

PLC-RSC- 24DC/21-21/EX - Relay module



2909509

<https://www.phoenixcontact.com/us/products/2909509>

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PLC-INTERFACE, consisting of DIN-rail-mountable basic terminal block in 14 mm with screw connection and plug-in relay with power contact, 2 changeover contacts, 24 V DC input voltage. Approved according to ATEX/IECEx (Zone 2) and Ex Zone Class I, Div. 2.

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 2909509 |
| Packing unit | 10 pc |
| Minimum order quantity | 10 pc |
| Sales key | C462 |
| Product key | DK623K |
| GTIN | 4055626363134 |
| Weight per piece (including packing) | 76.52 g |
| Weight per piece (excluding packing) | 70.63 g |
| Customs tariff number | 85364190 |
| Country of origin | DE |

Technical data

Notes

Utilization restriction

| | |
|----------|---|
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|----------|---|

Product properties

| | |
|-------------------------|--|
| Product type | Relay Module |
| Product family | PLC-INTERFACE |
| Application | Class I, Division 2 potentially explosive areas |
| Operating mode | 100% operating factor |
| Mechanical service life | 3x 10 ⁷ cycles |

Insulation characteristics: Standards/regulations

| | |
|----------------------|---------------------------------------|
| Insulation | Safe isolation, reinforced insulation |
| Overvoltage category | III |
| Pollution degree | 3 |

Data management status

| | |
|------------------------------|------------|
| Date of last data management | 12.05.2026 |
|------------------------------|------------|

Electrical properties

| | |
|--|--|
| Maximum power dissipation for nominal condition | 0.43 W |
| Test voltage (Winding/contact) | 4 kV AC (50 Hz, 1 min., winding/contact) |
| Test voltage (Changeover contact/changeover contact) | 2.5 kV AC (50 Hz, 1 min., changeover contact/changeover contact) |

Standards/regulations

| | |
|--------------------------|----------|
| Rated insulation voltage | 250 V AC |
| Rated surge voltage | 6 kV |

Input data

Coil side

| | |
|--|--|
| Nominal input voltage U_N | 24 V DC |
| Input voltage range | 20.2 V DC ... 33.6 V DC (20 °C) |
| Nominal voltage (plugged-in electromechanical relay) | 24 V DC |
| Drive and function | monostable |
| Drive (polarity) | polarized |
| Typical input current at U_N | 18 mA |
| Typical response time | 8 ms |
| Typical release time | 10 ms |
| Protective circuit | Reverse polarity protection; Polarity protection diode |

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| | |
|---------------------------|--------------------------------------|
| | Surge protection; Freewheeling diode |
| Operating voltage display | Yellow LED |

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 (The separating plate PLC-ATP should be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules. Potential bridging is then carried out with FBST 8-PLC... or ...FBST 500...) |
| Minimum switching voltage | 5 V AC/DC (10 mA) |
| Limiting continuous current | 2x 6 A (Derating) |
| Maximum inrush current | 15 A (300 ms) |
| Min. switching current | 10 mA (5 V) |
| Interrupting rating (ohmic load) max. | 140 W (24 V DC) 85 W (48 V DC) 60 W (60 V DC) 44 W (110 V DC) 60 W (220 V DC) 1500 VA (250 V AC) |
| Switching capacity | 2 A (24 V (DC13)) 0.2 A (250 V (DC13)) 3 A (24 V (AC15)) 3 A (120 V (AC15)) 3 A (250 V (AC15)) |

Connection data

| | |
|----------------------------------|---|
| Connection method | Screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross-section rigid | 0.14 mm ² ... 2.5 mm ² |
| Conductor cross-section flexible | 0.14 mm ² ... 2.5 mm ² 0.2 mm ² ... 2.5 mm ² (Single ferrule) 2x 0.5 mm ² ... 1.5 mm ² (TWIN ferrule) |
| Conductor cross-section AWG | 26 ... 14 |
| Tightening torque | 0.6 Nm ... 0.8 Nm |

Dimensions

Item dimensions

| | |
|--------|-------|
| Width | 14 mm |
| Height | 80 mm |
| Depth | 94 mm |

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Material specifications

| | |
|--|-----------------|
| Color | gray (RAL 7042) |
| Flammability rating according to UL 94 (Housing) | V0 (Housing) |

