

# Relay Module - PLC-RPT- 24UC/21-21AU/RW - 2900349

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14 mm PLC complete relay module with push-in connection for railway applications, 24 V DC nominal input voltage, range:  $0.7 \times U_N$  to  $1.25 \times U_N$ , temperature class TX:  $-40^\circ\text{C}$  to  $70^\circ\text{C}$ . Corresponds to EN 50155, EN 50178, EN 61373, EN 50121, and IEC 62103.

The figure shows a version with a screw connection

## Product Features

- Optimum relay operation thanks to wide-range electronics
- Vibration and shock resistance according to EN 50155
- Safe isolation according to DIN EN 50178 between coil and contact
- Certified according to EN 50155
- Spring-cage and Push-in connection technology
- Input voltage range of  $0.7$  to  $1.25 \times U_N$  ( $1.4 \times U_N$  briefly)
- Temperature range from  $-40^\circ\text{C}$  to  $+70^\circ\text{C}$  ( $+85^\circ\text{C}$  briefly)



## Key commercial data

|                  |               |
|------------------|---------------|
| package_quantity | 10            |
| GTIN             | 4046356507530 |

## 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)         | $-40^\circ\text{C}$ ... $70^\circ\text{C}$ (Temperature class TX) |
| Ambient temperature (storage/transport) | $-40^\circ\text{C}$ ... $85^\circ\text{C}$                        |

### Coil side

|   |                  |
|---|------------------|
| Nominal input voltage $U_N$               | 24 V DC          |
| Input voltage range in reference to $U_N$ | $0.7$ ... $1.25$ |

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## Technical data

### Coil side

|                                   |                                   |
|-----------------------------------|-----------------------------------|
| Nominal input current at $U_{IN}$ | 20 mA                             |
| Typical response time             | 5 ms                              |
| Typical release time              | 11 ms                             |
| Operating voltage display         | Yellow LED                        |
| Protective circuit                | Bridge rectifier Bridge rectifier |
| Protective circuit                | Free-wheeling diode Damping diode |
| Protective circuit                | Surge protection                  |
| Protective circuit                | RCZ filter                        |
| Protective circuit                | Wide-range electronics            |

### Contact side

|  |   |
|--|---|
| Contact type   | 2 PDT   |
| Contact material                                       | AgNi, hard gold-plated  |
| Maximum switching voltage                              | 30 V AC   |
| Maximum switching voltage                              | 36 V DC   |
| Minimum switching voltage                              | 100 mV (at 10 mA)   |
| Maximum inrush current                                 | 50 mA   |
| Min. switching current                                 | 1 mA (at 24 V)  |
| Limiting continuous current                            | 50 mA   |
| Interrupting rating (ohmic load) max.                  | 1.2 W (at 24 V DC)  |
| Switching capacity in acc. with DIN VDE 0660/IEC 60947 | 2 A (24 V (DC13))   |
| Switching capacity in acc. with DIN VDE 0660/IEC 60947 | 0.2 A (220 V (DC13))  |
| Switching capacity in acc. with DIN VDE 0660/IEC 60947 | 3 A (230 V (AC 15))   |
| Note   | the following values are applicable if a gold layer is destroyed  |
| Maximum switching voltage                              | 250 V AC/DC (Separating plate PLC-ATP must be installed for voltages larger than 250 V (L1, L2, L3) between identical terminal blocks in adjacent modules.) |
| Minimum switching voltage                              | 5 V AC/DC   |
| Limiting continuous current                            | 6 A   |
| Maximum inrush current                                 | 8 A   |
| Min. switching current                                 | 10 mA   |
| Interrupting rating (ohmic load) max.                  | 140 W (at 24 V DC)  |
| Interrupting rating (ohmic load) max.                  | 100 W (at 48 V DC)  |
| Interrupting rating (ohmic load) max.                  | 60 W (at 60 V DC)   |
| Interrupting rating (ohmic load) max.                  | 44 W (at 110 V DC)  |
| Interrupting rating (ohmic load) max.                  | 60 W (at 220 V DC)  |
| Interrupting rating (ohmic load) max.                  | 1500 VA (for 250 V AC)  |

### General

|  |                                       |
|--|---------------------------------------|
| Test voltage relay winding/relay contact | 5 kV <sub>rms</sub> (50 Hz, 1 min.)   |
| Test voltage PDT/PDT                     | 2.5 kV <sub>rms</sub> (50 Hz, 1 min.) |
| Operating mode                           | 100% operating factor                 |
| Degree of protection                     | RT III (relay)                        |

