PHŒNIX CONTACT

Safety module - PSR-SPP- 24DC/TS/S - 2986232

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Freely configurable safety module with 20 safe inputs and 4 safe outputs, 4 signal, 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 spring-cage terminal block

The figure shows a version with a screw connection

Why buy this product

☑ 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

☑ Flexible extension with safe inputs and outputs

☑ Easy graphical configuration instead of complex programming

☑ Quick startup thanks to comprehensive simulation and test functions

☑ Freely configurable safety module for monitoring emergency stops, safety doors, light grids, etc.

☑ Quick startup thanks to user-friendly simulation and test options

☑ Multifunctional use for a wide range of safety functions

☑ 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

Packing unit	1 pc
GTIN	4 046356 477185
Weight per Piece (excluding packing)	55.1 g
Custom tariff number	85371099
Country of origin	Germany

Technical data

Note

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Technical data

Note

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

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 µF (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)

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Technical data

Output data

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

Alarm outputs	no
Number of outputs	4
Voltage	24 V DC (A1 / A2)
Limiting continuous current	100 mA
Short-circuit protection	no

General

Net weight	55.1 g
Mounting type	DIN rail mounting
Degree of protection	IP54
	IP20
Min. degree of protection of inst. location	IP54
Mounting position	horizontal
Control	one and two channel
Parameters as per EN ISO 13849	4
Parameters for IEC 61508	3
Housing material	Polyamide PA non-reinforced
Number of possible safe extension modules	10
Interfaces	USB

Connection data

Connection method	Spring-cage connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	1.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	8 mm

Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	DIN EN 50178

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Technical data

Standards and Regulations

Rated insulation voltage	50 V
Rated surge voltage/insulation	0.8 kV / Basic isolation
Degree of pollution	2
Overvoltage category	III
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

Approvals

Approvals

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

Ex Approvals

Safety module - PSR-SPP- 24DC/TS/S - 2986232

Approvals

Approvals submitted

Approval details

UL Listed

cUL Listed

Functional Safety

EAC

EAC

EAC

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

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Configuration set

Safety module - PSR-SPP- 24DC/TS/S - 2986232

Accessories

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

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

Plug component, Nominal current: 8 A, Nominal current (Ex): 8 A, Nominal voltage (Ex): 125 V, Number of positions: 5, Pitch: 3.81 mm, Articles with gold-plated contacts, bus connectors for connecting with electronic housings

DIN rail connector - PSR-TBUS - 2890425

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

Filter terminal block

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

Terminal block for filtering test pulses from safe semiconductor outputs with adjustable filter values (20 µF/86 µF), as well as for EMC filtering of 24 V signals up to an amperage of 2 A.

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Accessories

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

Terminal block for filtering test pulses from safe semiconductor outputs with adjustable filter values (1.5 µF/11.5 µF), as well as for EMC filtering of 24 V signals up to an amperage of 2 A.

Gateways/Proxies

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

Gateway for the connection of up to 32 INTERFACE system devices to a higher-level controller via PROFIBUS DP. The INTERFACE system devices are connected to the Gateway via DIN rail connectors, the DIN rail connectors are provided.

Memory block

Memory block - IFS-CONFSTICK - 2986122

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

Starter kit
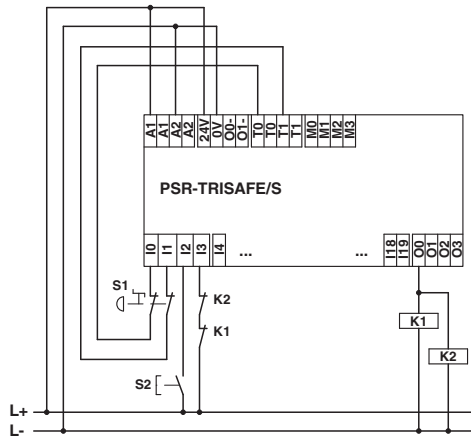
Starter kit - ILC 130 SBT V2 STARTERKIT - 2700993

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
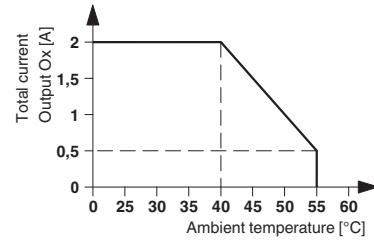
Drawings

Safety module - PSR-SPP- 24DC/TS/S - 2986232

Application drawing

Diagram

Circuit diagram