Extension module - PSR-M-EF3-SDI12-MAT-PI - 1104884

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://phoenixcontact.com/download)



Safe extension module with 12 safe inputs for monitoring safety shut-off mats and switching strips, TBUS interface, up to SILCL 3, Cat. 4/PL e, SIL 3, pluggable Push-in terminal block, TBUS connector included

Product Description

The configurable and individually scalable PSRmodular safety system is a flexible safety solution for monitoring your machine or system.
The safe extension module provides the system with additional safe inputs to monitor safety shut-off mats and switching capacity.

Your advantages

- Economical safety solution with a high level of adaptability to individual requirements
- Fast startup, thanks to easy hardware and software configuration
- Machine downtime minimized with comprehensive, easy-to-understand diagnostics
- Tool-free and time-saving installation with Push-in technology
-
- Up to Cat. 4/PL e according to ISO 13849-1, SILCL 3 according to IEC 62061, SIL 3 according to IEC 61508
- Suitable for lift applications according to EN 81-20

Key Commercial Data

Packing unit	1 pc
GTIN	4 055626 973067
GTIN	4055626973067
Weight per Piece (excluding packing)	180.000 g
Custom tariff number	85371098
Country of origin	Italy

Technical data

Dimensions

Extension module - PSR-M-EF3-SDI12-MAT-PI - 1104884

Technical data

Dimensions

Width	22.61 mm
Height	107.74 mm
Depth	113.6 mm

Ambient conditions

Ambient temperature (operation)	-10 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-20 °C ... 85 °C
Max. permissible relative humidity (operation)	95 % (non-condensing)
Max. permissible humidity (storage/transport)	95 % (non-condensing)
Maximum altitude	≤ 2000 m (Above sea level)

Power supply

Designation	A1/A2
Rated control circuit supply voltage U_S	24 V DC -20 % / +20 % (external fuse, typically 4 A)
Rated control supply current I_S	typ. 53 mA
Power consumption at U_S	typ. 1.27 W
Inrush current	< 2 A (Δt = 1.5 ms at U_s)
Filter time	typ. 10 ms (at A1 in the event of voltage dips at U_s)
Protective circuit	Serial protection against polarity reversal
	Suppressor diode

Digital inputs

Input name	IN1, IN2, IN3, IN4, IN5, IN6, IN7, IN8, IN9, IN10, IN11, IN12
Description of the input	Safety-related digital inputs
	IEC 61131-2 Type 2
Number of inputs	12
Input voltage range "0" signal	0 V DC ... 5 V DC
Input voltage range "1" signal	11 V DC ... 28.8 V DC
Input current range "0" signal	< 1 mA
Current consumption	typ. 7.5 mA (typically with U_S)
	max. 9.5 mA (at a control voltage of 28.8 V DC)
Filter time	min. 3 ms ±2 ms (adjustable)
	max. 250 ms ±2 ms (adjustable)
	Test pulse rate ≥ 2x set filter time, min. Test pulse rate = 10 ms
Max. permissible overall conductor resistance	max. 1.2 kΩ (Input and reset circuit at U_S)
Cable length	max. 100 m (per input)
Protective circuit/component	Suppressor diode

Clock outputs

Extension module - PSR-M-EF3-SDI12-MAT-PI - 1104884

Technical data

Clock outputs

Designation	T1, T2, T3, T4, T5, T6, T7, T8
Output description	PNP, IEC 61131-2 Typ 0,1
Number of outputs	8
Voltage	24 V DC (via A1)
Nominal voltage range	18.2 V DC ... 27.8 V DC (U_S - 1 V)
Output voltage when switched off	max. 0.1 V
Maximum inrush current	1.1 A (Δt = 3 s at U_s)
Limiting continuous current	100 mA (per channel)
	800 mA (Total current of all outputs)
Leakage current	max. 100 µA
Cable length	max. 100 m (per output)
Max. capacitive load	max. 470 nF
Max. inductive load	max. 2.4 mH
Test pulses	≤ 200 µs (Test pulse duration)
	Test pulse rate = 8 x t_{Cycle} [ms]
Protective circuit/component	Suppressor diode
Short-circuit protection	Yes (self-limitation at 1.1 A)
Discharging circuit	Yes, internal

Times

Response time	see user manual
Restart time	min. 5 s (Boot time)
	max. 10 s (Boot time)
Cycle time	see user manual

General

Nominal operating mode	100% operating factor
Net weight	141 g
Mounting position	vertical or horizontal
Mounting type	DIN rail mounting
Assembly instructions	Observe derating
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Protection class	III (EN 50178)
Housing material	PBT
Housing color	yellow
Operating voltage display	1 x green LED
Status display	1 x LED (green), 2 x LED (orange)

