

# REL-MR- 24DC/1IC - Single relay



2961341

<https://www.phoenixcontact.com/us/products/2961341>

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Pluggable miniature power relay, with power contact for high switch-on currents up to 130 A peaks, 1 N/O contact, input voltage: 24 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                          | 2961341       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 10 pc         |
| Sales key                            | C460          |
| Product key                          | DK6931        |
| GTIN                                 | 4017918187569 |
| Weight per piece (including packing) | 16.1 g        |
| Weight per piece (excluding packing) | 12.815 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 | $3 \times 10^7$ cycles |

### Insulation characteristics

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

### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 05.09.2025 |
|------------------------------|------------|

### Electrical properties

|   |  |
|---|--|
| Maximum power dissipation for nominal condition | 0.41 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 $U_N$               | 24 V DC                         |
| Input voltage range                       | 19.2 V DC ... 54 V DC           |
| Input voltage range in reference to $U_N$ | see diagram                     |
| Drive and function                        | monostable                      |
| Drive (polarity)                          | non-polarized                   |
| Typical input current at $U_N$            | 17 mA                           |
| Typical response time                     | 8 ms                            |
| Typical release time                      | 3 ms                            |
| Coil resistance                           | $1440 \Omega \pm 10 \%$ (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      | 80 A (20 ms)<br>130 A (peak, at capacitive load, 230 V AC, 24 $\mu$ F) |

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|                                       |                                |
|---------------------------------------|--------------------------------|
| 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                        |
| Switching capacity                    | 2 A (at 24 V, DC13)            |
|                                       | 0.2 A (at 110 V, DC13)         |
|                                       | 0.2 A (at 250 V, DC13)         |
|                                       | 6 A (at 24 V, AC15)            |
|                                       | 6 A (at 120 V, AC15)           |
|                                       | 6 A (at 250 V, AC15)           |
| Motor load according to UL 508        | 1/2 HP, 120 V AC (N/O contact) |
|                                       | 1 HP, 250 V AC (N/O contact)   |

## 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 |
| Altitude                                | ≤ 2000 m         |

## Approvals

### Corrosive gas test

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

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## Standards and regulations

|                       |            |
|-----------------------|------------|
| Standards/regulations | EN 50178   |
|                       | EN 61810-1 |

## Mounting

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

# REL-MR- 24DC/1IC - Single relay

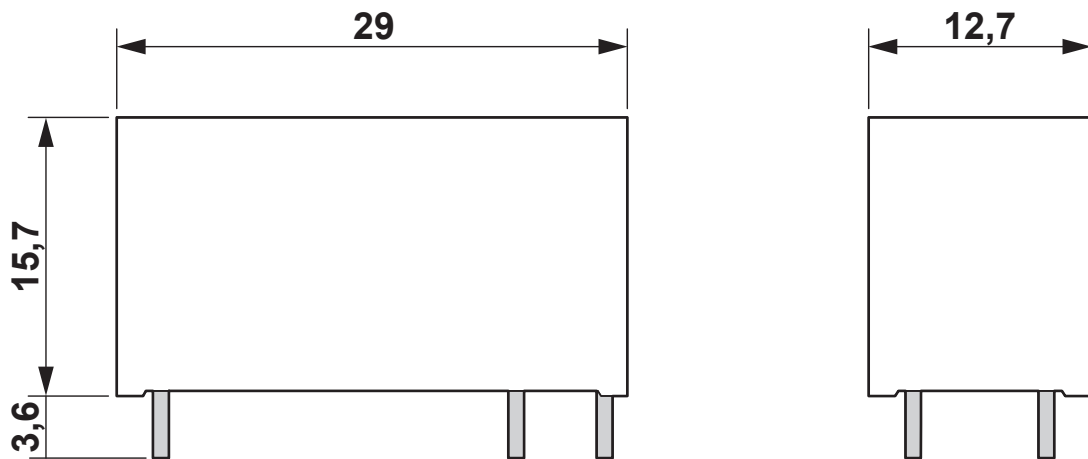
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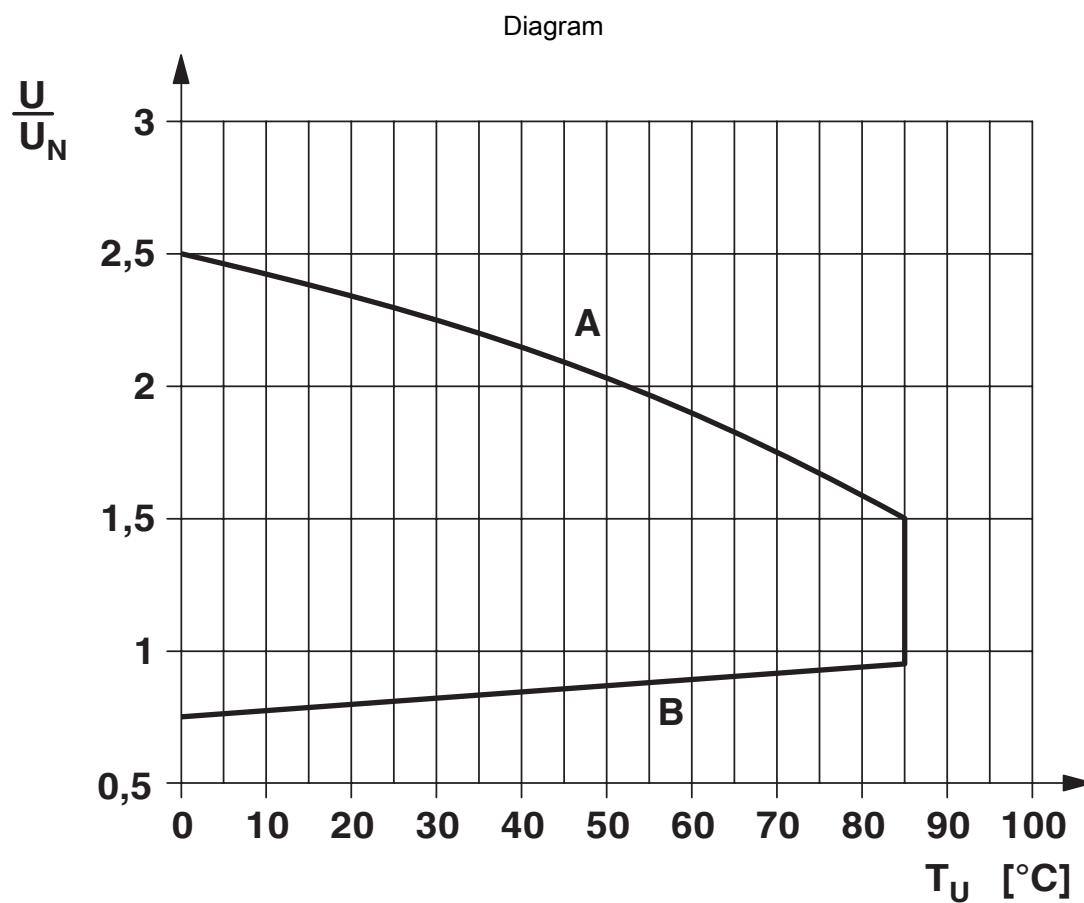
<https://www.phoenixcontact.com/us/products/2961341>



