

# REL-IR2/LDP-110DC/2X21 - Single relay



2903663  
<https://www.phoenixcontact.com/gb/products/2903663>

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Plug-in industrial relay with power contacts, 2 changeover contacts, test button, status LED, freewheeling diode, mechanical switching position indicator, polarity: A1+, A2-, input voltage: 110 V DC

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 2903663             |
| Packing unit                         | 10 pc               |
| Minimum order quantity               | 10 pc               |
| Sales key                            | CK6193              |
| Product key                          | CK6193              |
| Catalog page                         | Page 300 (C-5-2019) |
| GTIN                                 | 4046356758161       |
| Weight per piece (including packing) | 35.25 g             |
| Weight per piece (excluding packing) | 34.11 g             |
| Customs tariff number                | 85364900            |
| Country of origin                    | PL                  |

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## Technical data

### Product properties

|                         |                                |
|-------------------------|--------------------------------|
| Product type            | Single relay                   |
| Operating mode          | 100% operating factor          |
| Mechanical service life | approx. $2 \times 10^7$ cycles |

### Insulation characteristics

|            |                  |
|------------|------------------|
| Insulation | Basic insulation |
|------------|------------------|

### Insulation characteristics

|                      |                                                          |
|----------------------|----------------------------------------------------------|
| Insulation           | Basic insulation                                         |
| Overvoltage category | III                                                      |
| Pollution degree     | 3 (Rated voltage of 230 V)<br>2 (Rated voltage of 400 V) |

### Electrical properties

|                                                      |                                                                              |
|------------------------------------------------------|------------------------------------------------------------------------------|
| Service life electrical                              | see diagram                                                                  |
| Maximum power dissipation for nominal condition      | 0.88 W                                                                       |
| Test voltage (Winding/contact)                       | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)                       |
| Test voltage (Contact/contact)                       | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., contact/contact)                       |
| Test voltage (Changeover contact/changeover contact) | 2.5 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 $U_N$               | 110 V DC                 |
| Input voltage range                       | 85.8 V DC ... 214.5 V DC |
| Input voltage range in reference to $U_N$ | see diagram              |
| Drive and function                        | monostable               |
| Drive (polarity)                          | polarized                |
| Typical input current at $U_N$            | 8 mA                     |
| Typical response time                     | 13 ms                    |
| Typical release time                      | 14 ms                    |
| Protective circuit                        | Freewheeling diode       |
| Status display                            | Yellow LED               |

### Output data

#### Switching

|                        |                       |
|------------------------|-----------------------|
| Contact switching type | 2 changeover contacts |
| Type of switch contact | Single contact        |
| Contact material       | AgNi                  |

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|                                       |                            |
|---------------------------------------|----------------------------|
| Maximum switching voltage             | 250 V AC/DC                |
| Minimum switching voltage             | 5 V (At 24 mA)             |
| Limiting continuous current           | 12 A                       |
| Maximum inrush current                | 30 A (20 ms, N/O contacts) |
| Min. switching current                | 5 mA (at 24 V)             |
| Interrupting rating (ohmic load) max. | 288 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)         |
|                                       | 3000 VA (for 250 V AC)     |
| Switching capacity min.               | 0.12 W                     |
| Motor load according to UL 508        | 1/2 HP, 240 V AC           |

## Connection data

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

## Dimensions

|        |         |
|--------|---------|
| Width  | 21.2 mm |
| Height | 27.5 mm |
| Depth  | 35.6 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

