

# REL-MR-BL-24DC/21-21/MS - Single relay



2908181

<https://www.phoenixcontact.com/us/products/2908181>

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Plug-in miniature relay, with power contact, 2 changeover contacts, test button, mechanical switch position indicator, polarity: bipolar, input voltage: 24 V DC

## Commercial data

Item number	2908181
Packing unit	10 pc
Minimum order quantity	10 pc
Sales key	C460
Product key	DK6195
GTIN	4055626279404
Weight per piece (including packing)	19.1 g
Weight per piece (excluding packing)	18 g
Customs tariff number	85364190
Country of origin	CN

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## Technical data

### Product properties

Product type	Single relay
Operating mode	100% operating factor
Mechanical service life	5x 10 <sup>6</sup> cycles

### Insulation characteristics

Overvoltage category	III
Pollution degree	2

### Data management status

Date of last data management	01.04.2026
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### 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.)
Test voltage (Contact/contact)	2.5 kV AC (50 Hz, 1 min.)
Test voltage (open contact)	1 kV (50 Hz, 1 min.)
Rated insulation voltage	250 V AC

### Input data

#### Coil side

Nominal input voltage $U_N$	24 V DC
Input voltage range	19.2 V DC ... 52.8 V DC
Input voltage range in reference to $U_N$	0.8 ... 2.2 (see diagram)
Drive and function	monostable
Drive (polarity)	non-polarized
Typical input current at $U_N$	17 mA
Typical response time	9 ms
Typical release time	6 ms

### Output data

#### Switching

Contact switching type	2 changeover contacts
Type of switch contact	Single contact
Contact material	AgNi
Maximum switching voltage	250 V AC/DC
Minimum switching voltage	12 V (at 10 mA)
Limiting continuous current	8 A
Maximum inrush current	16 A (20 ms)
Min. switching current	10 mA (at 12 V)

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Interrupting rating (ohmic load) max.	192 W (at 24 V DC)
	62 W (at 48 V DC)
	42 W (at 60 V DC)
	55 W (at 110 V DC)
	66 W (at 220 V DC)

## Connection data

Connection method	Plug / solder connection
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## Dimensions

### Item dimensions

Width	13 mm
Height	29 mm
Depth	25.5 mm

## 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

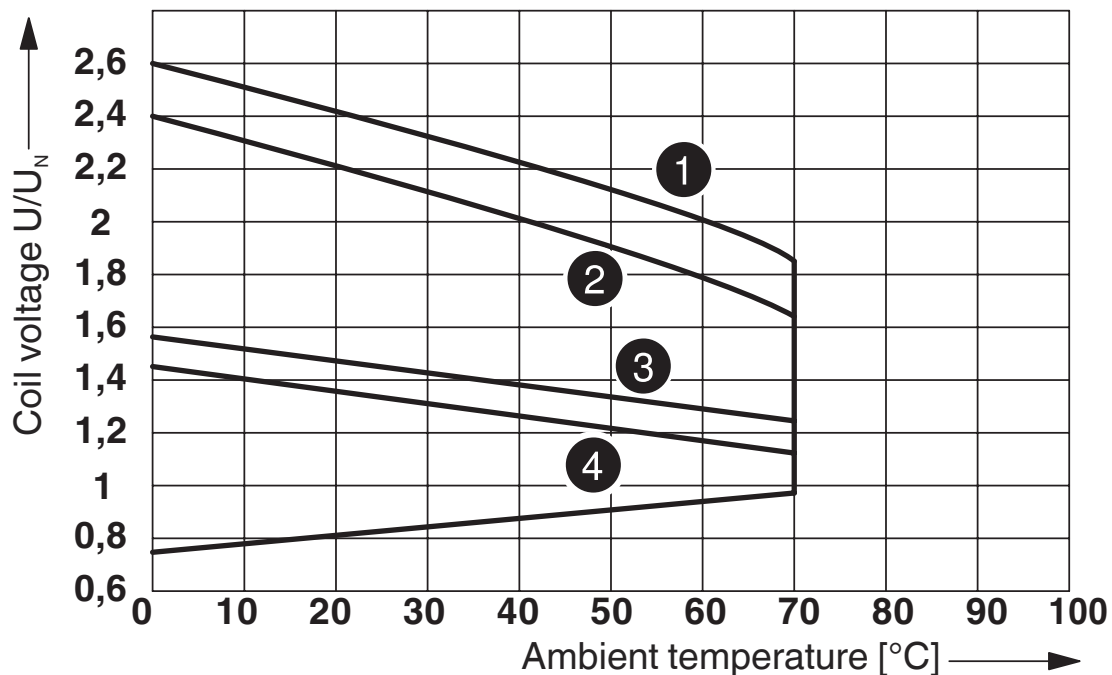
Standards/regulations	IEC 61810
	IEC 60664

