

## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

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PLC-INTERFACE, consisting of DIN-rail-mountable basic terminal block in 14 mm with Push-in connection and plug-in relay with 10 A power contact, 1 changeover contact, 24 V DC input voltage. Approved according to ATEX/IECEx (Zone 2) and Ex Zone Class I, Div. 2.



COMPLETE RoHS

### Key Commercial Data

|                        |                                                                                                         |
|------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit           | 10 pc                                                                                                   |
| Minimum order quantity | 10 pc                                                                                                   |
| GTIN                   | <br>4 055626 363691 |
| GTIN                   | 4055626363691                                                                                           |

### Technical data

#### Note

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

#### Dimensions

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

#### Ambient conditions

|                                         |                                 |
|-----------------------------------------|---------------------------------|
| Ambient temperature (operation)         | -20 °C ... 60 °C (UL)           |
|                                         | -40 °C ... 60 °C (ATEX / IECEx) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C                |
| Degree of protection                    | RT II (Relay)                   |
|                                         | IP20 (Relay base)               |

#### Coil side

|                                |         |
|--------------------------------|---------|
| Nominal input voltage $U_N$    | 24 V DC |
| Typical input current at $U_N$ | 18 mA   |

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## Technical data

### Coil side

|                                         |                                                       |
|-----------------------------------------|-------------------------------------------------------|
| Typical response time                   | 8 ms                                                  |
| Typical release time                    | 10 ms                                                 |
| Protective circuit                      | Reverse polarity protection Polarity protection diode |
|                                         | Free-wheeling diode Damping diode                     |
| Operating voltage display               | Yellow LED                                            |
| Power dissipation for nominal condition | 0.43 W                                                |

### Contact side

|                                               |                                                                                                                                                                                                                                               |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact type                                  | 1 PDT                                                                                                                                                                                                                                         |
| 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                     | 12 V DC (at 10 mA)                                                                                                                                                                                                                            |
| Min. switching current                        | 10 mA (at 12 V)                                                                                                                                                                                                                               |
| Maximum inrush current                        | 30 A (300 ms)                                                                                                                                                                                                                                 |
| Limiting continuous current                   | 10 A                                                                                                                                                                                                                                          |
|                                               | 6 A (value applies to connections 12. If connections 12 are bridged, the normal value applies.)                                                                                                                                               |
| Interrupting rating (ohmic load) max.         | 240 W (at 24 V DC)                                                                                                                                                                                                                            |
|                                               | 58 W (at 48 V DC)                                                                                                                                                                                                                             |
|                                               | 48 W (at 60 V DC)                                                                                                                                                                                                                             |
|                                               | 50 W (at 110 V DC)                                                                                                                                                                                                                            |
|                                               | 80 W (at 220 V DC)                                                                                                                                                                                                                            |
|                                               | 2500 VA (for 250 V AC)                                                                                                                                                                                                                        |
| Interrupting rating (ohmic load) max. bridged | 144 W (for 24 V DC. Value applies to connections 12. If connections 12 are bridged, the normal value applies.)                                                                                                                                |
|                                               | 1500 VA (for 250 V AC. Value applies to connections 12. If connections 12 are bridged, the normal value applies.)                                                                                                                             |
| Switching capacity                            | 2 A (at 24 V, DC13)                                                                                                                                                                                                                           |
|                                               | 0.2 A (at 110 V, DC13)                                                                                                                                                                                                                        |
|                                               | 0.2 A (at 250 V, DC13)                                                                                                                                                                                                                        |
|                                               | 6 A (at 24 V, AC15)                                                                                                                                                                                                                           |
|                                               | 6 A (at 120 V, AC15)                                                                                                                                                                                                                          |
|                                               | 6 A (at 250 V, AC15)                                                                                                                                                                                                                          |

### General

|                                          |                           |
|------------------------------------------|---------------------------|
| Test voltage relay winding/relay contact | 4 kV AC (50 Hz, 1 min.)   |
| Operating mode                           | 100% operating factor     |
| Flammability rating according to UL 94   | V0 (Housing)              |
| Mechanical service life                  | 3x 10 <sup>7</sup> cycles |
| Mounting position                        | any                       |

# Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

## Technical data

### General

|                       |                           |
|-----------------------|---------------------------|
| Assembly instructions | In rows with zero spacing |
|-----------------------|---------------------------|

