

# Relay Module - PLC-RPT-12DC/21/EX - 2909527


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PLC-INTERFACE, consisting of DIN-rail-mountable basic terminal block in 6.2 mm with Push-in connection and plug-in miniature relay with 6 A power contact, 1 changeover contact, 12 V DC input voltage. Approved according to ATEX/IECEX (Zone 2) and Ex Zone Class I, Div. 2.



## Key Commercial Data

|                        |   |
|------------------------|---|
| Packing unit           | 10 pc   |
| Minimum order quantity | 10 pc   |
| GTIN                   | <br>4 055626 363646 |
| GTIN                   | 4055626363646   |

## Technical data

### Note

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

### Dimensions

|        |        |
|--------|--------|
| Width  | 6.2 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                    | IP20 (Relay base)               |

### Coil side

|                                |         |
|--------------------------------|---------|
| Nominal input voltage $U_N$    | 12 V DC |
| Typical input current at $U_N$ | 15.3 mA |
| Typical response time          | 5 ms    |

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## Technical data

### Coil side

|   |   |
|---|---|
| Typical release time                    | 8 ms  |
| Protective circuit                      | Reverse polarity protection Polarity protection diode |
|   | Free-wheeling diode Damping diode                     |
| Operating voltage display               | Yellow LED  |
| Power dissipation for nominal condition | 0.18 W  |

### Contact side

|                                       |   |
|---------------------------------------|---|
| Contact type                          | 1 PDT   |
| Type of switch contact                | Single contact  |
| Contact material                      | AgSnO   |
| 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 (at 100 mA)   |
| Min. switching current                | 10 mA (at 12 V)   |
| Maximum inrush current                | 10 A (4 s)  |
| Limiting continuous current           | 6 A   |
| Interrupting rating (ohmic load) max. | 140 W (at 24 V DC)  |
|                                       | 20 W (at 48 V DC)   |
|                                       | 18 W (at 60 V DC)   |
|                                       | 23 W (at 110 V DC)  |
|                                       | 40 W (at 220 V DC)  |
|                                       | 1500 VA (for 250 V AC)  |
| Switching capacity                    | 2 A (at 24 V, DC13)   |
|                                       | 0.2 A (at 110 V, DC13)  |
|                                       | 0.1 A (at 220 V, DC13)  |
|                                       | 3 A (at 24 V, AC15)   |
|                                       | 3 A (at 120 V, AC15)  |
|                                       | 3 A (at 230 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                  | 2x 10 <sup>7</sup> cycles |
| Mounting position                        | any                       |
| Assembly instructions                    | In rows with zero spacing |

### Connection data

|                   |                    |
|-------------------|--------------------|
| Connection name   | Coil side          |
| Connection method | Push-in connection |
| Stripping length  | 8 mm               |

# Relay Module - PLC-RPT-12DC/21/EX - 2909527

## Technical data

### Connection data

|                                  |  |
|----------------------------------|--|
| 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                   |
| Pollution degree      | 3                                     |
| 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                              |
| 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                    |

