

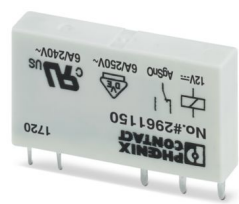
# REL-MR- 12DC/21 - Single relay



2961150  
<https://www.phoenixcontact.com/us/products/2961150>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.

Plug-in miniature power relay, with power contact, 1 changeover 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 6 A

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2961150             |
| Packing unit                         | 10 pc               |
| Minimum order quantity               | 10 pc               |
| Sales key                            | C460                |
| Product key                          | CK6921              |
| Catalog page                         | Page 284 (C-5-2019) |
| GTIN                                 | 4017918159566       |
| Weight per piece (including packing) | 6.62 g              |
| Weight per piece (excluding packing) | 5 g                 |
| Customs tariff number                | 85364900            |
| Country of origin                    | CZ                  |

# REL-MR- 12DC/21 - Single relay



2961150

<https://www.phoenixcontact.com/us/products/2961150>

## Technical data

### Product properties

|                              |                           |
|------------------------------|---------------------------|
| Product type                 | Single relay              |
| Operating mode               | 100% operating factor     |
| Mechanical service life      | 2x 10 <sup>7</sup> cycles |
| Date of last data management | 02.05.2024                |

### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Pollution degree     | 3   |

### Electrical properties

|   |  |
|---|--|
| Maximum power dissipation for nominal condition | 0.17 W                                   |
| Test voltage (Winding/contact)                  | 4 kV AC (50 Hz, 1 min., winding/contact) |

### Input data

#### Coil side

|   |                                    |
|---|------------------------------------|
| Nominal input voltage $U_N$               | 12 V DC                            |
| Input voltage range                       | 7.2 V DC ... 33 V DC               |
| Input voltage range in reference to $U_N$ | see diagram                        |
| Drive and function                        | monostable                         |
| Drive (polarity)                          | non-polarized                      |
| Typical input current at $U_N$            | 14 mA                              |
| Typical response time                     | 5 ms                               |
| Typical release time                      | 2.5 ms                             |
| Coil resistance                           | 848 $\Omega$ $\pm$ 10 % (at 20 °C) |

### Output data

#### Switching

|                                       |                      |
|---------------------------------------|----------------------|
| Contact switching type                | 1 changeover contact |
| Type of switch contact                | Single contact       |
| Contact material                      | AgSnO                |
| Maximum switching voltage             | 250 V AC/DC          |
| Minimum switching voltage             | 5 V (at 100 mA)      |
| Limiting continuous current           | 6 A                  |
| Maximum inrush current                | 10 A (4 s)           |
| Min. switching current                | 10 mA (at 12 V)      |
| Interrupting rating (ohmic load) max. | 140 W (at 24 V DC)   |
|                                       | 20 W (at 48 V DC)    |
|                                       | 18 W (at 60 V DC)    |
|                                       | 23 W (at 110 V DC)   |
|                                       | 40 W (at 220 V DC)   |

# REL-MR- 12DC/21 - Single relay

2961150

<https://www.phoenixcontact.com/us/products/2961150>



|                                |                                      |
|--------------------------------|--------------------------------------|
| Switching capacity             | 1500 VA (for 250 V AC)               |
|                                | 2 A (at 24 V, DC13)                  |
|                                | 0.2 A (at 110 V, DC13)               |
|                                | 0.1 A (at 220 V, DC13)               |
|                                | 3 A (at 24 V, AC15)                  |
|                                | 3 A (at 120 V, AC15)                 |
| Motor load according to UL 508 | 3 A (at 230 V, AC15)                 |
|                                | 1/4 HP, 240 - 277 V AC (N/O contact) |
|                                | 1/6 HP, 240 - 277 V AC (N/C contact) |

## Connection data

|                   |                          |
|-------------------|--------------------------|
| Connection method | Plug / solder connection |
|-------------------|--------------------------|

