

# REL-IR-BL/L-125DC/2X21 - Single relay



1109553

<https://www.phoenixcontact.com/gb/products/1109553>

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Plug-in industrial relay in basic design with power contacts, 2 changeover contacts, test button, status LED, mechanical switch position indicator, polarity A1+, A2-, input voltage: 125 V DC

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1109553       |
| Packing unit                         | 10 pc         |
| Minimum order quantity               | 1 pc          |
| Sales key                            | CKF943        |
| Product key                          | CKF943        |
| GTIN                                 | 4063151021634 |
| Weight per piece (including packing) | 29.95 g       |
| Weight per piece (excluding packing) | 29.95 g       |
| Customs tariff number                | 85364900      |
| Country of origin                    | AT            |

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## Technical data

### Notes

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

### Product properties

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

### Insulation characteristics

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

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

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

### 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 (Changeover contact/changeover contact) | 2.5 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>    | 125 V DC                        |
| Input voltage range                     | 100 V DC ... 212.5 V DC (20 °C) |
| Drive and function                      | monostable                      |
| Drive (polarity)                        | polarized                       |
| Typical input current at U <sub>N</sub> | 6.1 mA                          |
| Typical response time                   | 15 ms                           |
| Typical release time                    | 10 ms                           |
| Coil voltage                            | 125 V DC                        |
| Status display                          | Yellow LED                      |
| Coil resistance                         | 20.8 kΩ ±15 %                   |

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## 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             | 12 V (10 mA)               |
| Limiting continuous current           | 12 A                       |
| Maximum inrush current                | 24 A (20 ms, N/O contacts) |
| Min. switching current                | 10 mA (12 V)               |
| Interrupting rating (ohmic load) max. | 288 W (24 V DC)            |
|                                       | 130 W (48 V DC)            |
|                                       | 90 W (60 V DC)             |
|                                       | 66 W (110 V DC)            |
|                                       | 88 W (220 V DC)            |
|                                       | 3000 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

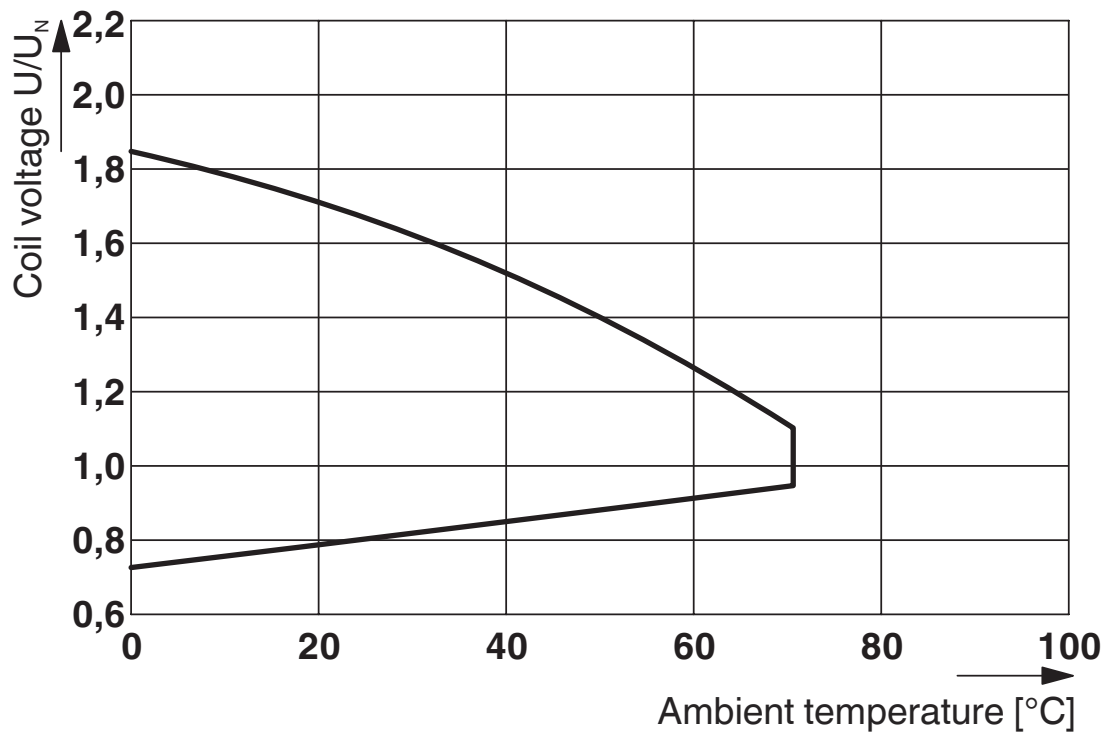
|                       |            |
|-----------------------|------------|
| Standards/regulations | EN 61810-1 |
|-----------------------|------------|