### Connection data

|                                  |                                                              |
|----------------------------------|--------------------------------------------------------------|
| Connection name                  | Coil side                                                    |
| Connection method                | Push-in connection                                           |
| Stripping length                 | 8 mm                                                         |
| Conductor cross section solid    | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                 |
| Conductor cross section flexible | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                 |
|                                  | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule) |
|                                  | 2x 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> (TWIN ferrule)  |
| Conductor cross section AWG      | 26 ... 14                                                    |

### Connection data 2

|                                  |                                                              |
|----------------------------------|--------------------------------------------------------------|
| Connection name                  | Contact side                                                 |
| Connection method                | Push-in connection                                           |
| Stripping length                 | 8 mm                                                         |
| Conductor cross section solid    | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                 |
| Conductor cross section flexible | 0.14 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>                 |
|                                  | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> (Single ferrule) |
|                                  | 2x 0.5 mm <sup>2</sup> ... 1 mm <sup>2</sup> (TWIN ferrule)  |
| Conductor cross section AWG      | 26 ... 14                                                    |

### Standards and Regulations

|                          |                                       |
|--------------------------|---------------------------------------|
| Designation              | Standards/regulations                 |
| Standards/regulations    | IEC 60664                             |
|                          | EN 50178                              |
|                          | EN 60079-0, -7, -15                   |
| Rated insulation voltage | 250 V AC                              |
| Rated surge voltage      | 6 kV                                  |
| Insulation               | Safe isolation, reinforced insulation |
| Pollution degree         | 2                                     |
| Overvoltage category     | III                                   |
| Conformance              | CE-compliant                          |
| ATEX                     | # II 3G Ex ec nC IIC T4 Gc            |
| IECEX                    | Ex ec nC IIC T4 Gc                    |
| UL, USA                  | Class I, Zone 2, AEx nA nC IIC T6     |
| UL, USA/Canada           | Class I, Div. 2, Groups A, B, C, D    |
| UL, Canada               | Class I, Zone 2, Ex nA nC IIC Gc T6 X |

### Conformance/approvals

|                |              |
|----------------|--------------|
| Designation    | CE           |
| Identification | CE-compliant |
| Designation    | ATEX         |

## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

### Technical data

#### Conformance/approvals

|                |                                       |
|----------------|---------------------------------------|
| Identification | # II 3G Ex ec nC IIC T4 Gc            |
| Certificate    | IBExU16ATEXB015 X                     |
| Designation    | IECEX                                 |
| Identification | Ex ec nC IIC T4 Gc                    |
| Certificate    | IECEX IBE 16.0029X                    |
| Designation    | UL, USA                               |
| Identification | Class I, Zone 2, AEx nA nC IIC T6     |
| Designation    | UL, USA/Canada                        |
| Identification | Class I, Div. 2, Groups A, B, C, D    |
| Designation    | UL, Canada                            |
| Identification | Class I, Zone 2, Ex nA nC IIC Gc T6 X |

