REL-MR- 12DC/1ICT - Single relay

1081616

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Pluggable miniature power relay, with tungsten pre-contact for high switch-on currents up to 800 A peaks, 1 N/O contact, input voltage: 12 V DC

Your advantages

- Safe isolation between coil and contact side
- High degree of protection up to RT III depending on type (wash-proof)
- Power contacts up to 16 A

Commercial data

Item number	1081616
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	DK6931
Product key	DK6931
GTIN	4055626807881
Weight per piece (including packing)	15.94 g
Weight per piece (excluding packing)	15.94 g
Customs tariff number	85364900
Country of origin	AT

Technical data

Product properties

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

Insulation characteristics

Insulation	Safe isolation, reinforced insulation
Overvoltage category	III
Pollution degree	3

Data management status

Date of last data management	01.04.2026

Electrical properties

Maximum power dissipation for nominal condition	0.4 W
Test voltage (Winding/contact)	5 kV AC (50 Hz, 1 min., winding/contact)
Rated insulation voltage	250 V AC
Rated surge voltage	6 kV

Input data

Coil side

Nominal input voltage U_N	12 V DC
Input voltage range	9.6 V DC ... 27 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	33 mA
Typical response time	8 ms
Typical release time	3 ms
Coil resistance	360 Ω ±10 % (20 °C)

Output data

Switching

Contact switching type	1 N/O contact
Type of switch contact	Single contact
Contact material	AgSnO
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (100 mA)
Limiting continuous current	16 A
Maximum inrush current	165 A (20 ms)
	800 A (200 µs)

Min. switching current	100 mA (at 12 V DC)
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 power min.	1200 mW

Connection data

Connection method	Plug / solder connection

Dimensions

Item dimensions

Width	12.7 mm
Height	29 mm
Depth	15.7 mm

Material specifications

Color	white (RAL 9010)

Environmental and real-life conditions

Ambient conditions

Degree of protection	RT II
Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m

Approvals

Corrosive gas test

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

Standards and regulations

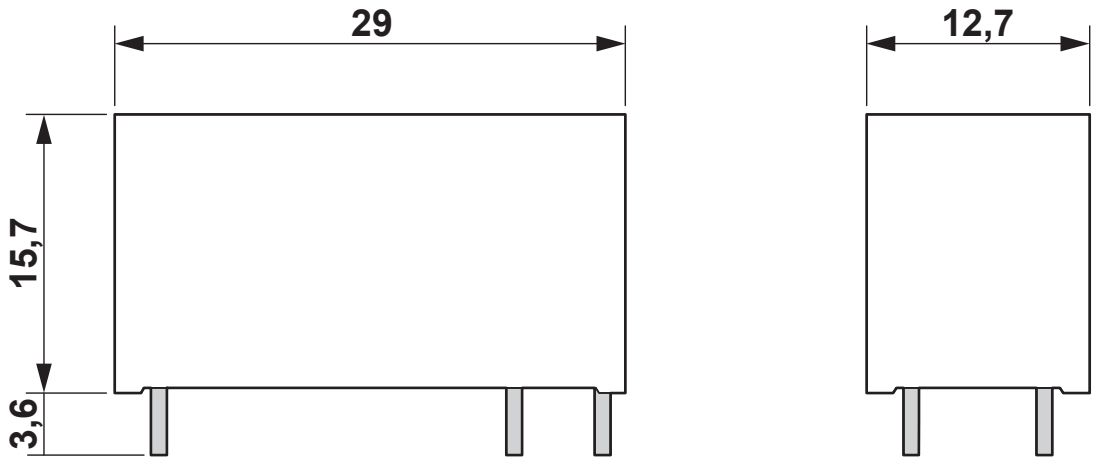
Standards/regulations	EN 50178
	EN 61810-1

