

# REL-IR-BL/L-110DC/4X21 - Single relay



1109560

<https://www.phoenixcontact.com/in/products/1109560>

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Plug-in industrial relay in basic design with power contacts, 4 changeover contacts, test button, status LED, mechanical switch position indicator, polarity A1+, A2-, input voltage: 110 V DC

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1109560       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CK6           |
| Product key                          | DKF947        |
| GTIN                                 | 4063151021825 |
| Weight per piece (including packing) | 31.028 g      |
| Weight per piece (excluding packing) | 29.9 g        |
| Customs tariff number                | 85364900      |
| Country of origin                    | AT            |

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## Technical data

### Notes

|                    |                                                                                                            |
|--------------------|------------------------------------------------------------------------------------------------------------|
| Notes on operation | Do not connect adjacent channels to SELV/ PELV and voltages dangerous to the touch.                        |
| Notes on operation | The outputs are not suitable for switching different outer conductors.                                     |
| Notes on operation | Do not use to separate SELV / PELV circuits from other circuits, because safe isolation is not guaranteed. |

### Product properties

|                         |                           |
|-------------------------|---------------------------|
| Product type            | Single relay              |
| Product family          | ESSENTIAL edition         |
| Operating mode          | 100% operating factor     |
| Mechanical service life | 3x 10 <sup>7</sup> cycles |

Insulation characteristics: Air clearances and creepage distances between coil and contact side

|                      |                  |
|----------------------|------------------|
| Insulation           | Basic insulation |
| Overvoltage category | III              |
| Pollution degree     | 2                |

Data management status

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

### Electrical properties

|                                                      |                                                                            |
|------------------------------------------------------|----------------------------------------------------------------------------|
| Service life electrical                              | see diagram                                                                |
| Maximum power dissipation for nominal condition      | 0.85 W                                                                     |
| Test voltage (Winding/contact)                       | 2.5 kV <sub>rms</sub> (50 Hz, 1 min., winding/contact)                     |
| Test voltage (Changeover contact/changeover contact) | 2 kV <sub>rms</sub> (50 Hz, 1 min., changeover contact/changeover contact) |

Air clearances and creepage distances between coil and contact side

|                          |          |
|--------------------------|----------|
| Rated insulation voltage | 250 V AC |
| Rated surge voltage      | 5 kV     |

### Input data

Coil side

|                                         |                                |
|-----------------------------------------|--------------------------------|
| Nominal input voltage U <sub>N</sub>    | 110 V DC                       |
| Input voltage range                     | 88 V DC ... 214.5 V DC (20 °C) |
| Drive and function                      | monostable                     |
| Drive (polarity)                        | polarized                      |
| Typical input current at U <sub>N</sub> | 6.9 mA                         |
| Typical response time                   | 15 ms                          |
| Typical release time                    | 10 ms                          |
| Coil voltage                            | 110 V DC                       |
| Status display                          | LED (yellow)                   |

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|                 |               |
|-----------------|---------------|
| Coil resistance | 16.1 kΩ ±12 % |
|-----------------|---------------|

## Output data

### Switching

|                                       |                            |
|---------------------------------------|----------------------------|
| Contact switching type                | 4 changeover contacts      |
| Type of switch contact                | Single contact             |
| Contact material                      | AgNi                       |
| Maximum switching voltage             | 250 V AC/DC                |
| Minimum switching voltage             | 12 V (10 mA)               |
| Limiting continuous current           | 6 A                        |
| Maximum inrush current                | 12 A (20 ms, N/O contacts) |
| Min. switching current                | 10 mA (12 V)               |
| Interrupting rating (ohmic load) max. | 144 W (24 V DC)            |
|                                       | 130 W (48 V DC)            |
|                                       | 90 W (60 V DC)             |
|                                       | 66 W (110 V DC)            |
|                                       | 88 W (220 V DC)            |
|                                       | 1500 VA (250 V AC)         |
| Switching capacity min.               | 120 mW                     |