## Dimensions

|                     |       |
|---------------------|-------|
| Dimensional drawing |       |
| Width               | 5 mm  |
| Height              | 28 mm |
| Depth               | 15 mm |

## Material specifications

|       |                  |
|-------|------------------|
| Color | white (RAL 9010) |
|-------|------------------|

## Environmental and real-life conditions

|   |                  |
|---|------------------|
| Ambient conditions                      |                  |
| Degree of protection                    | RT III           |
| 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 50178   |
|                       | EN 61810-1 |

## Mounting

|               |                           |
|---------------|---------------------------|
| Assembly note | in rows with zero spacing |
|---------------|---------------------------|

# REL-MR- 12DC/21 - Single relay

2961150

<https://www.phoenixcontact.com/us/products/2961150>



|                   |     |
|-------------------|-----|
| Mounting position | any |
|-------------------|-----|

# REL-MR- 12DC/21 - Single relay

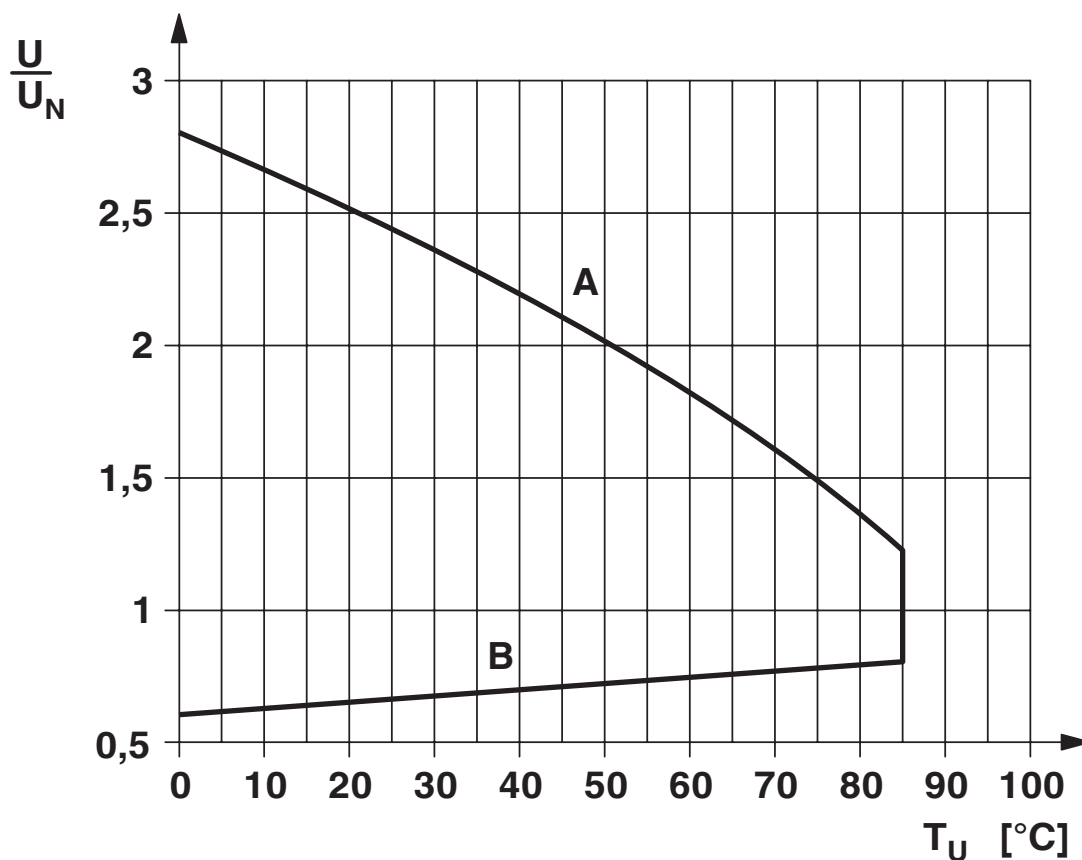
2961150

<https://www.phoenixcontact.com/us/products/2961150>

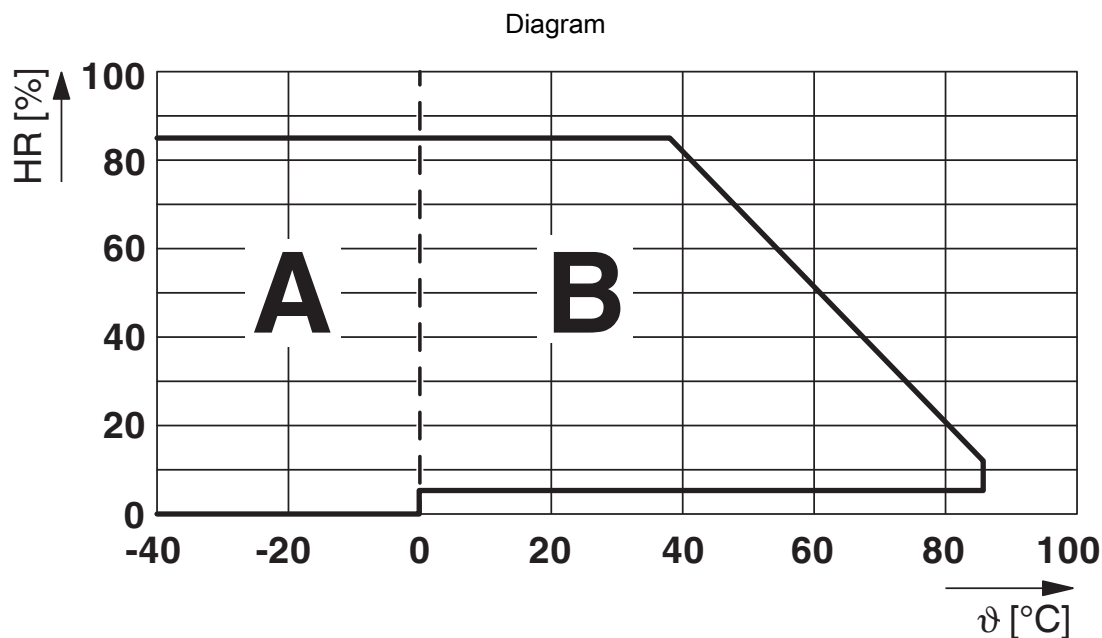


## Drawings

Diagram



Operating voltage range



Permissible humidity for operation and storage.

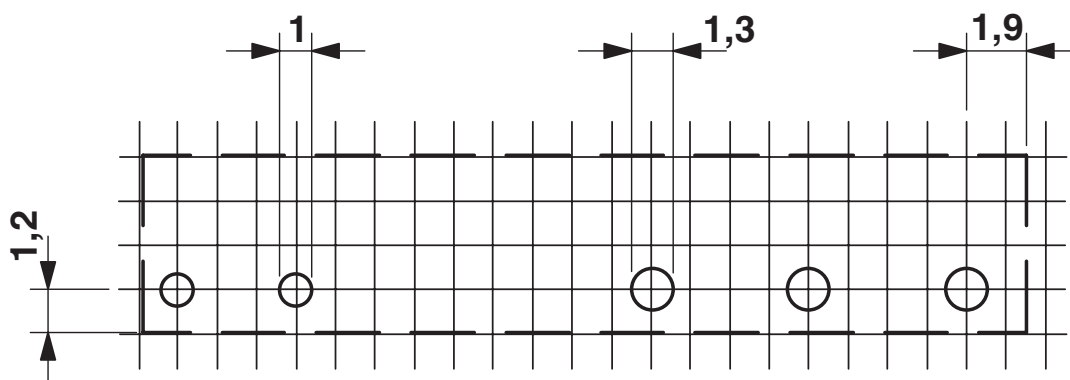
The maximum permissible ambient temperature as specified in the data sheet must be observed.

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  $\leq 25^\circ\text{C}$ .

