

REL-MR- 24AC/21-21AU - Single relay



2961464

<https://www.phoenixcontact.com/us/products/2961464>

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Plug-in miniature power relay, with multi-layer gold contact, 2 changeover contacts, input voltage 24 V AC

Your advantages

- RT III-proof (wash-proof)

Commercial data

Item number	2961464
Packing unit	10 pc
Minimum order quantity	10 pc
Note	Made to order (non-returnable)
Sales key	C460
Product key	CK6936
Catalog page	Page 290 (C-5-2019)
GTIN	4017918937874
Weight per piece (including packing)	16.11 g
Weight per piece (excluding packing)	16.11 g
Customs tariff number	85364190
Country of origin	AT

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Technical data

Product properties

Product type	Single relay
Operating mode	100% operating factor
Mechanical service life	1x 10 ⁷ cycles

Insulation characteristics

Insulation	Basic insulation
Overvoltage category	III
Pollution degree	3

Data management status

Date of last data management	02.05.2024
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Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.77 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	24 V AC
Input voltage range	18.7 V AC ... 37.2 V AC
Mains frequency	50/60 Hz
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at U _N	32 mA (at 50 Hz)
	24 mA (At 60 Hz)
Typical response time	3 ms ... 12 ms (depending on phase relation)
Typical release time range	2 ms ... 9 ms (depending on phase relation)
Coil resistance	350 Ω ±10 % (at 20 °C)

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	100 mV (at 10 mA)
Limiting continuous current	50 mA

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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)

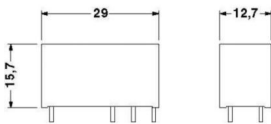
Switching: when the gold layer is destroyed

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	5 V (at 10 mA)
Limiting continuous current	8 A
Maximum inrush current	50 A (20 ms)
Min. switching current	10 mA (At 5 V)
Interrupting rating (ohmic load) max.	190 W (at 24 V DC)
	85 W (at 48 V DC)
	60 W (at 60 V DC)
	44 W (at 110 V DC)
	60 W (at 220 V DC)
	2000 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
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Dimensions

Dimensional drawing	
Width	12.7 mm
Height	29 mm
Depth	15.7 mm

Material specifications

Color	white (RAL 9010)
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Environmental and real-life conditions

Ambient conditions

Degree of protection	RT III
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