## Mounting

Mounting position	any
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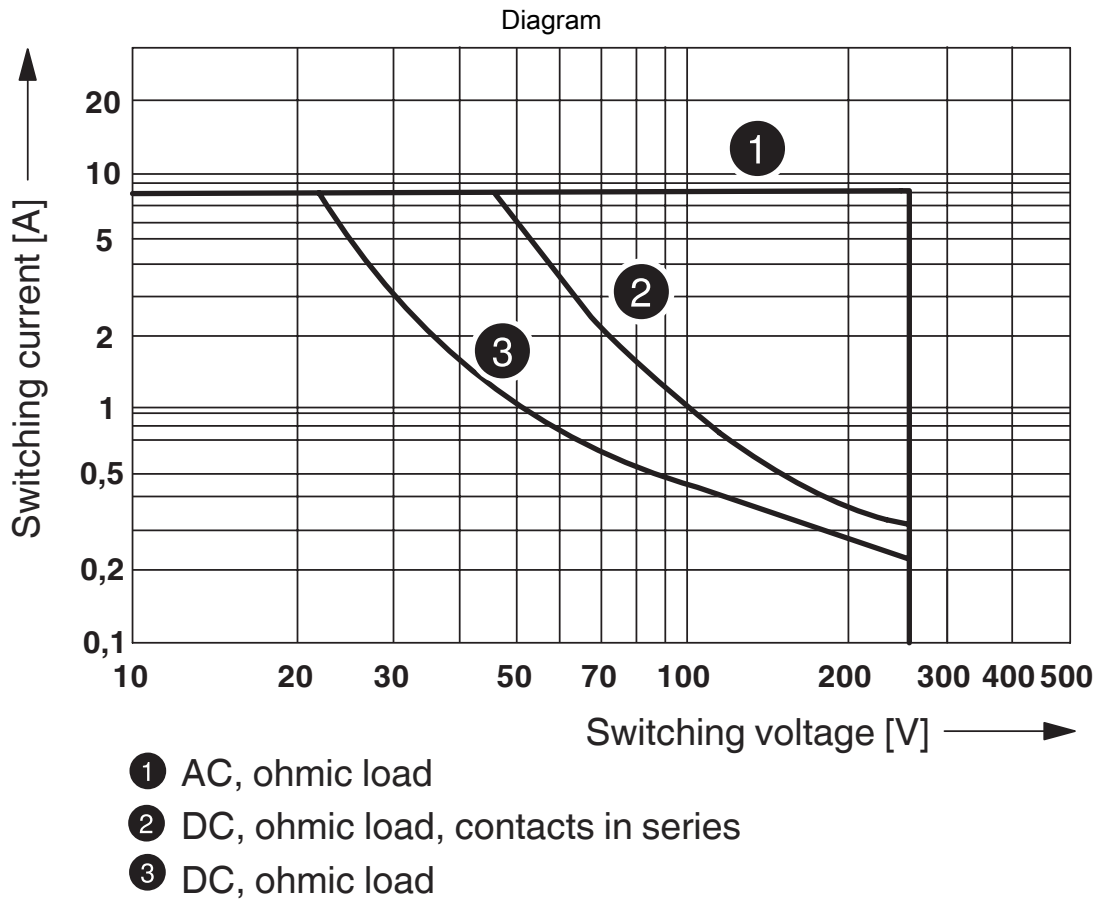
Drawings

Diagram



- ① DC coils, 0 A contact current
- ② DC coils, 8 A contact current
- ③ AC coils, 0 A contact current
- ④ AC coils, 8 A contact current

Operating voltage range



Interrupting rating

Diagram



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



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2908181>



**cUL Recognized**  
Approval ID: FILE E 195083



**UL Recognized**  
Approval ID: FILE E 195083



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

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## Classifications

### ECLASS

ECLASS-13.0	27371601
ECLASS-15.0	27371601

### ETIM

ETIM 10.0	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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### EF3.1 Climate Change

CO2e kg	1.014 kg CO2e
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