

PSR-CT-F-SEN-1-8 - Safety switch sensor



2702976

<https://www.phoenixcontact.com/mx/products/2702976>

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.



Proximity safety circuit up to Cat. 4, PL e (EN ISO 13849), SIL 3 (IEC 61508), fixcode sensor with RFID coding, model 4 (EN ISO 14119), automatic or manual start, integrated diagnostics, 24 V DC supply, IP69K, M12 connector

Product description

The PSR-CT safety circuit consists of a combination of a PSR-CT-...-SEN-1-8 sensor with varying coding types and a coded PSR-CT-C-ACT actuator. It provides maximum tamper protection and the highest level of safety in accordance with EN ISO 14119. The PSR-CT safety circuit is available with the following types of coding: **Fixcode:** For the sensor to detect the actuator, the actuator must first be associated with the sensor via a learning process. The learning process can only be completed once. The sensor and actuator are then permanently assigned to each other by their coding. Safety circuits with fixcode evaluation achieve a **high coding level**. **Unicode:** For the sensor to detect the actuator, the actuator must first be assigned to the sensor via a learning process. The learning process for a new actuator can be repeated any number of times. The sensor only detects the last learned actuator. Safety circuits with unicode evaluation achieve a **high coding level**. **Multicode:** The sensor detects every actuator of the approved type. No specific actuator code can be assigned. Safety circuits with multicode evaluation achieve a **low coding level**.

Your advantages

- Integrated reset function on the switch
- 4 actuation settings, 3 travel directions
- Tamper protection via RFID transponder technology
- Rapid diagnostics, thanks to comprehensive status information
- Consistent M12 connection technology for convenient installation
- Safe series connection in accordance with EN ISO 14119
- Flexible use, thanks to compact design
- Safe, cost-effective complete solution

Commercial data

Item number	2702976
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	02
Product key	DNA611
Catalog page	Page 213 (C-6-2019)
GTIN	4055626447032
Weight per piece (including packing)	40.3 g
Weight per piece (excluding packing)	40.2 g

PSR-CT-F-SEN-1-8 - Safety switch sensor



2702976

<https://www.phoenixcontact.com/mx/products/2702976>

Customs tariff number	85365019
Country of origin	DE

Technical data

Product properties

Product type	Safety switches
Application	Safety door monitoring
	Position monitoring
Technology	Transponder

Insulation characteristics

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

Times

Discrepancy time	max. 10 ms (between the safety outputs)
Switch-on delay	typ. 5 s (after switching U_B on)
Switch-on time	max. 400 ms (for the safety outputs)
Risk time	max. 125 ms (Stand-alone device)
Test pulses	typ. 300 μ s (Test pulse duration)
	approx. 100 ms (Test pulse interval)
Delay time	typ. 10 ms (Risk time delay per device)

Electrical properties

Short-circuit current	typ. 100 A (conditional short-circuit current)
Switching frequency	max. 1 Hz
Rated insulation voltage	max. 300 V
Rated surge voltage	max. 1.5 kV

Supply

Supply voltage	24 V DC \pm 15 % (PELV, controlled, residual ripple < 5%)
Current consumption	max. 40 mA
Protection	min. 0.25 A (to be performed externally)
	max. 8 A (to be performed externally)

Output data

Signal

Designation	DGN
Output description	p-wired
Number of outputs	1
Output voltage	min. ($U_B - 1.5$ V (HIGH))
	max. (U_B (HIGH))
	min. 0 V DC (LOW)
	max. 1 V DC (LOW)
Current	min. 1 mA
	max. 50 mA
Short-circuit-proof	yes

PSR-CT-F-SEN-1-8 - Safety switch sensor



2702976

<https://www.phoenixcontact.com/mx/products/2702976>

Safety output

Designation	FO1A, FO1B
Output description	Semiconductor outputs, p-wired
Number of outputs	2
Output voltage	min. ($U_B - 1.5 \text{ V}$ (HIGH FO1A, FO1B)) max. (U_B (HIGH FO1A, FO1B)) min. 0 V DC (LOW FO1A/FO1B) max. 1 V DC (LOW FO1A/FO1B)
Switching current	min. 1 mA (per safety output) max. 150 mA (per safety output)
Residual current	$\leq 0.25 \text{ mA}$
Utilization category in accordance with IEC 60947-5-2	150 mA (24 V (DC13))
Short-circuit-proof	yes
Note on protection circuit	NOTE: Protect the outputs under inductive loads with a freewheeling diode.

