

# PSR-M-EM1-PROX2-PI - Extension module



1104988

<https://www.phoenixcontact.com/us/products/1104988>

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 for monitoring zero-speed and speed, monitoring of 2 axes, suitable for NPN/PNP proximity switch, 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 is used to monitor downtimes and speed. The module is suitable for connection of NPN/PNP proximity switches.

## 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 EN 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	1104988
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN02
Product key	DNA363
GTIN	4055626971742
Weight per piece (including packing)	154.5 g
Weight per piece (excluding packing)	154.5 g
Customs tariff number	85371098
Country of origin	IT

# PSR-M-EM1-PROX2-PI - Extension module



1104988

<https://www.phoenixcontact.com/us/products/1104988>

## Technical data

### Product properties

Product type	Safety device
Application	Over-speed safety relay
	Zero-speed safety relay

### 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	2.18 W ( $U_B = 28.8$ V, IN1 = IN2 = 50 mA)
Nominal operating mode	100% operating factor
Interfaces	DIN rail TBUS for connection to the master module, supplied as standard
	Proximity switches

### 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 % (provide external protection, typically 200 mA)
Rated control supply current $I_S$	typ. 35 mA
Power consumption at $U_S$	typ. 0.84 W
Inrush current	3.5 A ( $\Delta t = 1$ ms at $U_S$ )
Filter time	typ. 20 ms (at A1 in the event of voltage dips at $U_S$ )
Protective circuit	Serial protection against polarity reversal
	Suppressor diode

### Input data

#### Measurement

Input name	Proximity switch inputs
	IN1, IN2
Description of the input	NPN / PNP (3- or 4-wire)
Number of inputs	2
Input voltage range "0" signal	0 V DC ... 5 V DC (NPN)

# PSR-M-EM1-PROX2-PI - Extension module



1104988

<https://www.phoenixcontact.com/us/products/1104988>

	16 V DC ... 28.8 V DC (PNP)
Input voltage range "1" signal	16 V DC ... 28.8 V DC (NPN) 0 V DC ... 5 V DC (PNP)
Input current range "0" signal	< 2 mA (NPN)
Precision	5 % (in reference to the parameterized limit value)
Limit frequency	max. 5 kHz
Max. permissible overall conductor resistance	150 Ω
Protective circuit	Suppressor diode
Current consumption	typ. 13 mA (NPN, at $U_S$ ) typ. -13 mA (PNP, at $U_s$ ) max. 17 mA (NPN, at 28.8 V DC) max. -15 mA (PNP, at 28.8 V DC)

## Output data

Digital: Proximity switch supply (24V/0V)

Short-circuit protection	no
Nominal output voltage range	16.7 V DC ... 26.3 V DC ( $U_S$ - 2,5 V)

## Connection data

Connection technology

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

Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 14
Stripping length	10 mm

## Signaling

Status display	4 x LED (yellow), 1 x LED (green), 2 x LED (orange)
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	Polyamide PA non-reinforced

## Characteristics

# PSR-M-EM1-PROX2-PI - Extension module



1104988

<https://www.phoenixcontact.com/us/products/1104988>

Safety data: EN ISO 13849

Category	3
Performance level (PL)	e

Safety data: IEC 61508 - High demand

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

Safety data: EN IEC 62061

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

## 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)
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-EM1-PROX2-PI - Extension module

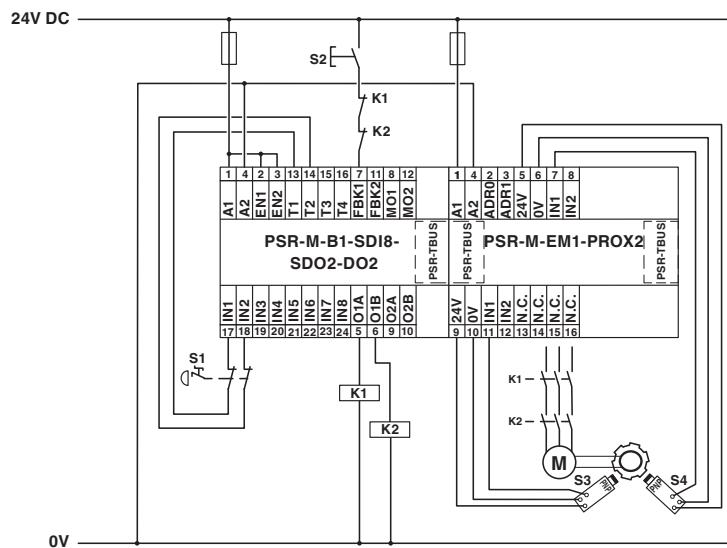
1104988

<https://www.phoenixcontact.com/us/products/1104988>

**PHÖNIX CONTACT**

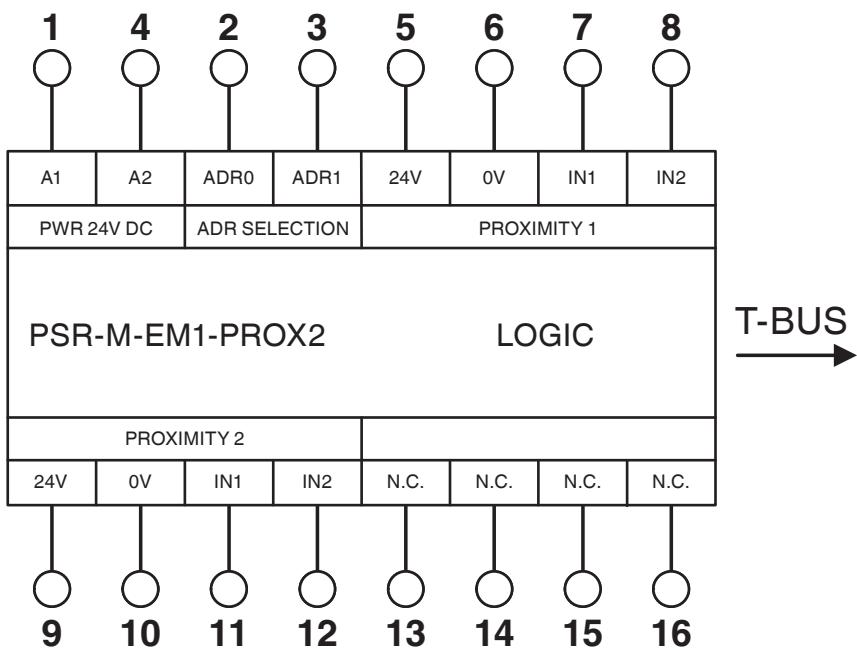
## Drawings

## Application drawing



## Example application

## Block diagram



## Block diagram

# PSR-M-EM1-PROX2-PI - Extension module

1104988

<https://www.phoenixcontact.com/us/products/1104988>



## Approvals

ⓘ To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1104988>



**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-EM1-PROX2-PI - Extension module

1104988

<https://www.phoenixcontact.com/us/products/1104988>



## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC001449
----------	----------

### UNSPSC

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

# PSR-M-EM1-PROX2-PI - Extension module



1104988

<https://www.phoenixcontact.com/us/products/1104988>

## 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-EM1-PROX2-PI - Extension module



1104988

<https://www.phoenixcontact.com/us/products/1104988>

## 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-EM1-PROX2-PI - Extension module



1104988

<https://www.phoenixcontact.com/us/products/1104988>

## 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 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, 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](mailto:info@phoenixcon.com)