

# REL-MR- 48DC/21-21AU - Single relay



2834847

<https://www.phoenixcontact.com/gb/products/2834847>

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Plug-in miniature power relay, with multi-layer gold contact, 2 changeover contacts, input voltage 48 V DC

## Your advantages

- RT III-proof (wash-proof)

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2834847             |
| Packing unit                         | 10 pc               |
| Minimum order quantity               | 10 pc               |
| Sales key                            | CK6195              |
| Product key                          | CK6195              |
| Catalog page                         | Page 290 (C-5-2019) |
| GTIN                                 | 4046356118934       |
| Weight per piece (including packing) | 16.2 g              |
| Weight per piece (excluding packing) | 14.95 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 | 3x 10 <sup>7</sup> cycles |

### Insulation characteristics

|            |                  |
|------------|------------------|
| Insulation | Basic insulation |
|------------|------------------|

### Insulation characteristics

|                      |                  |
|----------------------|------------------|
| Insulation           | Basic insulation |
| Overvoltage category | III              |
| Pollution degree     | 3                |

### Electrical properties

|                                                 |                                            |
|-------------------------------------------------|--------------------------------------------|
| Service life electrical                         | see diagram                                |
| Maximum power dissipation for nominal condition | 0.42 W                                     |
| Test voltage (Winding/contact)                  | 5 kV AC (50 Hz, 1 min., winding/contact)   |
| Test voltage (Contact/contact)                  | 2.5 kV AC (50 Hz, 1 min., contact/contact) |

### Input data

#### Coil side

|                                         |                         |
|-----------------------------------------|-------------------------|
| Nominal input voltage U <sub>N</sub>    | 48 V DC                 |
| Input voltage range                     | 31.2 V DC ... 119 V DC  |
| Drive and function                      | monostable              |
| Drive (polarity)                        | non-polarized           |
| Typical input current at U <sub>N</sub> | 8.7 mA                  |
| Typical response time                   | 7 ms                    |
| Typical release time                    | 3 ms                    |
| Coil resistance                         | 5520 Ω ±10 % (at 20 °C) |

### Output data

#### Switching

|                             |                        |
|-----------------------------|------------------------|
| Contact switching type      | 2 changeover contacts  |
| Type of switch contact      | Single contact         |
| Contact material            | AgNi, hard gold-plated |
| Maximum switching voltage   | 30 V AC                |
|                             | 36 V DC                |
| Minimum switching voltage   | 100 mV (at 10 mA)      |
| Limiting continuous current | 50 mA                  |
| Maximum inrush current      | 50 mA                  |
| Min. switching current      | 1 mA (at 24 V)         |

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|                                       |                    |
|---------------------------------------|--------------------|
| Interrupting rating (ohmic load) max. | 1.2 W (at 24 V DC) |
|---------------------------------------|--------------------|

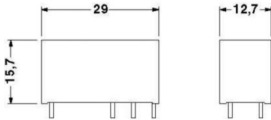
Switching: when the gold layer is destroyed

|                                       |                                                                  |
|---------------------------------------|------------------------------------------------------------------|
| Note                                  | the following values are applicable if a gold layer is destroyed |
| Contact material                      | AgNi                                                             |
| Maximum switching voltage             | 250 V                                                            |
| Minimum switching voltage             | 5 V (at 10 mA)                                                   |
| Limiting continuous current           | 8 A                                                              |
| Maximum inrush current                | 15 A (300 ms)                                                    |
| Min. switching current                | 10 mA (At 5 V)                                                   |
| Interrupting rating (ohmic load) max. | 190 W (at 24 V DC)                                               |
|                                       | 100 W (at 48 V DC)                                               |
|                                       | 60 W (at 60 V DC)                                                |
|                                       | 44 W (at 110 V DC)                                               |
|                                       | 60 W (at 220 V DC)                                               |
|                                       | 2000 VA (for 250 V AC)                                           |
| Switching capacity                    | 2 A (at 24 V, DC13)                                              |
|                                       | 0.2 A (at 110 V, DC13)                                           |
|                                       | 0.2 A (at 250 V, DC13)                                           |
|                                       | 2 A (at 24 V, AC15)                                              |
|                                       | 2 A (at 120 V, AC15)                                             |
|                                       | 2 A (at 250 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

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## Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Degree of protection            | RT III           |
| Ambient temperature (operation) | -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 instructions | Can be aligned without spacing ( $> 70\text{ °C} \geq 2.5\text{ mm}$ ) |
| Mounting position     | any                                                                    |