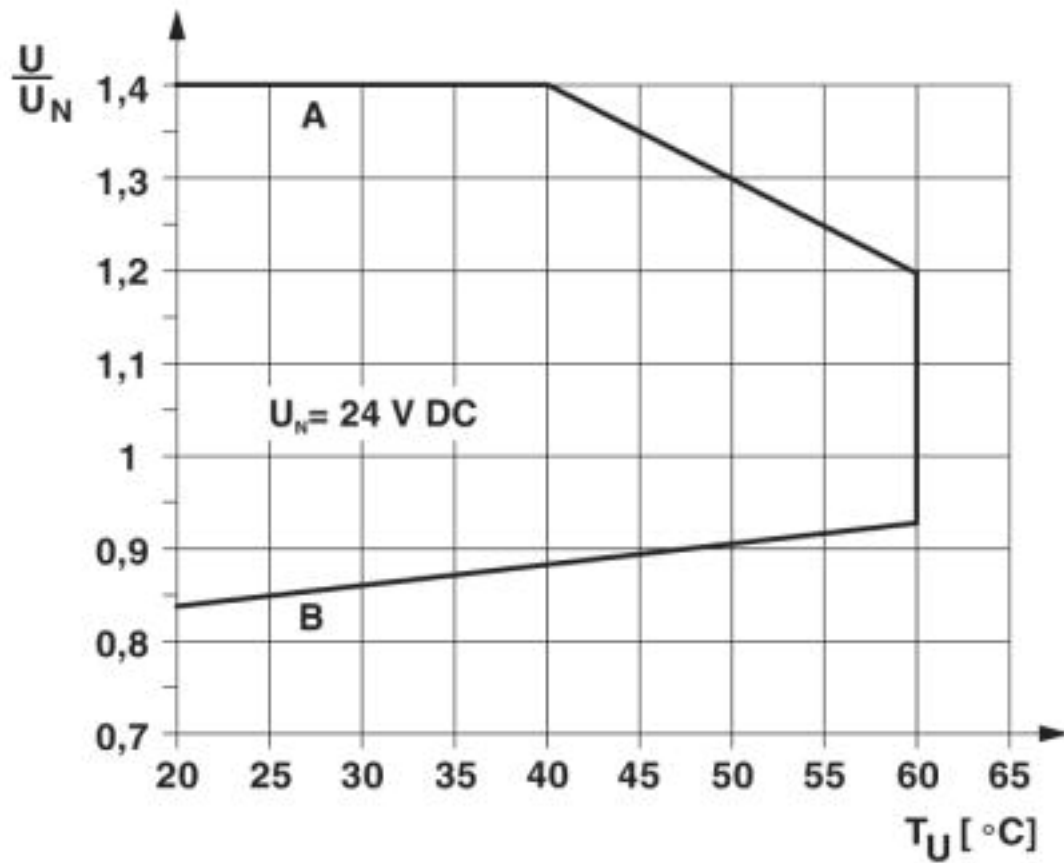
#### Environmental Product Compliance

|            |                                                                                                     |
|------------|-----------------------------------------------------------------------------------------------------|
| China RoHS | Environmentally Friendly Use Period = 50 years                                                      |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

Diagram



Curve A

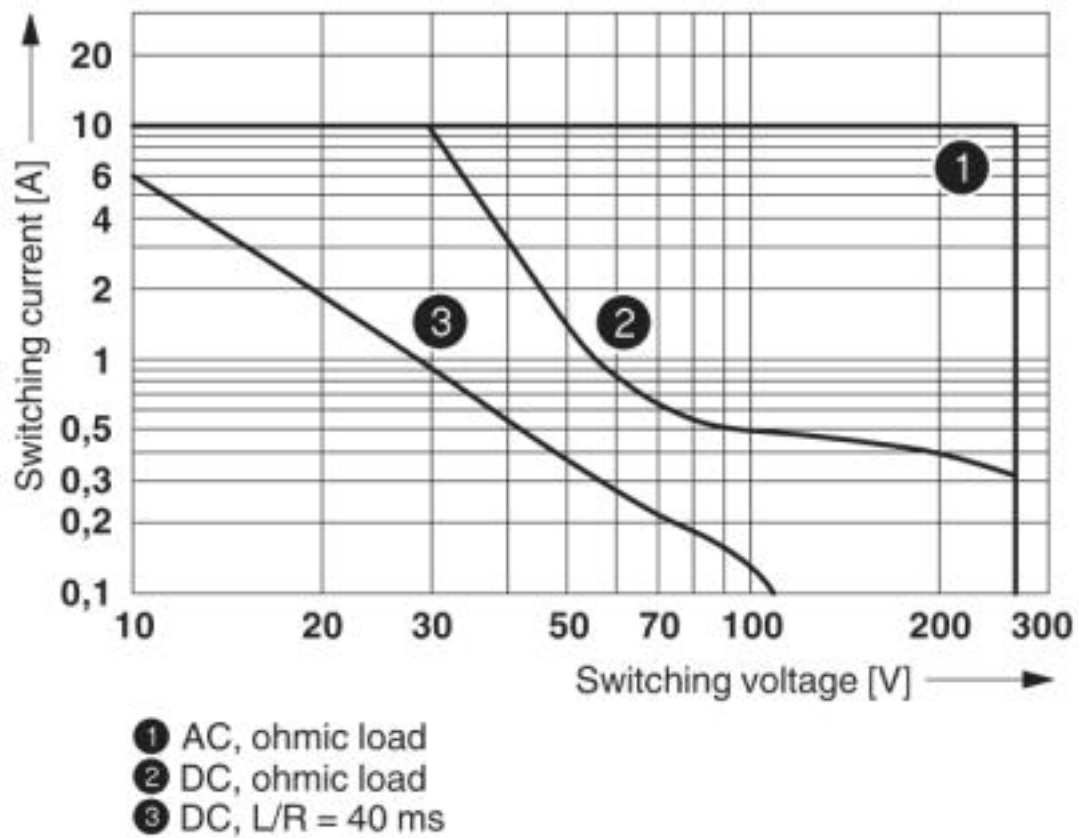
Maximum permissible continuous voltage  $U_{max}$  with limiting continuous current on the contact side (see relevant technical data)

