

REL-MR-BL- 24AC/21HC - Single relay

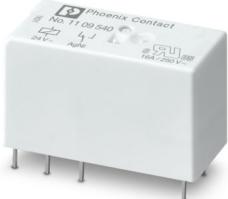
1109540

<https://www.phoenixcontact.com/us/products/1109540>



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Pluggable miniature power relay in basic design, with power contact for high continuous currents, 1 changeover contact, input voltage 24 V AC



Commercial data

Item number	1109540
Packing unit	20 pc
Minimum order quantity	20 pc
Sales key	C460
Product key	DKF921
GTIN	4063151018672
Weight per piece (including packing)	14.55 g
Weight per piece (excluding packing)	289 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	1×10^7 cycles

Insulation characteristics

Insulation	Basic insulation
Overtoltage category	III
Pollution degree	3

Data management status

Date of last data management	05.09.2025
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Electrical properties

Service life electrical	see diagram
Maximum power dissipation for nominal condition	0.4 W
Rated insulation voltage	250 V AC
Rated surge voltage	4 kV

Input data

Coil side

Nominal input voltage U_N	24 V AC
Input voltage range	19.2 V AC ... 34.8 V AC
Mains frequency	50/60 Hz
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at U_N	31.6 mA
Typical response time	3 ms ... 12 ms (depending on phase relation)
Typical release time range	2 ms ... 9 ms (depending on phase relation)
Coil voltage	24 V AC
Coil resistance	$350 \Omega \pm 10 \%$

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)

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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
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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 II
Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

Standards and regulations

Standards/regulations	IEC 60664 EN 61810-1
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Mounting

Mounting type	Plug-in mounting
Mounting position	any

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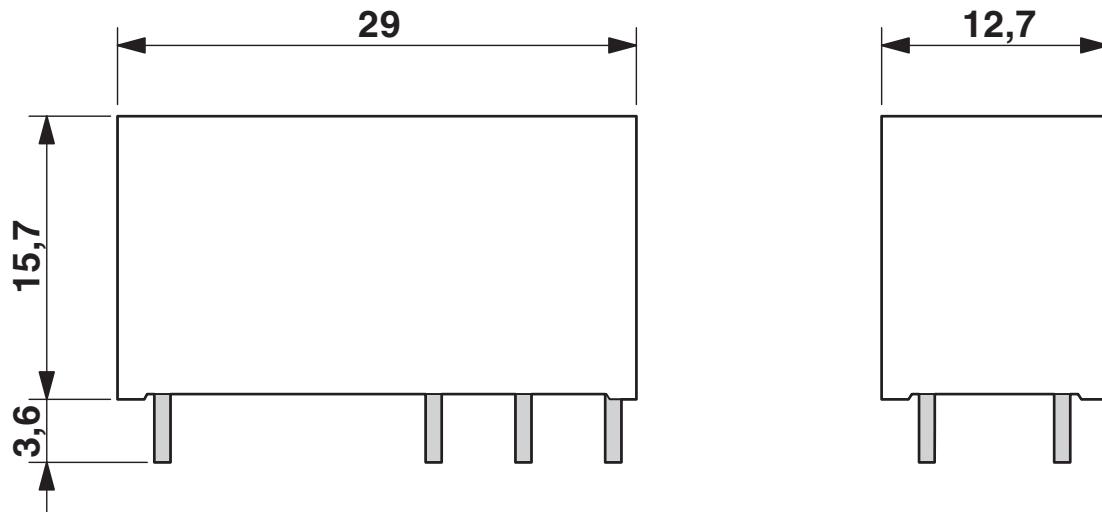