## Connection data

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

## Dimensions

|        |         |
|--------|---------|
| Width  | 22.5 mm |
| Height | 28 mm   |
| Depth  | 35.5 mm |

## Environmental and real-life conditions

### Ambient conditions

|                                              |                                |
|----------------------------------------------|--------------------------------|
| Degree of protection                         | RT II                          |
| Degree of protection (Installation location) | ≥ IP54 (Installation location) |
| Ambient temperature (operation)              | -40 °C ... 70 °C               |
| Ambient temperature (storage/transport)      | -40 °C ... 70 °C               |
| Altitude                                     | ≤ 2000 m                       |

## Standards and regulations

### Air clearances and creepage distances between coil and contact side

|                       |            |
|-----------------------|------------|
| Standards/regulations | EN 61810-1 |
|-----------------------|------------|

## Mounting

|               |                           |
|---------------|---------------------------|
| Mounting type | Plug-in mounting          |
| Assembly note | in rows with zero spacing |

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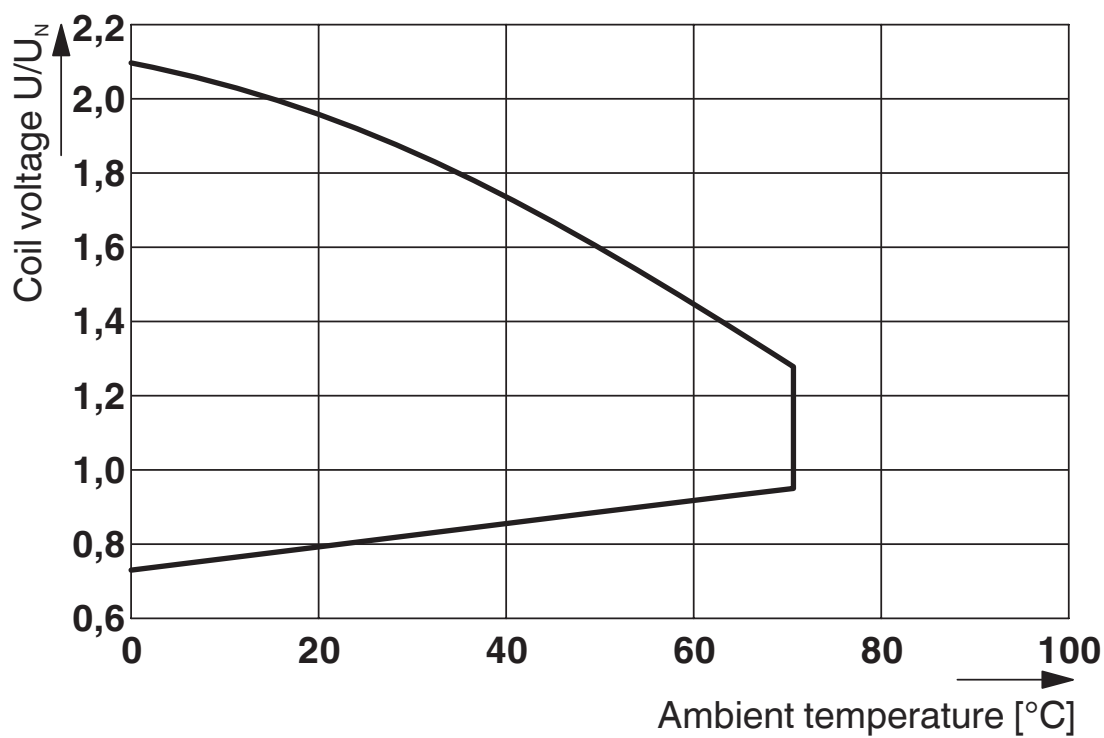
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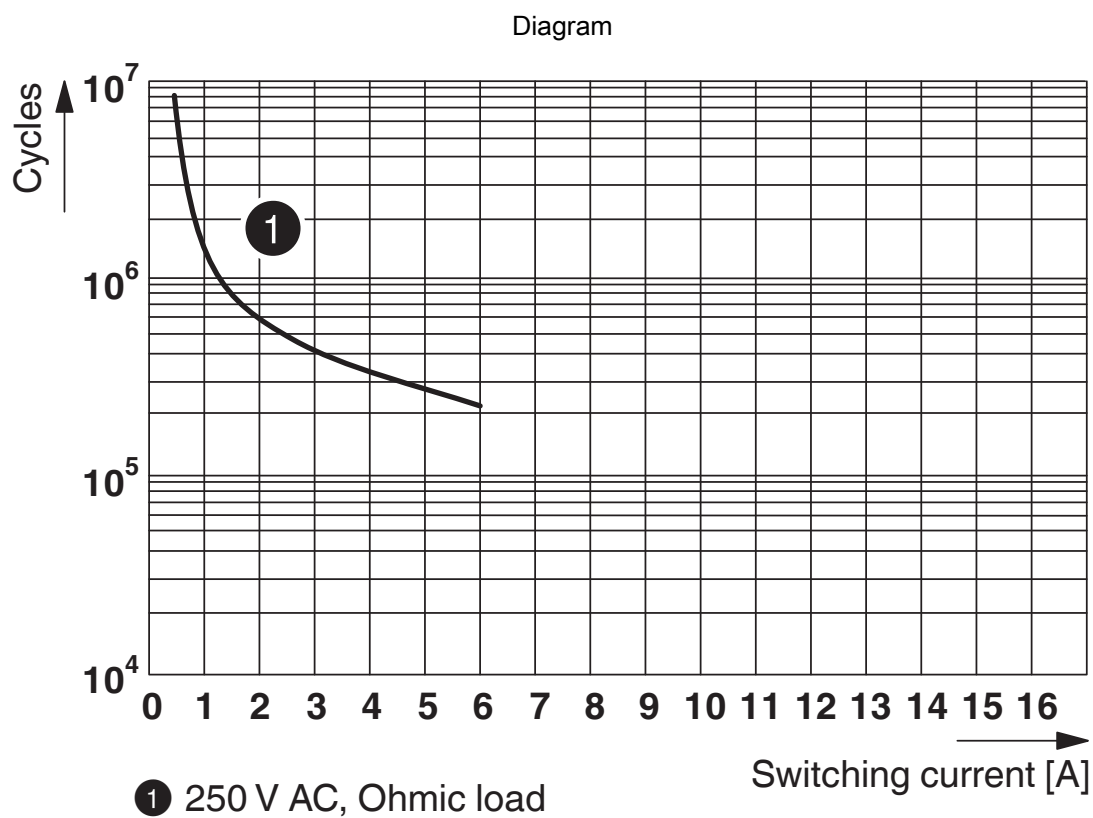
|                   |     |
|-------------------|-----|
| Mounting position | any |
|-------------------|-----|