Curve B

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

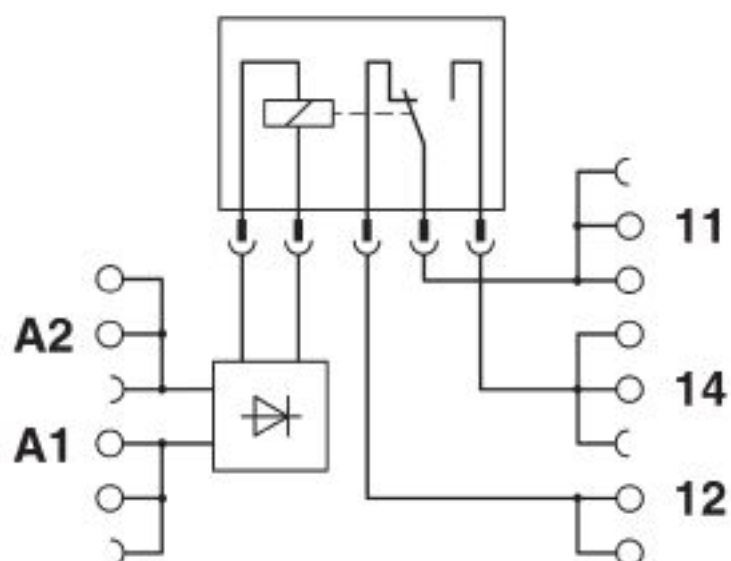
## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

Diagram



Interrupting rating

Circuit diagram



## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27371601 |
| eCl@ss 5.0    | 27371600 |
| eCl@ss 5.1    | 27371600 |
| eCl@ss 6.0    | 27371600 |
| eCl@ss 7.0    | 27371601 |
| eCl@ss 8.0    | 27371601 |
| eCl@ss 9.0    | 27371601 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001437 |
| ETIM 3.0 | EC001437 |
| ETIM 4.0 | EC001437 |
| ETIM 5.0 | EC001437 |
| ETIM 6.0 | EC001437 |
| ETIM 7.0 | EC001437 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211916 |
| UNSPSC 7.0901 | 39121515 |
| UNSPSC 11     | 39121515 |
| UNSPSC 12.01  | 39121515 |
| UNSPSC 13.2   | 39122334 |
| UNSPSC 18.0   | 39122334 |
| UNSPSC 19.0   | 39122334 |
| UNSPSC 20.0   | 39122334 |
| UNSPSC 21.0   | 39122334 |

### Approvals

#### Approvals

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Approvals

DNV GL

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Ex Approvals

IECEx / ATEX / UL Listed / cUL Listed / KC-s / EAC Ex / cULus Listed

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#### Approval details

## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

### Approvals

DNV GL



<https://approvalfinder.dnvgl.com/>

TAE0000196-03

### Accessories

#### Accessories

#### Bridge

Continuous plug-in bridge - FBST 500-PLC RD - 2966786



Continuous plug-in bridge, length: 500 mm, color: red

Continuous plug-in bridge - FBST 500-PLC BU - 2966692



Continuous plug-in bridge, length: 500 mm, color: blue

Continuous plug-in bridge - FBST 500-PLC GY - 2966838



Continuous plug-in bridge, length: 500 mm, color: gray

Single plug-in bridge - FBST 6-PLC RD - 2966236



Single plug-in bridge, length: 6 mm, number of positions: 2, color: red

## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

### Accessories

Single plug-in bridge - FBST 6-PLC BU - 2966812



Single plug-in bridge, length: 6 mm, number of positions: 2, color: blue

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Single plug-in bridge - FBST 6-PLC GY - 2966825



Single plug-in bridge, length: 6 mm, number of positions: 2, color: gray

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Single plug-in bridge - FBST 8-PLC GY - 2967688



Single plug-in bridge, length: 8 mm, number of positions: 2, color: gray

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Single plug-in bridge - FBST 14-PLC BK - 2967691



