

# Extension module - PSR-SPP- 24DC/TS/SDOR4/4X1 - 2986106

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PSR-TRISAFE-M relay output extension module with 4 safe relay output contacts (choice of 4 single-channel or 2 two-channel relay contacts), 4 signal outputs; up to SILCL 3, Cat. 4/PL e, SIL 3, EN 50156, plug-in spring-cage terminal block

The figure shows a version with a screw connection



## Key commercial data

package_quantity	1
GTIN	4046356536547

## Technical data

### Note

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

Width	22.5 mm
Height	112 mm
Depth	114.5 mm

### Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-20 °C ... 70 °C

### Input data

Nominal input voltage $U_N$	24 V DC (via PSR-TBUS)
Input voltage range in reference to $U_N$	0.85 ... 1.1
Typical input current at $U_N$	120 mA
Protective circuit	Surge protection Suppressor diode
Status display	2 LEDs (green, red)

### Output data

Contact type	4 enabling current paths
Contact type	4 alarm outputs
Contact material	AgCuNi, + 0.2 µm Au

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### Technical data

#### Output data

Minimum switching voltage	5 V AC/DC
Maximum switching voltage	250 V AC/DC
Maximum switching voltage	24 V DC
Limiting continuous current	4 A (see derating curve)
Inrush current, minimum	5 mA
Maximum inrush current	6 A
Switching capacity min.	60 mW
Output fuse	6 A gL/gG
Response time	max. 50 ms

#### Alarm outputs

Number of outputs	4
Voltage	24 V DC (A1 / A2)
Limiting continuous current	50 mA
Electrical isolation	yes, against relay outputs
Short-circuit protection	Yes

#### General

Nominal operating mode	100% operating factor
Net weight	274.4 g
Mounting type	DIN rail mounting
Mounting position	horizontal
Degree of protection	IP54
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Control	one and two channel
Housing material	Polyamide PA non-reinforced
Housing color	yellow
Interfaces	DIN rail TBUS for connection to the master module, supplied as standard

#### Connection data

Connection method	Spring-cage connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	1.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	1.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

#### Safety-related characteristic data

Designation	IEC 61508 - High demand
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## Technical data

### Safety-related characteristic data

<b>Safety Integrity Level (SIL)</b>	3
<b>Designation</b>	IEC 61508 - Low demand
<b>Safety Integrity Level (SIL)</b>	3
<b>Designation</b>	EN ISO 13849
<b>Performance level (PL)</b>	e
<b>Category</b>	4
<b>Designation</b>	EN 62061
<b>Safety Integrity Level Claim Limit (SIL CL)</b>	3
<b>Designation</b>	EN 50156
<b>Safety Integrity Level (SIL)</b>	3

### Standards and Regulations

<b>Designation</b>	Air clearances and creepage distances between the power circuits
<b>Standards/regulations</b>	DIN EN 50178
<b>Rated insulation voltage</b>	250 V
<b>Rated surge voltage/insulation</b>	4 kV / basic insulation between output contact current paths (13/14, 23/24, 33/34, 43/44); 6 kV / safe isolation, reinforced insulation between output contact current paths (13/14, 23/24, 33/34, 43/44) and the other circuits
<b>Degree of pollution</b>	2
<b>Overvoltage category</b>	III

### Environmental Product Compliance

<b>China RoHS</b>	Environmentally friendly use period: unlimited = EFUP-e
<b>China RoHS</b>	No hazardous substances above threshold values

## 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
<b>eCl@ss 9.0</b>	27371819

### ETIM

<b>ETIM 3.0</b>	EC001449
<b>ETIM 4.0</b>	EC001417
<b>ETIM 5.0</b>	EC001449
<b>ETIM 6.0</b>	EC001417

### UNSPSC

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## Classifications

### UNSPSC

UNSPSC 6.01	30211901
UNSPSC 7.0901	39121501
UNSPSC 11	39121501
UNSPSC 12.01	39121501
UNSPSC 13.2	39122329

## Approvals

UL Listed / cUL Listed / Functional Safety / EAC / cULus Listed /

### Approval details

UL Listed

cUL Listed

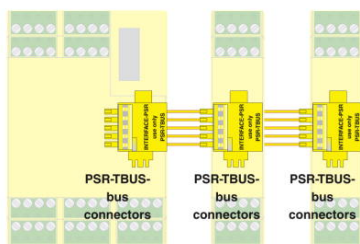
Functional Safety

EAC

cULus Listed

## Drawings

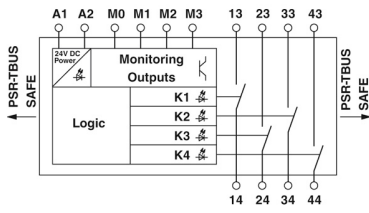
### Connection diagram



PSR-TBUS DIN rail connectors are used for cross-wiring between the modules.

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## Circuit diagram



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