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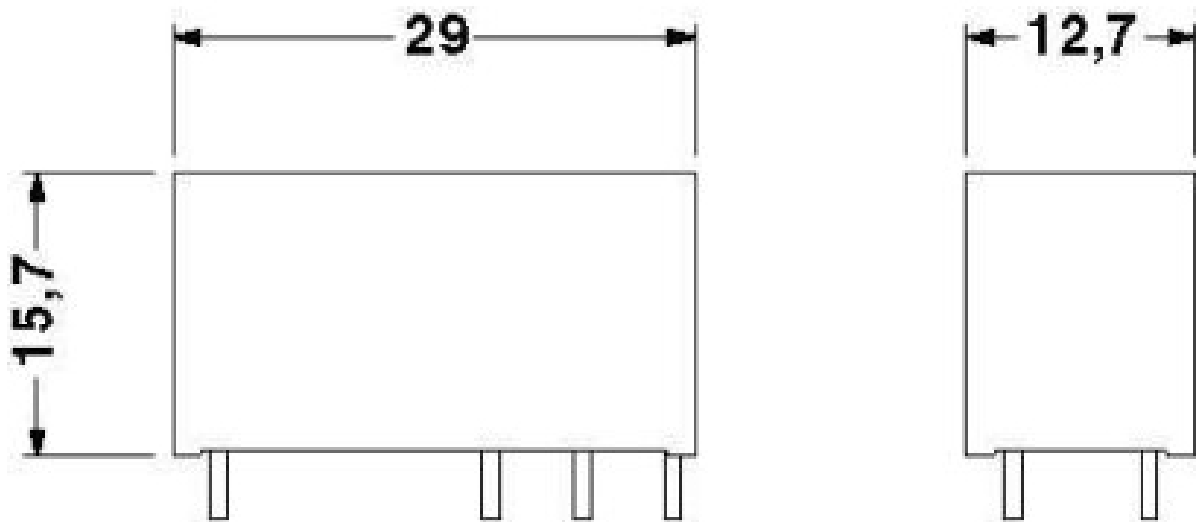
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## Drawings