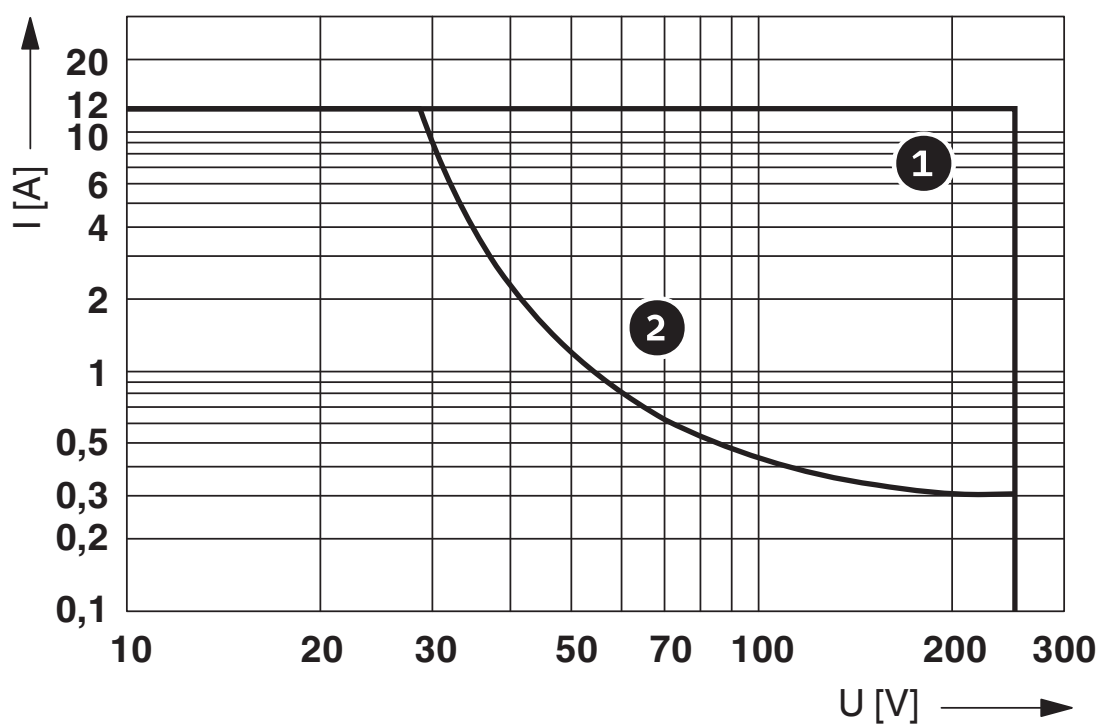
|                       |           |
|-----------------------|-----------|
| Standards/regulations | IEC 60664 |
|                       | IEC 61810 |

## Mounting

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

## Drawings

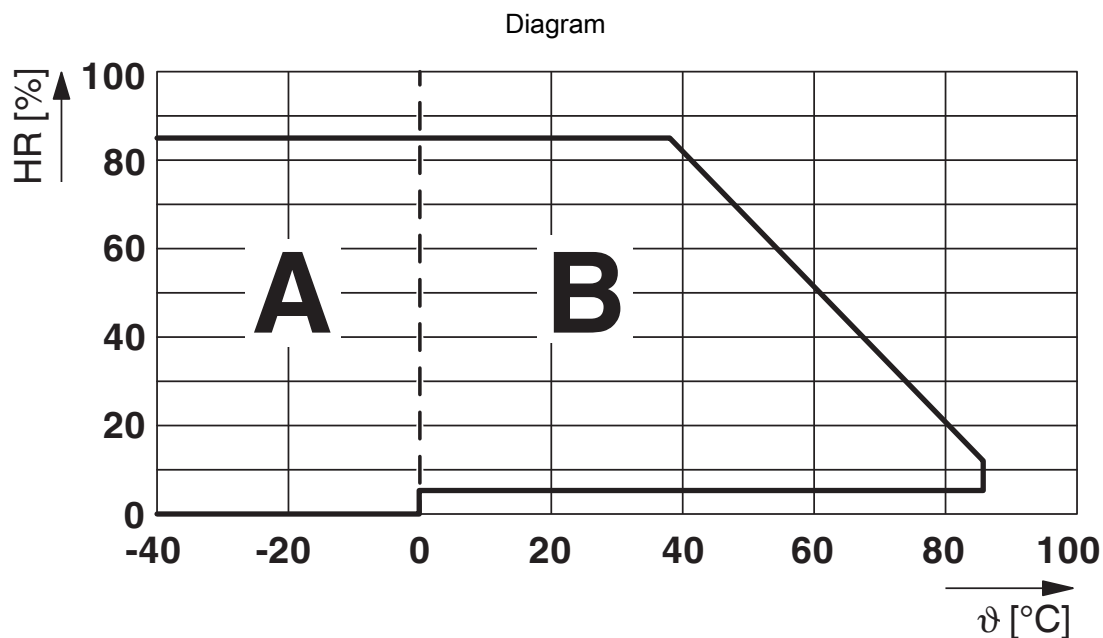
Diagram



Interrupting rating

Curve 1: AC, ohmic load

Curve 2: DC, ohmic load



Permissible humidity for operation and storage.

