

## Single relay - REL-IR/LDM- 48DC/2X21 - 2834177

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Pluggable industrial relays with power contacts, 2 PDT, test button, status LED, free-wheeling diode, mechanical switch position indicator, polarity A1-, A2+, input voltage 48 V DC

### Your advantages

- ✓ With detectable manual operation
- ✓ Mechanical switch position indicator
- ✓ Integrated status LED
- ✓ DC types with integrated freewheeling diode

RoHS

### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 10 pc                                                                                                   |
| Minimum order quantity               | 10 pc                                                                                                   |
| GTIN                                 | <br>4 017918 941710 |
| GTIN                                 | 4017918941710                                                                                           |
| Weight per Piece (excluding packing) | 38.590 g                                                                                                |
| Custom tariff number                 | 85364190                                                                                                |
| Country of origin                    | Japan                                                                                                   |

### Technical data

#### Dimensions

|        |         |
|--------|---------|
| Width  | 21.5 mm |
| Height | 28 mm   |
| Depth  | 36 mm   |

#### Ambient conditions

|                                         |                  |
|-----------------------------------------|------------------|
| Ambient temperature (operation)         | -55 °C ... 70 °C |
| Ambient temperature (storage/transport) | -55 °C ... 70 °C |

#### Coil side

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## Technical data

### Coil side

|                                         |                                   |
|-----------------------------------------|-----------------------------------|
| Nominal input voltage $U_N$             | 48 V DC                           |
| Typical input current at $U_N$          | 19 mA                             |
| Typical response time                   | 13 ms                             |
| Typical release time                    | 14 ms                             |
| Coil resistance                         | 2560 $\Omega \pm 15\%$ (at 20 °C) |
| Power dissipation for nominal condition | 0.91 W                            |

### Contact side

|                                       |                        |
|---------------------------------------|------------------------|
| Contact type                          | 2 PDT                  |
| Type of switch contact                | Single contact         |
| Contact material                      | Ag                     |
| Maximum switching voltage             | 250 V AC/DC            |
| Minimum switching voltage             | 5 V                    |
| Min. switching current                | 1 mA                   |
| Maximum inrush current                | 20 A (15 ms)           |
| Limiting continuous current           | 10 A                   |
| Interrupting rating (ohmic load) max. | 2500 VA (for 250 V AC) |

### General

|                                          |                           |
|------------------------------------------|---------------------------|
| Test voltage relay winding/relay contact | 2 kV AC (50 Hz, 1 min.)   |
| Test voltage relay contact/relay contact | 2 kV AC (50 Hz, 1 min.)   |
| Operating mode                           | 100% operating factor     |
| Degree of protection                     | RT I                      |
| Mechanical service life                  | 5x 10 <sup>7</sup> cycles |
| Mounting position                        | any                       |
| Assembly instructions                    | On relay base PR2         |

### Standards and Regulations

|                       |                |
|-----------------------|----------------|
| Standards/regulations | DIN EN 61810-1 |
|                       | VDE 0435-201   |
|                       | EN 50178       |
| Degree of pollution   | 2              |
| Overvoltage category  | II             |