# Relay Module - PLC-RPT-12DC/21/EX - 2909527

## Technical data

### Conformance/approvals

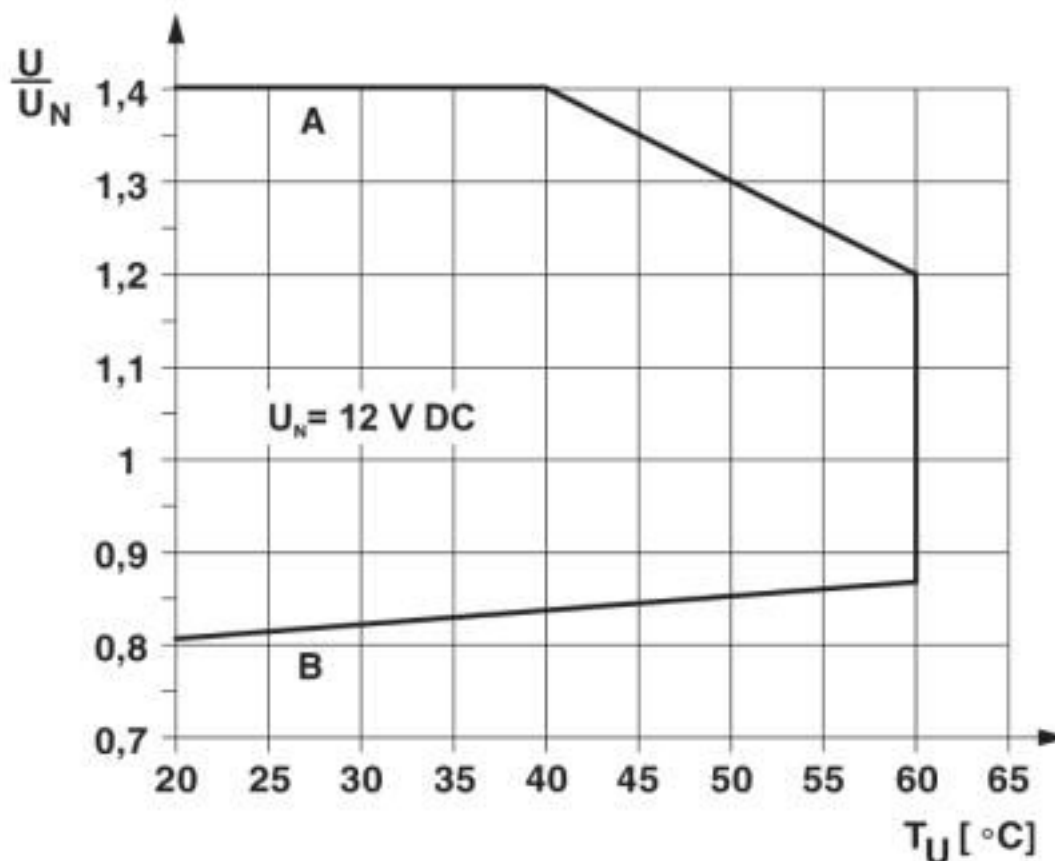
|                |                                       |
|----------------|---------------------------------------|
| Identification | Class I, Div. 2, Groups A, B, C, D    |
| Designation    | UL, Canada                            |
| Identification | Class I, Zone 2, Ex nA nC IIC Gc T6 X |

### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50 years  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

## Drawings

Diagram



Curve A

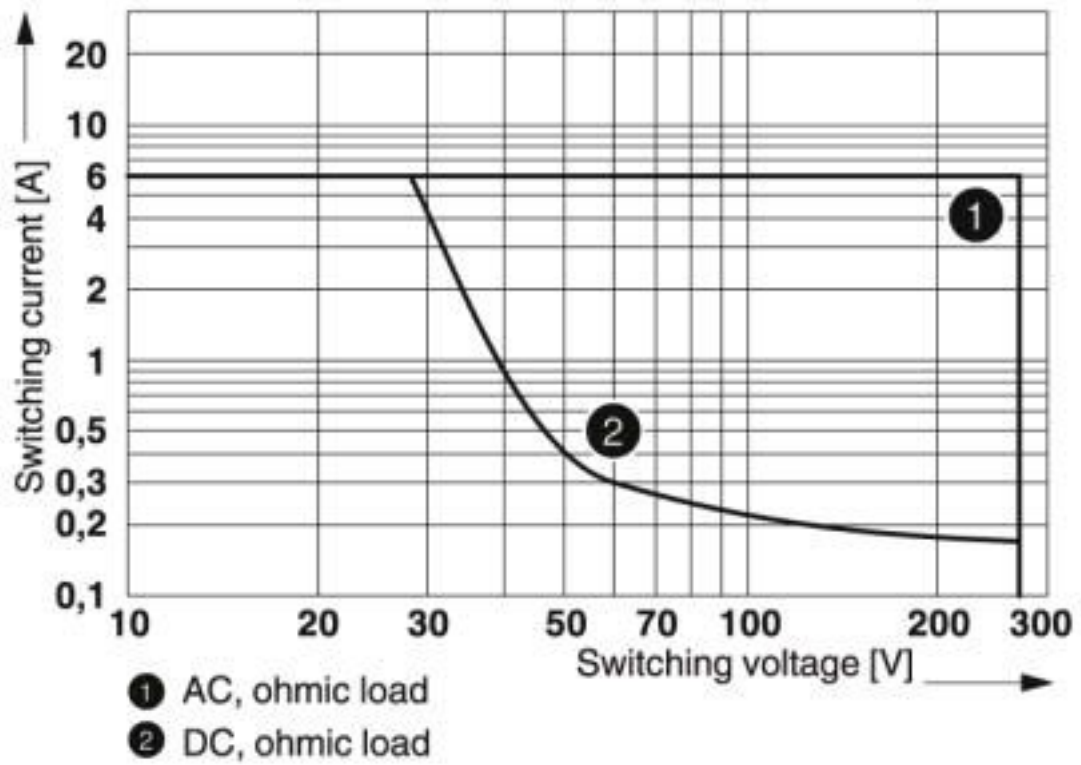
Maximum permissible continuous voltage  $U_{max}$  with limiting continuous current on the contact side (see relevant technical data)

