

Ensuring Stable and
Reliable Safety

Safety Non-Contact Door Switches

SFN Series

The SFN series safety non-contact door switches utilize magnetic type detection to monitor opening and closing of doors. The dedicated controller allows multiple connection of up to 30 units. The switches can be installed vertically or horizontally, and can also be installed from both sides which allow application in various types of doors.

Safety Standards

IEC/EN 60947-5-3
IEC/EN 61000-6-2/4
EN ISO 14119

Certifications





Easy Expansion

Up to 30 SFN series units can be connected to a single dedicated controller, and various connection types and connectors are available for easy expansion.

1. Connect Up to 30 Units

Connect up to 30 units to a single dedicated controller to save cost and installation time.



2. Two Connection Types

Users can select between cable type and cable connector type models depending on user requirements.



3. Various Connectors

The cable connector type models can be connected to various connectors and extension cables for flexible installation and maintenance.



Flexible Installation

The units can be installed in right/left, front/rear, and top/bottom directions, allowing flexible installation in various door types.



Sliding Door



Swinging Door



Removable Cover Doors

Operation Indicator

The U-shaped operation indicator allows users to identify operation status from various directions.



IP67 Protection Rating

IP67 protection structure allows stable and error-free operation even in wet or dusty environments.



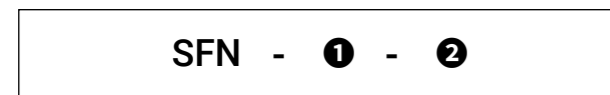
Non-contact Door Switches

SFN Series

Technical Overview

Ordering Information

This is only for reference. For selecting the specific model, follow the Autonics web site.



① Sensing type

M: Magnetic type

② Cable

020: Cable type (2 m)

050: Cable type (5 m)

