

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



1109560

<https://www.phoenixcontact.com/gb/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 | 10 pc |
| Sales key | DKF947 |
| 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 |

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 ⁷ 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 _{rms} (50 Hz, 1 min., winding/contact) |
| Test voltage (Changeover contact/changeover contact) | 2 kV _{rms} (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 _N | 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 _N | 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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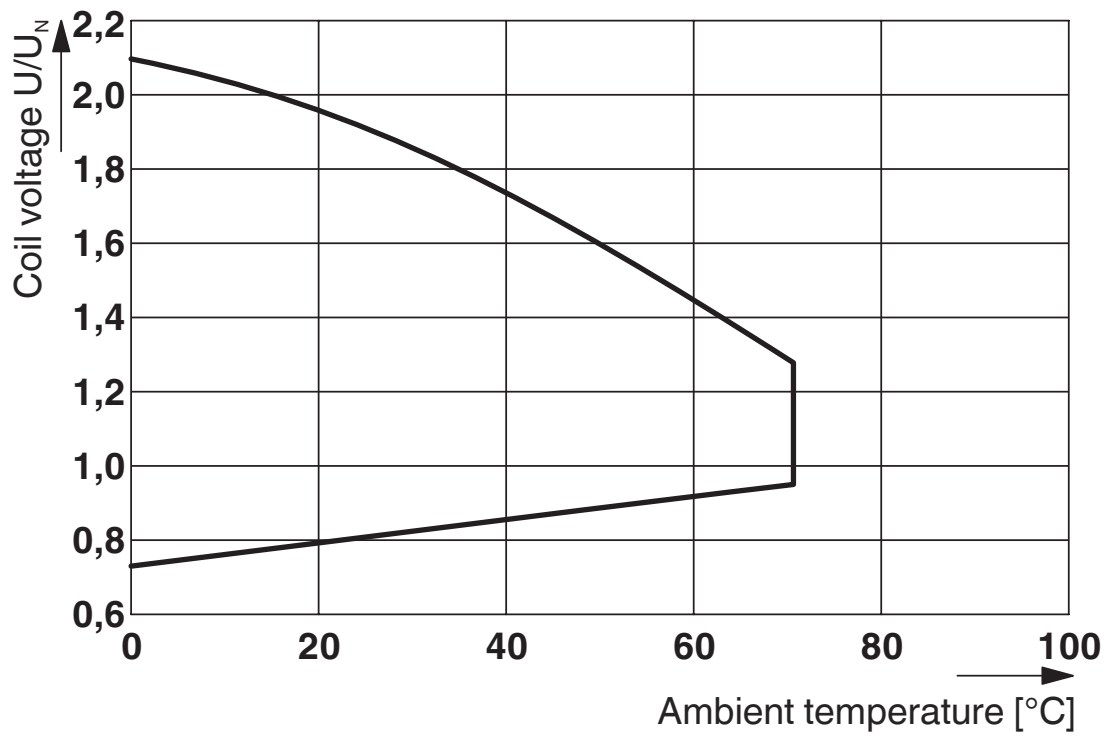
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| | |
|-------------------|-----|
| Mounting position | any |
|-------------------|-----|

