

Safety module - PSR-SCP- 24DC/TS/S - 2986229

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Freely configurable safety module with 20 safe inputs and 4 safe outputs; 4 alarm, 2 clock, and 2 ground switching outputs; diagnostics possible via bus gateways, up to SILCL 3, Cat.4/PL e, SIL 3, EN 50156, plug-in screw connection terminal blocks

Product Features

- Flexible extension with safe inputs and outputs
- Including IFS-CONFSTICK memory stick for easily storing and saving the configuration
- Easy graphical configuration with the SAFECONF software
- Option for connecting fieldbus gateways for diagnostics and signaling functions
- Multifunctional use for a wide range of safety functions
- Easy graphical configuration instead of complex programming
- Quick startup thanks to comprehensive simulation and test functions
- Quick startup thanks to user-friendly simulation and test options
- Freely configurable safety module for monitoring emergency stops, safety doors, light grids, etc.
- Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- With 20 safe inputs, 4 safe outputs, 4 alarm outputs, and 2 clock outputs on a design width of just 67.5 mm
- EN 50156



Key commercial data

package_quantity	1
GTIN	4046356477192

Technical data

Note

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

Width	67.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

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

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Input data

Nominal input voltage U_N	24 V DC
Input voltage range in reference to U_N	0.85 ... 1.1
Typical input current at U_N	110 mA
Maximum response time	< 30 ms
Bypassing voltage dips	20 ms
Recovery time	< 10 s
Protective circuit	Surge protection Suppressor diode
Status display	4 LEDs (green, red)
Number of safe inputs	20
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

Output data

Contact type	20 safe digital inputs
Contact type	4 safe semiconductor outputs
Contact type	4 alarm outputs
Contact type	2 grounded switching outputs
Contact type	4 clock outputs
Number of safe semiconductor outputs	4 (Cat.4 / ISO 13849)
Number of ground switching outputs	2
Nominal voltage U_N	24 V DC
Limiting continuous current	2 A (see derating curve)
Max. capacitive load	1 μ F (When using electromechanical components (e.g., contactors), 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 (To ground)
Short-circuit protection	Yes
Clock outputs	Yes
Number of outputs	2
Nominal voltage U_N	24 V DC (A1 / A2)
Limiting continuous current	100 mA
Test pulses	< 100 ms
Short-circuit protection	Yes
Alarm outputs	no
Number of outputs	4
Nominal voltage U_N	24 V DC (A1 / A2)

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Output data

Limiting continuous current	100 mA
Short-circuit protection	no

General

Mounting type	DIN rail mounting
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Mounting position	Horizontal
Category according to EN 13849-1	4
Designation	Air and creepage distances between the power circuits
Standards/regulations	DIN EN 50178
Rated surge voltage / insulation	0.8 kV / Basic isolation
Rated insulation voltage	50 V
Pollution degree	2
Surge voltage category	III
Housing material	Polyamide PA non-reinforced
Number of possible safe extension modules	10
Interfaces	USB

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	12
Stripping length	7 mm
Screw thread	M3
Connection method	Screw connection

Safety-related characteristic data

Designation	IEC 61508 - High demand
Safety Integrity Level (SIL)	3
Probability of a hazardous failure per hour (PFH _D)	1.37 x 10 ⁻⁸
Diagnostic coverage (DC)	99 %
Proof test interval	240 Months
Note	Specifications are applicable only if the safety function is requested at least once a year.
Designation	EN ISO 13849
Performance level (PL)	e
Category	4
Mean time to a hazardous failure (MTTF _d)	8321 Years

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Safety-related characteristic data

Note	Specifications are applicable only if the safety function is requested at least once a year.
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	3

classifications

eCl@ss

eCl@ss 4.0	27371102
eCl@ss 4.1	27371102
eCl@ss 5.0	27371901
eCl@ss 5.1	27371901
eCl@ss 6.0	27371001
eCl@ss 7.0	27371001
eCl@ss 8.0	27371819