Environmental and real-life conditions

Ambient conditions

| | |
|---|-------------------|
| Degree of protection (Relay) | RT III (Relay) |
| Degree of protection (Relay base) | IP20 (Relay base) |
| Ambient temperature (operation) | -40 °C ... 70 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Altitude | ≤ 2000 m |

Approvals

CE

| | |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

ATEX

| | |
|----------------|----------------------------|
| Identification | ⊕ II 3G Ex ec nC IIC T4 Gc |
| Certificate | IBExU16ATEXB015 X |

IECEX

| | |
|----------------|--------------------|
| Identification | Ex ec nC IIC T4 Gc |
| Certificate | IECEX IBE 16.0029X |

CCC / China-Ex

| | |
|----------------|--------------------|
| Identification | Ex ec nC IIC T4 Gc |
| Certificate | 2021122304114118 |

INMETRO

| | |
|----------------|--------------------|
| Identification | Ex ec nC IIC T4 Gc |
| Certificate | DNV 25.0067 X |

UL, USA/Canada

| | |
|----------------|---------------------------------------|
| Identification | Class I, Zone 2, AEx ec nC IIC Gc T4 |
| | Class I, Zone 2, Ex ec nC IIC Gc T4 X |

Shipbuilding approval

| | |
|-------------|------------|
| Certificate | TAE0000196 |
|-------------|------------|

Corrosive gas test

| | |
|----------------|----------------------------|
| Identification | ISA-S71.04. G3 Harsh Group |
| | EN 60068-2-60 |

Shipbuilding data

| | |
|-------------|---|
| Temperature | D |
| Humidity | A |

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| | |
|-----------|---|
| Vibration | B/C |
| EMC | B |
| Enclosure | Required protection according to the Rules shall be provided upon installation on board |

EMC data

| | |
|-------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC directive |
| Low Voltage Directive | Conformance with Low Voltage Directive |

Standards and regulations

Standards/regulations

| | |
|-----------------------|-----------------|
| Standards/regulations | IEC 60664 |
| | IEC 60947-5-1 |
| | IEC/EN 60079-0 |
| | IEC/EN 60079-7 |
| | IEC/EN 60079-15 |

GB Standard

| | |
|-----------------------|-------------|
| Standards/regulations | GB/T 3836.1 |
| | GB/T 3836.3 |
| | GB/T 3836.8 |

Mounting

| | |
|-------------------|---------------------------|
| Mounting type | DIN rail mounting |
| Assembly note | in rows with zero spacing |
| Mounting position | any |

Drawings

Diagram



Curve A

Maximum permissible continuous voltage U_{max} with limiting continuous current on the contact side (see relevant technical data)

Curve B

Minimum permissible operate voltage U_{op} after pre-excitation (see relevant technical data)



Interrupting rating



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/us/products/2909509>



cULus Listed

Approval ID: E140324



cULus Listed

Approval ID: E140324



EAC Ex

Approval ID: RU C-DE.AB72.B.02328



IECEx

Approval ID: IECEx IBE 16.0029X



ATEX

Approval ID: 16ATEXB015X



cULus Listed

Approval ID: E199827



KC-s

Approval ID: 18-KA4BO-0620X



CCC

Approval ID: 2021122304114118



IECEx

Approval ID: IECEx IBE 16.0029X



ATEX

Approval ID: IBExU16ATEXB015X

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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 |
| Exemption | 7(a), 7(c)-I |

China RoHS

| | |
|--|---|
| Environment friendly use period (EFUP) | EFUP-50 |
| | An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required. |

EU REACH SVHC

| | |
|-------------------------------------|---|
| REACH candidate substance (CAS No.) | Hexahydromethylphthalic anhydride(CAS: n/a) |
| | Lead(CAS: 7439-92-1) |
| SCIP | ec9008ce-8446-449a-b29c-2832bb5527a2 |

EF3.1 Climate Change

| | |
|---------|---------------|
| CO2e kg | 0.802 kg CO2e |
|---------|---------------|

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