

# REL-PR3-220DC/3X21 - Single relay



2909055

<https://www.phoenixcontact.com/us/products/2909055>

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Plug-in high-power relay with power contacts, 3 changeover contacts, coil voltage: 220 V DC



## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2909055       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | C460          |
| Product key                          | DK6965        |
| GTIN                                 | 4055626358789 |
| Weight per piece (including packing) | 89.1 g        |
| Weight per piece (excluding packing) | 88.1 g        |
| Customs tariff number                | 85364900      |
| Country of origin                    | PL            |

## Technical data

### Notes

|                    |  |
|--------------------|--|
| 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          |
| Operating mode          | 100% operating factor |
| Mechanical service life | approx. $10^7$ cycles |

### Insulation characteristics

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

### Data management status

|                              |            |
|------------------------------|------------|
| Date of last data management | 01.04.2026 |
|------------------------------|------------|

### Electrical properties

|  |  |
|--|--|
| Service life electrical                              | see diagram  |
| Maximum power dissipation for nominal condition      | 1.34 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) |
| Rated insulation voltage                             | 250 V AC   |
| Rated surge voltage                                  | 4 kV   |

### Input data

#### Coil side

|                                   |                                     |
|-----------------------------------|-------------------------------------|
| Nominal input voltage $U_N$       | 220 V DC                            |
| Input voltage range               | 187 V DC ... 242 V DC (see diagram) |
| Drive and function                | monostable                          |
| Drive (polarity)                  | non-polarized                       |
| Typical input current at $U_N$    | 6 mA                                |
| Input power dissipation for $U_N$ | 1.32 W                              |
| Non-operate voltage               | < 132 V DC                          |
| Safe operate voltage              | > 176 V DC                          |
| Typical response time             | 20 ms                               |
| Typical release time              | 15 ms                               |
| Coil resistance                   | 37000 $\Omega$ $\pm$ 10 %           |

### Output data

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## Switching

|                                       |   |
|---------------------------------------|---|
| Contact switching type                | 3 changeover contacts   |
| Type of switch contact                | Single contact  |
| Contact material                      | AgNi  |
| Maximum switching voltage             | 440 V AC<br>250 V DC  |
| Minimum switching voltage             | 10 V (At 24 mA)   |
| Limiting continuous current           | 16 A  |
| Maximum inrush current                | 50 A (20 ms, N/O contacts)  |
| Min. switching current                | 10 mA (at 24 V)   |
| Interrupting rating (ohmic load) max. | 384 W (at 24 V DC)<br>124 W (at 48 V DC)<br>108 W (at 60 V DC)<br>52 W (at 110 V DC)<br>70 W (at 220 V DC)<br>4000 VA (for 250 V AC)<br>4000 VA (at 440 V AC) |
| 3-phase motor load                    | 1500 W (at 400 V, AC3)  |
| Motor load according to UL 508        | 1/3 HP, 120 V AC (single-phase AC motor)<br>1/2 HP, 240 V AC (single-phase AC motor)<br>1/2 HP, 240 V AC (three-phase induction motor)                        |

## Connection data

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

## Dimensions

### Item dimensions

|        |         |
|--------|---------|
| Width  | 38.6 mm |
| Height | 36.1 mm |
| Depth  | 45.5 mm |

## Environmental and real-life conditions

### Ambient conditions

|  |                                |
|--|--------------------------------|
| Degree of protection                         | RT I                           |
| Degree of protection (Installation location) | ≥ IP54 (Installation location) |
| Ambient temperature (operation)              | -40 °C ... 70 °C               |
| Ambient temperature (storage/transport)      | -40 °C ... 85 °C               |
| Altitude                                     | ≤ 2000 m                       |

## Approvals

### Corrosive gas test

|                |                            |
|----------------|----------------------------|
| Identification | ISA-S71.04. G3 Harsh Group |
|----------------|----------------------------|

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|  |               |
|--|---------------|
|  | 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



① 250 V AC, Ohmic load

Electrical service life

Diagram



Service life reduction factor

Diagram



Permissible humidity for operation and storage.

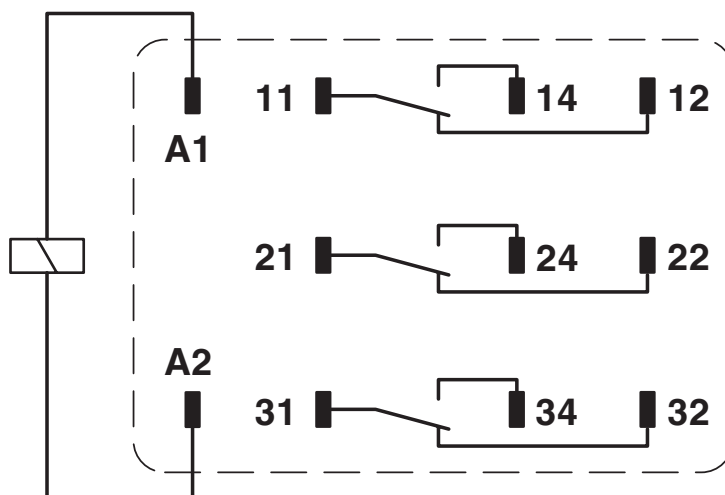
The maximum permissible ambient temperature as specified in the data sheet must be observed.

Area A: Ice buildup at ambient temperatures  $\leq 0^\circ\text{C}$  must be 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  $\leq 25^\circ\text{C}$ .

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2909055>



**CSA**

Approval ID: 256725



**EAC**

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



**cULus Recognized**

Approval ID: E172140

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## Classifications

### ECLASS

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

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | 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% |
|-------------------------------------|----------------------------|

### EF3.1 Climate Change

|         |               |
|---------|---------------|
| CO2e kg | 2.064 kg CO2e |
|---------|---------------|

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