ETIM

ETIM 2.0	EC001449
ETIM 3.0	EC001449
ETIM 4.0	EC001449
ETIM 5.0	EC001449

UNSPSC

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

approvals

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

Approval details

UL Listed

cUL Listed

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approvals

Functional Safety

cULus Listed 

accessories

Starter kit

ILC 130 SBT V2 STARTERKIT - 2700993



Memory block

IFS-CONFSTICK - 2986122



Adapter cable

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



Configuration set

PSR-SAFECNF-BOX-EN - 2986164



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accessories

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

EM-PB-GATEWAY-IFS - 2297620



Filter terminal block

PSR-FTB/20/86 - 2904477



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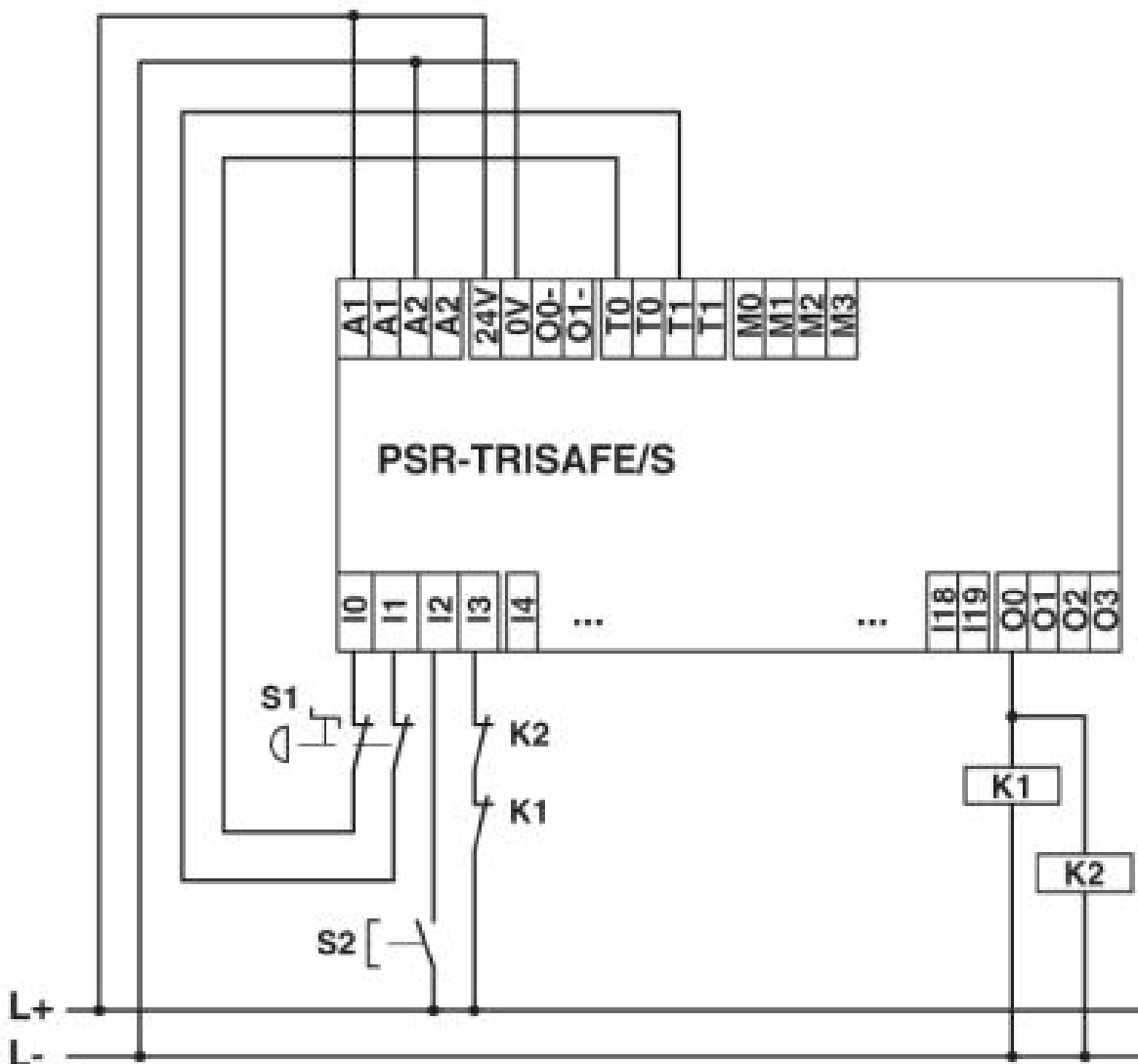
accessories