#### Drilling plan/solder pad geometry



a = pitch division 1.25 mm and 1.27 mm

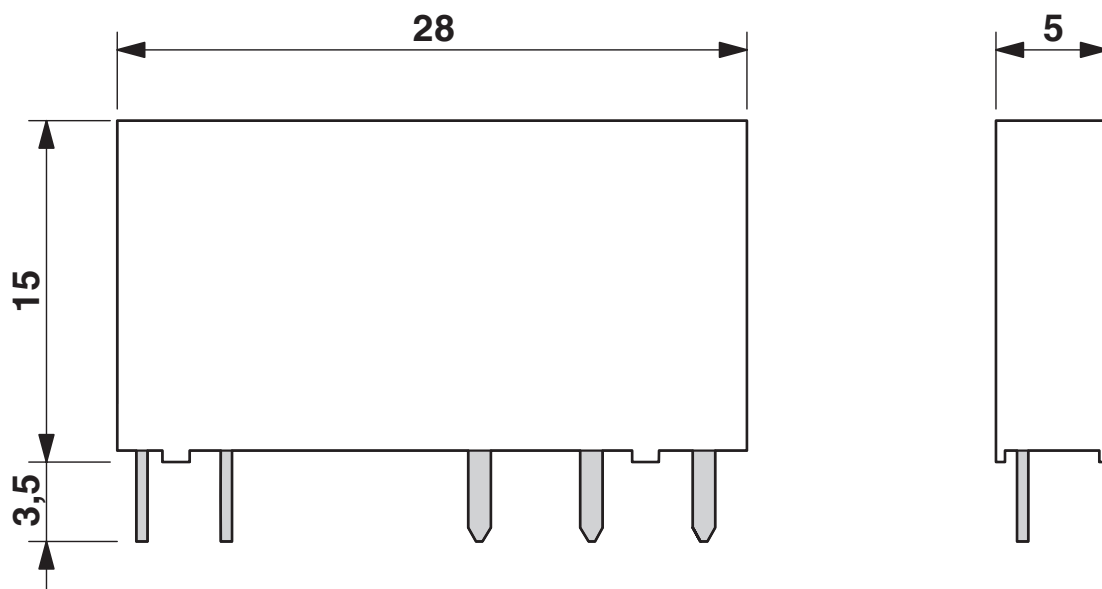
# REL-MR- 12DC/21 - Single relay

2961150

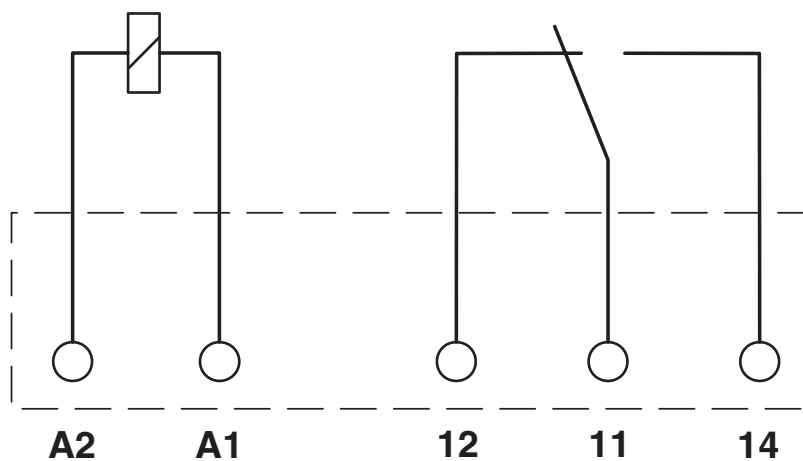
<https://www.phoenixcontact.com/us/products/2961150>