Mounting

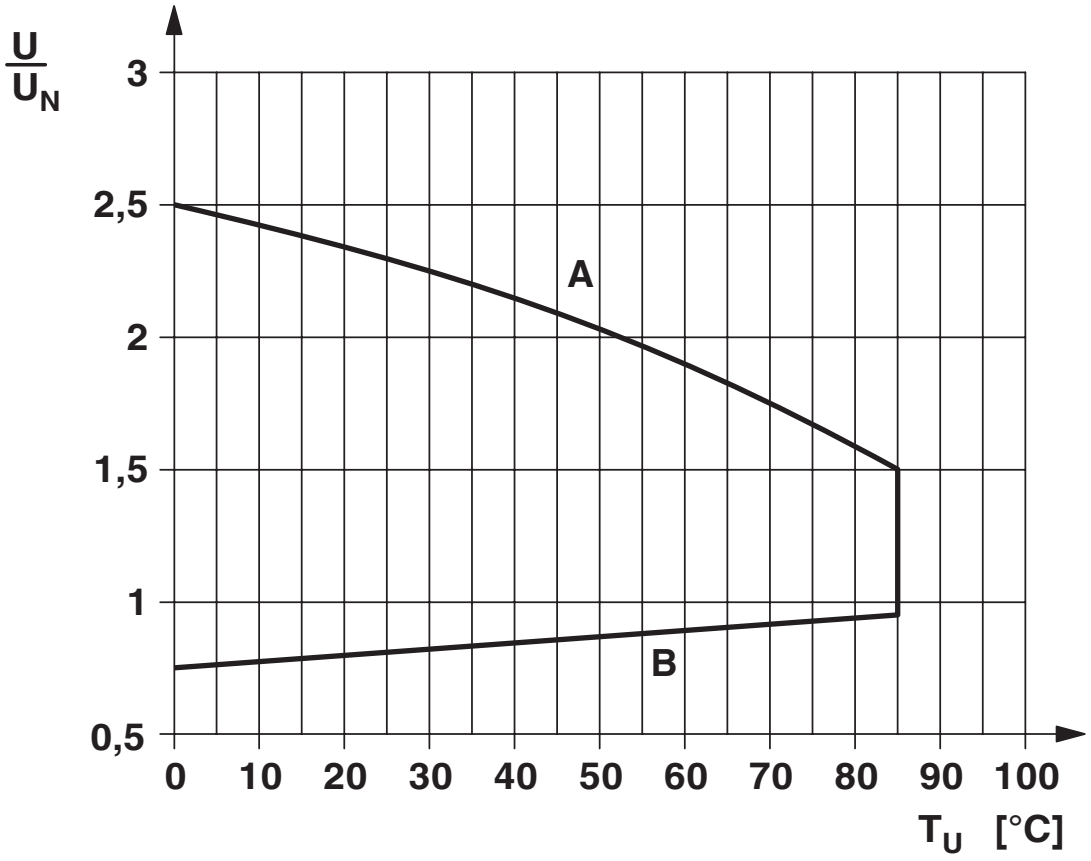
Mounting type	Plug-in mounting
Assembly note	Can be aligned without spacing (> 70 °C ≥ 2.5 mm)
Mounting position	any

Drawings

Dimensional drawing



Diagram



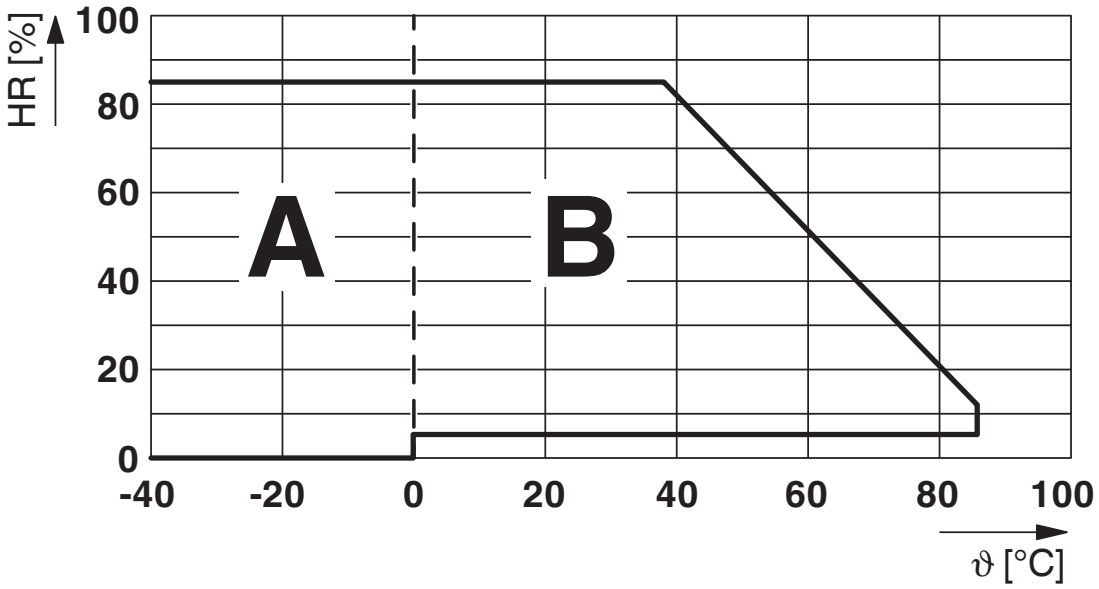
Curve A

Maximum permissible continuous voltage U_{max} with limiting continuous current on the contact side (see relevant technical data)

