REL-MR-BL-110DC/21HC - Single relay

1109539

https://www.phoenixcontact.com/us/products/1109539

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Pluggable miniature power relay in basic design, with power contact for high continuous currents, 1 changeover contact, input voltage 110 V DC

Commercial data

Item number	1109539
Packing unit	20 pc
Minimum order quantity	20 pc
Sales key	C460
Product key	DKF921
GTIN	4063151021528
Weight per piece (including packing)	15 g
Weight per piece (excluding packing)	15 g
Customs tariff number	85364900
Country of origin	AT

Technical data

Product properties

Product type	Single relay
Product family	ESSENTIAL edition
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	06.07.2025

Electrical properties

Service life electrical	see diagram
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	4 kV

Input data

Coil side

Nominal input voltage U_N	110 V DC
Input voltage range	77 V DC ... 247.5 V DC
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at U_N	3.8 mA
Typical response time	8 ms
Typical release time	6 ms
Coil voltage	110 V DC
Coil resistance	28.8 kΩ ±12 %

Output data

Switching

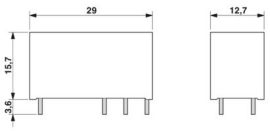
Contact switching type	1 changeover contact
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	5 V (At 24 mA)
Limiting continuous current	16 A

Maximum inrush current	30 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)
	1.5 A (at 230 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

Degree of protection	RT II
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 61810-1