Extension module - PSR-M-EF3-SDI12-MAT-PI - 1104884

Technical data

General

	12 x LED (yellow)
Indication	2 x LED (red)

Connection data

Connection method	Push-in connection
pluggable	Yes
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section flexible min.	0.2 mm²
Conductor cross section flexible max.	2.5 mm²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	16
Stripping length	10 mm

Safety-related characteristic data

Stop category	0
Designation	IEC 61508 - High-demand for 2-channel wiring
Safety Integrity Level (SIL)	3
Designation	IEC 61508 - High-demand for 1-channel wiring
Safety Integrity Level (SIL)	2
Designation	EN ISO 13849
Performance level (PL)	e (2-channel wiring)
	d (1-channel wiring)
Designation	EN 62061
Safety Integrity Level Claim Limit (SIL CL)	3 (2-channel wiring)
	2 (1-channel wiring)

Standards and Regulations

Designation	Air clearances and creepage distances between the power circuits
Standards/regulations	EN 50178
Rated insulation voltage	250 V AC
Rated surge voltage/insulation	Basic insulation 4 kV between 24 V power supply and I/Os to the housing
Degree of pollution	2
Overvoltage category	II
Shock	10g for Δt = 16 ms (continuous shock, 1000 shocks in each space direction)
Vibration (operation)	10 Hz ... 150 Hz, 2g
Conformance	CE-compliant

Environmental Product Compliance

Extension module - PSR-M-EF3-SDI12-MAT-PI - 1104884

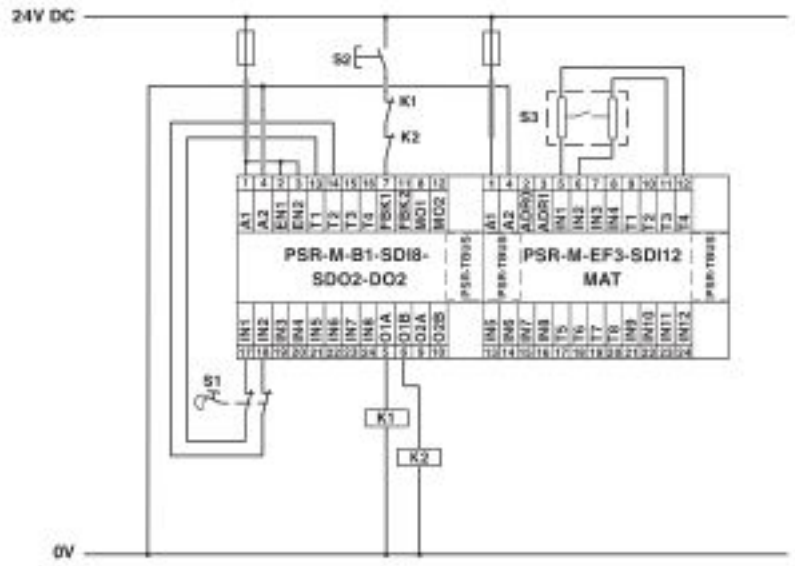
Technical data

Environmental Product Compliance

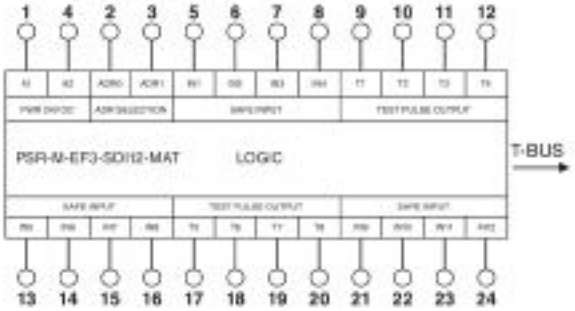
China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

Application drawing



Block diagram



Extension module - PSR-M-EF3-SDI12-MAT-PI - 1104884

Classifications

eCl@ss

eCl@ss 10.0.1	27371819
eCl@ss 8.0	27371819
eCl@ss 9.0	27371819

ETIM

ETIM 5.0	EC001449

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

UL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cUL Listed		http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm	FILE E 238705
cULus Listed			

Accessories

Accessories

Coding element

Extension module - PSR-M-EF3-SDI12-MAT-PI - 1104884

Accessories

Coding profile - CP-MSTB - 1734634



Coding profile, is inserted into the slot on the plug or inverted header, red insulating material

Coding section - CR-MSTB - 1734401



Coding section, inserted into the recess in the header or the inverted plug, red insulating material

Phoenix Contact 2020 © - all rights reserved
http://www.phoenixcontact.com