





Non-contact switches for monitoring the status of guarding doors

Non-contact switches monitor the status of guarding doors. LED for easy diagnosis and stainless steel housing for high hygiene demands in the food industry are available

- Connect up to 3 switches in series
- Operates with all Omron safety controllers
- Operates behind stainless steel fittings
- Non-contact – no abrasion – no particles
- Screw-hole covers support hygienic design (NMPC)
- Conforms to safety categories up to PLe acc. EN ISO13849-1




Ordering information

Polyester housing




Type	Cable connection	Contact configuration	Order code
 Elongated sensors	5 m pre-wired	2NC/1NO	F3S-TGR-NLPC-21-05
	10 m pre-wired		F3S-TGR-NLPC-21-10
	M12, 8-pin		F3S-TGR-NLPC-21-M1J8
 Small sensors	5 m pre-wired		F3S-TGR-NSPC-21-05
	10 m pre-wired		F3S-TGR-NSPC-21-10
	M12, 8-pin		F3S-TGR-NSPC-21-M1J8
 Miniature sensors	5 m pre-wired*		F3S-TGR-NMPC-21-05
	10 m pre-wired*		F3S-TGR-NMPC-21-10
	M12, 8-pin*		F3S-TGR-NMPC-21-M1J8
 Barrel sensors	5 m pre-wired		F3S-TGR-NBPC-21-05
	10 m pre-wired		F3S-TGR-NBPC-21-10
	M12, 8-pin		F3S-TGR-NBPC-21-M1J8

* Optional cable exit to the right side is available for F3S-TGR-NMPC-types. Please add "-R" to the order code (i.e. F3S-TGR-NMPC-21-05-R)

Stainless steel housing

Type	Cable connection	Contact configuration	Order code
 Elongated sensors	5 m pre-wired	2NC/1NO	F3S-TGR-NLMC-21-05
	10 m pre-wired		F3S-TGR-NLMC-21-10
	M12, 8-pin		F3S-TGR-NLMC-21-M1J8
 Small sensors	5 m pre-wired		F3S-TGR-NSMC-21-05
	10 m pre-wired		F3S-TGR-NSMC-21-10
	M12, 8-pin		F3S-TGR-NSMC-21-M1J8
 Barrel sensors	5 m pre-wired		F3S-TGR-NBMC-21-05
	10 m pre-wired		F3S-TGR-NBMC-21-10
	M12, 8-pin		F3S-TGR-NBMC-21-M1J8

Hygienic and food types

Type	Cable connection	Contact configuration	Order code
 Small sensors	5 m pre-wired	2NC/1NO	F3S-TGR-NSHC-21-05
	10 m pre-wired		F3S-TGR-NSHC-21-10
	M12, 8-pin		F3S-TGR-NSHC-21-M1J8
 Small sensors (Special food type)	5 m pre-wired		F3S-TGR-NSFC-21-05
	10 m pre-wired		F3S-TGR-NSFC-21-10
	M12, 8-pin		F3S-TGR-NSFC-21-M1J8
 Miniature sensors	5 m pre-wired*		F3S-TGR-NMHC-21-05
	10 m pre-wired*		F3S-TGR-NMHC-21-10
	M12, 8-pin*		F3S-TGR-NMHC-21-M1J8

* Optional cable exit to the right side is available for F3S-TGR-NMHC-types. Please add "-R" to the order code (i.e. F3S-TGR-NMHC-21-05-R)

Specifications

Mechanical data

Item	Model	Polyester types	Stainless steel types
Operating distance*	OFF → ON (Sao)	Min. 8 mm/max. 10 mm	
	ON → OFF (Sar)	Min. 12 mm/max. 22 mm	
Actuator approach speed	Min.	4 mm/s	
	Max.	1,000 mm/s	
Operating temperature	–	–25 to 80°C	–25 to 105°C
Enclosure protection	Flying lead M12 connector	IP69K IP67	
Material	–	Black polyester	Stainless steel 316

* Depends on type. Please see online data sheet.

Electrical data

Item	Model	Polyester types	Stainless steel types
Power supply	–	24 VDC±15%	
Power consumption	Max.	50 mA	
Switching current	Min.	10 mA, 10 VDC	
Rated loads	NC contacts	Max.	100 mA, 24 VDC 100 mA, 24 VDC
	NO contact		
Output type	–	Electronic output (potential-free optocoupler output)	

Approved standards

EN standards certified by TÜV Rheinland
EN 954-1, EN ISO13849-1
EN 60204-1
EN/IEC 60947-5-3
UL 508, CSA C22.2
BS 5304
EN 1088-1 conformance

Wiring examples (Single head connection)

G9SA

Single sensor application with G9SA-301
(up to PLe acc. EN ISO 13849-1)

