

# Extension module - PSR-SPP- 24DC/TS/SDI8/SDIO4 - 2986041

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://download.phoenixcontact.com>)



PSR-TRISAFE-M input/output extension module with 8 safe inputs and 4 safe, configurable channels (choice of safe inputs or outputs), 2 clock/alarm outputs; up to SILCL 3, Cat.4/PL e, SIL 3, EN 50156, plug-in spring-cage connection terminal blocks

The figure shows a version with a screw connection

## Product Features

- Flexible extension with safe inputs and outputs
- Narrow 22.5 mm housing
- 4 safe digital outputs or 4 additional digital inputs (that can be configured using SAFECONF)
- Multifunctional use for a wide range of safety functions
- Easy graphical configuration instead of complex programming
- Quick startup thanks to user-friendly simulation and test options
- Including PSR-TBUS connector (DIN rail connector) for adapting to the PSR-TRISAFE-M master module
- Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- 8 safe digital inputs
- 2 alarm outputs or 2 clock outputs (that can be configured using SAFECONF)
- EN 50156



## Key commercial data

|                         |               |
|-------------------------|---------------|
| <b>package_quantity</b> | 1             |
| <b>GTIN</b>             | 4046356451369 |

## Technical data

Note:

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

### Dimensions

|               |          |
|---------------|----------|
| <b>Width</b>  | 22.5 mm  |
| <b>Height</b> | 112 mm   |
| <b>Depth</b>  | 114.5 mm |

### Ambient conditions

|  |                  |
|--|------------------|
| <b>Ambient temperature (operation)</b>         | -20 °C ... 55 °C |
| <b>Ambient temperature (storage/transport)</b> | -20 °C ... 70 °C |

# Extension module - PSR-SPP- 24DC/TS/SDI8/SDIO4 - 2986041

## Technical data

### Input data

|   |  |
|---|--|
| Nominal input voltage $U_N$                 | 24 V DC (A1 / A2)                                    |
| Input voltage range in reference to $U_N$   | 0.85 ... 1.1   |
| Typical input current at $U_N$              | 100 mA   |
| Maximum response time                       | < 30 ms  |
| Bypassing voltage dips                      | 20 ms  |
| Recovery time                               | < 10 s   |
| Protective circuit                          | Surge protection Suppressor diode                    |
| Status display                              | 2 LEDs (green, red)                                  |
| Number of safe inputs                       | 12 (of which 4 can be configured as input or output) |
| Nominal voltage $U_N$                       | 24 V DC  |
| Typical current consumption                 | 4 mA   |
| Signal level "0" signal                     | < 5 V  |
| Signal level "1" signal                     | > 11 V   |
| Permissible cable length                    | 2000 m   |
| Error detection time at 1-channel structure | < 1 s  |
| Status display                              | 12 LEDs (green)                                      |

### Output data

|                                      |  |
|--------------------------------------|--|
| Contact type                         | 8 safe digital inputs  |
| Contact type                         | 4 safe digital outputs   |
| Contact type                         | 4 safe digital inputs  |
| Contact type                         | 2 clock outputs  |
| Contact type                         | 2 alarm outputs  |
| Number of safe semiconductor outputs | 4 (If the four parameterizable inputs/outputs are used as outputs)   |
| Nominal voltage $U_N$                | 24 V DC  |
| Limiting continuous current          | 4x 0.5 A (see derating curve)  |
| Max. capacitive load                 | 1 $\mu$ F (When using electromechanical components (e.g. safeguarding), the capacitive load can be disregarded.)                               |
| Max. inductive load                  | (A suitable and effective protective circuit is to be provided for inductive loads. A recommended measure is the use of free-wheeling diodes.) |
| Test pulses                          | < 1 ms   |
| Number of outputs                    | 2  |
| Nominal voltage $U_N$                | 24 V DC  |
| Limiting continuous current          | 50 mA  |
| Test pulses                          | ~ 1 ms   |