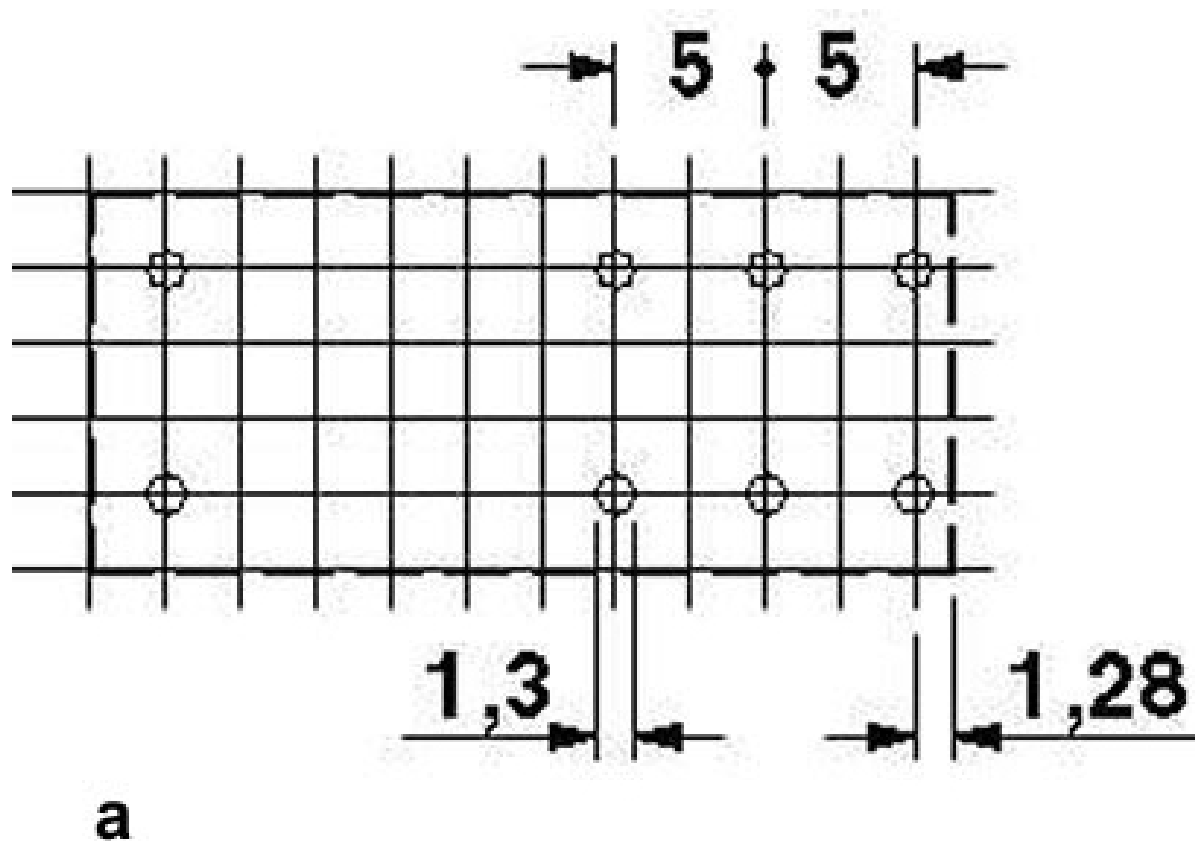
Standards/regulations	IEC 60664
	EN 50178
	EN 61810-1

Mounting

Assembly note	Can be aligned without spacing ($> 70\text{ °C} \geq 2.5\text{ mm}$)
Mounting position	any