Curve B

Minimum permissible operate voltage U_{op} after pre-excitation (see relevant technical data)

Diagram

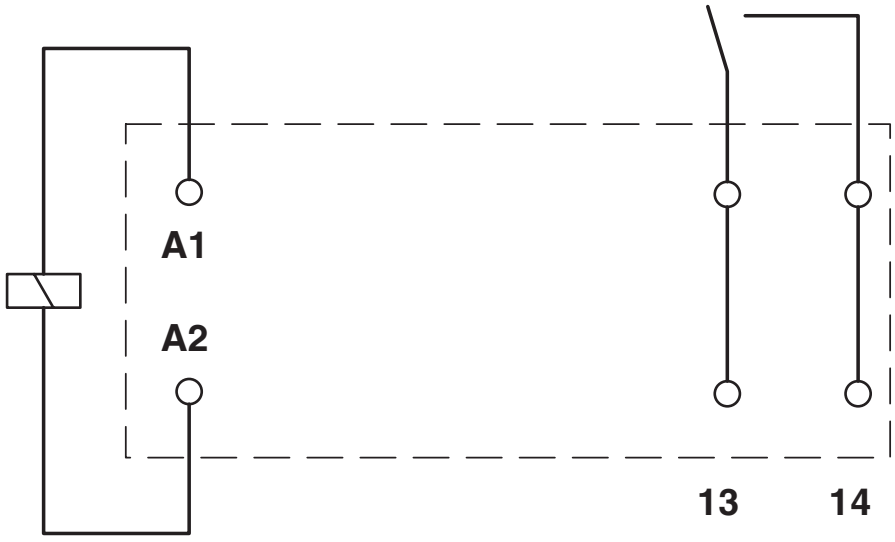


Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

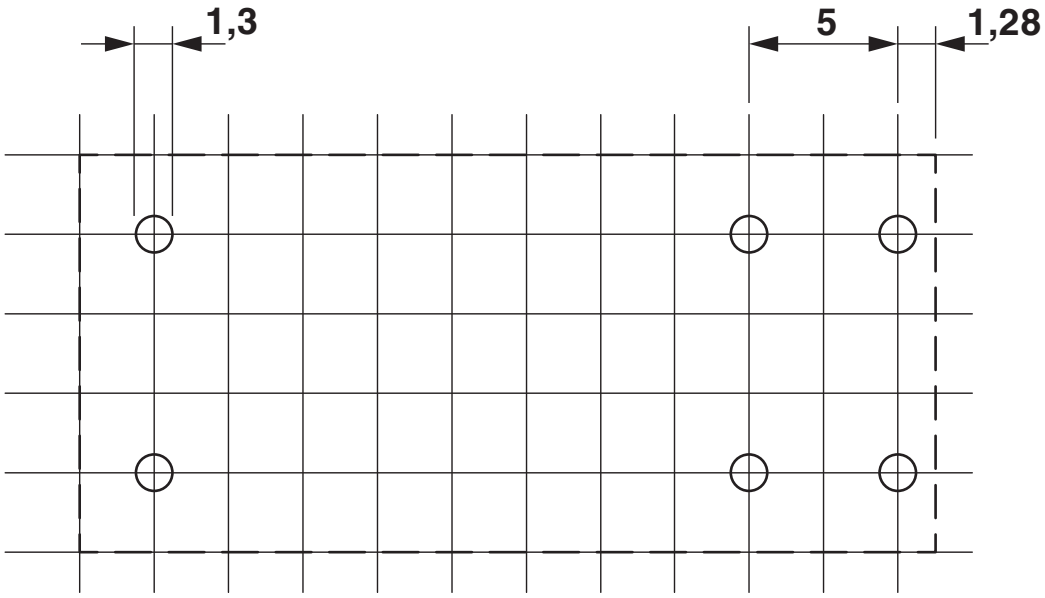
Area A: Ice buildup at ambient temperatures ≤ 0°C must be prevented
Area B: Condensation at ambient temperatures > 0°C must be prevented

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



Drilling plan/solder pad geometry



a = pitch division 2.5 mm

Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/gb/products/1081616

cUL Recognized
Approval ID: FILE E 228652

UL Recognized
Approval ID: FILE E 228652

VDE Zeichengenehmigung
Approval ID: 40007758

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, 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%

EF3.1 Climate Change

CO2e kg	0.381 kg CO2e

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