Single plug-in bridge, length: 14 mm, number of positions: 2, color: black

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### Controller board

System connection - PLC-V8L/FLK14/OUT - 2299660



V8 adapter for 8 x PLC-INTERFACE (14 mm), controller: PLC system cabling of output cards, connection 1: Screw connection 1x, connection 2: IDC/FLK pin strip 1x 14-position, connection 3: Plug connection (Can be snapped onto 8x PLC-INTERFACE terminals), number of channels: 8, control logic: positive switching

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## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

### Accessories

System connection - PLC-V8L/FLK14/OUT/M - 2304306



V8 adapter for 8 x PLC-INTERFACE (14 mm), controller: PLC system cabling of output cards, connection 1: Screw connection 1x, connection 2: IDC/FLK pin strip 1x 14-position, connection 3: Plug connection (Can be snapped onto 8x PLC-INTERFACE terminals), number of channels: 8, control logic: negative switching

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### DIN rail

DIN rail, unperforated - NS 35/ 7,5 V2A UNPERF 2000MM - 0801377



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Stainless steel V2A, uncoated, length: 2000 mm, color: silver

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DIN rail perforated - NS 35/ 7,5 PERF 2000MM - 0801733



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

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DIN rail, unperforated - NS 35/ 7,5 CU UNPERF 2000MM - 0801762



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

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DIN rail, unperforated - NS 35/15 UNPERF 2000MM - 1201714



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

### Accessories

DIN rail, unperforated - NS 35/15 CU UNPERF 2000MM - 1201895



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Copper, uncoated, length: 2000 mm, color: copper-colored

DIN rail, unperforated - NS 35/15-2,3 UNPERF 2000MM - 1201798



DIN rail, unperforated, Standard profile 2.3 mm, width: 35 mm, height: 15 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/15 AL UNPERF 2000MM - 1201756



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Aluminum, uncoated, length: 2000 mm, color: silver

DIN rail perforated - NS 35/15 PERF 2000MM - 1201730



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

DIN rail, unperforated - NS 35/ 7,5 UNPERF 2000MM - 0801681



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, galvanized, passivated with a thick layer, length: 2000 mm, color: silver

Labeled terminal marker

## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

### Accessories

Zack marker strip - ZB10,LGS:FORTL.ZAHLEN - 1053014



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 91 ... 100, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 10

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### Partition plate

Separating plate - PLC-ATP BK - 2966841



Separating plate, 2 mm thick, required at the start and end of a PLC terminal strip. Furthermore, it is used for: visual separation of groups, safe isolation of different voltages of neighboring PLC relays in acc. with DIN VDE 0106-101, isolation

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### Power module

Power terminal block - PLC-ESK GY - 2966508



Power terminal block, for the input of up to four potentials, for mounting on NS 35/7.5

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### Screwdriver tools

Screwdriver - SZF 1-0,6X3,5 - 1204517



Actuation tool, for ST terminal blocks, also suitable for use as a bladed screwdriver, size: 0.6 x 3.5 x 100 mm, 2-component grip, with non-slip grip

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### Terminal marking

Zack marker strip - ZB10/WH-100:UNBEDRUCKT - 5060883



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.15 x 10.5 mm, Number of individual labels: 1000

## Relay Module - PLC-RPT-24DC/21HC/EX - 2909532

### Accessories

Zack marker strip - ZB 10:UNBEDRUCKT - 1053001



Zack marker strip, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 10.2 mm, lettering field size: 10.5 x 10.15 mm, Number of individual labels: 10

---

Marker for terminal blocks - UC-TM 12 - 0819194



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, PLOTMARK, CMS-P1-PLOTTER, mounting type: snap into tall marker groove, for terminal block width: 12 mm, lettering field size: 11.45 x 10.5 mm, Number of individual labels: 40

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Marker for terminal blocks - UCT-TM 12 - 0829144



Marker for terminal blocks, Sheet, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snap into tall marker groove, for terminal block width: 12 mm, lettering field size: 10.8 x 9.6 mm, Number of individual labels: 30

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### Spare parts

Single relay - REL-MR-24DC/21HC/EX - 2908822



Plug-in miniature power relay, RT III sealed with power contacts, 1 changeover contact, input voltage: 24 V DC, in connection with the corresponding PLC base approved in accordance with ATEX/IECEx (zone 2) and Ex zone class I, div. 2.

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PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>