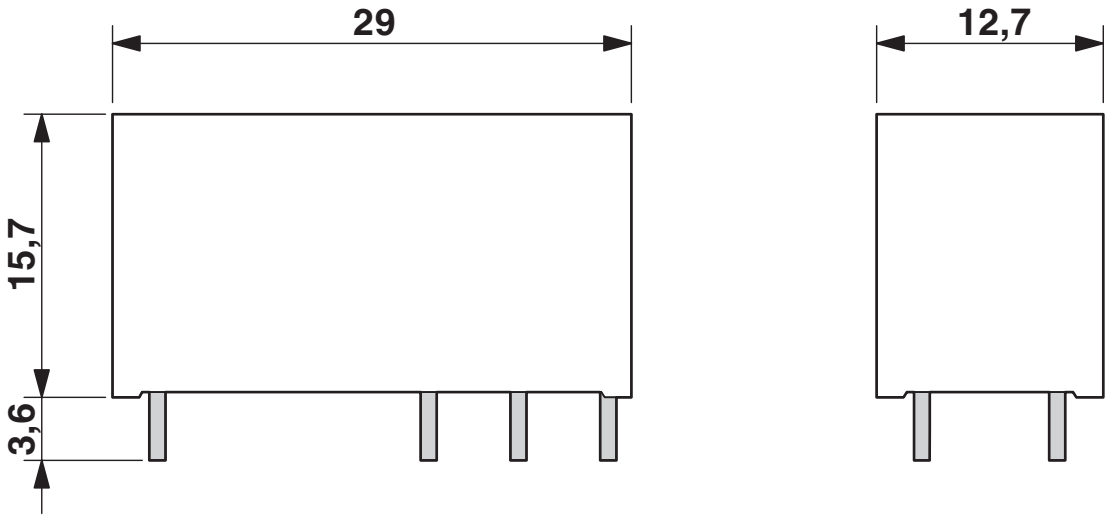
Mounting

Mounting type	Plug-in mounting

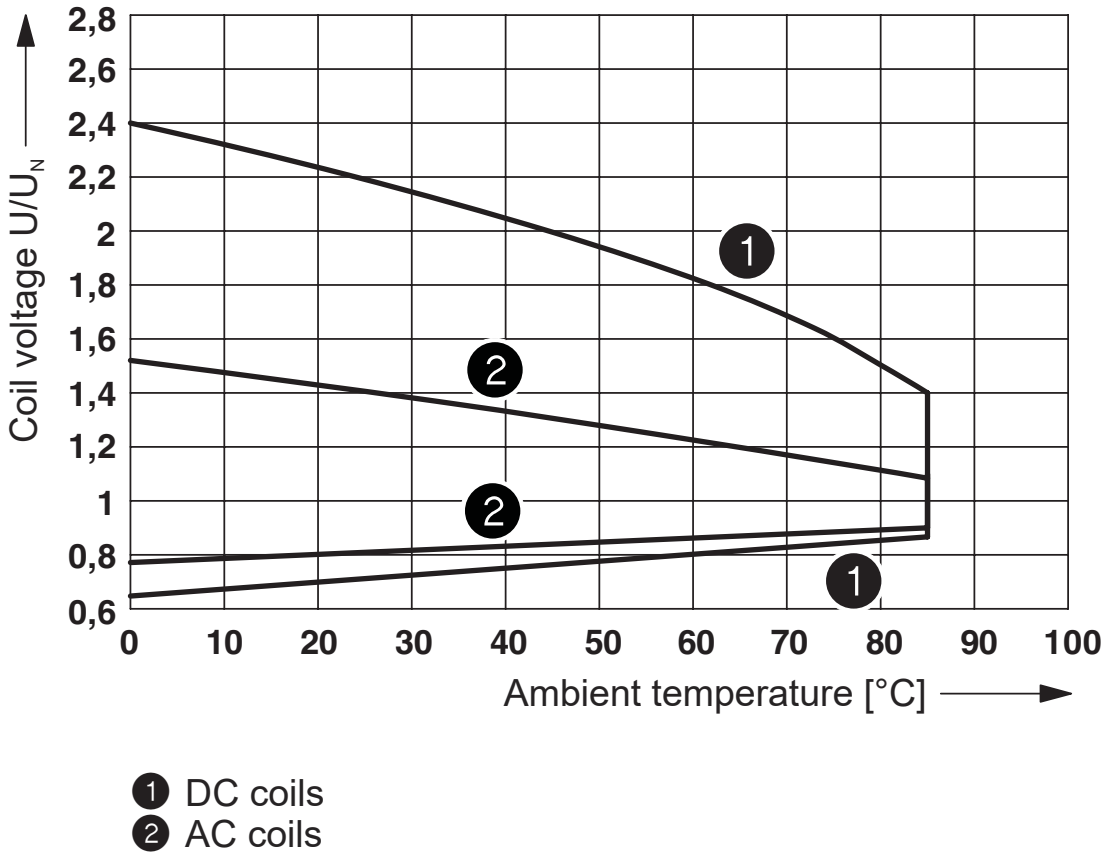
Mounting position	any

Drawings

Dimensional drawing



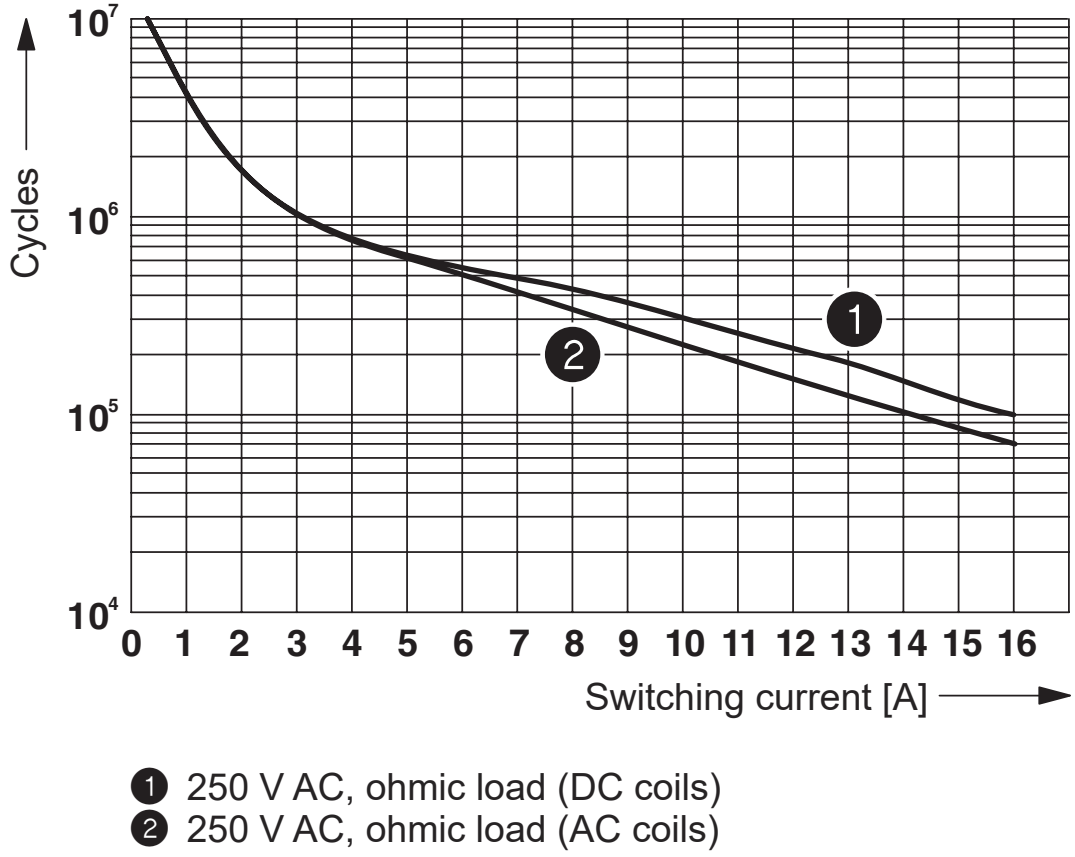
Diagram



1 DC coils
2 AC coils

Operating voltage range

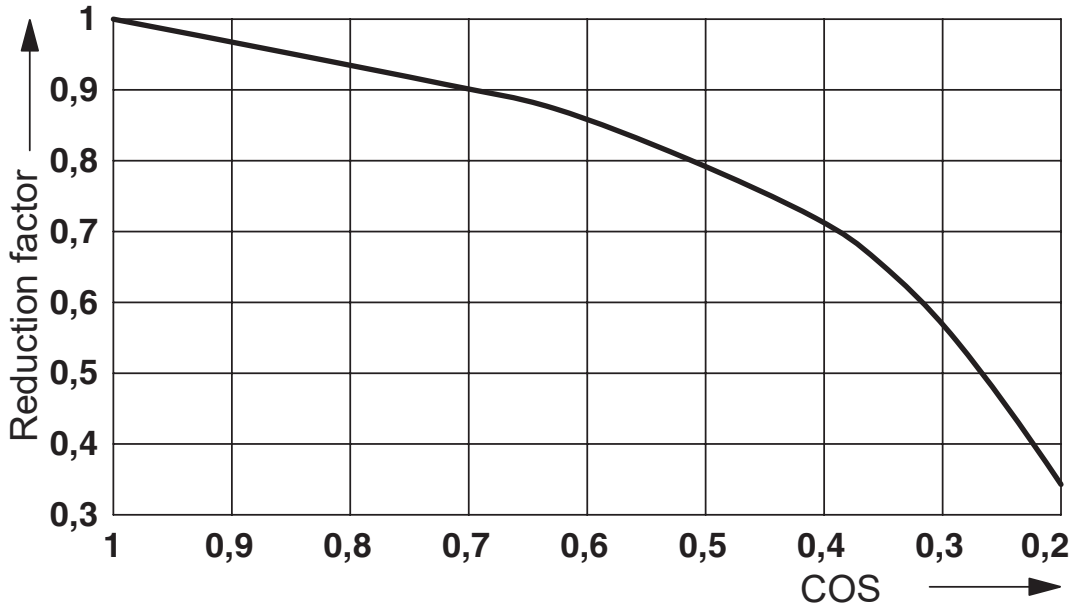
Diagram



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

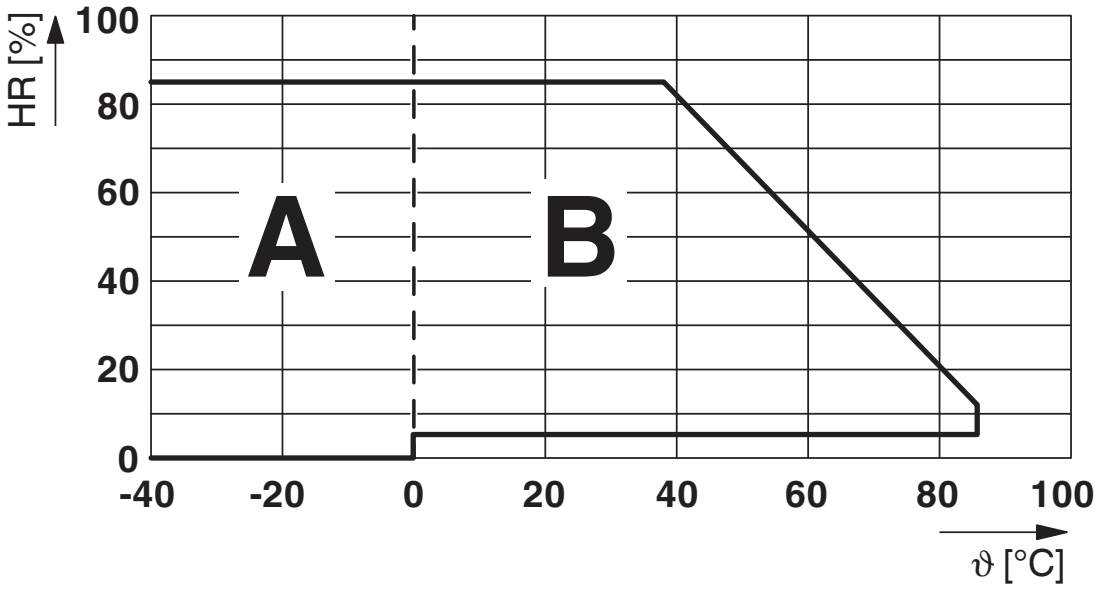
Electrical service life

Diagram



Service life reduction factor with various cos phi

Diagram

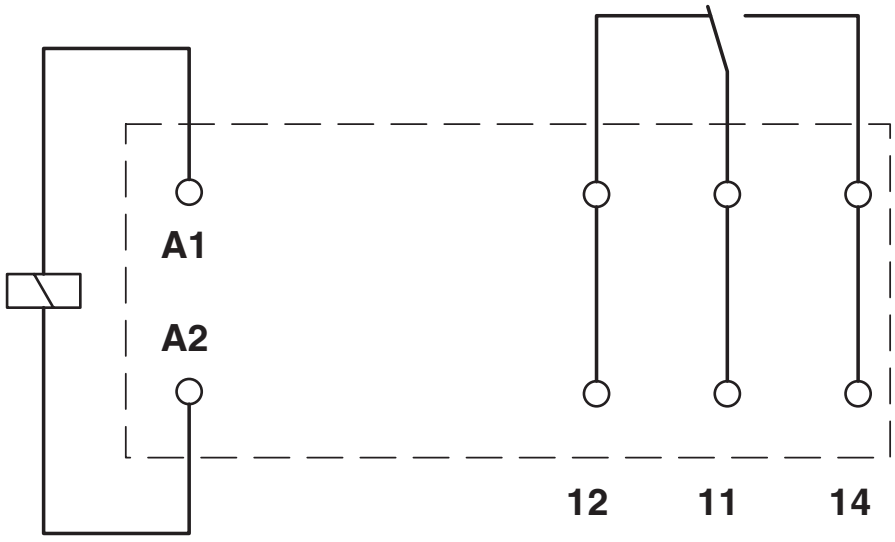