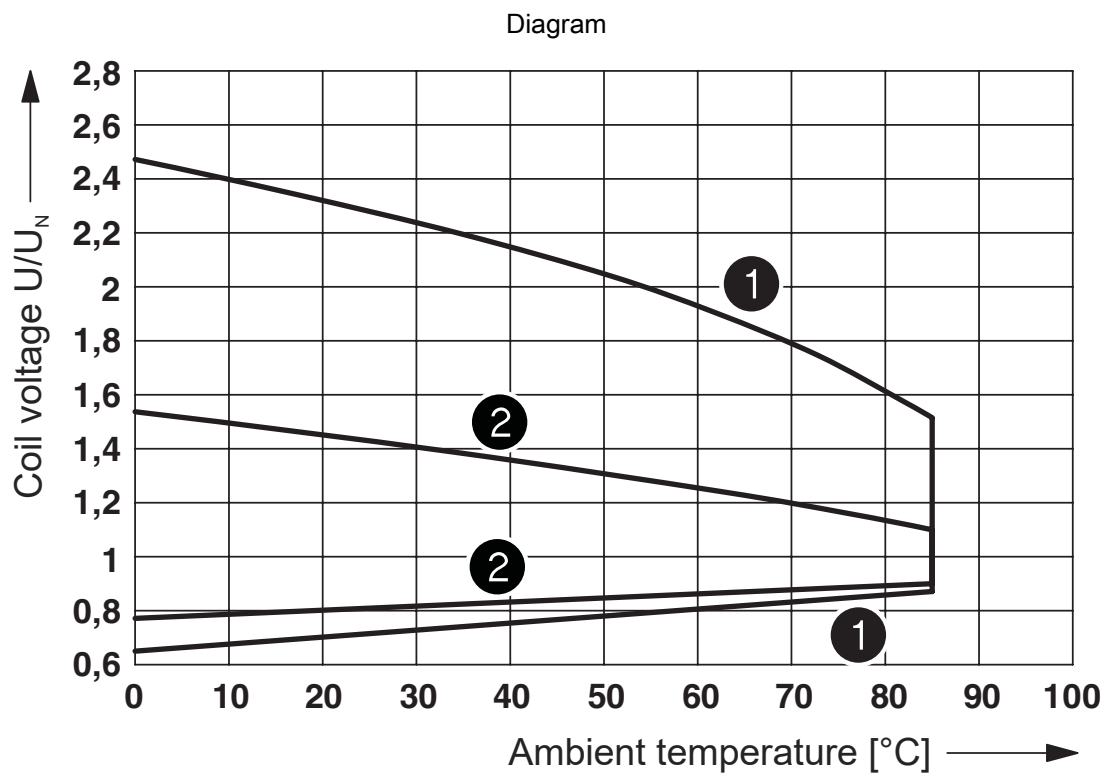
### Dimensional drawing



Diagram



Service life reduction factor with various cos phi



- ① DC coils  
② AC coils

Operating voltage range



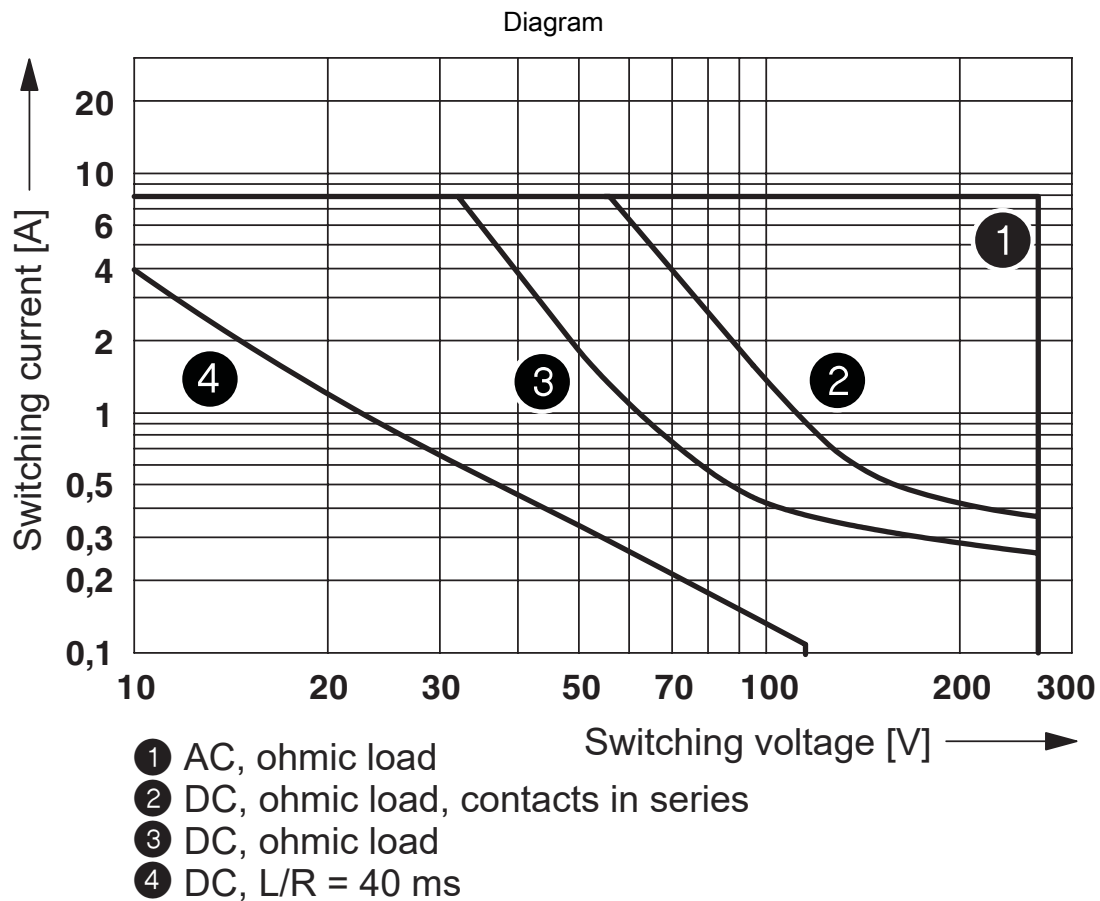
Permissible humidity for operation and storage.

