

Safety module - PSR-SPP- 24DC/TS/M - 2986025

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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; can be extended via additional I/O modules, up to SILCL 3, Cat. 4/PL e, SIL 3, EN 50156, plug-in spring-cage terminal blocks

The figure shows a version with a screw connection

Why buy this product

- ✓ Flexible extension with safe inputs and outputs
- ✓ Option for connecting fieldbus gateways for diagnostics and signaling functions
- ✓ Including IFS-CONFSTICK memory stick for easily storing and saving the configuration
- ✓ Including PSR-TBUS connector (DIN rail connector) for adapting safe extension modules
- ✓ Easy graphical configuration with the SAFECONF software
- ✓ Multifunctional use for a wide range of safety functions
- ✓ Quick startup thanks to user-friendly simulation and test options
- ✓ Easy graphical configuration instead of complex programming
- ✓ Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- ✓ Safe and standard extension via INTERFACE DIN rail TBUS
- ✓ 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

Packing unit	1 pc
GTIN	4 046356 345897
Weight per Piece (excluding packing)	99.99 g
Custom tariff number	85371099
Country of origin	Germany

Technical data

Note:

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

Dimensions

Width	67.5 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
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
	4 safe semiconductor outputs
	4 alarm outputs
	2 grounded switching outputs
	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

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Technical data

Output data

Nominal voltage U _N	24 V DC (A1 / A2)
Limiting continuous current	100 mA
Test pulses	~ 100 ms
Short-circuit protection	Yes
Alarm outputs	Yes
Number of outputs	4
Nominal voltage U _N	24 V DC (A1 / A2)
Limiting continuous current	100 mA
Short-circuit protection	Yes

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
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.	1.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Stripping length	8 mm
Connection method	Spring-cage connection

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	27371819
eCl@ss 7.0	27371819

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Classifications

eCl@ss

eCl@ss 8.0	27371819
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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

Approvals

Approvals

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

Ex Approvals

Approvals submitted

Approval details

UL Listed

GOST

cUL Listed

Safety module - PSR-SPP- 24DC/TS/M - 2986025

Approvals

Functional Safety

cULus Listed 

Accessories

Accessories

Adapter cable

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



USB connecting cable: USB plug type A to USB plug type Mini-B; length: 3 m

Configuration set

Configuration package - PSR-SAFECONF-BOX-EN - 2986164



Configuration package for the PSR-TRISAFE safety module, consisting of the SAFECONF software, connecting cable and Quick Start Guide.

Configuration package - PSR-SAFECONF-BOX-DE - 2986151



Configuration package for the PSR-TRISAFE safety module, consisting of the SAFECONF software, connecting cable and Quick Start Guide.

DIN rail connector

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



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

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Accessories

Electronic housing - PSR-TBUS - 2890425



DIN rail connector for safety switching devices, for supplying/controlling/monitoring (depending on the module)

Gateways/Proxies

Data interface - EM-PB-GATEWAY-IFS - 2297620



The PROFIBUS module EM-PB-GATEWAY-IFS, certified as per DPV1 specification (EN 50170), connects up to 32 motor management modules (EMM-...IFS) or other INTERFACE system devices via the TBUS DIN rail connector.

Memory block

Memory block - IFS-CONFSTICK - 2986122



Multi-functional memory block for the INTERFACE system for easy storage and backup of the configuration.

Solid-state contactor

Filter terminal block - PSR-FTB/20/86 - 2904477



Terminal block for filtering test pulses of safe semiconductor outputs, plus EMI filtering of 24 V signals up to a current strength of 2 A

Filter terminal block - PSR-FTB/1.5/11.5 - 2904476



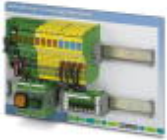
Terminal block for filtering test pulses of safe semiconductor outputs, plus EMI filtering of 24 V signals up to a current strength of 2 A

Starter kit

Safety module - PSR-SPP- 24DC/TS/M - 2986025

Accessories

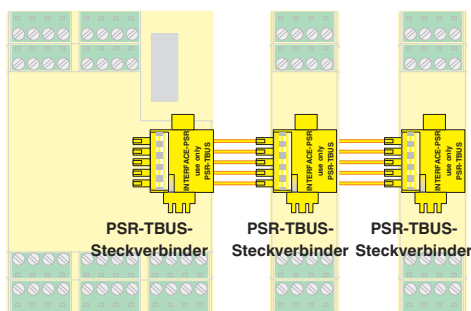
Starter kit - ILC 130 SBT V2 STARTERKIT - 2700993



ILC 130 SBT starter kit including ILC 130 ETH, LPSDO and PSDI SafetyBridge modules, control panel, power supply unit, and accessories with pre-configured safety application

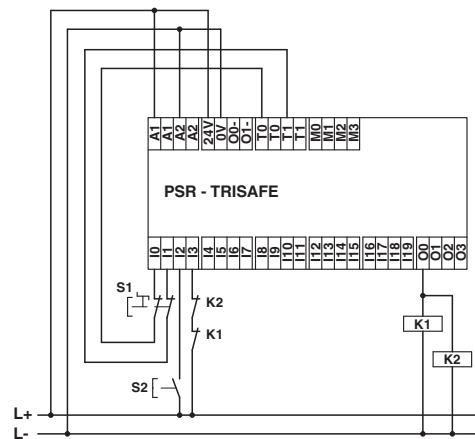
Drawings

Connection diagram

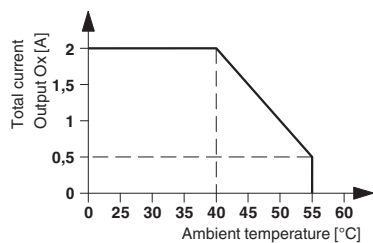


PSR-TBUS DIN rail connectors are used for cross-wiring between the modules.

Application drawing



Diagram



Circuit diagram