The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures  $\leq 0^{\circ}\text{C}$  must be prevented

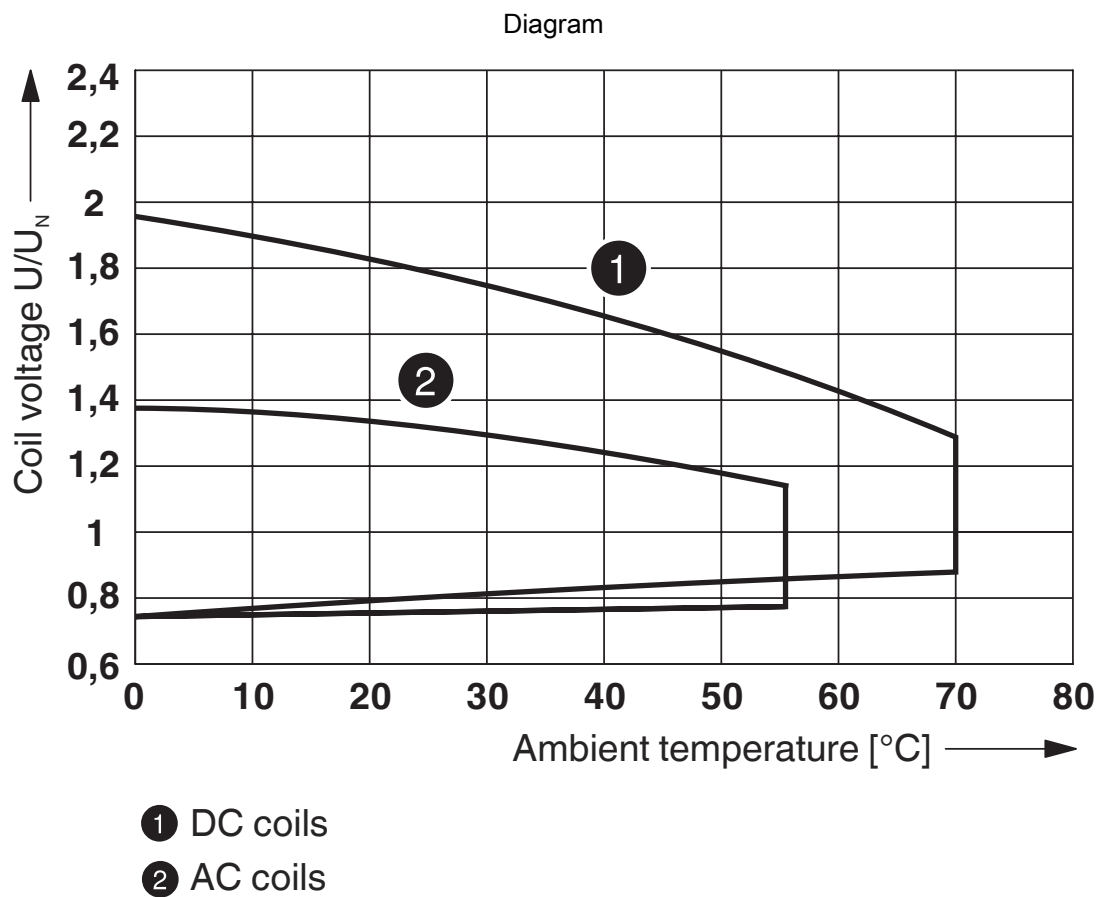
Area B: Condensation at ambient temperatures  $> 0^{\circ}\text{C}$  must be prevented

On 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature  $\leq 25^{\circ}\text{C}$ .