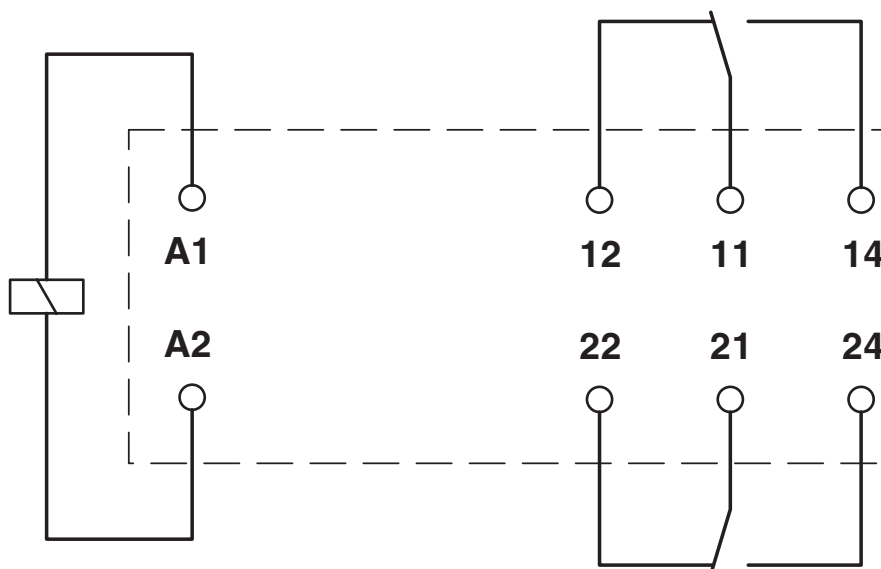
Drawings

Drilling plan/solder pad geometry

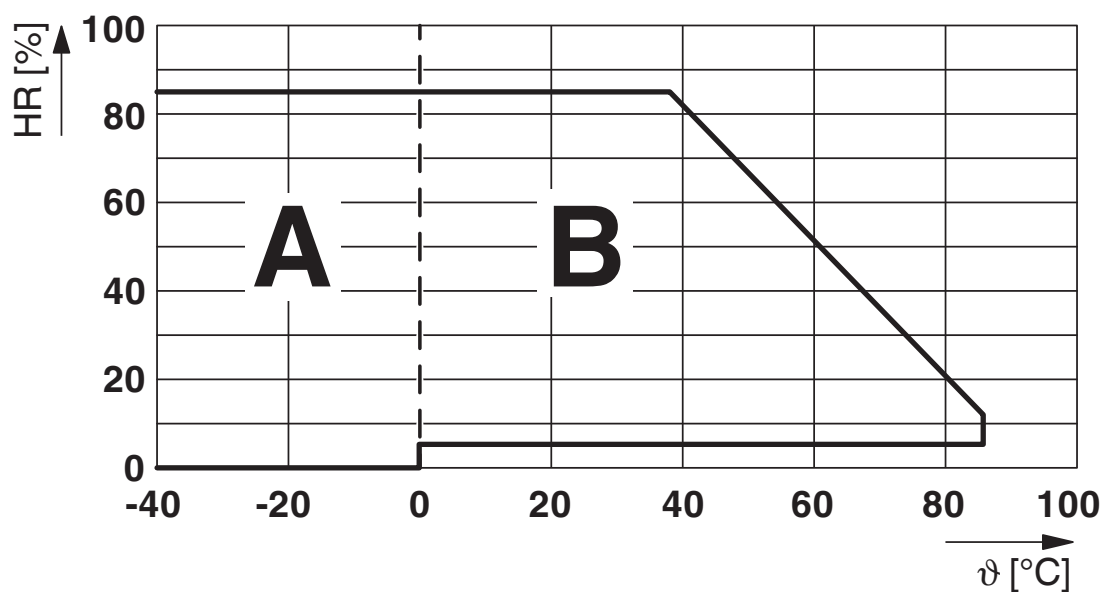


a = pitch division 2.5 mm

Circuit diagram



Diagram



Permissible humidity for operation and storage.

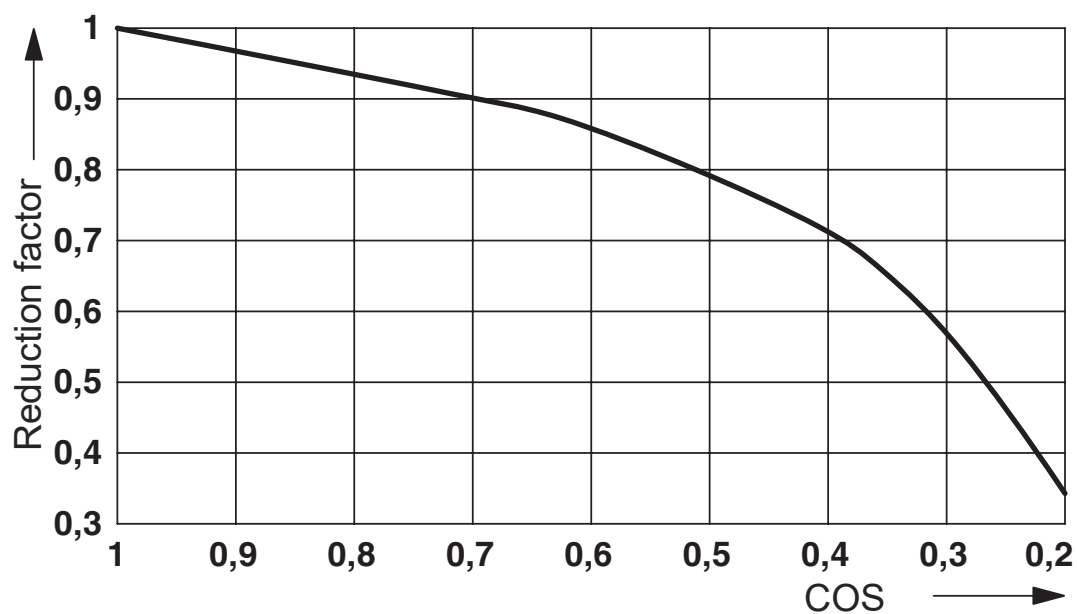
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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