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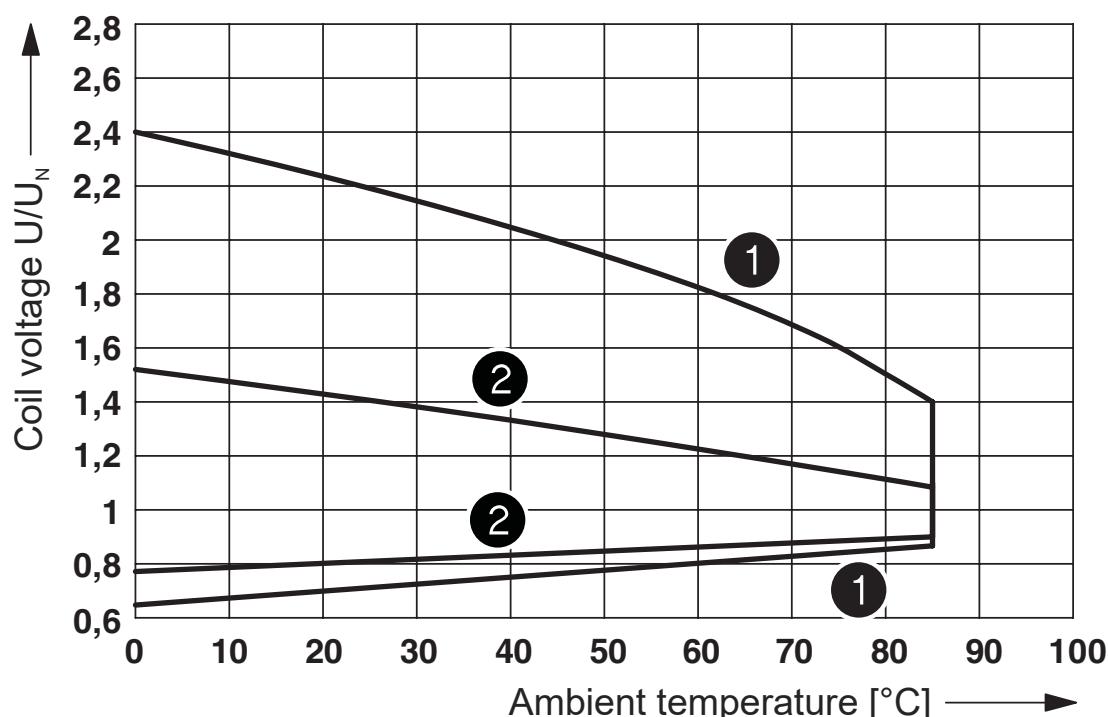
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Drawings

Dimensional drawing



Diagram



- 1 DC coils
- 2 AC coils

Operating voltage range

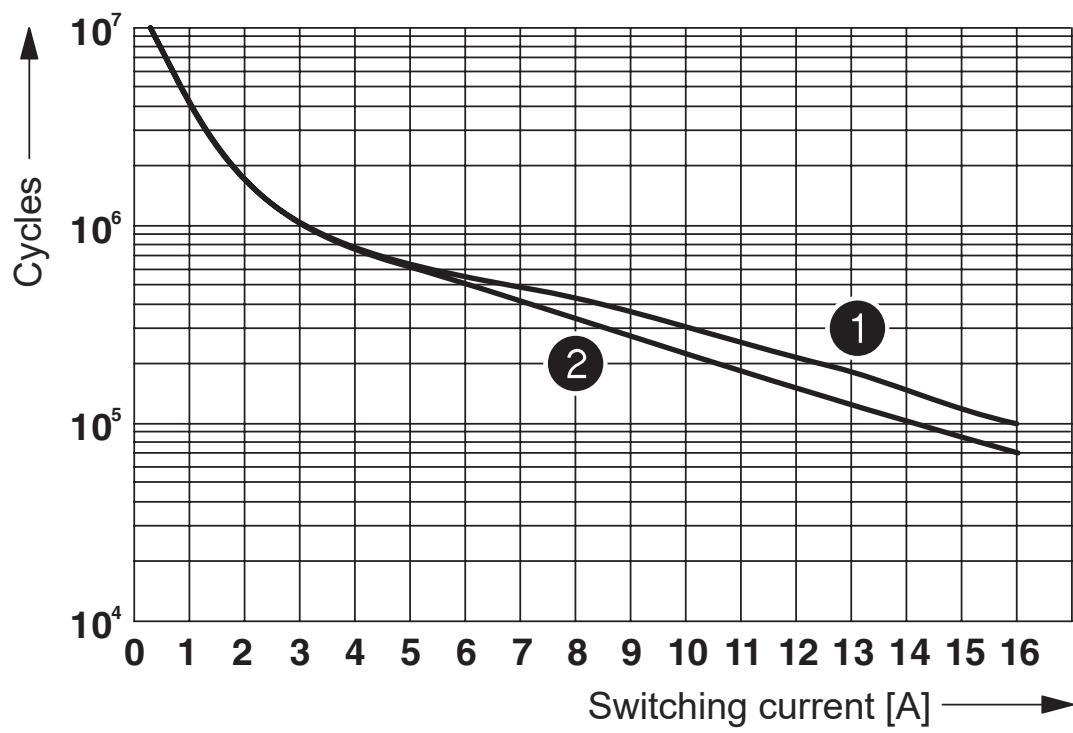
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Diagram