Connection data

Connection technology

Connection technology	M12 connector
pluggable	no
Number of positions	8

Conductor connection

Connection method	Connector
-------------------	-----------

Signaling

Status display	2 LEDs
----------------	--------

Dimensions

Dimensional drawing	
Width	26.5 mm
Height	40 mm
Depth	18 mm
Minimum distance	140 mm (between two safety circuits) 7 mm (between sensor and actuator when traveling in the Y-direction)

Material specifications

PSR-CT-F-SEN-1-8 - Safety switch sensor



2702976

<https://www.phoenixcontact.com/mx/products/2702976>

Housing material	PBT
------------------	-----

Characteristics

Safety data: EN ISO 13849

Category	4
Performance level (PL)	e

Safety data: IEC 61508 - High demand

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

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP65/IP67/IP69/IP69K IP67 (with SAC cabling)
Ambient temperature (operation)	-25 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Vibration (operation)	in accordance with EN 60947-5-2

Approvals

Conformity/Approvals

EMC conformance	EN 60947-5-3
-----------------	--------------

Mounting

Mounting type	not flush
Assembly instructions	Note EN ISO 14119 Maximum tightening torque to secure: 0.8 Nm
Mounting position	any
Connection method	Connector

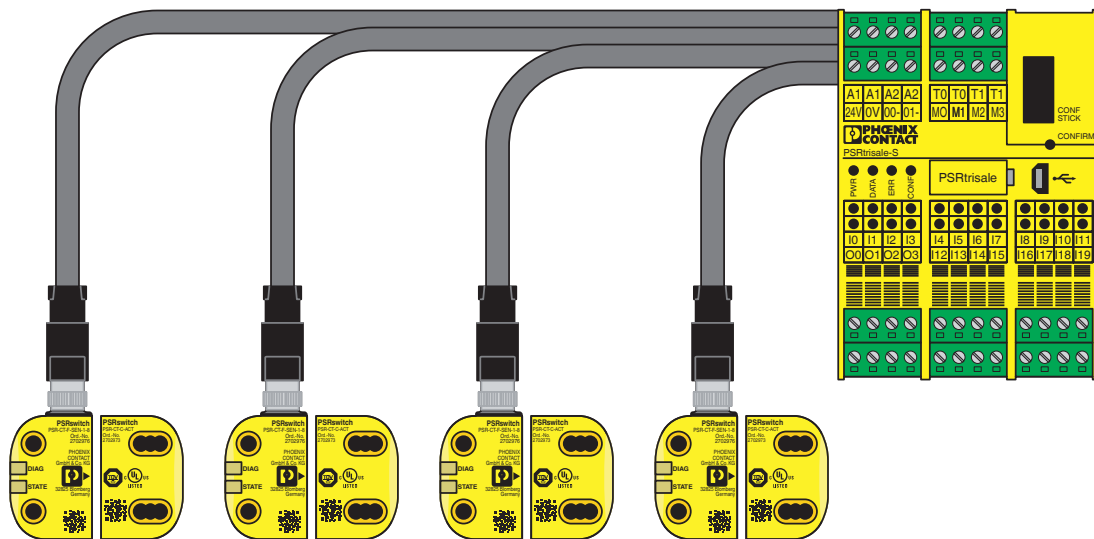
PSR-CT-F-SEN-1-8 - Safety switch sensor

2702976

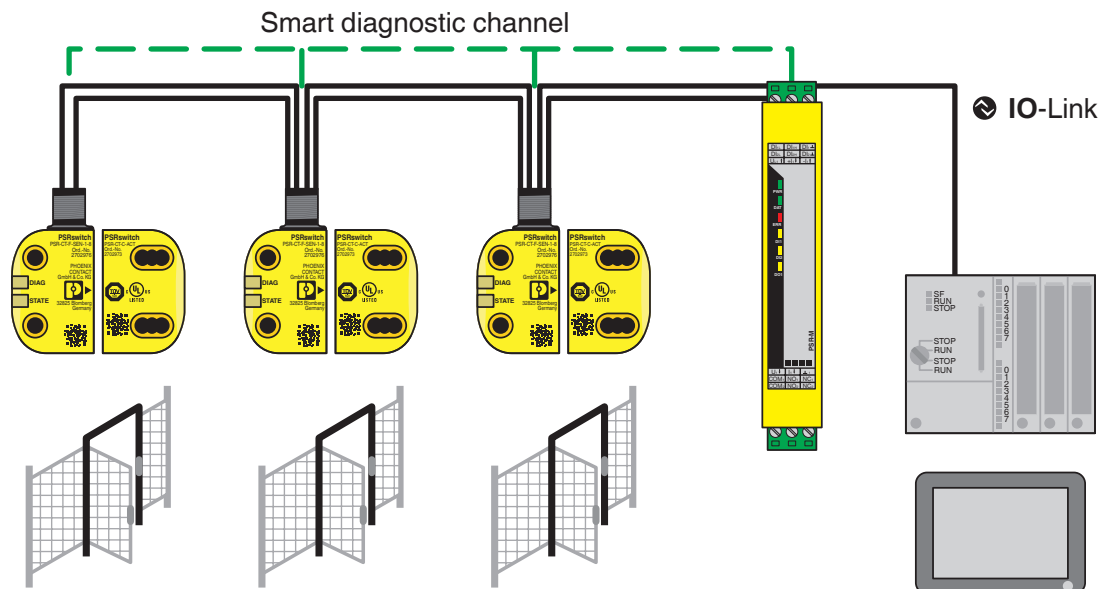
<https://www.phoenixcontact.com/mx/products/2702976>

