

Make Life Easy



For Safer Monitoring of Door Opening and Closing

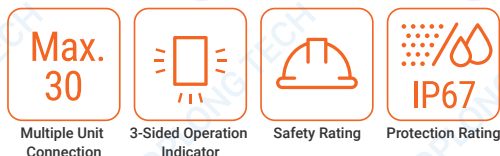


Multiple Connection of Up to 30 Units

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.



www.autonics.com

Autonics

Safety Non-Contact Door Switches

SFN Series

Ordering Information

SFN	-	M	-	1
-----	---	---	---	---

- 1 Cable
- 020: cable type (2 m)
- 050: cable type (5 m)
- W: cable connector type

Operation Distance

- Operating distance represents the distance between the sensing surface of switch and that of actuator.
- Operating distance can be differed according to the moving direction of actuator from the switch.
(at ambient temperature of 23 °C)
- The operating distance may be affected by metal or magnetic substances which is placed closely to the switch.

Operation status	Moving direction	Operating distance
OFF → ON	Front - Back	≥ 5 mm
	Top - Bottom	≥ 2 mm
	Left - Right	≥ 5 mm
ON → OFF	Front - Back	≤ 15 mm
	Top - Bottom	≥ 6 mm
	Left - Right	≤ 15 mm

Connection Examples

Cable type

Wiring a single switch

Wiring multiple switches

Cable connector type

Wiring a single switch

Wiring multiple switches

Maximum 30 unit of switches can be connected to a controller (SFC-N322).

Specifications

Model	SFN-M-□
Operating distance ¹⁾	OFF→ON ≥ 5 mm ON→OFF ≤ 15 mm
Approval	CE
Unit weight (packaged)	Cable type (2m): ≈ 100.5 g (≈ 113.8 g) Cable type (5m): ≈ 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 ¹⁾	≤ 400 mA
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 (for 1 min) in each X, Y, Z direction for 2 hours
Vibration (malfunction)	1.0 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 10 min
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 (a non freezing or condensation environment)
Ambient humidity	35 to 85 %RH, storage : 35 to 85 %RH (a non freezing or condensation environment)
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 connector
material	Body/CAP: PC

Charateristic 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 cannot maintain a safety status in the event of error.
Error recognition is processed in the connected controller (SFC-N322).

Dimensions

Unit: mm, For the detailed drawings, follow the Autonics website.

Cable type

Switch

Actuator

Cable connector type

Switch

Actuator