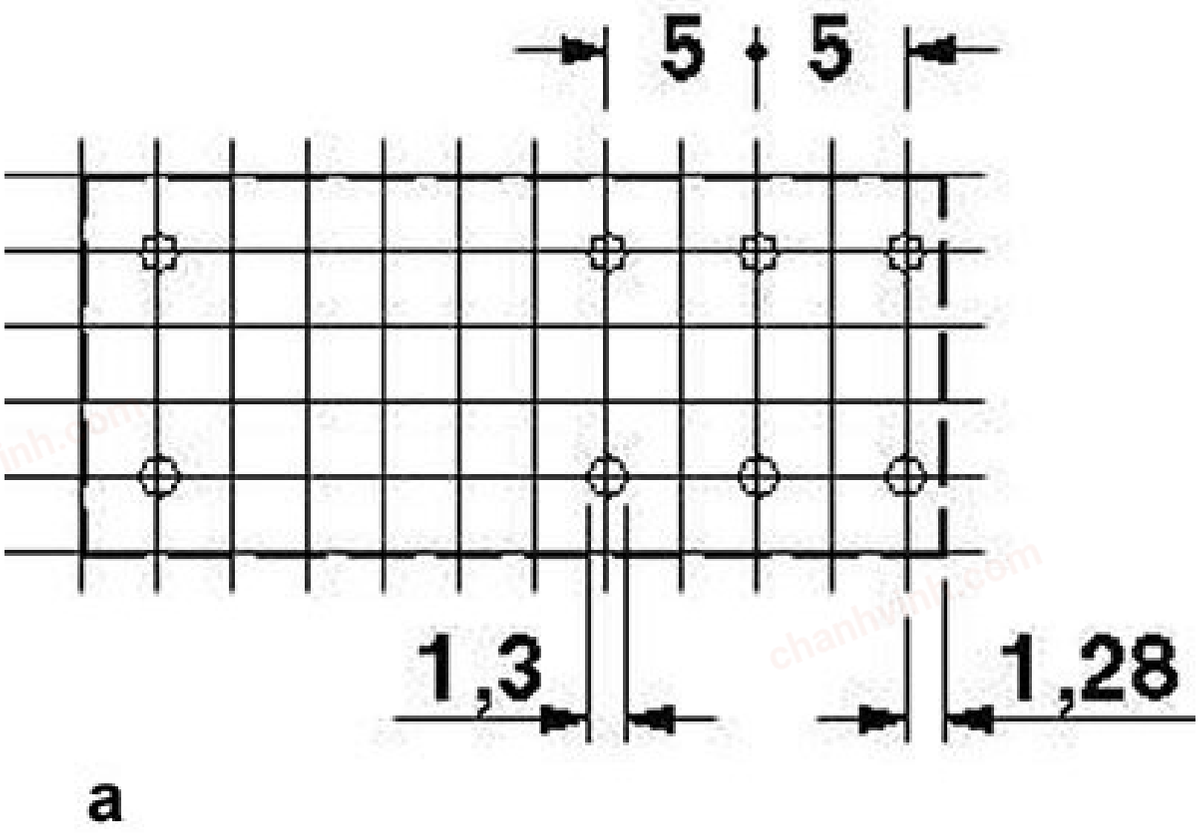
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Drilling plan/solder pad geometry



a = pitch division 2.5 mm

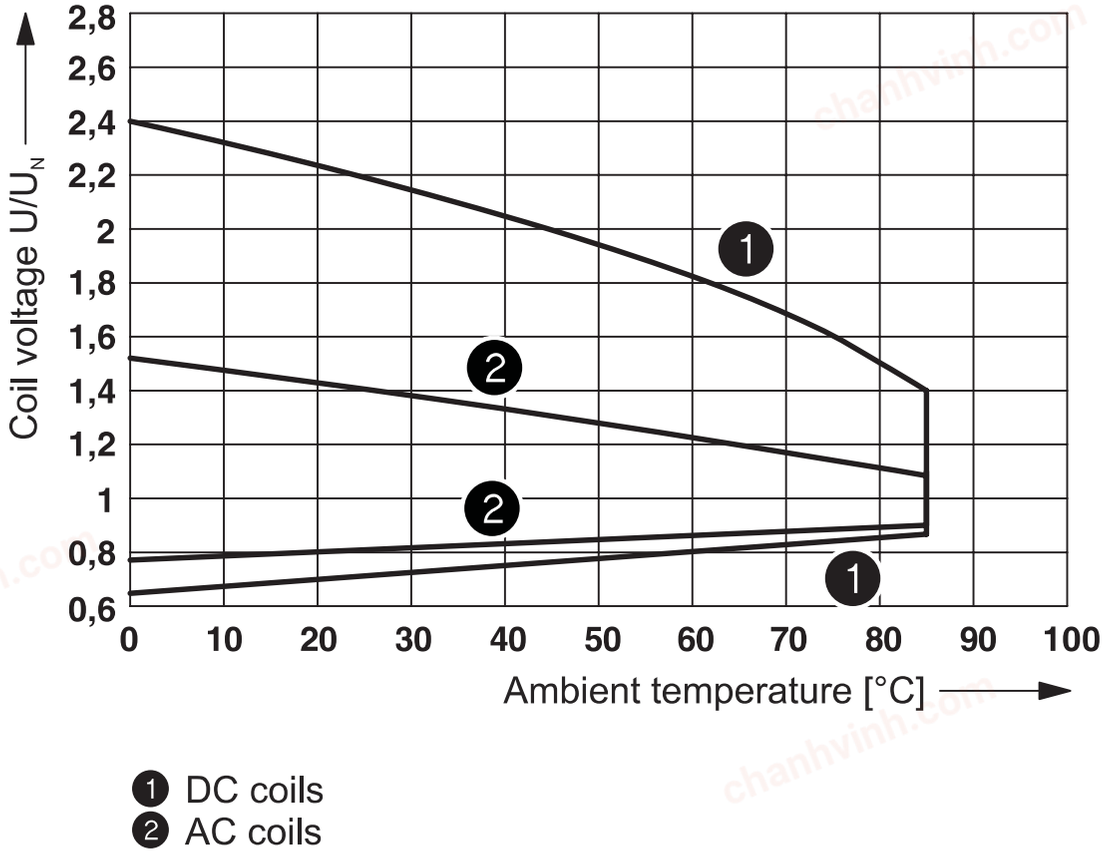
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Diagram



1 DC coils
2 AC coils

Operating voltage range

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Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/pc/products/2961545

cUL Recognized
Approval ID: FILE E 228652

UL Recognized
Approval ID: FILE E 228652

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

UL Recognized
Approval ID: FILE E 172140

VDE Zeichengenehmigung
Approval ID: 40048281

VDE Zeichengenehmigung
Approval ID: 40007758

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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, 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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