

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



1104884

<https://www.phoenixcontact.com/us/products/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 documentation. Our general terms of use for downloads are valid.



Safe extension module with 12 safe inputs for monitoring safety shut-off mats and switching strips, TBUS interface, up to SIL 3, Cat. 4/PL e, 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

- Cost-effective safety solution with a high level of adaptability to individual requirements
- Fast startup, thanks to easy hardware and software configuration
- Machine downtimes minimized with comprehensive, easy-to-understand diagnostics
- Tool-free and time-saving installation thanks to Push-in technology
- Narrow housing width of just 22.6 mm
- Up to Cat. 4/PL e in accordance with ISO 13849-1, SIL 3 in accordance with EN IEC 62061, SIL 3 in accordance with IEC 61508
- Suitable for elevator applications in accordance with EN 81-20

Commercial data

Item number	1104884
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN02
Product key	DNA362
GTIN	4055626973067
Weight per piece (including packing)	171.4 g
Weight per piece (excluding packing)	141 g
Customs tariff number	85371098
Country of origin	IT

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



1104884

<https://www.phoenixcontact.com/us/products/1104884>

Technical data

Notes

Note on application	Only for industrial use
---------------------	-------------------------

Product properties

Product type	Safety device
Application	Emergency stop
	Light grid
	Safety door
	Safety shut-off mats
	Switching capacities

Data management status

Article revision	00
------------------	----

Insulation characteristics

Protection class	III
------------------	-----

Times

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

Electrical properties

Maximum power dissipation for nominal condition	4.28 W (with max. permissible load)
Nominal operating mode	100% operating factor
Interfaces	DIN rail TBUS for connection to the master module, supplied as standard

Air clearances and creepage distances between the power circuits

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

Supply

Designation	A1/A2
Rated control circuit supply voltage U_S	19.2 V DC ... 28.8 V DC
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 ($\Delta t = 1.5$ 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

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



1104884

<https://www.phoenixcontact.com/us/products/1104884>

Input data

Digital: 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
Filter time	min. 3 ms $\pm$ 2 ms (adjustable)
	max. 250 ms $\pm$ 2 ms (adjustable)
	Test pulse rate $\geq$ 2x set filter time, min. Test pulse rate = 10 ms
Cable length	max. 100 m (per input)
Max. permissible overall conductor resistance	max. 1.2 k Ω (Input and reset circuit at U _S)
Protective circuit	Suppressor diode
Current consumption	typ. 7.5 mA (typically with U _S)
	max. 9.5 mA (at a control voltage of 28.8 V DC)

Output data

Clock: 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)
Output voltage when switched off	max. 0.1 V
Maximum inrush current	1.1 A ($\Delta t = 3$ s at U _S)
Limiting continuous current	100 mA (per channel)
	800 mA (Total current of all outputs)
Leakage current	max. 100 μ A
Test pulses	≤ 200 μ s (Test pulse duration)
	Test pulse rate = 8 x t _{Cycle} [ms]
Protective circuit	Suppressor diode
Short-circuit protection	Yes (self-limitation at 1.1 A)
Cable length	max. 100 m (per output)
Max. capacitive load	max. 470 nF
Max. inductive load	max. 2.4 mH
Discharging circuit	Yes, internal

Connection data

Connection technology

pluggable	yes
-----------	-----

Conductor connection

Connection method	Push-in connection
-------------------	--------------------

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



1104884

<https://www.phoenixcontact.com/us/products/1104884>

Conductor cross section rigid	0.2 mm² ... 2.5 mm²
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross-section AWG	24 ... 14
Stripping length	10 mm

Signaling

Status display	1 x LED (green), 2 x LED (orange) 12 x LED (yellow)
Operating voltage display	1 x green LED
Error indication	2 x LED (red)

Dimensions

Width	22.61 mm
Height	107.74 mm
Depth	113.6 mm

Material specifications

Color (Housing)	yellow (RAL 1018)
Housing material	PBT

Characteristics

Safety data	
Stop category	0

Safety data: EN ISO 13849

Performance level (PL)	e (2-channel wiring) d (1-channel wiring)
------------------------	--

