

# REL-OR2/LDP- 24DC/2X21 - Single relay



2903689

<https://www.phoenixcontact.com/us/products/2903689>

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Plug-in octal relays with power contacts, 2 changeover contacts, test button, freewheeling diode, mechanical switching position indicator, polarity: A1+, A2-, coil voltage: 24 V DC

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2903689                        |
| Packing unit                         | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | C460                           |
| Product key                          | DK6193                         |
| GTIN                                 | 4046356759021                  |
| Weight per piece (including packing) | 86.41 g                        |
| Weight per piece (excluding packing) | 86.41 g                        |
| Customs tariff number                | 85364190                       |
| Country of origin                    | PL                             |

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## Technical data

### Product properties

|                         |                                 |
|-------------------------|---------------------------------|
| Product type            | Single relay                    |
| Set comprises           | 2903297 RIF-3-RPT-LDP-24DC/2X21 |
|                         | 2903303 RIF-3-RSC-LDP-24DC/2X21 |
| Operating mode          | 100% operating factor           |
| Mechanical service life | approx. $2 \times 10^7$ cycles  |

### Insulation characteristics

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

### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 05.09.2025 |
|------------------------------|------------|

### Electrical properties

|  |  |
|--|--|
| Maximum power dissipation for nominal condition      | 1.44 W   |
| Test voltage (Winding/contact)                       | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)                     |
| Test voltage (Contact/contact)                       | 2 kV <sub>rms</sub> (50 Hz, 1 min., contact/contact)                       |
| Test voltage (Changeover contact/changeover contact) | 2 kV <sub>rms</sub> (50 Hz, 1 min., changeover contact/changeover contact) |
| Rated insulation voltage                             | 250 V AC   |
| Rated surge voltage                                  | 4 kV   |

### Input data

#### Coil side

|                                |                                 |
|--------------------------------|---------------------------------|
| Nominal input voltage $U_N$    | 24 V DC                         |
| Input voltage range            | 20.4 V DC ... 26.4 V DC (20 °C) |
| Drive and function             | monostable                      |
| Typical input current at $U_N$ | 60 mA                           |
| Typical response time          | 18 ms                           |
| Typical release time           | 20 ms                           |
| Protective circuit             | Freewheeling diode              |
| Status display                 | LED (yellow)                    |

### Output data

#### Switching

|                           |                       |
|---------------------------|-----------------------|
| Contact switching type    | 2 changeover contacts |
| Type of switch contact    | Single contact        |
| Contact material          | AgNi                  |
| Maximum switching voltage | 250 V AC/DC           |
| Minimum switching voltage | 10 V (At 24 mA)       |

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|                                       |                                |
|---------------------------------------|--------------------------------|
| Limiting continuous current           | 10 A                           |
| Maximum inrush current                | 30 A (20 ms, N/O contacts)     |
| Min. switching current                | 10 mA (at 24 V)                |
| Interrupting rating (ohmic load) max. | 240 W (at 24 V DC)             |
|                                       | 124 W (at 48 V DC)             |
|                                       | 108 W (at 60 V DC)             |
|                                       | 52 W (at 110 V DC)             |
|                                       | 48 W (at 220 V DC)             |
|                                       | 2500 VA (for 250 V AC)         |
| Switching power min.                  | 0.24 W                         |
| Switching capacity                    | 2 A (at 24 V, DC13)            |
|                                       | 0.22 A (at 120 V, DC13)        |
|                                       | 0.11 A (at 250 V, DC13)        |
|                                       | 3 A (at 24 V, AC15)            |
|                                       | 3 A (at 120 V, AC15)           |
|                                       | 1.5 A (at 240 V, AC15)         |
| Motor load according to UL 508        | 1/2 HP, 240 V AC (N/O contact) |

## Connection data

|                   |                    |
|-------------------|--------------------|
| Connection method | Plug-in connection |
|-------------------|--------------------|

## Dimensions

|        |         |
|--------|---------|
| Width  | 35 mm   |
| Height | 35 mm   |
| Depth  | 54.4 mm |

## Environmental and real-life conditions

### Ambient conditions

|   |                  |
|---|------------------|
| Degree of protection                    | RT I             |
| Ambient temperature (operation)         | -40 °C ... 70 °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

|                       |           |
|-----------------------|-----------|
| Standards/regulations | IEC 60664 |
|                       | IEC 61810 |

## Mounting

|                   |     |
|-------------------|-----|
| Mounting position | any |
|-------------------|-----|

