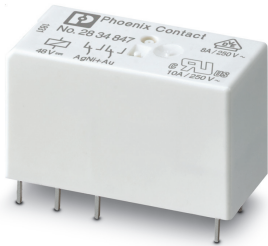


## Single relay - REL-MR- 48DC/21-21AU - 2834847

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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)



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| Minimum order quantity               | 10 pc   |
| GTIN                                 | <br>4 046356 118934 |
| GTIN                                 | 4046356118934   |
| Weight per Piece (excluding packing) | 16.000 g  |
| Custom tariff number                 | 85364900  |
| Country of origin                    | Austria   |

### Technical data

#### Dimensions

|        |         |
|--------|---------|
| Width  | 12.7 mm |
| Height | 29 mm   |
| Depth  | 15.7 mm |

#### Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Ambient temperature (operation) | -40 °C ... 85 °C |
| Degree of protection            | RT III           |

#### Coil side

# Single relay - REL-MR- 48DC/21-21AU - 2834847

## Technical data

### Coil side

|   |                                     |
|---|-------------------------------------|
| Nominal input voltage $U_N$             | 48 V DC                             |
| Typical input current at $U_N$          | 8.7 mA                              |
| Typical response time                   | 7 ms                                |
| Typical release time                    | 3 ms                                |
| Coil resistance                         | 5520 $\Omega$ $\pm$ 10 % (at 20 °C) |
| Power dissipation for nominal condition | 0.42 W                              |

### Contact side

|                                       |                        |
|---------------------------------------|------------------------|
| Contact 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)      |
| Min. switching current                | 1 mA (at 24 V)         |
| Maximum inrush current                | 50 mA                  |
| Limiting continuous current           | 50 mA                  |
| Interrupting rating (ohmic load) max. | 1.2 W (at 24 V DC)     |

### Contact side (with destroyed gold layer)

|                                       |  |
|---------------------------------------|--|
| Contact material                      | AgNi   |
| Note                                  | the following values are applicable if a gold layer is destroyed |
| 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)   |

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## Technical data

Contact side (with destroyed gold layer)

|  |                      |
|--|----------------------|
|  | 2 A (at 250 V, AC15) |
|--|----------------------|

## General

|                          |   |
|--------------------------|---|
| Test voltage             | 5 kV AC (50 Hz, 1 min., winding/contact)          |
|                          | 2.5 kV AC (50 Hz, 1 min., contact/contact)        |
| Operating mode           | 100% operating factor                             |
| Mechanical service life  | 3x 10 <sup>7</sup> cycles                         |
| Service life, electrical | see diagram                                       |
| Mounting position        | any   |
| Assembly instructions    | Can be aligned without spacing (> 70 °C ≥ 2.5 mm) |

## Connection data

|                   |                   |
|-------------------|-------------------|
| Connection method | Solder connection |
|-------------------|-------------------|

## Standards and Regulations

|                                  |                  |
|----------------------------------|------------------|
| Connection in acc. with standard | CUL              |
| Standards/regulations            | IEC 60664        |
|                                  | EN 50178         |
|                                  | EN 61810-1       |
| Insulation                       | Basic insulation |
| Pollution degree                 | 3                |
| Overvoltage category             | III              |

## Conformance/approvals

|                |                            |
|----------------|----------------------------|
| Designation    | Corrosive gas test         |
| Identification | ISA-S71.04. G3 Harsh Group |
|                | EN 60068-2-60              |

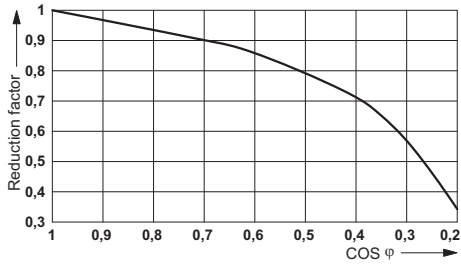
## Environmental Product Compliance

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

## Drawings

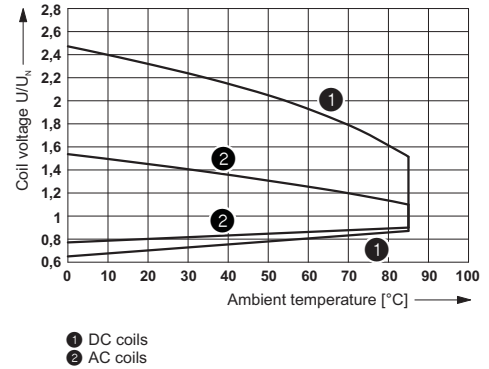
# Single relay - REL-MR- 48DC/21-21AU - 2834847