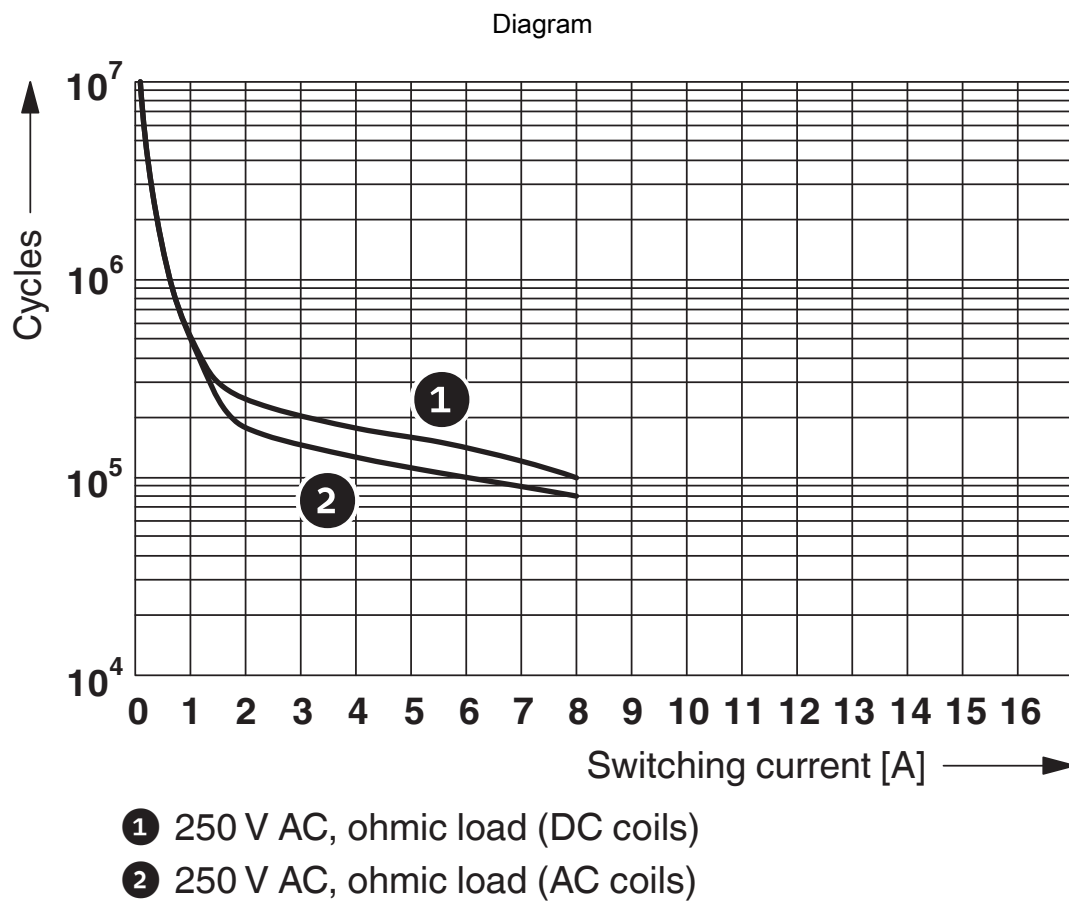
Area B: Condensation at ambient temperatures $> 0^{\circ}\text{C}$ must be prevented