Drawings

Diagram



- ① DC coils
- ② AC coils

Operating voltage range

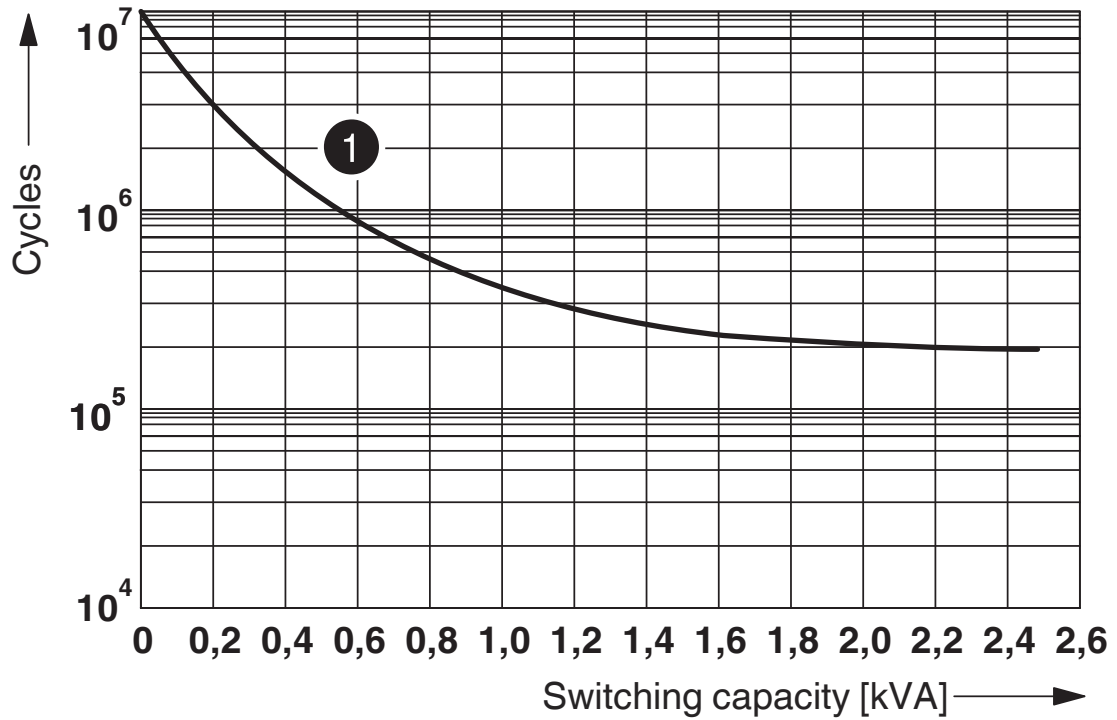
Diagram



- ① AC, ohmic load
- ② DC, ohmic load

Interrupting rating

Diagram



250 V AC, ohmic load

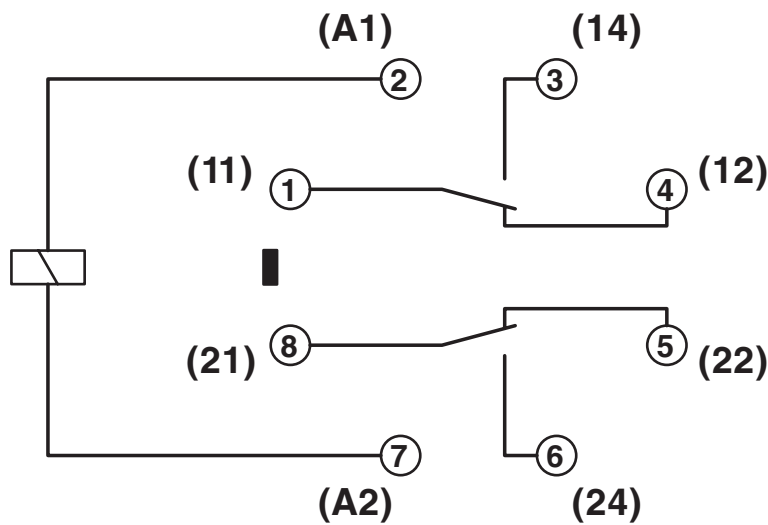
Electrical service life

Diagram



Service life reduction factor

Circuit diagram



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## Classifications

### UNSPSC

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

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## Environmental product compliance

### EU RoHS

|   |                    |
|---|--------------------|
| Fulfills EU RoHS substance requirements | Yes, No exemptions |
|---|--------------------|

### China RoHS

|  |  |
|--|--|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|  | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)