Curve B

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

# Relay Module - PLC-RPT-12DC/21/EX - 2909527

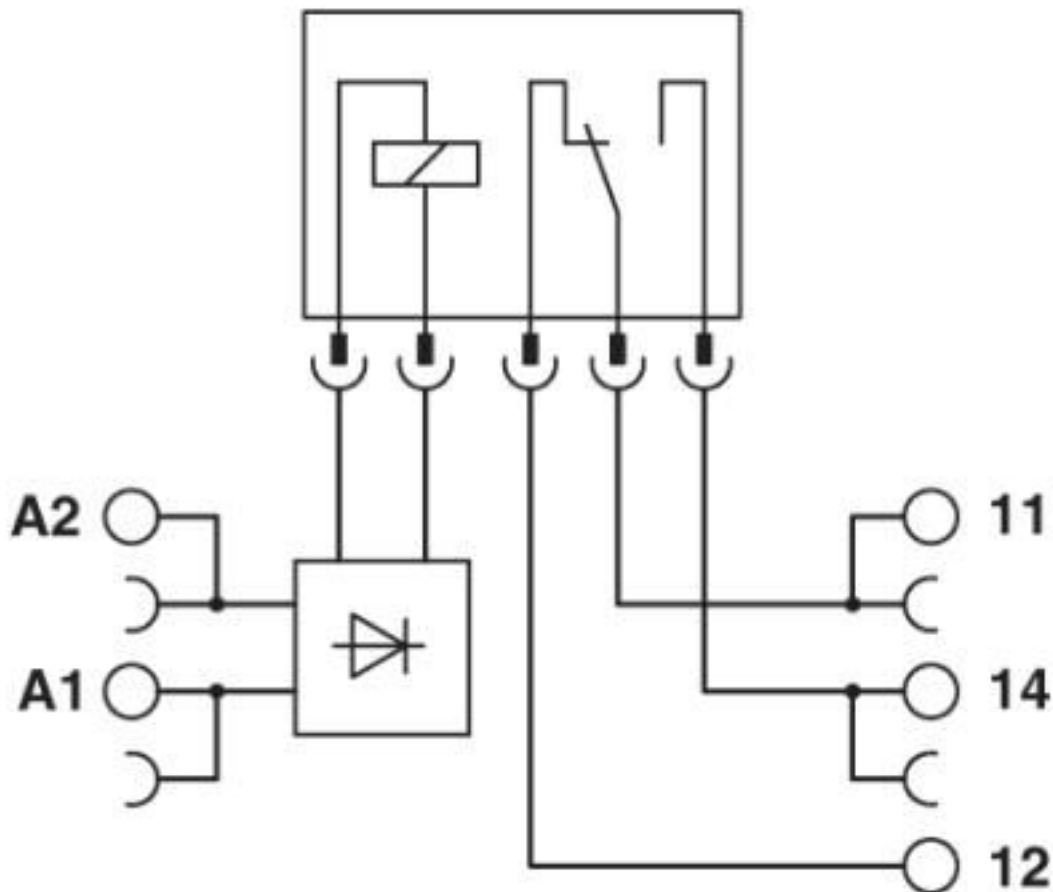
Diagram



Interrupting rating

# Relay Module - PLC-RPT-12DC/21/EX - 2909527

Circuit diagram



## 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 |

# Relay Module - PLC-RPT-12DC/21/EX - 2909527

## Classifications

### ETIM

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

Approvals

DNV GL

Ex Approvals

IECEX / ATEX / UL Listed / cUL Listed / EAC Ex / cULus Listed

### Approval details

|        |  |   |               |
|--------|--|---|---------------|
| DNV GL |  | <a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a> | TAE0000196-03 |
|--------|--|---|---------------|