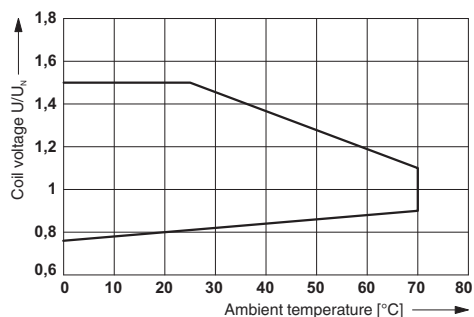
### Environmental Product Compliance

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

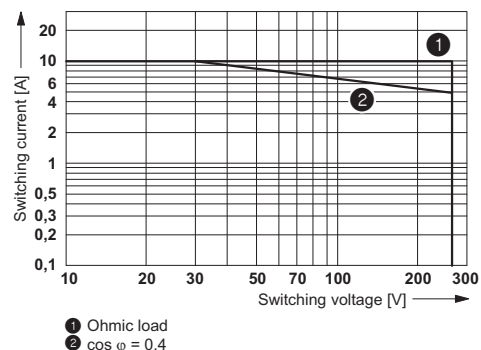
## Drawings

## Single relay - REL-IR/LDM- 48DC/2X21 - 2834177

Diagram

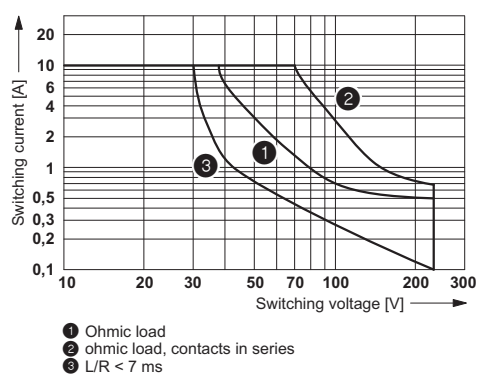


Diagram



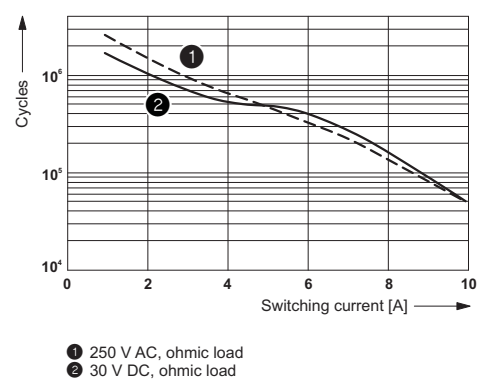
Operating voltage range

Diagram



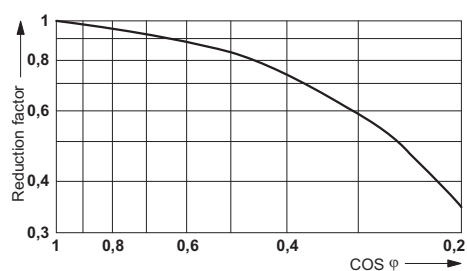
AC interrupting rating

Diagram



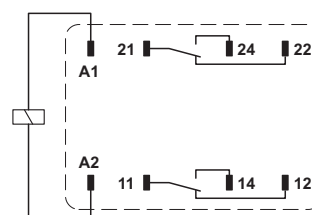
DC interrupting rating

Diagram



Electrical service life

Circuit diagram



Shown without LED and damping diode.  
Contacts 21, 22, 24 are led onto relay base connections 41, 42, 44.

Service life reduction factor

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### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 5.0 | 27371601 |
| eCl@ss 5.1 | 27371600 |
| eCl@ss 6.0 | 27371600 |
| eCl@ss 7.0 | 27371601 |
| eCl@ss 8.0 | 27371601 |
| eCl@ss 9.0 | 27371601 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001437 |
| ETIM 3.0 | EC001437 |
| ETIM 4.0 | EC001437 |
| ETIM 5.0 | EC001437 |
| ETIM 6.0 | EC001437 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211916 |
| UNSPSC 7.0901 | 39121515 |
| UNSPSC 11     | 39121515 |
| UNSPSC 12.01  | 39121515 |
| UNSPSC 13.2   | 39122334 |

### Approvals

#### Approvals

#### Approvals

UL Listed / VDE Gutachten mit Fertigungsüberwachung / cUL Listed / EAC / cULus Listed

#### Ex Approvals

#### Approval details

|           |                                                                                     |                                                                                                                                                       |               |
|-----------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| UL Listed |  | <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 Gutachten mit<br>Fertigungsüberwachung |  | <a href="http://www2.vde.com/de/Institut/Online-Service/VDE-gepruefteProdukte/Seiten/Online-Suche.aspx">http://www2.vde.com/de/Institut/Online-Service/<br/>VDE-gepruefteProdukte/Seiten/Online-Suche.aspx</a> | 40026798 |
|--------------------------------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|

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### Approvals

cUL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 172140

EAC



RU C-  
DE.A\*30.B.01082

cULus Listed



### Accessories

#### Additional products

Relay base - PR2-BSC2/4X21 - 2833563



Relay base PR2-B, for industrial relay REL-IR with 2 or 4 PDT, 2/2-level version, screw connections, connection facility for input/interference suppression modules, for mounting on NS 35/7.5

Relay base - PR2-BSC3/4X21 - 2833576



Relay base PR2-B, for industrial relay REL-IR with 2 or 4 PDT, 1/3-level version, screw connections, connection facility for input/interference suppression modules, for mounting on NS 35/7.5

Relay base - PR2-BSP3/4X21 - 2833589



Relay base PR2-B, for industrial relay REL-IR with 2 or 4 PDT, 1/3-level version, spring-cage connections, connection facility for input/interference suppression modules, for mounting on NS 35/7.5