## Mounting

|                       |                           |
|-----------------------|---------------------------|
| Mounting type         | Plug-in mounting          |
| Assembly instructions | in rows with zero spacing |
| Mounting position     | any                       |

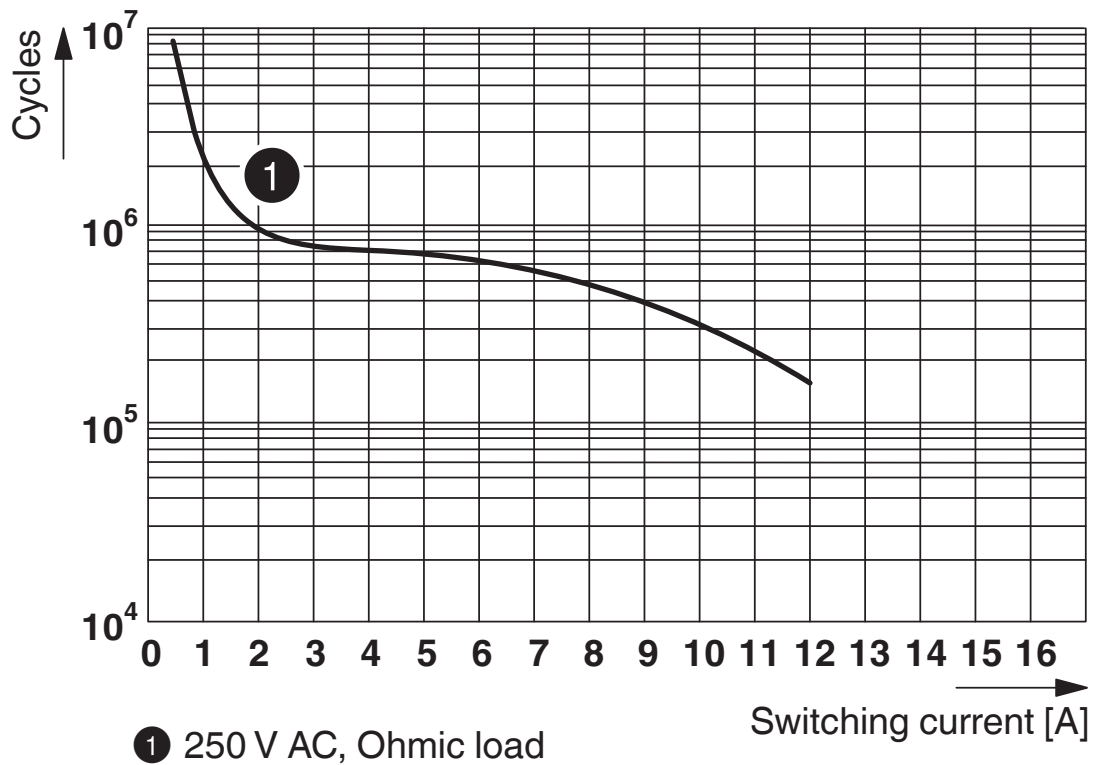
Drawings

Diagram



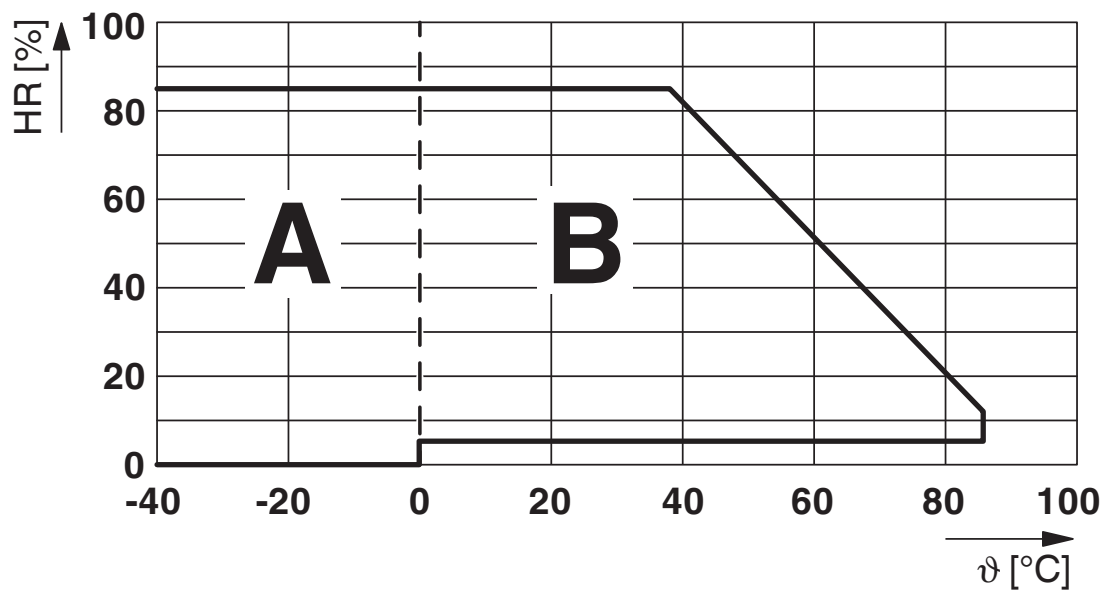
Operating voltage range

Diagram



Electrical service life

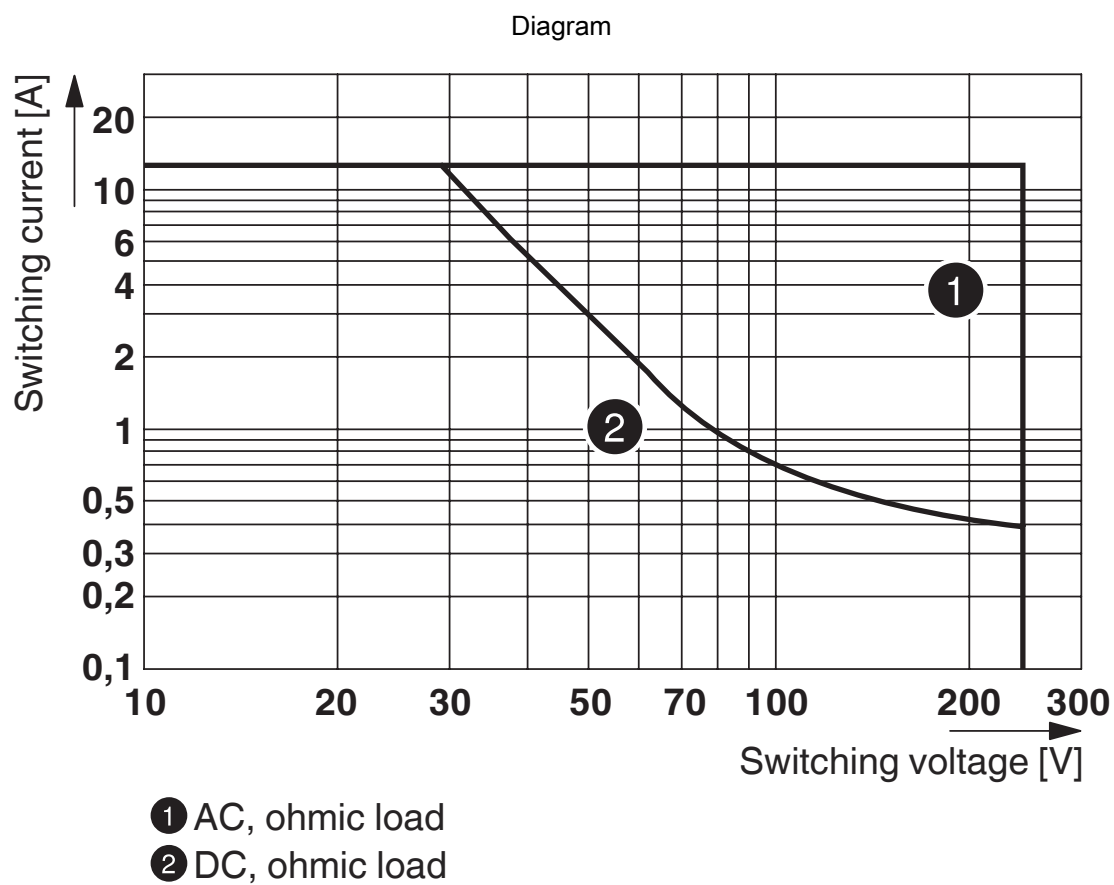
Diagram



Permissible humidity for operation and storage.

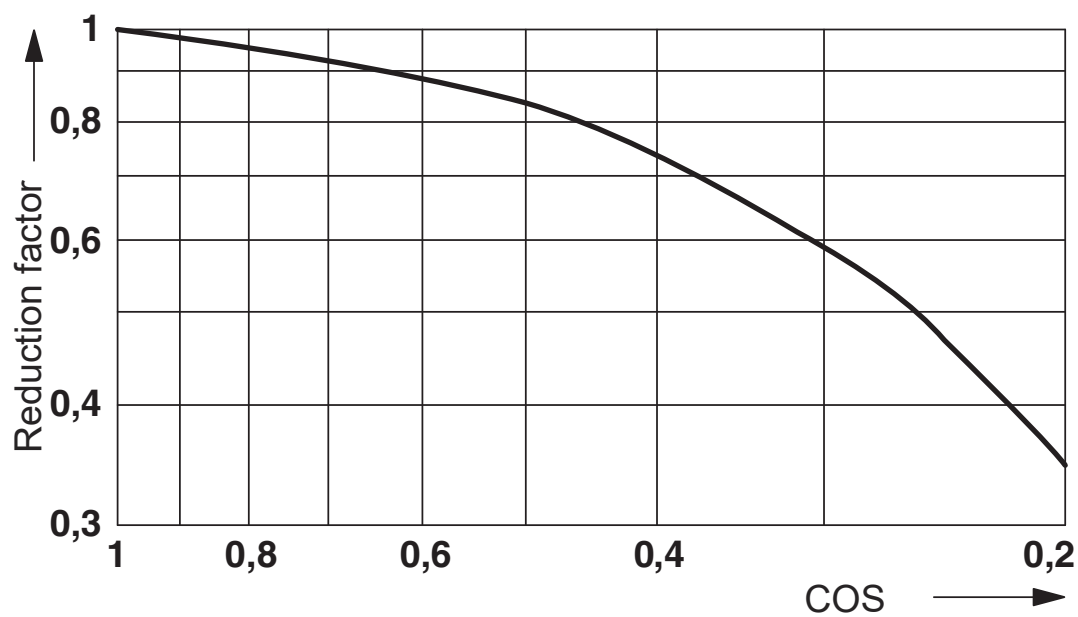
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures  $\leq 0^\circ\text{C}$  must be preventedArea B: Condensation at ambient temperatures  $> 0^\circ\text{C}$  must be preventedOn 30 full days that are naturally distributed across an entire year, a humidity level of 95% is permissible at an ambient temperature  $\leq 25^\circ\text{C}$ .



Interrupting rating

Diagram



Service life reduction factor

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1109553>



**cUL Recognized**  
Approval ID: FILE E 228652



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**cULus Recognized**

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27371601 |
| ECLASS-12.0 | 27371601 |
| ECLASS-13.0 | 27371601 |

### ETIM

|          |          |
|----------|----------|
| ETIM 8.0 | EC001437 |
|----------|----------|

### UNSPSC

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

Environmental product compliance

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

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## Mandatory accessories

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

2908341

<https://www.phoenixcontact.com/gb/products/2908341>

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



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

2908214

<https://www.phoenixcontact.com/gb/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/gb/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

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

1089994

<https://www.phoenixcontact.com/gb/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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