### General

|                                  |   |
|----------------------------------|---|
| Mounting position                | Horizontal  |
| Category according to EN 13849-1 | 4   |
| Name                             | Air and creepage distances between the power circuits |
| Standards/regulations            | DIN EN 50178  |
| Rated surge voltage / insulation | 0.8 kV / Basic isolation                              |

# Extension module - PSR-SPP- 24DC/TS/SDI8/SDIO4 - 2986041

## Technical data

### General

|                                 |   |
|---------------------------------|---|
| <b>Rated insulation voltage</b> | 50 V  |
| <b>Pollution degree</b>         | 2   |
| <b>Surge voltage category</b>   | III   |
| <b>Housing material</b>         | Polyamide PA non-reinforced   |
| <b>Interfaces</b>               | DIN rail TBUS for connection to the master module, supplied as standard |

### Connection data

|   |                     |
|---|---------------------|
| <b>Conductor cross section solid min.</b>     | 0.2 mm <sup>2</sup> |
| <b>Conductor cross section solid max.</b>     | 1.5 mm <sup>2</sup> |
| <b>Conductor cross section stranded min.</b>  | 0.2 mm <sup>2</sup> |
| <b>Conductor cross section stranded max.</b>  | 1.5 mm <sup>2</sup> |
| <b>Conductor cross section AWG/kcmil min.</b> | 24                  |
| <b>Conductor cross section AWG/kcmil max</b>  | 16                  |
| <b>Stripping length</b>                       | 8 mm                |
| <b>Connection method</b>                      | Spring-cage conn.   |

## classifications

### eCl@ss

|                   |          |
|-------------------|----------|
| <b>eCl@ss 4.0</b> | 27371102 |
| <b>eCl@ss 4.1</b> | 27371102 |
| <b>eCl@ss 5.0</b> | 27371901 |
| <b>eCl@ss 5.1</b> | 27371901 |
| <b>eCl@ss 6.0</b> | 27371819 |
| <b>eCl@ss 7.0</b> | 27371819 |
| <b>eCl@ss 8.0</b> | 27371819 |

### ETIM

|                 |          |
|-----------------|----------|
| <b>ETIM 2.0</b> | EC001449 |
| <b>ETIM 3.0</b> | EC001449 |
| <b>ETIM 4.0</b> | EC001449 |
| <b>ETIM 5.0</b> | EC001449 |

### UNSPSC

|                      |          |
|----------------------|----------|
| <b>UNSPSC 6.01</b>   | 30211901 |
| <b>UNSPSC 7.0901</b> | 39121501 |
| <b>UNSPSC 11</b>     | 39121501 |
| <b>UNSPSC 12.01</b>  | 39121501 |
| <b>UNSPSC 13.2</b>   | 39121501 |

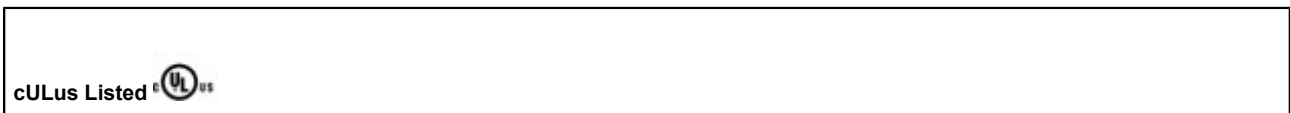
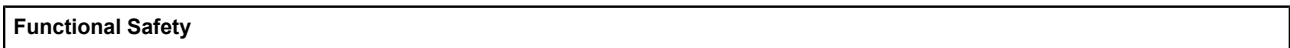
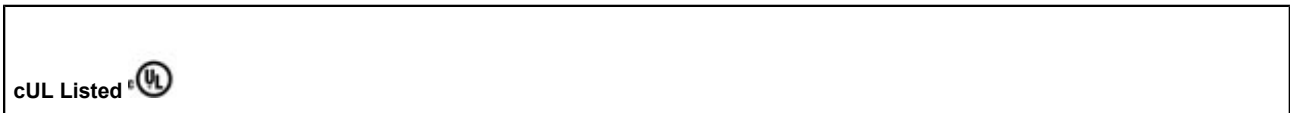
## approvals