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

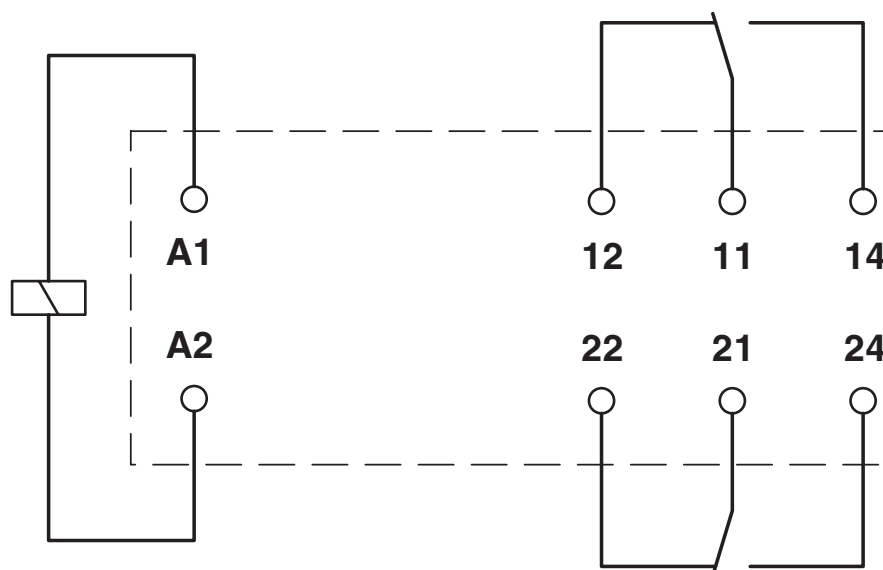
Area B: Condensation at ambient temperatures  $> 0^{\circ}\text{C}$  must be prevented

On 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature  $\leq 25^{\circ}\text{C}$ .