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

Electrical service life

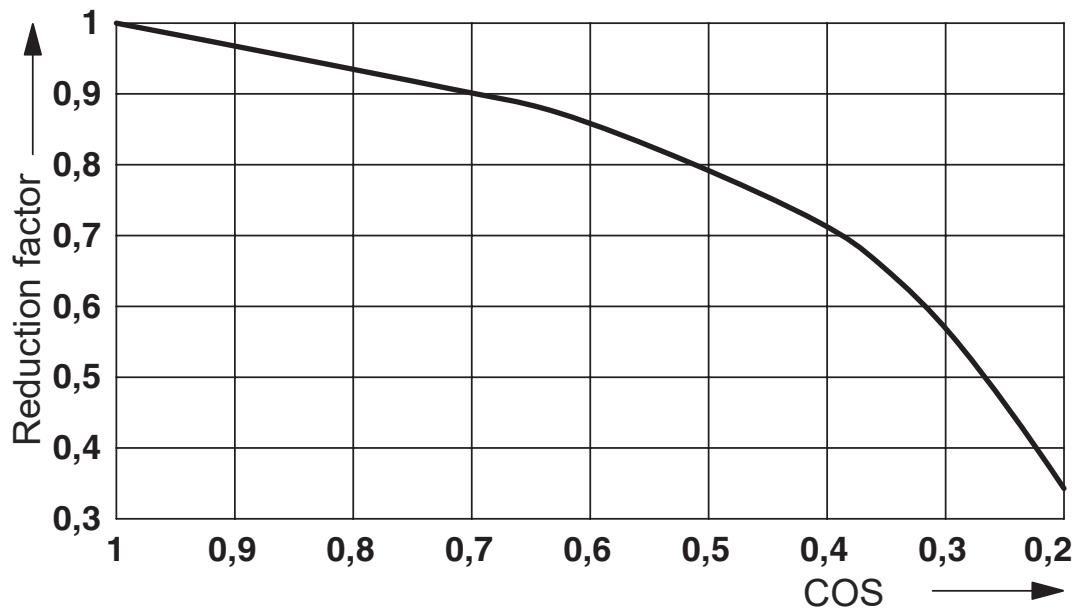
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Diagram



Service life reduction factor with various cos phi

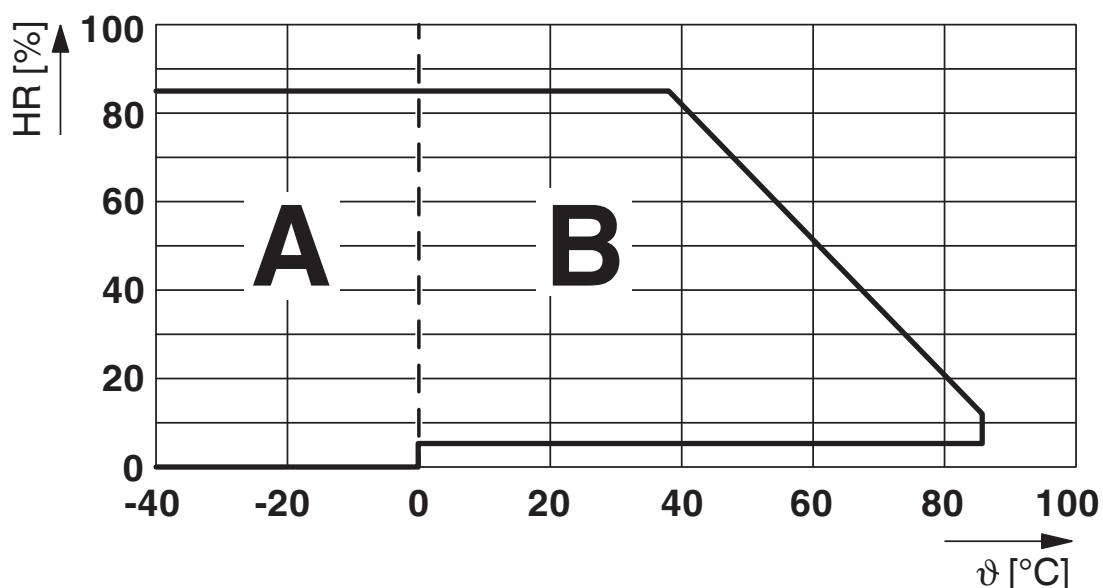
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Diagram



Permissible humidity for operation and storage.