Safety data: IEC 61508 - High-demand for 2-channel wiring

Safety Integrity Level (SIL)	3
------------------------------	---

Safety data: IEC 61508 - High-demand for 1-channel wiring

Safety Integrity Level (SIL)	2
------------------------------	---

Safety data: EN IEC 62061

Safety Integrity Level (SIL)	3 (2-channel wiring) 2 (1-channel wiring)
------------------------------	--

Environmental and real-life conditions

Ambient conditions	
Degree of protection	IP20
Min. degree of protection of inst. location	IP54
Ambient temperature (operation)	-10 °C ... 55 °C (observe derating)
Ambient temperature (storage/transport)	-20 °C ... 85 °C
Maximum altitude	≤ 2000 m (Above sea level)

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



1104884

<https://www.phoenixcontact.com/us/products/1104884>

Max. permissible humidity (storage/transport)	95 % (non-condensing)
Max. permissible relative humidity (operation)	95 % (non-condensing)
Shock	10g for $\Delta t = 16$ ms (continuous shock, 1000 shocks in each space direction)
Vibration (operation)	10 Hz ... 150 Hz, 2g

Approvals

CE

Identification	CE-compliant
----------------	--------------

Mounting

Mounting type	DIN rail mounting
Assembly note	Observe derating
Mounting position	vertical or horizontal

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

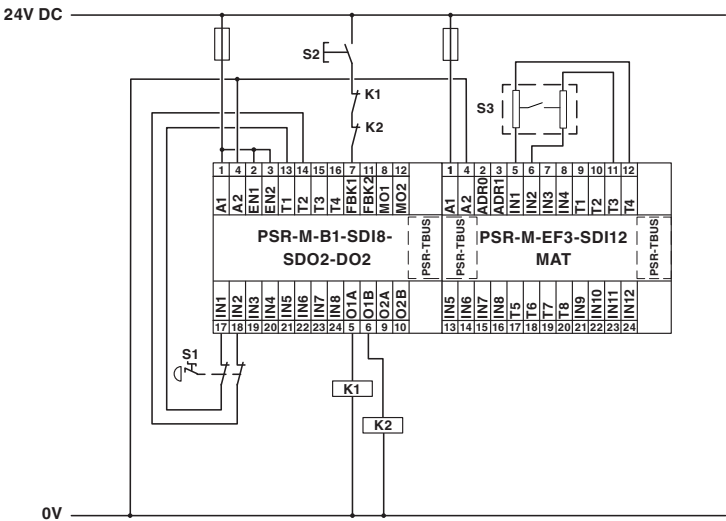
1104884

<https://www.phoenixcontact.com/us/products/1104884>

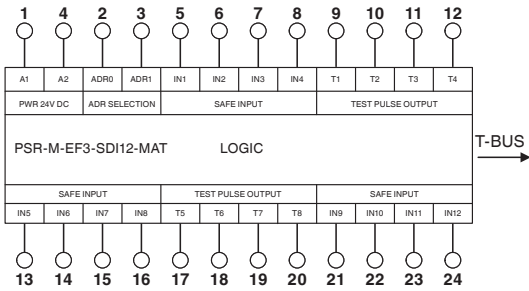


Drawings

Application drawing



Block diagram



Block diagram

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



1104884

<https://www.phoenixcontact.com/us/products/1104884>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1104884>



UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705



EAC

Approval ID: RU*-DE*B.00606/20



Functional Safety

Approval ID: Z10 029429 0013

cULus Listed

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



1104884

<https://www.phoenixcontact.com/us/products/1104884>

Classifications

ECLASS

ECLASS-11.0	27371819
ECLASS-13.0	27371819
ECLASS-12.0	27371819

ETIM

ETIM 9.0	EC001449
----------	----------

UNSPSC

UNSPSC 21.0	39122200
-------------	----------

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



1104884

<https://www.phoenixcontact.com/us/products/1104884>

Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes, No exemptions
China RoHS	
Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%

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



1104884

<https://www.phoenixcontact.com/us/products/1104884>

Accessories

CP-MSTB - Coding profile

1734634

<https://www.phoenixcontact.com/us/products/1734634>

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



CR-MSTB - Coding section

1734401

<https://www.phoenixcontact.com/us/products/1734401>

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



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



1104884

<https://www.phoenixcontact.com/us/products/1104884>

CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/us/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

Phoenix Contact 2024 © - all rights reserved

<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com