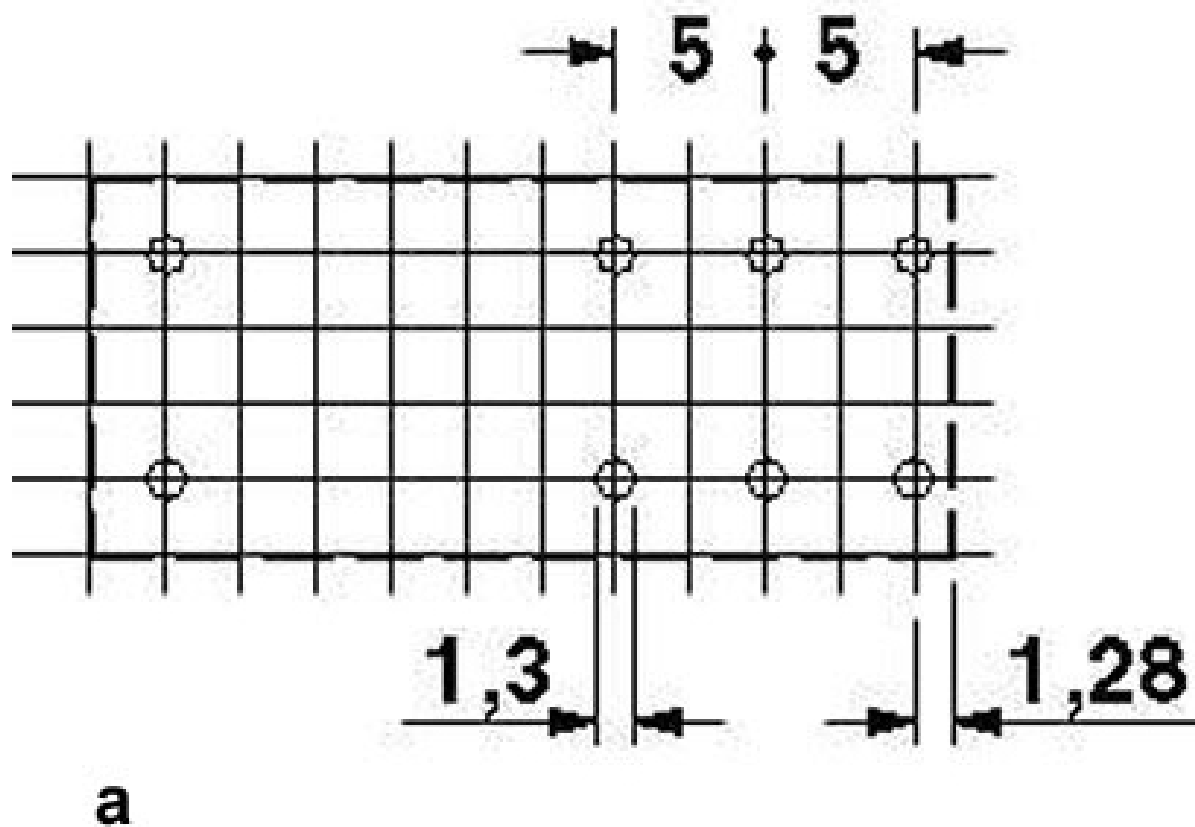


Interrupting rating

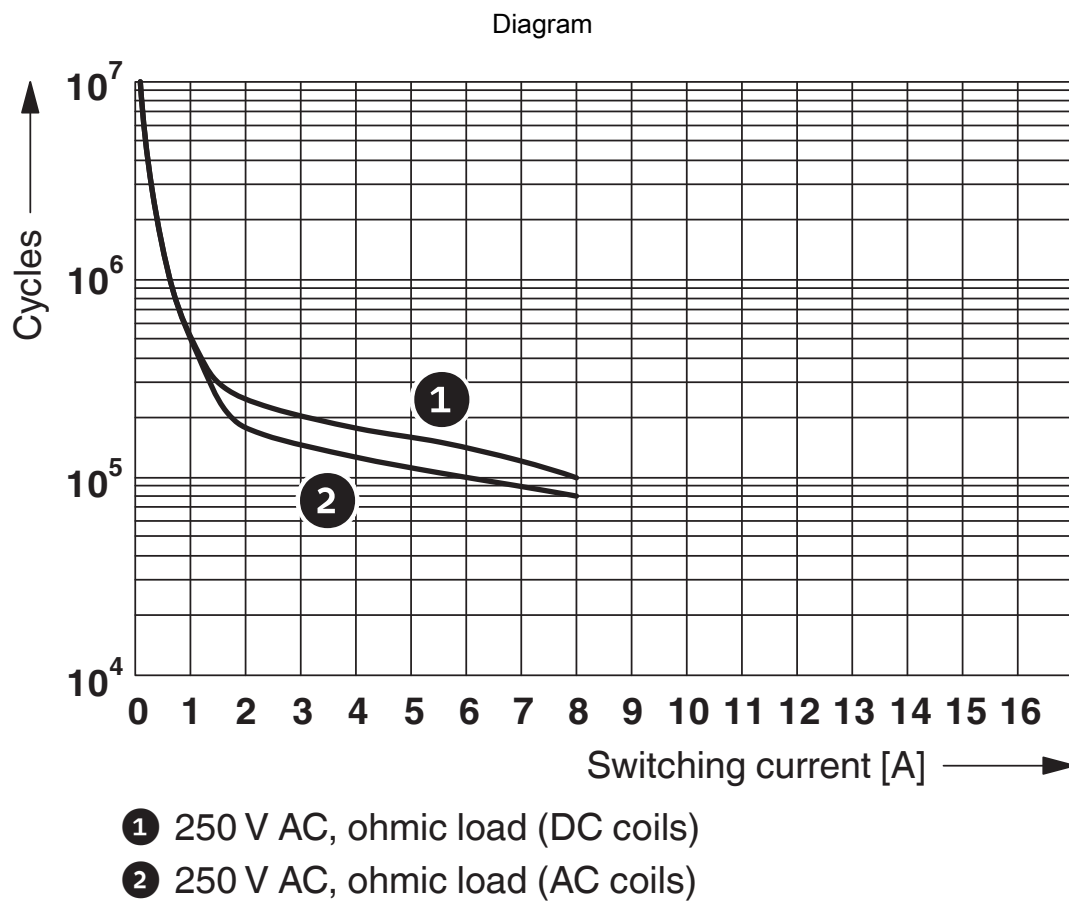
Circuit diagram



Drilling plan/solder pad geometry



a = pitch division 2.5 mm



Electrical service life

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2834847>



**cUL Recognized**  
Approval ID: FILE E 522914



**UL Recognized**  
Approval ID: FILE E 522914



**EAC**  
Approval ID: TR\_TS\_D\_00573\_c



**UL Recognized**  
Approval ID: FILE E 172140



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



**VDE Zeichengenehmigung**  
Approval ID: 40007758



**VDE Zeichengenehmigung**  
Approval ID: 40048281



**cUL Recognized**  
Approval ID: FILE E 172140

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## Classifications

### ECLASS

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

### ETIM

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

### UNSPSC

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

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## Environmental product compliance

|            |                                                         |
|------------|---------------------------------------------------------|
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
|            | No hazardous substances above threshold values          |

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## Mandatory accessories

### RIF-1-BPT/2X21 - Relay base

2900931

<https://www.phoenixcontact.com/gb/products/2900931>



Relay base RIF-1..., for miniature power relay with 1 or 2 changeover contacts or solid-state relays of the same design, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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### RIF-1-BSC/2X21 - Relay base

2900930

<https://www.phoenixcontact.com/gb/products/2900930>



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

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