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## Technical data

### General

|   |                                |
|---|--------------------------------|
| Degree of protection                    | IP20 (basic terminal block)    |
| Mechanical service life                 | Approx. $3 \times 10^7$ cycles |
| Inflammability class according to UL 94 | V0                             |
| Standards/regulations                   | EN 50155 (VDE 0115 part 200)   |
| Standards/regulations                   | EN 50178                       |
| Standards/regulations                   | IEC 62103                      |
| Standards/regulations                   | EN 61373                       |
| Standards/regulations                   | EN 50121                       |
| Rated surge voltage / insulation        | 6 kV / Basic isolation         |
| Rated insulation voltage                | 250 V AC                       |
| Pollution degree                        | 2                              |
| Surge voltage category                  | III                            |
| Mounting position                       | Any                            |
| Assembly instructions                   | In rows with zero spacing      |

### Connection data

|  |                      |
|--|----------------------|
| Connection method                      | Push-in connection   |
| Conductor cross section solid min.     | 0.14 mm <sup>2</sup> |
| Conductor cross section solid max.     | 2.5 mm <sup>2</sup>  |
| Conductor cross section stranded min.  | 0.14 mm <sup>2</sup> |
| Conductor cross section stranded max.  | 2.5 mm <sup>2</sup>  |
| Conductor cross section AWG/kcmil min. | 26                   |
| Conductor cross section AWG/kcmil max  | 14                   |
| Stripping length                       | 8 mm                 |

## classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27371001 |
| eCl@ss 4.1 | 27371001 |
| eCl@ss 5.0 | 27371001 |
| eCl@ss 5.1 | 27371001 |
| eCl@ss 6.0 | 27371001 |
| eCl@ss 7.0 | 27371001 |
| eCl@ss 8.0 | 27371001 |

### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC000196 |
| ETIM 5.0 | EC000196 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211916 |
| UNSPSC 7.0901 | 39121515 |

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## classifications

### UNSPSC

|              |          |
|--------------|----------|
| UNSPSC 11    | 39121515 |
| UNSPSC 12.01 | 39121515 |
| UNSPSC 13.2  | 39121515 |

## approvals

GL / UL Listed / cUL Listed / UL Recognized / cUL Recognized / cULus Recognized / cULus Listed /

### Approval details

GL

UL Listed

cUL Listed

UL Recognized

cUL Recognized

cULus Recognized

cULus Listed

## accessories

### Mounting rail

## Relay Module - PLC-RPT- 24UC/21-21AU/RW - 2900349

### accessories

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



NS 35/ 7,5 PERF 2000MM - 0801733



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



NS 35/15 UNPERF 2000MM - 1201714



NS 35/15 CU UNPERF 2000MM - 1201895



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



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## accessories

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NS 35/15 AL UNPERF 2000MM - 1201756



NS 35/15 PERF 2000MM - 1201730



NS 35/ 7,5 UNPERF 2000MM - 0801681



## Terminal marking

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ZB10/WH-100:UNBEDRUCKT - 5060883



ZB 10:UNBEDRUCKT - 1053001



## Labeled terminal marker

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## Relay Module - PLC-RPT- 24UC/21-21AU/RW - 2900349