## Drawings

Dimensional drawing



**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.

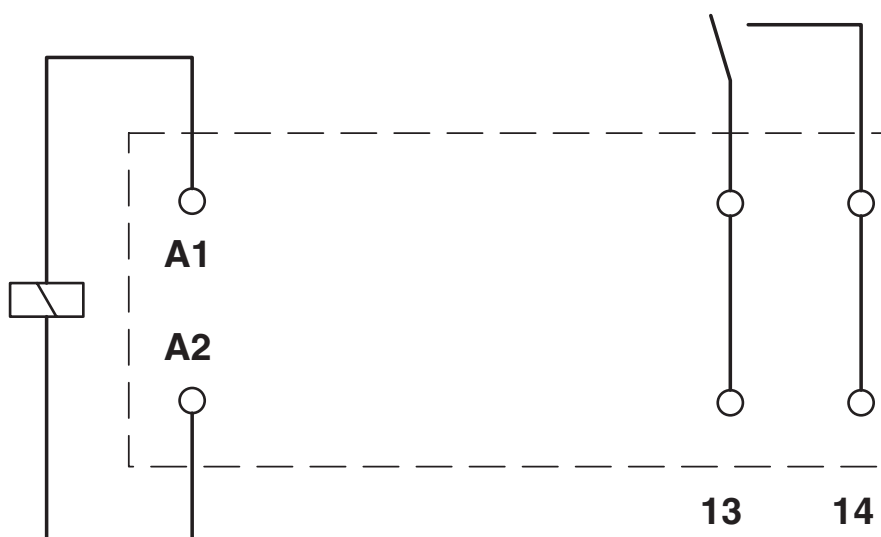
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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



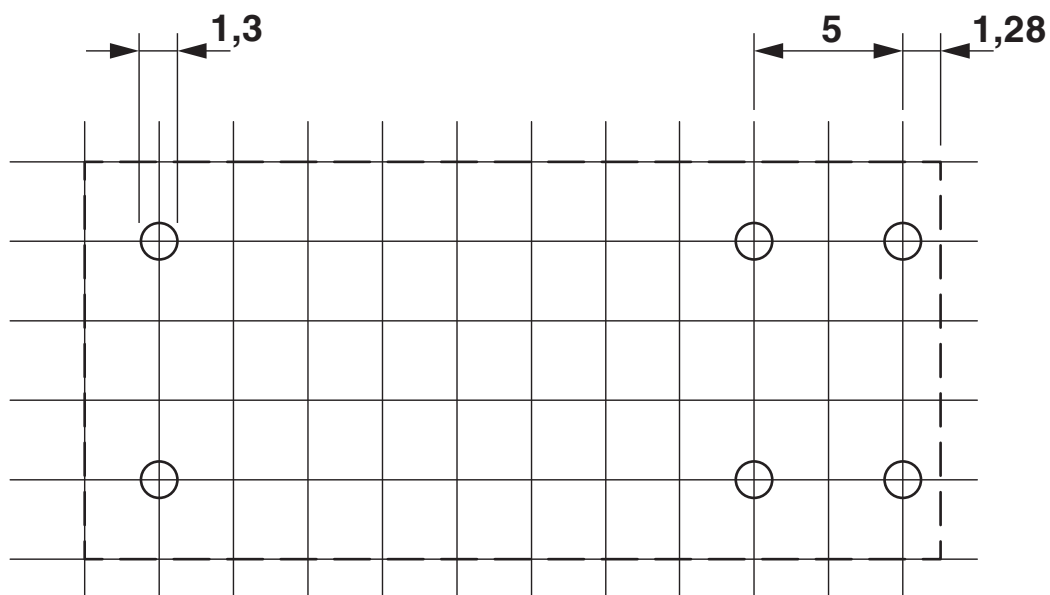
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Drilling plan/solder pad geometry



a = pitch division 2.5 mm



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2961341>



**cUL Recognized**  
Approval ID: FILE E 228652



**UL Recognized**  
Approval ID: FILE E 228652



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



**VDE Zeichengenehmigung**  
Approval ID: 40048281



**cULus Recognized**  
Approval ID: E172140

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371601 |
| ECLASS-15.0 | 27371601 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001437 |
|----------|----------|

### 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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