Drawings

Application drawing



Application drawing



PSR-CT-F-SEN-1-8 - Safety switch sensor



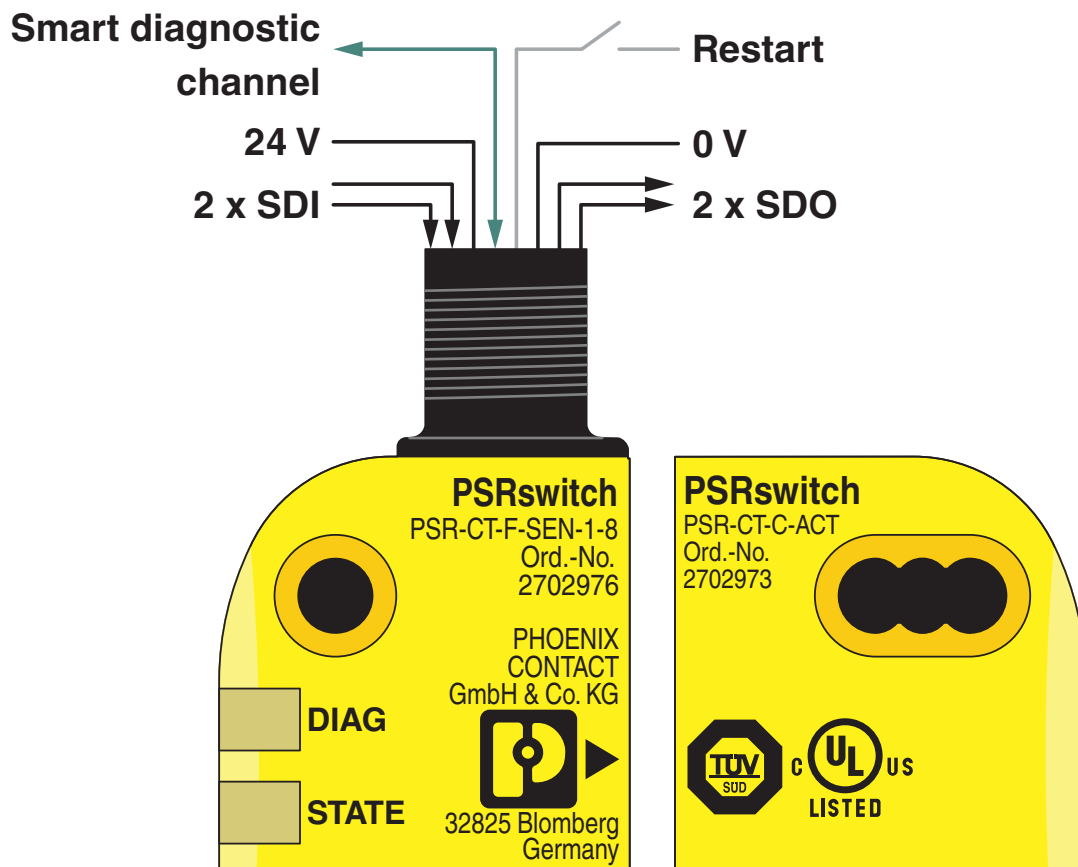
2702976

<https://www.phoenixcontact.com/mx/products/2702976>

Application drawing



Application drawing

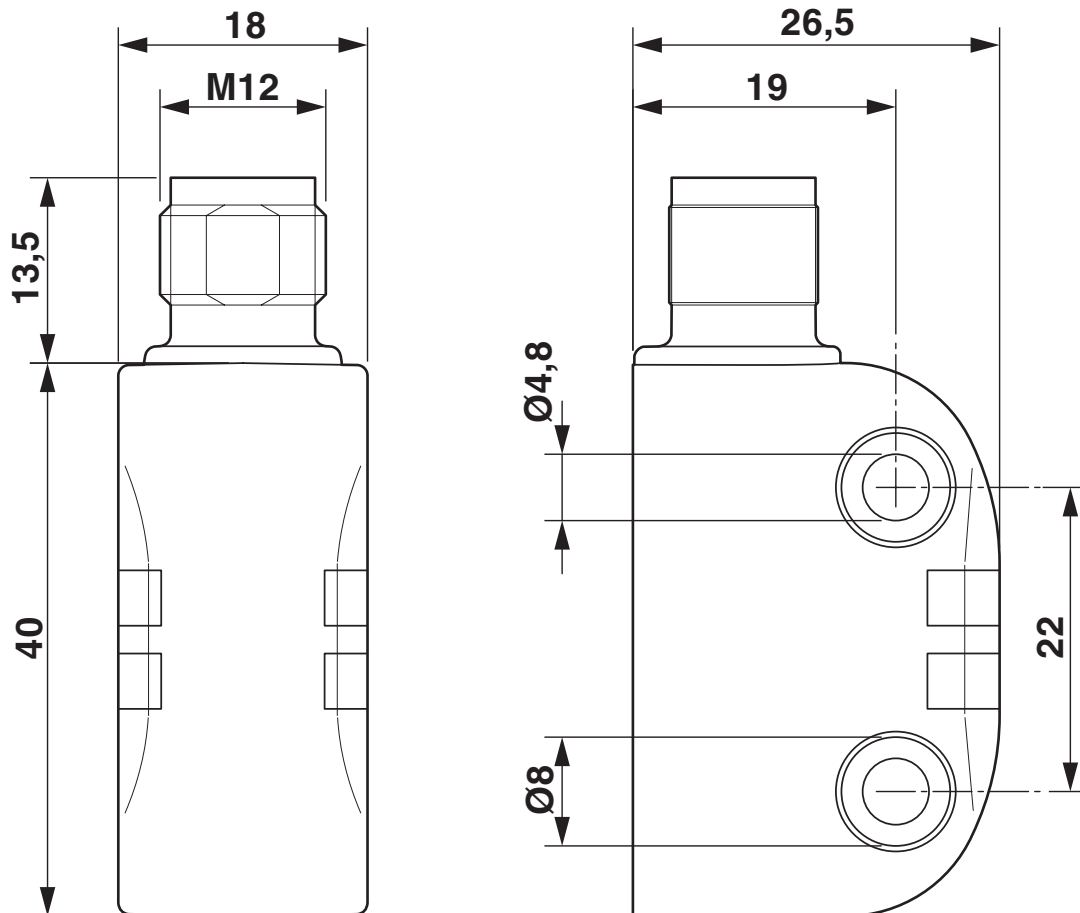


PSR-CT-F-SEN-1-8 - Safety switch sensor

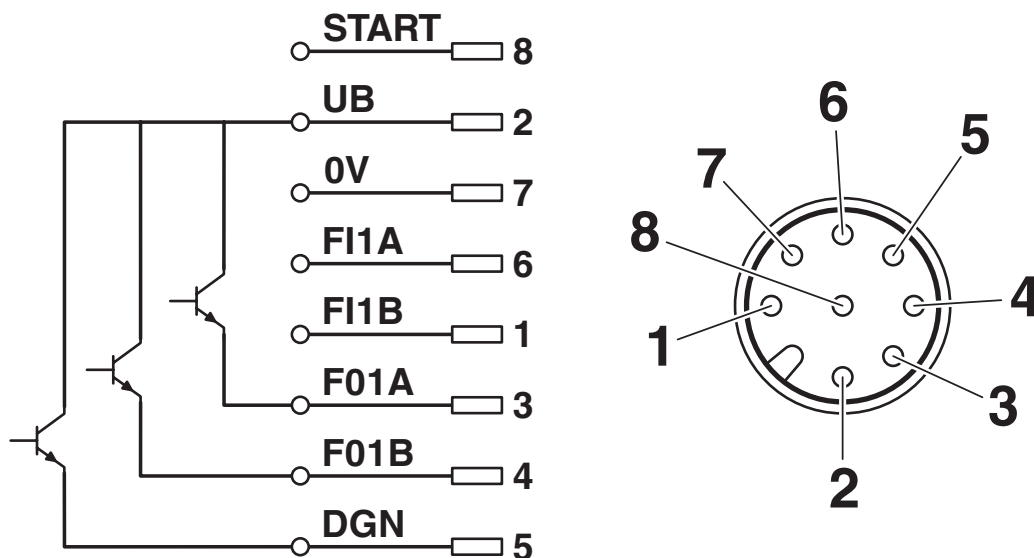
2702976

<https://www.phoenixcontact.com/mx/products/2702976>

Dimensional drawing



Connection diagram



PSR-CT-F-SEN-1-8 - Safety switch sensor



2702976

<https://www.phoenixcontact.com/mx/products/2702976>

Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/mx/products/2702976>



UL Listed

Approval ID: FILE E 196162



cUL Listed

Approval ID: FILE E 196162

Functional Safety

Approval ID: Z10 18 04 29429 005

FCC

Approval ID: YG3-PSR1

Industry Canada

Approval ID: 4720B-PSR1

cULus Listed

PSR-CT-F-SEN-1-8 - Safety switch sensor



2702976

<https://www.phoenixcontact.com/mx/products/2702976>

Classifications

ECLASS

ECLASS-11.0	27272403
ECLASS-12.0	27274601
ECLASS-13.0	27274601

ETIM

ETIM 8.0	EC003015
----------	----------

UNSPSC

UNSPSC 21.0	32151800
-------------	----------

PSR-CT-F-SEN-1-8 - Safety switch sensor



2702976

<https://www.phoenixcontact.com/mx/products/2702976>

Environmental product compliance

REACH SVHC	Lead 7439-92-1
	Lead titanium trioxide 12060-00-3
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

PSR-CT-F-SEN-1-8 - Safety switch sensor



2702976

<https://www.phoenixcontact.com/mx/products/2702976>

Accessories

PSR-CT-C-ACT - Safety switch actuator

2702973

<https://www.phoenixcontact.com/mx/products/2702973>



Proximity safety circuit up to Cat. 4, PL e (EN ISO 13849), SIL 3 (IEC 61508), coded actuator, compatible with all sensor coding types, supplied inductively via the sensor, IP69K