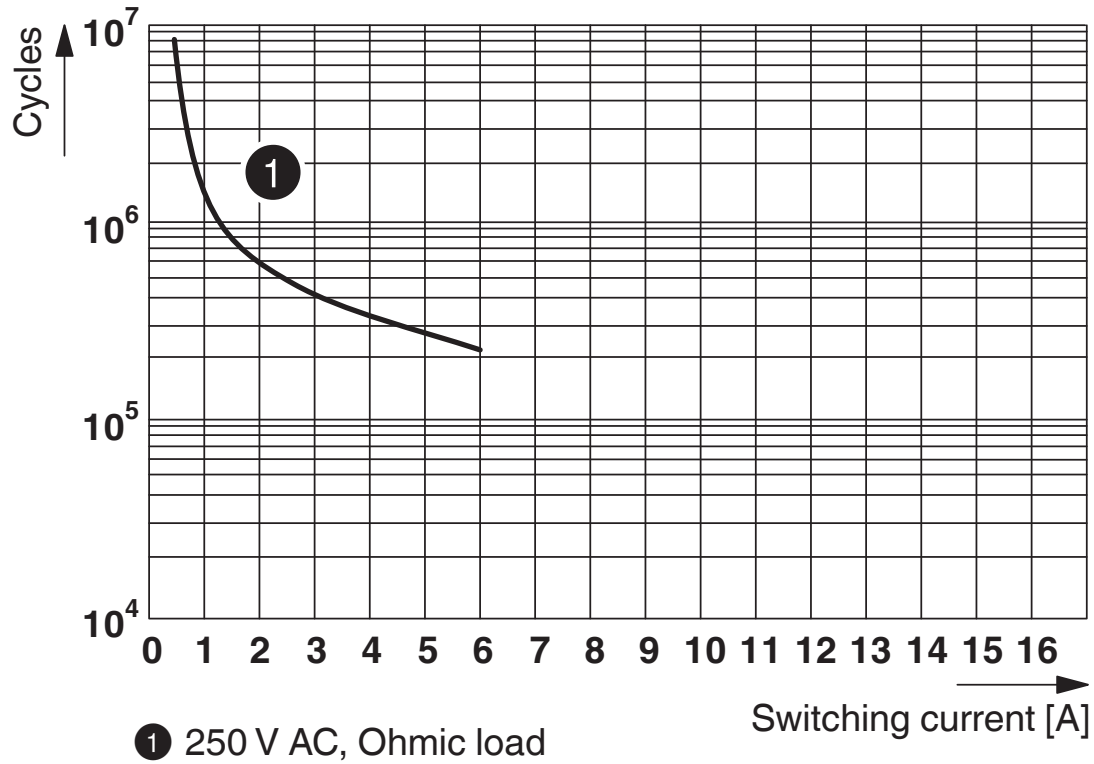
Drawings

Diagram



Operating voltage range

Diagram

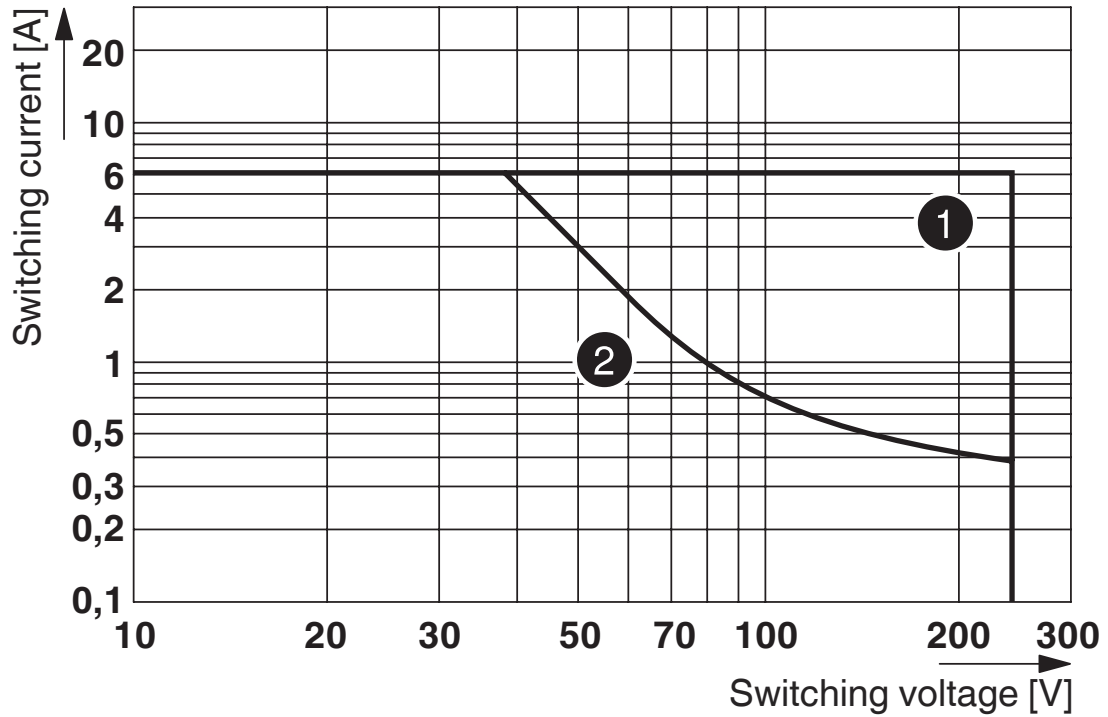


Electrical service life

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Diagram



- ① AC, ohmic load
- ② DC, ohmic load

Interrupting rating

Diagram



Service life reduction factor

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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

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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 |
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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 Ltd
Halesfield 13, Telford
Shropshire, TF7 4PG
01952 681700
info@phoenixcontact.co.uk