## Drawings

Diagram

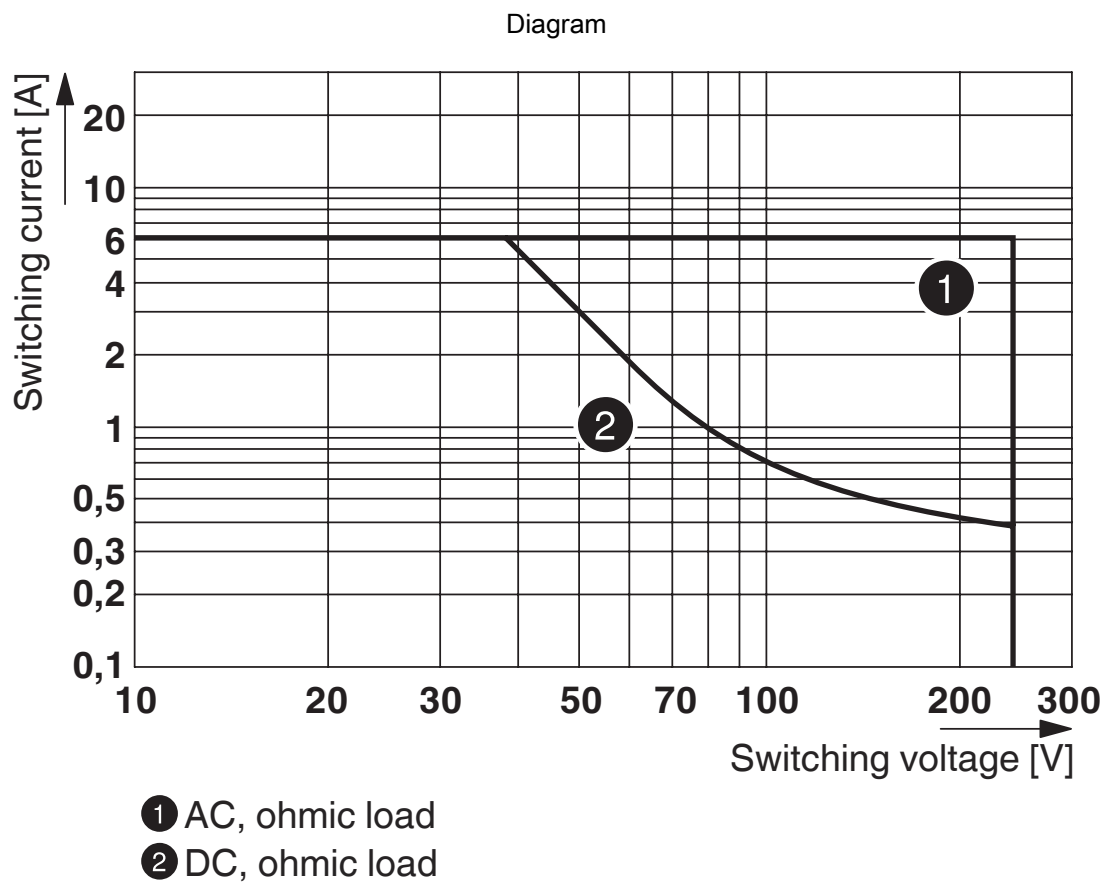


Operating voltage range



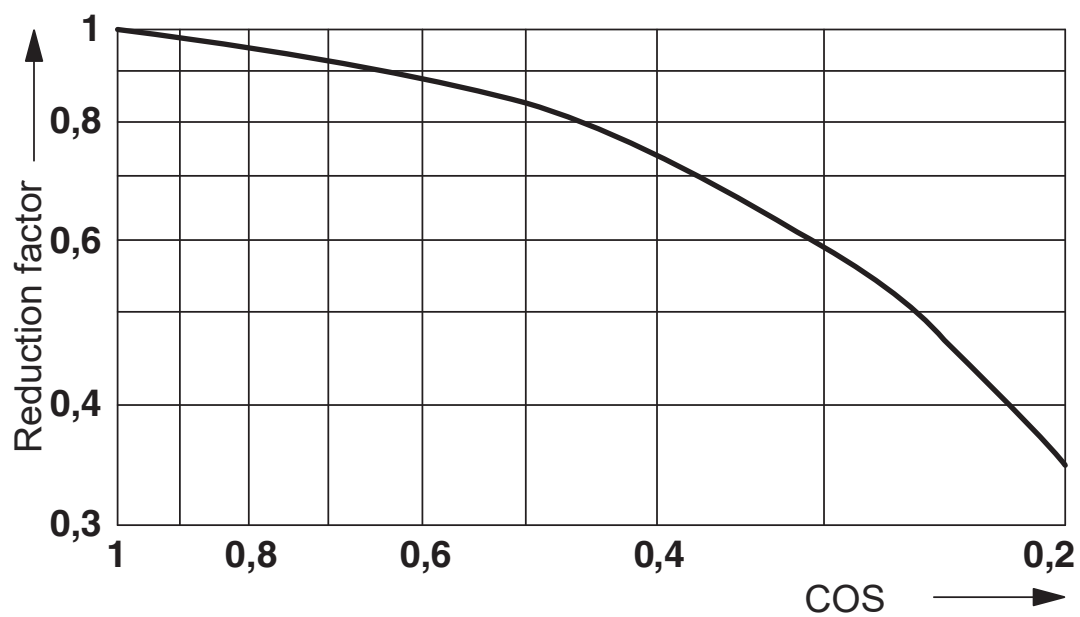
Electrical service life

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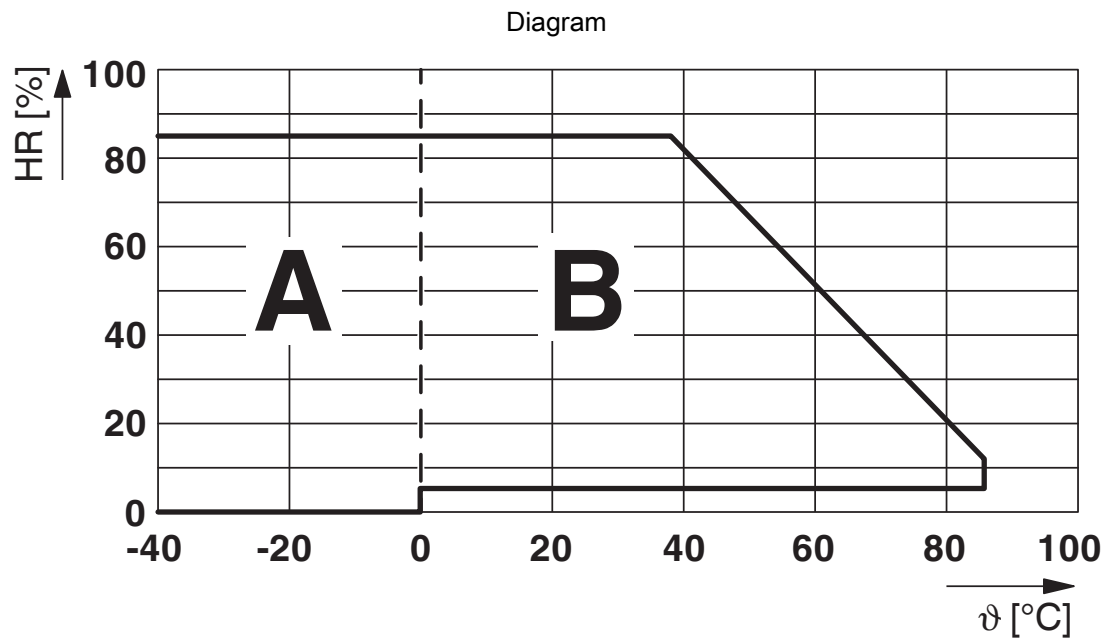
<https://www.phoenixcontact.com/in/products/1109560>

Interrupting rating

Diagram



Service life reduction factor



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  $\leq 25^{\circ}\text{C}$ .

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## Approvals

 To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/1109560>



**cUL Recognized**

Approval ID: FILE E 228652



**UL Recognized**

Approval ID: FILE E 228652



**VDE approval of drawings**

Approval ID: 40058034

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27371601 |
| ECLASS-15.0 | 27371601 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001437 |
|----------|----------|

### 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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## Mandatory accessories

### ECOR-2-BSC2-RT/4X21 - Relay base

2908214

<https://www.phoenixcontact.com/in/products/2908214>

ECOR-2 relay base, for industrial relays with four changeover contacts, bolt connection, for mounting on NS 35/7,5



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### ECOR-2-BSC3/4X21 - Relay base

2907521

<https://www.phoenixcontact.com/in/products/2907521>

ECOR-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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## ECOR-2-BSC2/4X21 - Relay base

1089994

<https://www.phoenixcontact.com/in/products/1089994>



ECOR-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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