Diagram



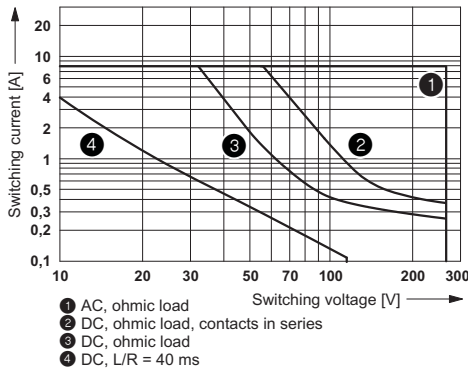
Service life reduction factor with various cos phi

Diagram



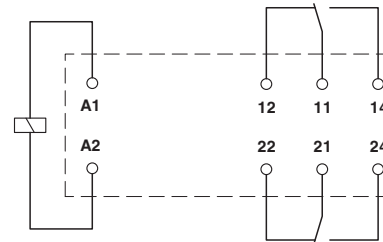
Operating voltage range

Diagram



Interrupting rating

Circuit diagram



## Classifications

eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371601 |
| eCl@ss 11.0   | 27371601 |
| eCl@ss 4.0    | 27371100 |
| eCl@ss 4.1    | 27371100 |
| eCl@ss 5.0    | 27371600 |
| eCl@ss 5.1    | 27371600 |
| eCl@ss 6.0    | 27371600 |
| eCl@ss 7.0    | 27371601 |
| eCl@ss 9.0    | 27371601 |

# Single relay - REL-MR- 48DC/21-21AU - 2834847

## Classifications

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001437 |
| ETIM 3.0 | EC001437 |
| ETIM 4.0 | EC001437 |
| ETIM 6.0 | EC001437 |
| ETIM 7.0 | EC001437 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211916 |
| UNSPSC 7.0901 | 39121515 |
| UNSPSC 11     | 39121515 |
| UNSPSC 12.01  | 39121515 |
| UNSPSC 13.2   | 39122334 |
| UNSPSC 18.0   | 39122334 |
| UNSPSC 19.0   | 39122334 |
| UNSPSC 20.0   | 39122334 |
| UNSPSC 21.0   | 39122334 |

## Approvals

### Approvals

#### Approvals

EAC / UL Recognized / UL Recognized / cUL Recognized / cUL Recognized / VDE Zeichengenehmigung / VDE Zeichengenehmigung

#### Ex Approvals

### Approval details

|     |  |                          |
|-----|--|--------------------------|
| EAC |  | RU C-<br>DE.A*30.B.01082 |
|-----|--|--------------------------|

|               |  |   |               |
|---------------|--|---|---------------|
| UL Recognized |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 228652 |
|---------------|--|---|---------------|

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## Approvals

|                        |  |   |               |
|------------------------|--|---|---------------|
| UL Recognized          |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>   | FILE E 172140 |
| cUL Recognized         |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>   | FILE E 228652 |
| cUL Recognized         |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>   | FILE E 172140 |
| VDE Zeichengenehmigung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40007758      |
| VDE Zeichengenehmigung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40048281      |

## Accessories

### Additional products

#### Relay base - PR1-BSC2/2X21 - 2833518



PR1... relay base, for miniature power relays or miniature switching relays with 1 or 2 changeover contacts or solid-state relays of the same design, 2/2-level version, screw connections, plug-in option for input/interference suppression modules

#### Relay base - PR1-BSC3/2X21 - 2833521



PR1... relay base, for miniature power relays or miniature switching relays with 1 or 2 changeover contacts or solid-state relays of the same design, 1/3-level version, screw connections, plug-in option for input/interference suppression modules

## Single relay - REL-MR- 48DC/21-21AU - 2834847

### Accessories

#### Relay base - PR1-BSP3/2X21 - 2833534



PR1... relay base, for miniature power relays or miniature switching relays with 1 or 2 changeover contacts or solid-state relays with the same design, 1/3-level version, spring-cage connections, plug-in option for input/interference suppression modules

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