## Accessories

### Accessories

#### Bridge

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



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

## Relay Module - PLC-RPT-12DC/21/EX - 2909527

### Accessories

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



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

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



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

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



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

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



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

---

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



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

---



## Relay Module - PLC-RPT-12DC/21/EX - 2909527

### Accessories

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



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

---

### DIN rail

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

---

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

---

DIN rail perforated - NS 35/ 7,5 WH PERF 2000MM - 1204119



DIN rail perforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/ 7,5 WH UNPERF 2000MM - 1204122



DIN rail, unperforated, Standard profile, width: 35 mm, height: 7.5 mm, acc. to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

---

## Relay Module - PLC-RPT-12DC/21/EX - 2909527

### Accessories

DIN rail, unperforated - NS 35/ 7,5 AL UNPERF 2000MM - 0801704



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

---

DIN rail perforated - NS 35/ 7,5 ZN PERF 2000MM - 1206421



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

---

DIN rail, unperforated - NS 35/ 7,5 ZN UNPERF 2000MM - 1206434



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

---

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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End cap - NS 35/ 7,5 CAP - 1206560



DIN rail end piece, for DIN rail NS 35/7.5

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## Relay Module - PLC-RPT-12DC/21/EX - 2909527

### Accessories

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 35/15 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

---

DIN rail perforated - NS 35/15 WH PERF 2000MM - 0806602



DIN rail perforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, Galvanized, white passivated, length: 2000 mm, color: silver

---

DIN rail, unperforated - NS 35/15 WH UNPERF 2000MM - 1204135



DIN rail, unperforated, Standard profile, width: 35 mm, height: 15 mm, similar to EN 60715, material: Steel, Galvanized, white passivated, 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

---

## Relay Module - PLC-RPT-12DC/21/EX - 2909527

### Accessories

DIN rail perforated - NS 35/15 ZN PERF 2000MM - 1206599



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

---

DIN rail, unperforated - NS 35/15 ZN UNPERF 2000MM - 1206586



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

---

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

---

End cap - NS 35/15 CAP - 1206573



DIN rail end piece, for DIN rail NS 35/15

---

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

---

Labeled terminal marker

## Relay Module - PLC-RPT-12DC/21/EX - 2909527

### Accessories

#### Zack marker strip - ZB 6 CUS - 0824992



Zack marker strip, can be ordered: Strip, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

---

#### Zack marker strip - ZB 6,LGS:FORTL.ZAHLEN - 1051016



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

---

#### Zack marker strip - ZB 6,QR:FORTL.ZAHLEN - 1051029



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, Printed vertically: consecutive numbers 1 ... 10, 11 ... 20, etc. up to 491 ... 500, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

---

#### Zack marker strip - ZB 6,LGS:GLEICHE ZAHLEN - 1051032



Zack marker strip, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: Identical numbers 1 or 2, etc. up to 100, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

---

#### Marker for terminal blocks - ZB 6,LGS:L1-N,PE - 1051414



Marker for terminal blocks, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, horizontal: L1, L2, L3, N, PE, L1, L2, L3, N, PE, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

## Relay Module - PLC-RPT-12DC/21/EX - 2909527

### Accessories

Marker for terminal blocks - ZB 6,LGS:U-N - 1051430



Marker for terminal blocks, Strip, white, labeled, can be labeled with: CMS-P1-PLOTTER, printed horizontally: U, V, W, N, GND, U, V, W, N, GND, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

Marker for terminal blocks - UC-TM 6 CUS - 0824589



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

Marker for terminal blocks - UCT-TM 6 CUS - 0829602



Marker for terminal blocks, can be ordered: by sheet, white, labeled according to customer specifications, mounting type: snap into tall marker groove, for terminal block width: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 60

### 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

### 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

### Screwdriver tools

## Relay Module - PLC-RPT-12DC/21/EX - 2909527

### Accessories

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

---

### Terminal marking

Zack marker strip - ZB 6:UNBEDRUCKT - 1051003



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: 6.2 mm, lettering field size: 6.15 x 10.5 mm, Number of individual labels: 10

---

Marker for terminal blocks - UC-TM 6 - 0818085



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: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 80

---

Marker for terminal blocks - UCT-TM 6 - 0828736



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: 6.2 mm, lettering field size: 5.6 x 10.5 mm, Number of individual labels: 60

---

### Spare parts

Single relay - REL-MR- 12DC/21 - 2961150



Plug-in miniature power relay, with power contact, 1 PDT, input voltage 12 V DC

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