PSR-FTB/1.5/11.5 - 2904476



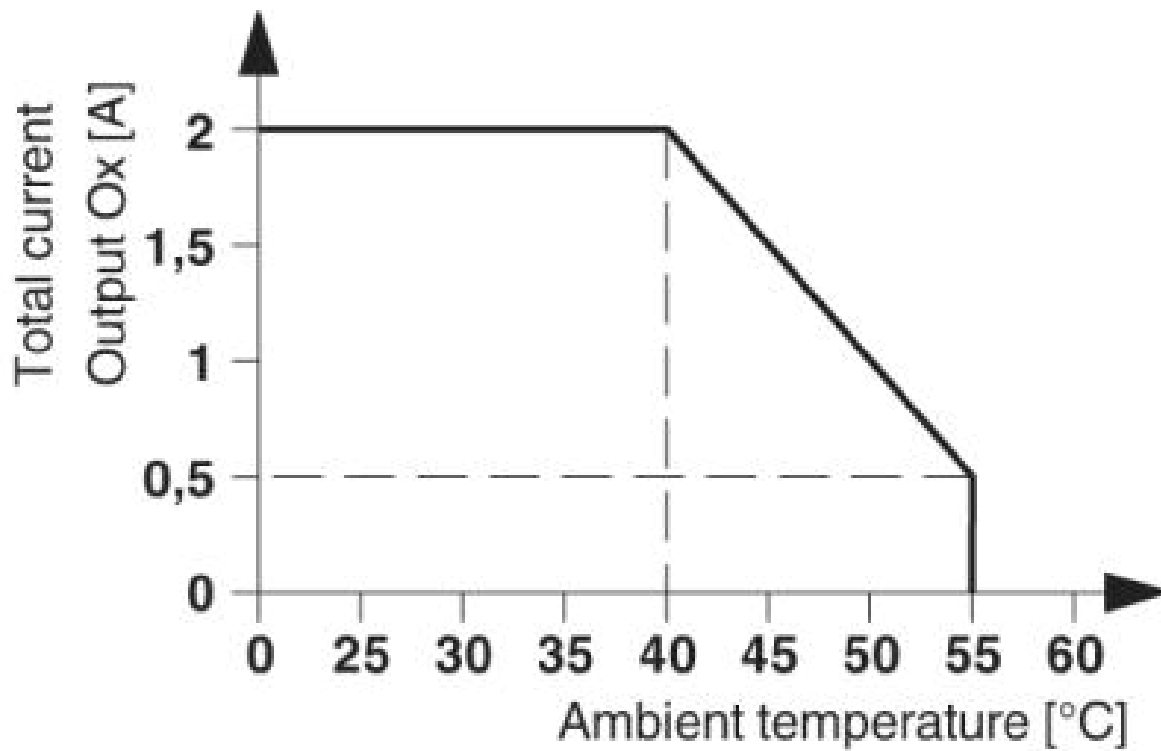
Drawings

Application drawing



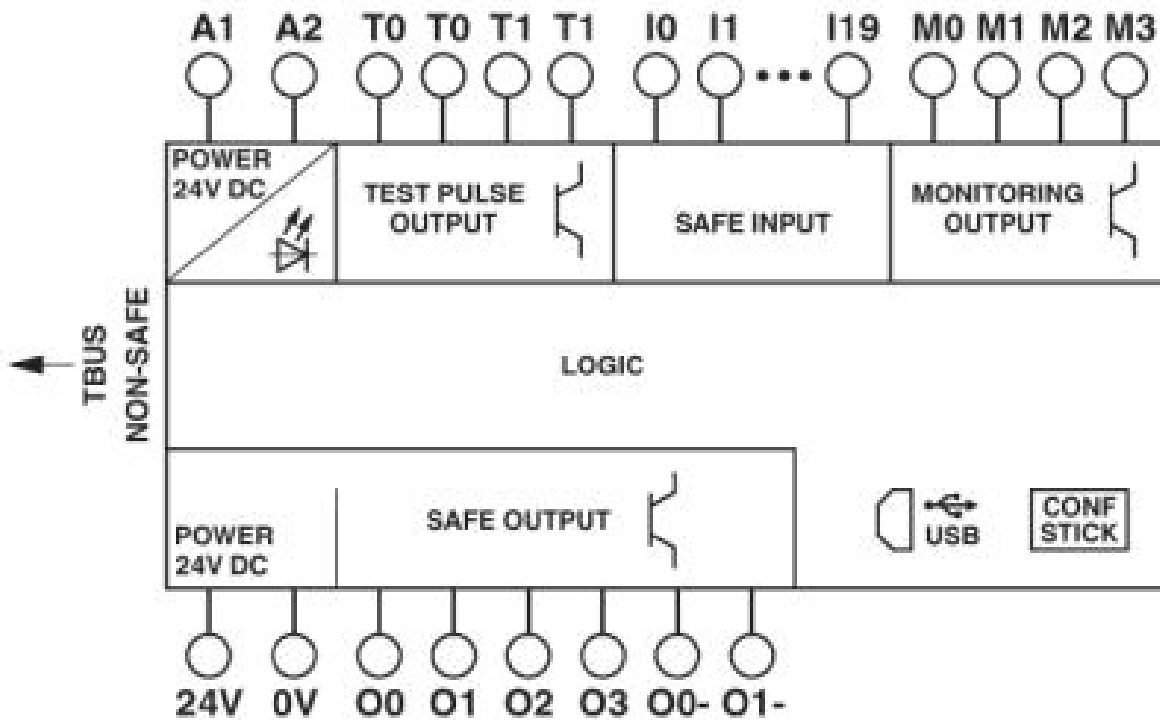
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Diagram



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Circuit diagram



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