SAC-5P-M12MS BK BR 1-2-4 - Short-circuit connector

1054366

<https://www.phoenixcontact.com/mx/products/1054366>



Termination plug for PSR-CT series RFID transponder switches, M12 male, 5-pos., closes the circuit at the last Y distributor in a series connection

PSR-CT-F-SEN-1-8 - Safety switch sensor

2702976

<https://www.phoenixcontact.com/mx/products/2702976>

SAC-8PY-M/2XF BK 1-PSR - Y distributor

1054338

<https://www.phoenixcontact.com/mx/products/1054338>



Y distributor for PSR-CT series RFID transponder switches, M12 male/female, 5- and 8-pos., for safe series connection of up to 30 devices

SAC-8PY-M/2XF BK 2-PSR - Y distributor

1054339

<https://www.phoenixcontact.com/mx/products/1054339>



Y distributor for PSR-CT series RFID transponder switches, M12 male/female, 5- and 8-pos., for implementation of a manual start circuit in the field

PSR-CT-F-SEN-1-8 - Safety switch sensor

2702976

<https://www.phoenixcontact.com/mx/products/2702976>



SAC-8PY-M/2XF BK 3-PSR - Y distributor

1054341

<https://www.phoenixcontact.com/mx/products/1054341>



Y distributor for PSR-CT series RFID transponder switches, M12 male/female, 5- and 8-pos., for signal contact feedback to the PLC

PSR-MC42-2NO-1DO-24DC-SC - Safety relays

2702901

<https://www.phoenixcontact.com/mx/products/2702901>



Safety relay with IO-Link for emergency stop, safety doors, and light grids, up to SIL 3, Cat. 4, PL e, 2 sensor circuits, automatic or manual, monitored start, 2 enabling current paths, 1 signal output, $U_S = 24 \text{ V DC}$, plug-in screw terminal block

PSR-CT-F-SEN-1-8 - Safety switch sensor

2702976

<https://www.phoenixcontact.com/mx/products/2702976>

PSR-MC42-2NO-1DO-24DC-SP - Safety relays

2702902

<https://www.phoenixcontact.com/mx/products/2702902>



Safety relay with IO-Link for emergency stop, safety doors and light grids, up to SIL 3, Cat. 4, PL e, 2 sensor circuits, automatic or manual, monitored start, 2 enabling current paths, 1 signal output, $U_S = 24 \text{ V DC}$, pluggable Push-in terminal block

PSR-MC43-2SDO-1DO-24DC-SC - Safety relay module

1087561

<https://www.phoenixcontact.com/mx/products/1087561>



Safety relay module with IO-Link for emergency stop, safety doors, and light grids, to SIL 3, cat. 4, PL e, 2 sensor circuits, automatic or manual, monitored start, 2 safe digital outputs, 1 signal output, $U_S = 24 \text{ V DC}$, pluggable screw terminal block

PSR-CT-F-SEN-1-8 - Safety switch sensor

2702976

<https://www.phoenixcontact.com/mx/products/2702976>



PSR-MC43-2SDO-1DO-24DC-SP - Safety relay module

1087569

<https://www.phoenixcontact.com/mx/products/1087569>



Safety relay module with IO-Link for emergency stop, safety doors, and light grids, to SIL 3, Cat. 4, PL e, 2 sensor circuits, automatic or manual, monitored start, 2 safe digital outputs, 1 signal output, $U_S = 24\text{ V DC}$, pluggable Push-in terminal block

PSR-CT-GWY-1DGN-IOL-PI - Data interface

1106407

<https://www.phoenixcontact.com/mx/products/1106407>



Gateway module for acquiring standard status and diagnostic data from PSR-CT safety switches and forwarding data packets to an IO-Link master

Phoenix Contact 2023 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT S.A. de C.V.
Lago Alberto No. 319 - Piso 9
Colonia Granada, Delegación Miguel Hidalgo, México, Ciudad de México, C.P. 11520
+52/55/1101-1380
ventas@phoenixcontact.com.mx