

## Single relay - REL-MR-230AC/21-21/MS - 2987972

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Plug-in miniature relay, with power contact, 2 PDTs, test button, mechanical switch position indicator, status LED, coil voltage 230 V AC

### Your advantages

- ✓ With detectable manual operation
- ✓ DC types with integrated freewheeling diode
- ✓ Integrated status LED
- ✓ Switching current of up to 16 A
- ✓ Mechanical switch position indicator



### Key Commercial Data

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit           | 10 pc                                                                                                   |
| Minimum order quantity | 10 pc                                                                                                   |
| GTIN                   | <br>4 046356 480987 |
| GTIN                   | 4046356480987                                                                                           |

### Technical data

#### Dimensions

|        |         |
|--------|---------|
| Width  | 12.7 mm |
| Height | 29 mm   |
| Depth  | 25 mm   |

#### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |

#### Coil side

|                             |          |
|-----------------------------|----------|
| Nominal input voltage $U_N$ | 230 V AC |
| Mains frequency             | 50/60 Hz |

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## Technical data

### Coil side

|                                         |                                              |
|-----------------------------------------|----------------------------------------------|
| Typical input current at $U_N$          | 3.5 mA                                       |
| Typical response time                   | 3 ms ... 12 ms (depending on phase relation) |
| Typical release time range              | 2 ms ... 8 ms (depending on phase relation)  |
| Power dissipation for nominal condition | 0.81 W                                       |

### Contact side

|                                       |                                |
|---------------------------------------|--------------------------------|
| Contact type                          | 2 PDT                          |
| Type of switch contact                | Single contact                 |
| Contact material                      | AgNi                           |
| Maximum switching voltage             | 250 V AC/DC                    |
| Minimum switching voltage             | 12 V (at 10 mA)                |
| Min. switching current                | 10 mA (at 12 V)                |
| Maximum inrush current                | 16 A (20 ms)                   |
| Limiting continuous current           | 8 A                            |
| Interrupting rating (ohmic load) max. | 2000 VA (for 250 V AC)         |
| Switching capacity                    | 1 A (at 24 V, DC13)            |
|                                       | 1.5 A (at 24 V, AC15)          |
|                                       | 1.5 A (at 120 V, AC15)         |
|                                       | 1.5 A (at 240 V, AC15)         |
| Motor load according to UL 508        | 1/4 HP, 120 V AC (N/O contact) |
|                                       | 1/2 HP, 240 V AC (N/O contact) |
|                                       | 1/4 HP, 120 V AC (N/C contact) |
|                                       | 1/3 HP, 240 V AC (N/C contact) |

### General

|                                          |                           |
|------------------------------------------|---------------------------|
| Test voltage relay winding/relay contact | 5 kV AC (50 Hz, 1 min.)   |
| Test voltage relay contact/relay contact | 2.5 kV AC (50 Hz, 1 min.) |
| Mechanical service life                  | 5x 10 <sup>6</sup> cycles |
| Service life, electrical                 | see diagram               |

### Standards and Regulations

|                                  |              |
|----------------------------------|--------------|
| Connection in acc. with standard | CUL          |
| Standards/regulations            | EN 61810-1   |
|                                  | VDE 0435-201 |
|                                  | EN 50178     |

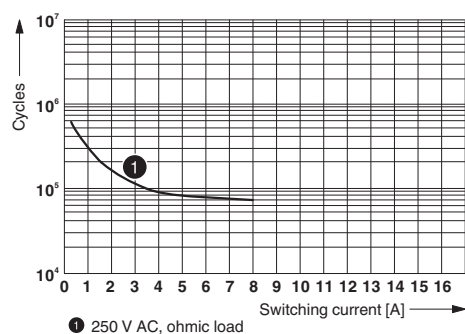
### Environmental Product Compliance

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

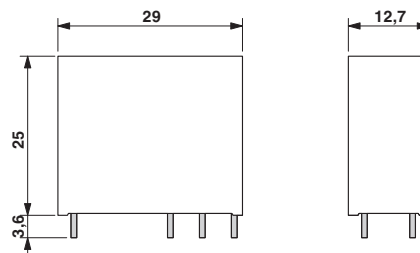
## Drawings

## Single relay - REL-MR-230AC/21-21/MS - 2987972

Diagram

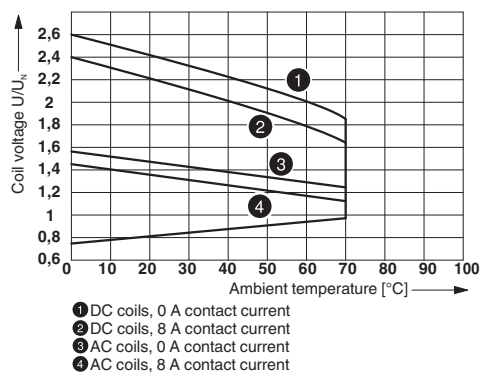


Dimensional drawing

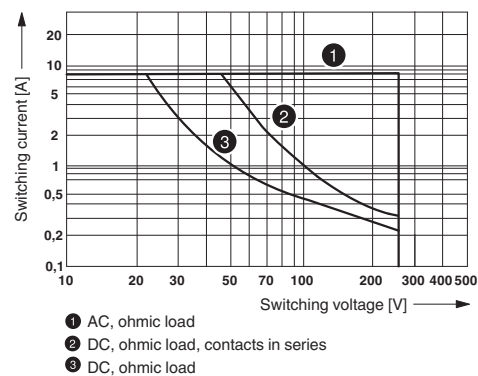


### Electrical service life

Diagram



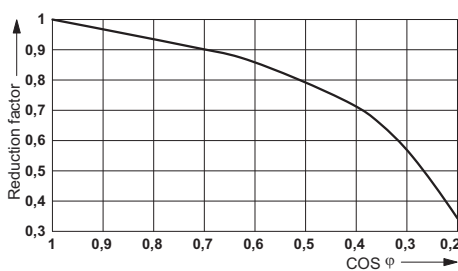
Diagram



### Operating voltage range

### Interrupting rating

Diagram



### Service life reduction factor with various cos phi

### Approvals

### Approvals

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### Approvals

#### Approvals

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

#### Ex Approvals

#### Approval details

|                        |                                                                                     |                                                                                                                                                                                                           |                          |
|------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|
| 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 195083            |
| 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 195083            |
| 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> | 40027210                 |
| EAC                    |  |                                                                                                                                                                                                           | RU C-<br>DE.A*30.B.01082 |
| cULus Recognized       |  |                                                                                                                                                                                                           |                          |

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