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

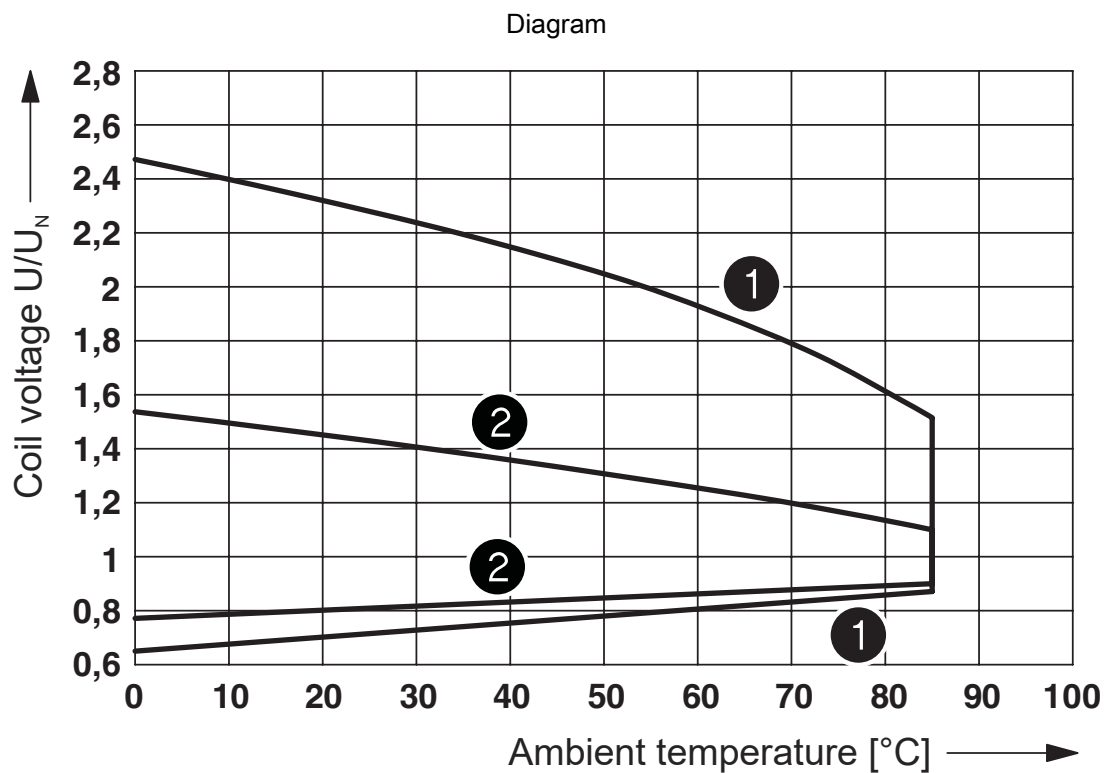
Diagram



Service life reduction factor with various cos phi



Electrical service life



- ① DC coils
- ② AC coils

Operating voltage range

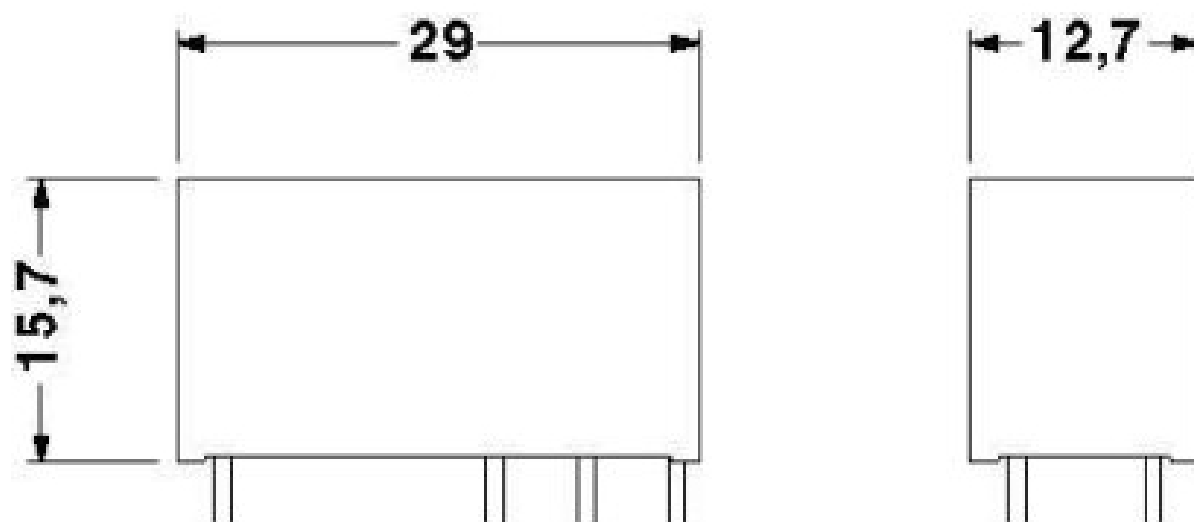
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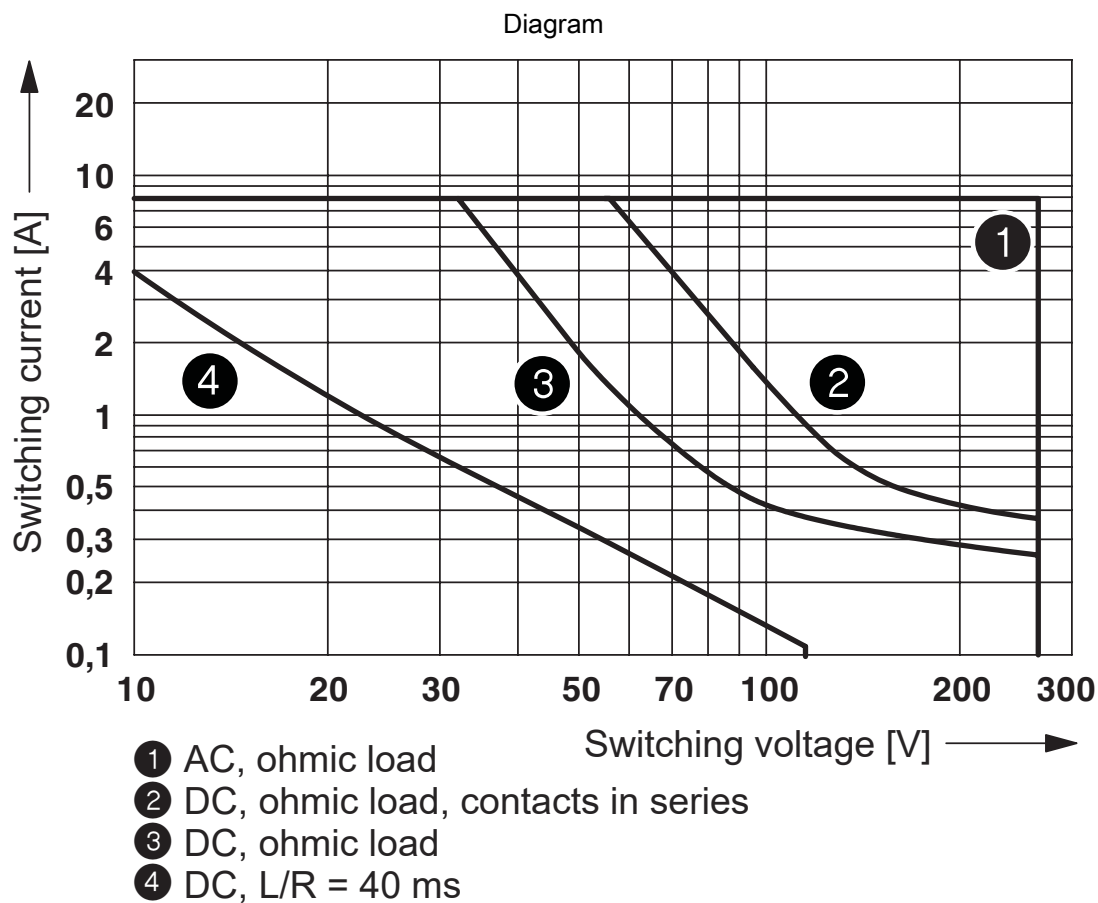
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Dimensional drawing





Interrupting rating

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2961464>



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 approval of drawings
Approval ID: 40048281



VDE approval of drawings
Approval ID: 40007758



cUL Recognized
Approval ID: FILE E 172140

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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, 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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