Dimensional drawing



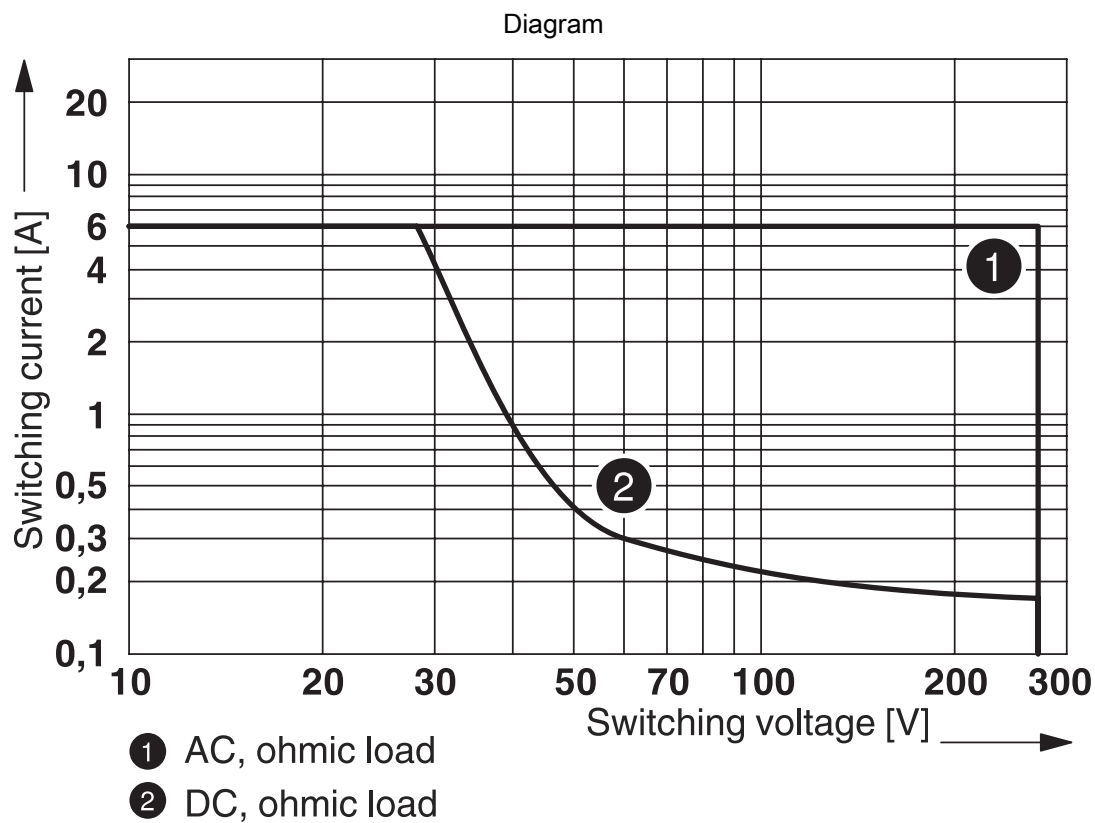
Circuit diagram



# REL-MR- 12DC/21 - Single relay

2961150

<https://www.phoenixcontact.com/us/products/2961150>



Interrupting rating



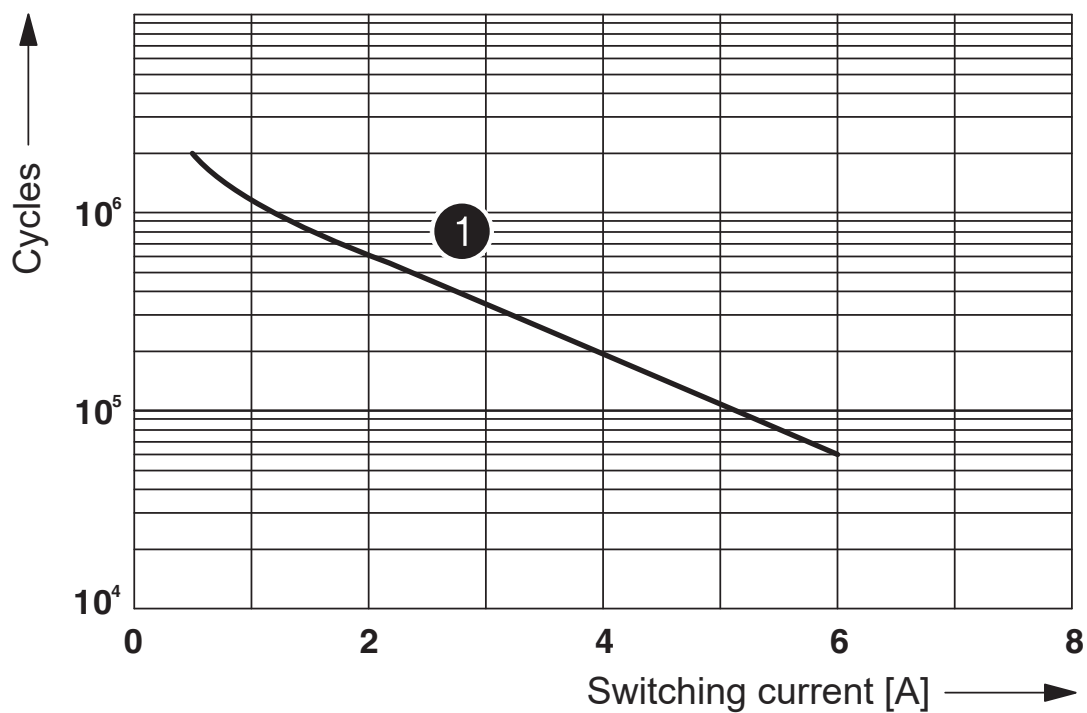
# REL-MR- 12DC/21 - Single relay

2961150

<https://www.phoenixcontact.com/us/products/2961150>



Diagram



① 250 V AC, ohmic load

Electrical service life

# REL-MR- 12DC/21 - Single relay














2961150

<https://www.phoenixcontact.com/us/products/2961150>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2961150>

|   |  |
|---|--|
|    | <b>cUL Recognized</b><br>Approval ID: FILE E 172140    |
|    | <b>UL Recognized</b><br>Approval ID: FILE E 172140     |
|    | <b>EAC</b><br>Approval ID: TR_TS_D_00573_c             |
|    | <b>UL Recognized</b><br>Approval ID: FILE E 172140     |
|  | <b>EAC</b><br>Approval ID: RU*C-DE.*08.B.00010         |
|  | <b>VDE Zeichengenehmigung</b><br>Approval ID: 40010212 |
|  | <b>VDE Zeichengenehmigung</b><br>Approval ID: 40032864 |
|  | <b>cUL Recognized</b><br>Approval ID: FILE E 172140    |
|  | <b>VDE Zeichengenehmigung</b><br>Approval ID: 40054426 |
|  | <b>cUL Recognized</b><br>Approval ID: FILE E 172140    |
|  | <b>UL Recognized</b><br>Approval ID: FILE E 172140     |

# REL-MR- 12DC/21 - Single relay



2961150  
<https://www.phoenixcontact.com/us/products/2961150>

## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27371601 |
| ECLASS-12.0 | 27371601 |
| ECLASS-13.0 | 27371601 |

### ETIM

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

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39122300 |
|-------------|----------|

# REL-MR- 12DC/21 - Single relay

2961150

<https://www.phoenixcontact.com/us/products/2961150>



## 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%               |

# REL-MR- 12DC/21 - Single relay

2961150

<https://www.phoenixcontact.com/us/products/2961150>



## Mandatory accessories

### RIF-0-BPT/21 - Relay base

2900958

<https://www.phoenixcontact.com/us/products/2900958>

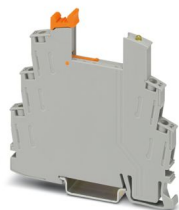


Relay base RIF-0..., for miniature power relay with 1 changeover contact or solid-state relays of the same design, Push-in connection, for mounting on NS 35/7,5

### RIF-0-BSC/21 - Relay base

2900957

<https://www.phoenixcontact.com/us/products/2900957>



RIF-0... relay base, for miniature power relay with 1 changeover contact or identical solid-state relays, screw connection, for mounting on NS 35/7,5

Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)