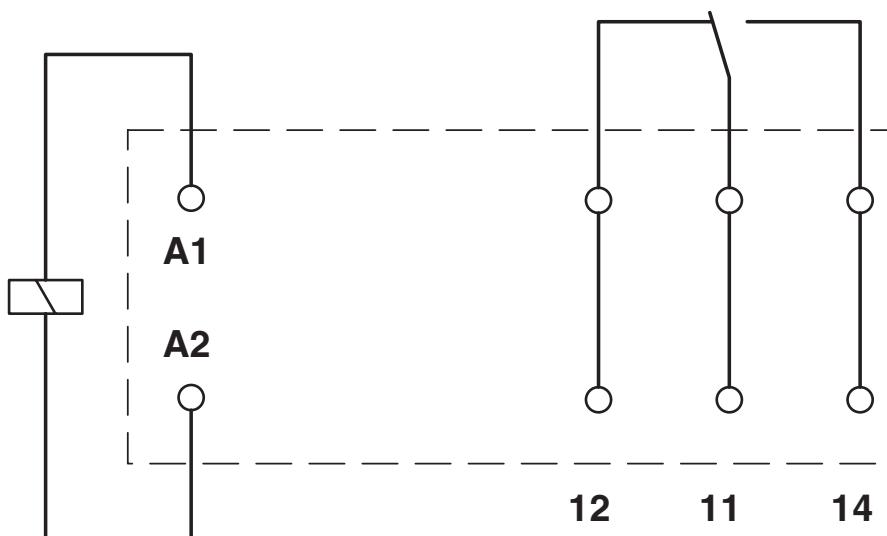
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures $\leq 0^{\circ}\text{C}$ 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 $\leq 25^{\circ}\text{C}$.

Circuit diagram



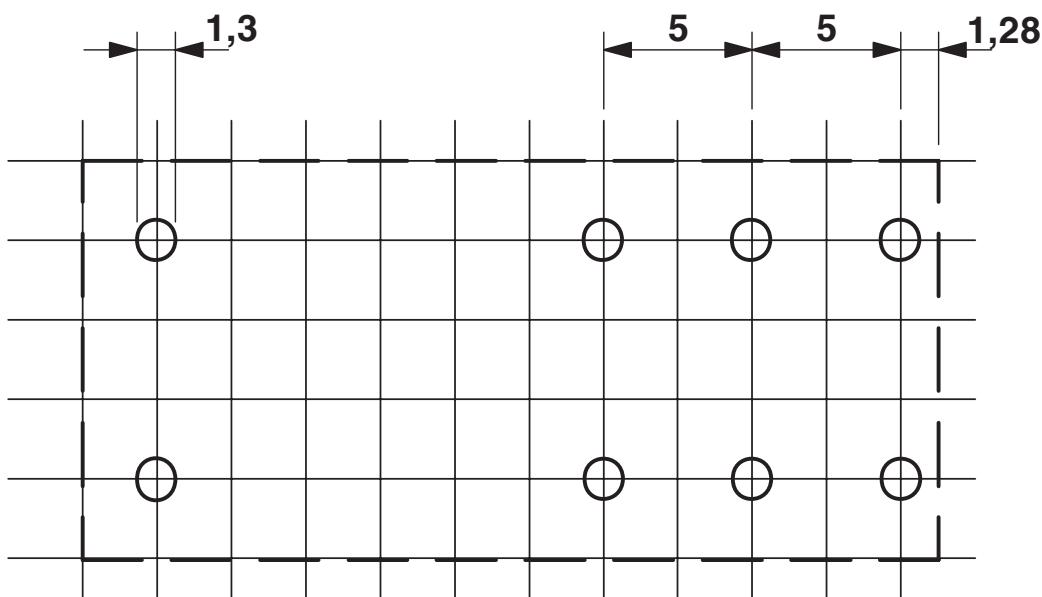
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Drilling plan/solder pad geometry



Basic pitch 2.5 mm

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Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1109540>



cUL Recognized

Approval ID: FILE E 228652



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Classifications

ECLASS

ECLASS-13.0	27371601
ECLASS-15.0	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
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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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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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