W: cable connector type

* Sold Separately

• Safety controller non-contact door switch unit: SFC-N322

• M12 Connector cable: C1D5-□, CID5-□, CID5-□P

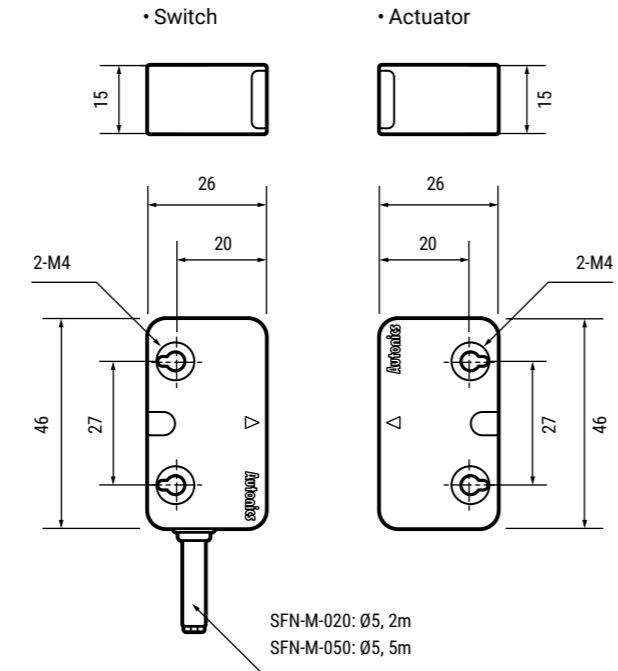
• Branch connector: CCD5-SFN, CYD5-SFN

• Loop connector: CND5-SFN

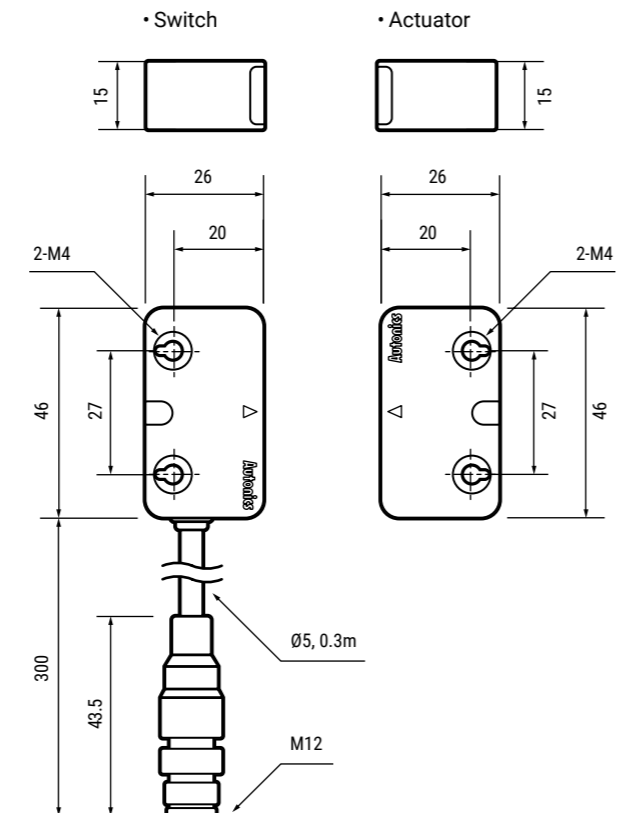
Dimensions

Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

■ Cable Type



■ Cable Connector Type



Specifications

Model	SFN-M-□	
Operating distance	OFF→ON	≥ 5 mm
	ON→OFF	≤ 15 mm
Approval	CE (TUV NORD)	
Unit weight (packaged)	Cable type (2 m): ≈ 100.5 g (≈ 113.8 g)	
	Cable type (5 m): ≈ 199.5 g (≈ 214.8 g)	
	Cable connector type: ≈ 58.1 g (≈ 71.6 g)	
Power supply	24 VDC≒ (± 10 %)	
Operating frequency	100 Hz	
Power consumption ⁰¹⁾	≤ 0.8 W	
Auxiliary output	PNP open collector output - 24 VDC≒, 10 mA	
Operation indicator	ON: green, OFF: red	
Life expectancy	≥ 20,000,000 times (with low load)	
Insulation resistance	≥ 50 MΩ (500 VDC≒ megger)	
Protection circuit	Surge protection circuit, output short over current protection circuit, reverse polarity protection circuit	
Dielectric strength	1,500 VAC~ 50/60Hz for 1 minute	
Vibration	1.0 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 2 hours	
Vibration (malfunction)	1.0 mm amplitude at frequency of 10 to 55 Hz in each X, Y, Z direction for 10 minutes	
Shock	300 m/s ² (≈ 30 G) in each X, Y, Z direction for 3 times	
Shock (malfunction)	300m/s ² (≈ 30G) in each X, Y, Z direction in output ON/OFF status for 3 times	
Ambient temperature	-10 to 55 °C, storage: -20 to 60 °C (no freezing or condensation)	
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)	
Protection structure	IP67 (IEC standard)	
Connection	Cable type / cable connector type model	
Cable	Ø 5 mm, 5-wire, cable type: 2 m / 5 m, cable connector type: 0.3 m	
Wire	AWG26 (0.08 mm), 28-core, core diameter: Ø 0.74 mm	
Connector spec.	M12 plug connector	
Material	Body/CAP: PC	

01) It is rated at 23°C of ambient temperature, and it may be differed up to ± 20 % by ambient temperature.

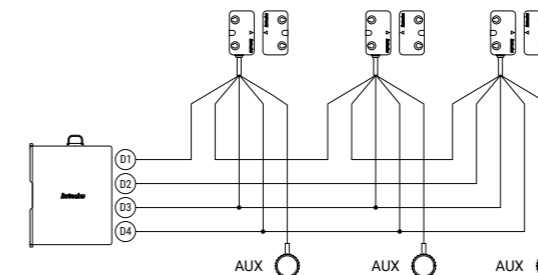
01) Power to the load is not included.

Characteristic level / Safety category (with SFC-N322)	IEC 61508 SIL 3, IEC 62061 SIL CL 3, ISO 13849-1 PLe Cat.4
	- HFT = 1, - Diagnostic Coverage: 99 % (high), - MTTFd = 100 year (high)
	- Mission time = 20 year, - PFH = 3.88E-09

* Safety status in case of error: the switch does not have an internal error recognition function, so it can not maintain a safety status in the event of error. Error recognition is processed in the connected controller (SFC-N322).

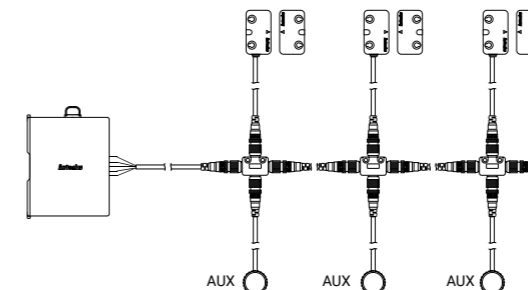
Example of Multiple Connection with Safety Controller (SFC-N322)

■ Cable type



■ Cable connector type

• Connection example of branch connector cross type (CCD5-SFN)



• Connection example of branch connector Y type (CYD5-SFN)