### accessories

ZB10,LGS:FORTL.ZAHLEN - 1053014



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### Partition plate

PLC-ATP BK - 2966841



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### Power module

PLC-ESK GY - 2966508



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### Screwdriver tools

SZF 1-0,6X3,5 - 1204517



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### Bridge

FBST 500-PLC RD - 2966786



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## accessories

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FBST 500-PLC BU - 2966692



FBST 500-PLC GY - 2966838



FBST 6-PLC RD - 2966236



FBST 6-PLC BU - 2966812



FBST 6-PLC GY - 2966825





# Relay Module - PLC-RPT- 24UC/21-21AU/RW - 2900349

accessories

FBST 8-PLC GY - 2967688

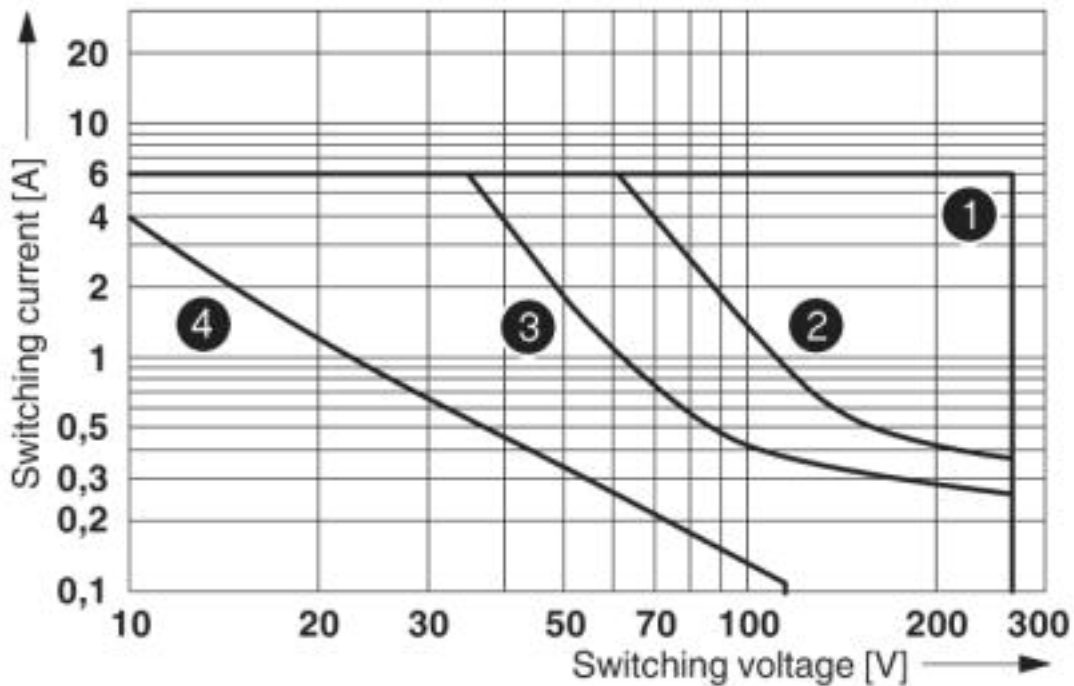


FBST 14-PLC BK - 2967691



## Drawings

Diagram

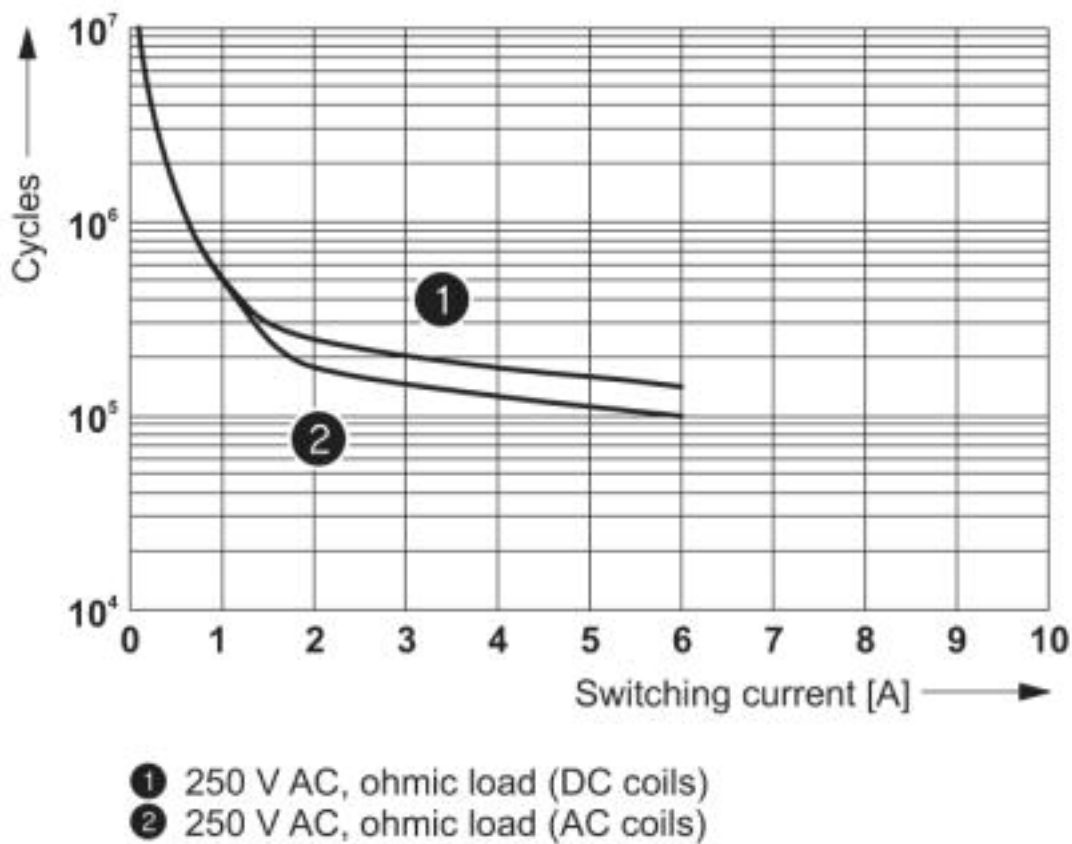


- ① AC, ohmic load
- ② DC, ohmic load, contacts in series
- ③ DC, ohmic load
- ④ DC, L/R = 40 ms

Interrupting rating

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Diagram



Electrical service life

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Circuit diagram

