

# Relay Module - PLC-RSP- 72UC/21AU/RW - 2987040

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PLC-INTERFACE for railway applications, consisting of basic terminal block with spring-cage connection and plug-in miniature relay with multi-layer gold contact, range:  $0.7 \times U_N$  to  $1.25 \times U_N$ , temperature class TX:  $-40^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$ , 1 PDT, input voltage 72 V DC

The illustration shows the version  
PLC-RSP-24UC/21/RW

## Product Features

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



## Key commercial data

|                                      |          |
|--------------------------------------|----------|
| Packing unit                         | 1 pc     |
| Weight per Piece (excluding packing) | 34.0 GRM |
| Custom tariff number                 | 85364900 |
| Country of origin                    | Germany  |

## 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  |

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## Technical data

### Dimensions

|       |       |
|-------|-------|
| Depth | 94 mm |
|-------|-------|

### Ambient conditions

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| Ambient temperature (operation)         | -40 °C ... 70 °C (Temperature class TX) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C                        |

### Coil side

|                                           |                                   |
|-------------------------------------------|-----------------------------------|
| Nominal input voltage $U_N$               | 72 V DC                           |
| Input voltage range in reference to $U_N$ | 0.7 ... 1.25                      |
| Typical input current at $U_N$            | 3 mA                              |
| Typical response time                     | 4 ms                              |
| Typical release time                      | 4 ms                              |
| Operating voltage display                 | Yellow LED                        |
| Protective circuit                        | Bridge rectifier Bridge rectifier |
|                                           | Free-wheeling diode Damping diode |
|                                           | Surge protection                  |
|                                           | RCZ filter                        |
|                                           | Wide-range electronics            |

### Contact side

|                                                        |                                                                                                                                                             |
|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact type                                           | 1 PDT                                                                                                                                                       |
| Contact material                                       | AgSnO <sub>2</sub> , hard gold-plated                                                                                                                       |
| Maximum switching voltage                              | 30 V AC                                                                                                                                                     |
|                                                        | 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 | 1 A (24 V (DC13))                                                                                                                                           |
|                                                        | 0.2 A (110 V (DC13))                                                                                                                                        |
|                                                        | 0.1 A (220 V (DC13))                                                                                                                                        |
|                                                        | 3 A (24 V (AC15))                                                                                                                                           |
|                                                        | 3 A (120 V (AC15))                                                                                                                                          |
|                                                        | 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.) |

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### Contact side

|                                       |                        |
|---------------------------------------|------------------------|
| Minimum switching voltage             | 12 V AC/DC             |
| Limiting continuous current           | 6 A                    |
| Min. switching current                | 10 mA                  |
| 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) |

### General

|                                          |                                     |
|------------------------------------------|-------------------------------------|
| Test voltage relay winding/relay contact | 4 kV <sub>rms</sub> (50 Hz, 1 min.) |
| Operating mode                           | 100% operating factor               |
| Degree of protection                     | RT III (relay)                      |
|                                          | IP20 (basic terminal block)         |
| Mechanical service life                  | Approx. $2 \times 10^7$ cycles      |
| Inflammability class according to UL 94  | V0                                  |
| Standards/regulations                    | EN 50155 (VDE 0115 part 200)        |
|                                          | EN 50178                            |
|                                          | IEC 62103                           |
|                                          | EN 61373                            |
|                                          | EN 50121                            |
| Rated surge voltage/insulation           | 6 kV                                |
| 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                     | Spring-cage connection |
| Stripping length                      | 8 mm                   |
| 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 solid min.    | 0.14 mm <sup>2</sup>   |
| Conductor cross section solid max.    | 2.5 mm <sup>2</sup>    |
| Conductor cross section AWG/kcmil max | 14                     |

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## Technical data

### Connection data

|                                        |    |
|----------------------------------------|----|
| Conductor cross section AWG/kcmil min. | 26 |
|----------------------------------------|----|

## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27371102 |
| eCl@ss 4.1 | 27371102 |
| eCl@ss 5.0 | 27371001 |
| eCl@ss 5.1 | 27371001 |
| eCl@ss 6.0 | 27371001 |
| eCl@ss 7.0 | 27371001 |
| eCl@ss 8.0 | 27371601 |

### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC000196 |
| ETIM 3.0 | EC000196 |
| ETIM 4.0 | EC000196 |
| ETIM 5.0 | EC001437 |

### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211916 |
| UNSPSC 7.0901 | 39121515 |
| UNSPSC 11     | 39121515 |
| UNSPSC 12.01  | 39121515 |
| UNSPSC 13.2   | 39121515 |

## Approvals

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#### Approvals

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

#### Ex Approvals

#### Approvals submitted

## Relay Module - PLC-RSP- 72UC/21AU/RW - 2987040

### Approvals

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#### Approval details

UL Listed 

cUL Listed 

GL

UL Recognized 

cUL Recognized 

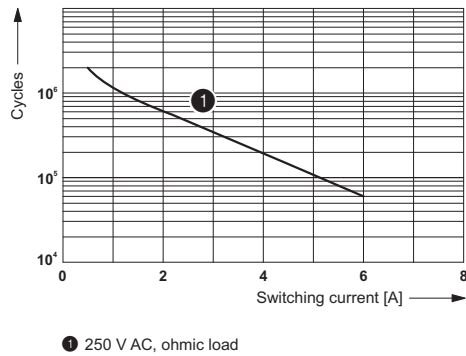
cULus Recognized 

cULus Listed 

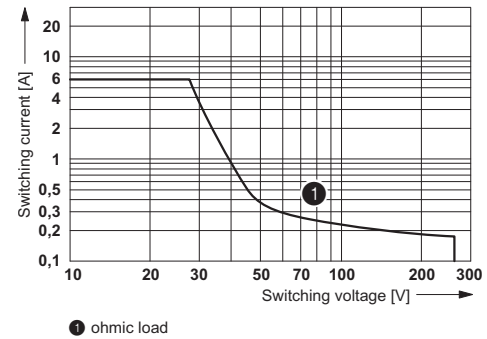
### Drawings

# Relay Module - PLC-RSP- 72UC/21AU/RW - 2987040

Diagram



Diagram



Electrical service life

DC interrupting rating

Circuit diagram