Diagram

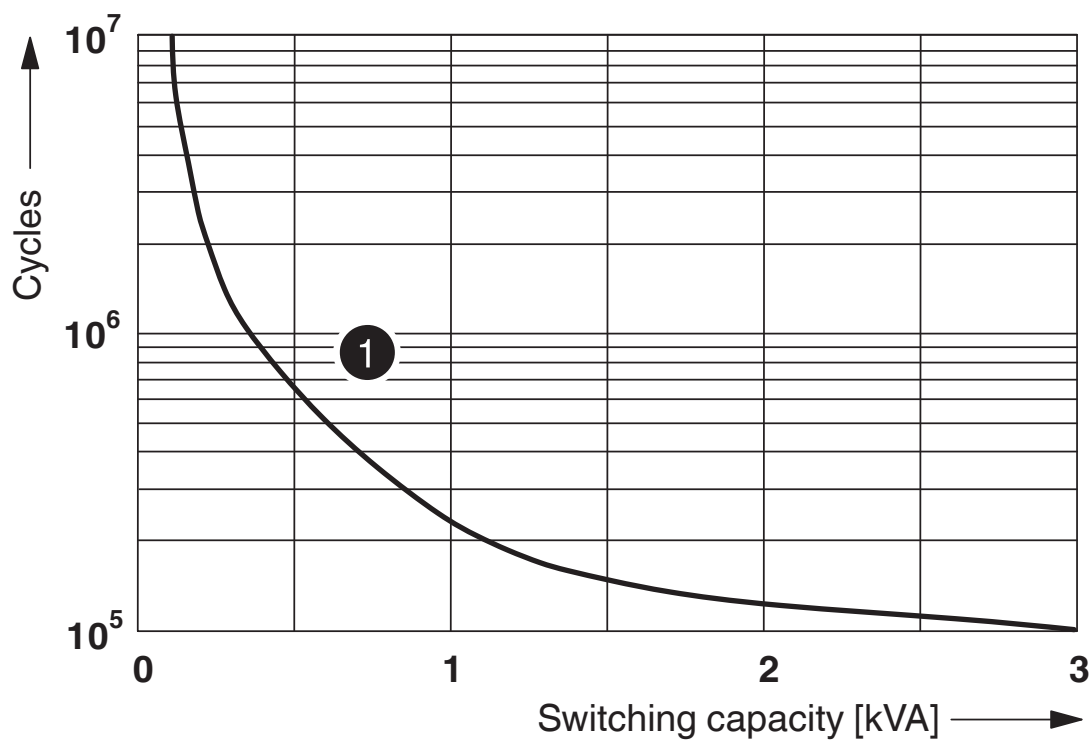


Service life reduction factor



Operating voltage range

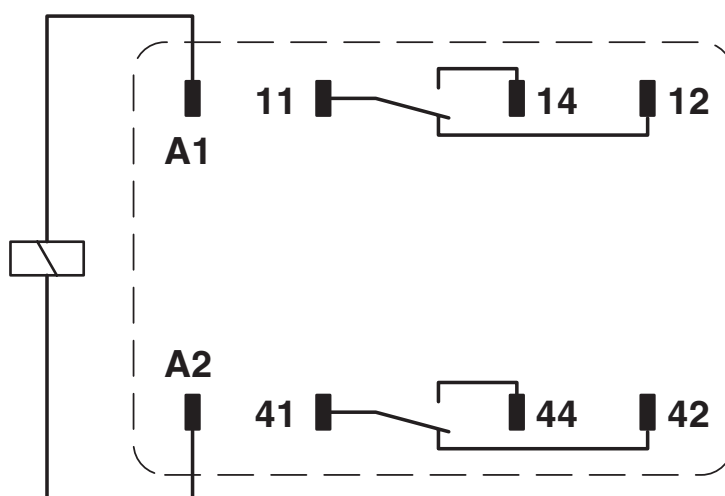
Diagram



① 250 V AC, Ohmic load

Electrical service life

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/2903663>



**CSA**

Approval ID: 256725



**cUL Recognized**

Approval ID: FILE E 172140



**UL Recognized**

Approval ID: FILE E 172140



**EAC**

Approval ID: TR\_TS\_D\_00573\_c



**EAC**

Approval ID: RU\*C-DE.\*08.B.00010



**VDE Zeichengenehmigung**

Approval ID: 40040427

**cULus Recognized**

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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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## Mandatory accessories

### RIF-2-BPT/4X21 - Relay base

2900934

<https://www.phoenixcontact.com/gb/products/2900934>



Relay base RIF-2..., for industrial relay with 2 or 4 changeover contacts, Push-in connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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### RIF-2-BSC/4X21 - Relay base

2900932

<https://www.phoenixcontact.com/gb/products/2900932>



RIF-2... relay base, for industrial relay with 2 or 4 changeover contacts, screw connection, plug-in option for input/interference suppression modules, for mounting on NS 35/7,5

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