Permissible humidity for operation and storage.
The maximum permissible ambient temperature as specified in the data sheet must be observed.

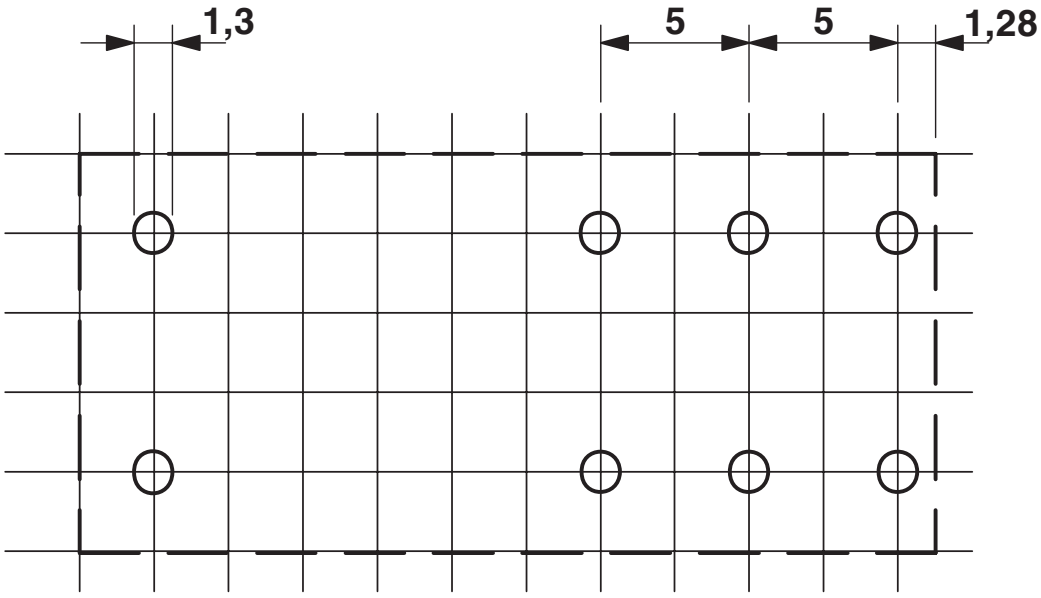
Area A: Ice buildup at ambient temperatures ≤ 0°C must be prevented
Area B: Condensation at ambient temperatures > 0°C must be prevented

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



Basic pitch 2.5 mm

Classifications

ECLASS

ECLASS-13.0	27371601

ETIM

ETIM 9.0	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%

Mandatory accessories

ECOR-1-BSC2-RT/2X21 - Relay base

1027546

https://www.phoenixcontact.com/us/products/1027546



ECOR-1... relay base, for miniature power relays or miniature switching relays with 1 or 2 changeover contacts, bolt connection, for mounting on NS 35/7,5.

ECOR-1-BSC3/2X21 - Relay base

2907518

https://www.phoenixcontact.com/us/products/2907518



ECOR-1... relay base, for miniature power relay or miniature switching relay with 1 or 2 changeover contacts, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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