

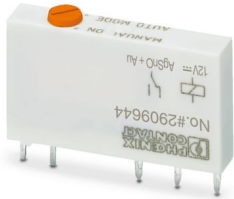
# REL-MR- 12DC/21AU/MS - Single relay



2909644

<https://www.phoenixcontact.com/us/products/2909644>

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Plug-in miniature power relay, with multi-layer gold contact, 1 changeover contact, manual operation, 12 V DC input voltage

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2909644                        |
| Packing unit                         | 10 pc                          |
| Minimum order quantity               | 10 pc                          |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | C460                           |
| Product key                          | CK6195                         |
| Catalog page                         | Page 284 (C-5-2019)            |
| GTIN                                 | 4055626377698                  |
| Weight per piece (including packing) | 6.65 g                         |
| Weight per piece (excluding packing) | 4.7 g                          |
| Customs tariff number                | 85364190                       |
| Country of origin                    | CZ                             |

## Technical data

### Product properties

|                         |                           |
|-------------------------|---------------------------|
| Product type            | Single relay              |
| Operating mode          | 100% operating factor     |
| Mechanical service life | 1x 10 <sup>7</sup> cycles |

### 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, 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)                       |
| Interrupting rating (ohmic load) max. | 1.2 W (at 24 V DC)                   |
| Motor load according to UL 508        | 1/4 HP, 240 - 277 V AC (N/O contact) |
|                                       | 1/6 HP, 240 - 277 V AC (N/C contact) |

Switching: when the gold layer is destroyed

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|                                       |  |
|---------------------------------------|--|
| Note                                  | the following values are applicable if a gold layer is destroyed |
| Contact material                      | AgSnO  |
| Maximum switching voltage             | 250 V AC/DC  |
| Minimum switching voltage             | 5 V (at 100 mA)  |
| Limiting continuous current           | 6 A  |
| 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)   |
|                                       | 1500 VA (for 250 V AC)   |
| Switching capacity                    | 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)   |
|                                       | 3 A (at 230 V, AC15)   |

## Connection data

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

## Dimensions

|        |       |
|--------|-------|
| Width  | 5 mm  |
| Height | 28 mm |
| Depth  | 16 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 |

## Approvals

### Corrosive gas test

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

## Standards and regulations

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|                       |            |
|-----------------------|------------|
| Standards/regulations | IEC 60664  |
|                       | EN 50178   |
|                       | EN 61810-1 |

## Mounting

|                       |                           |
|-----------------------|---------------------------|
| Assembly instructions | in rows with zero spacing |
| Mounting position     | any                       |

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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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