# Extension module - PSR-SPP- 24DC/TS/SDI8/SDIO4 - 2986041

## approvals

---

### Approval details



## accessories

### Starter kit

ILC 130 SBT V2 STARTERKIT - 2700993



### Memory block

IFS-CONFSTICK - 2986122



### Adapter cable

---

## Extension module - PSR-SPP- 24DC/TS/SDI8/SDIO4 - 2986041

### accessories

CABLE-USB/MINI-USB-3,0M - 2986135



---

### Configuration set

PSR-SAFECONF-BOX-EN - 2986164



---

PSR-SAFECONF-BOX-DE - 2986151



---

### DIN rail connector

ME 22,5 TBUS 1,5/ 5-ST-3,81 GN - 2707437



---

PSR-TBUS - 2890425



---

### Gateways/Proxies

## Extension module - PSR-SPP- 24DC/TS/SDI8/SDIO4 - 2986041

accessories

EM-PB-GATEWAY-IFS - 2297620



---

### Solid-state contactor

PSR-FTB/20/86 - 2904477



PSR-FTB/1.5/11.5 - 2904476

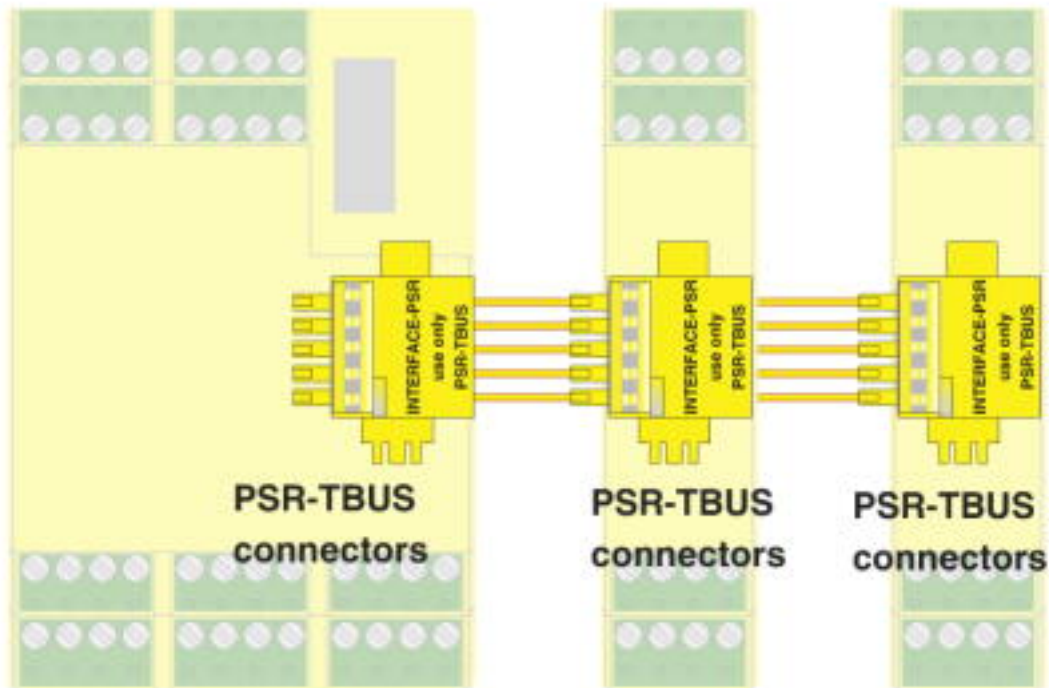


---

Drawings

## Extension module - PSR-SPP- 24DC/TS/SDI8/SDIO4 - 2986041

Connection diagram



The TBUS connectors carry out the cross-wiring between the modules.

# Extension module - PSR-SPP- 24DC/TS/SDI8/SDIO4 - 2986041

Circuit diagram

