

Optical proximity switches for glass fiber wave guides OPE Series

- For all glass fiber wave guides of SNT Sensortechnik AG (scanners and barriers)
- Infrared light source
- Detection of smallest objects
- Low cost versions with potentiometer setting
- Robust housing
- Versions with 110/230VAC and relay output



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Properties

The optical proximity switches for glass fiber wave guides type OPE are the basic electronics for all fiber-optic cables of the types FOY (scanner) and FOI (barriers) of SNT Sensortechnik AG. They can also be operated stand alone as an optical proximity switch. Thanks to clocked infrared light, they are non sensitive to ambient light. The electronics is built in a robust housing. The OPE together with the SNT glass fiber wave guides are a robust detection device for smallest parts under difficult conditions. The switching distance can be set by 1- or 10-turn potentiometers. The various versions have different sensitivity, speed, outputs and housings (see table on page 2).

Function

Optical wave guide sensors are ideally suited when objects have to be detected in confine conditions. The (bigger) sensor is separated from the small scanner head. Glass-fiber wave guides are more robust and have longer service life compared to plastic guides. The proximity switches type OPE are sensors which fit to the glass fiber wave guides of SNT Sensortechnik AG. The guide is mounted with an appropriate nut on the thread of the sensor. The O-ring seal makes it a fully tight connection (see drawing besides).

Scanner:

Together with an FOY glass fiber wave guide a reflection scanner can be realized. When an object enters the invisible light beam within the pre selected distance, the sensor switches.

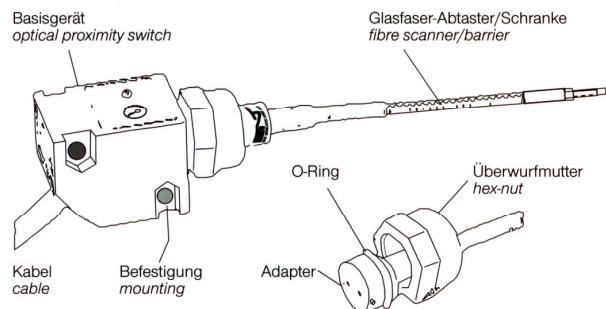
Barrier:

The sensor works as light barrier together with an FOI glass fiber wave guide. When the invisible light beam is interrupted by an object, the sensor switches.

Depending on the sensor version the output is either NO or NC. The output status is indicated by the red LED. The LED is on when the output is active.

Mounting

The OPE sensors can be mounted with 2 M4 screws and a mounting bracket (scope of delivery).



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Type	Art. #	Spezial properties	Switch distance [mm] *	Hysteresis [%]	Max. switching speed [Hz]	Switch on/off time [ms]	PNP	NPN	Relay	NO	NC	Supply voltage	Housing (page 3)	Electr. connection (page 3)
OPE 300 LEPS 24	23000	1-turn potentiometer	300	15	40	12	•			•		24VDC	V	A
OPE 300 LENS 24	23100	1-turn potentiometer	300	15	40	12		•		•		24VDC	V	B
OPE 500 LZPS 24	24000	10-turn potentiometer	500	15	40	12	•			•		24VDC	V	A
OPE 500 LZNS 24	24100	10-turn potentiometer	500	15	40	12		•		•		24VDC	V	B
OPE 750 LZPS 24	24050	10-turn potentiometer	750	15	40	12	•			•		24VDC	V	A
OPE 750 LZNS 24	24060	10-turn potentiometer	750	15	40	12		•		•		24VDC	V	B
OPE 300 MEPS 24	24500	1-turn potentiometer	300	15	200	2	•			•		24VDC	V	A
OPE 300 MENS 24	24510	1-turn potentiometer	300	15	200	2		•		•		24VDC	V	B
OPE 300 HEPS 24	25000	1-turn potentiometer	300	15	1000	0.4	•			•		24VDC	V	I
OPE 300 HENS 24	24520	1-turn potentiometer	300	15	1000	0.4		•		•		24VDC	V	I
OPE 300 MEPA 24	24630	1-turn potentiometer	300	15	200	2	•			•	•	24VDC	V	C
OPE 300 MENA 24	24640	1-turn potentiometer	300	15	200	2		•		•	•	24VDC	V	D
OPE 300 MEQA 24	24400	Switch for NC/NO	300	15	200	2	•	•		•	•	24VDC	V	G
OPE 300 MEPA 24 TO	24600	Switch for NC/NO	300	15	200	2	•			•	•	24VDC	Y	A
OPE 300 MEPS 24 AA	24200	Adjustable times $t_{on/off}$ Separate switch for NC/NO	300	15	40	0.05 -5s	•			•	•	24VDC	V	A
OPE 300 MENS 24 AA	24300	Adjustable times $t_{on/off}$ Separate switch for NC/NO	300	15	40	0.05 -5s		•		•	•	24VDC	V	B
OPE 300 LERA 24	21000	Relay	300	15	20	25			•	•	•	24VD/AC	V	H
OPE 300 LERA 110	21200	Relay	300	15	20	25			•	•	•	110VAC	V	H
OPE 300 LERA 220	21300	Relay	300	15	20	25			•	•	•	230VAC	V	H
OPE 500 LZRA 24	22000	Relay	500	15	20	25			•	•	•	24VD/AC	V	H
OPE 500 LZRA 110	22200	Relay	500	15	20	25			•	•	•	110VAC	V	H
OPE 500 LZRA 220	22300	Relay	500	15	20	25			•	•	•	230VAC	V	H
OPE 750 LZRA 24	22350	Relay	750	15	20	25			•	•	•	24VD/AC	V	H
OPE 750 LZRA 220	22360	Relay	750	15	20	25			•	•	•	230VAC	V	H

* nominal switching distance for target paper 200g/m², size DIN A4 (without glass fiber wave guide)

Outputs

- PNP/NPN: short circuit proof, max. 35VDC, 100mA
- Relay: max. 250V, 2A

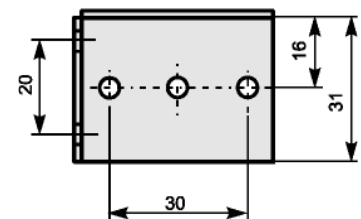
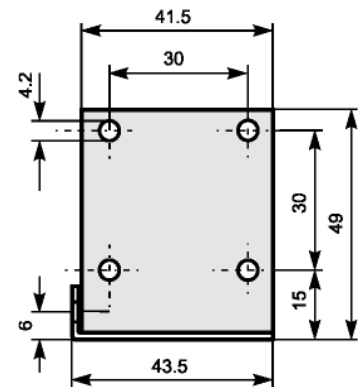
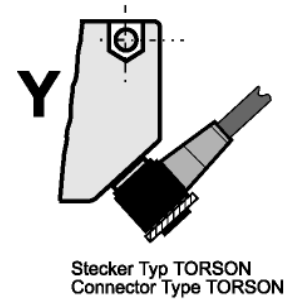
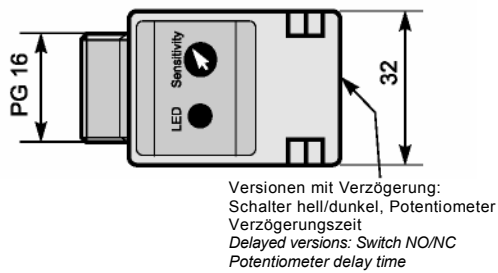
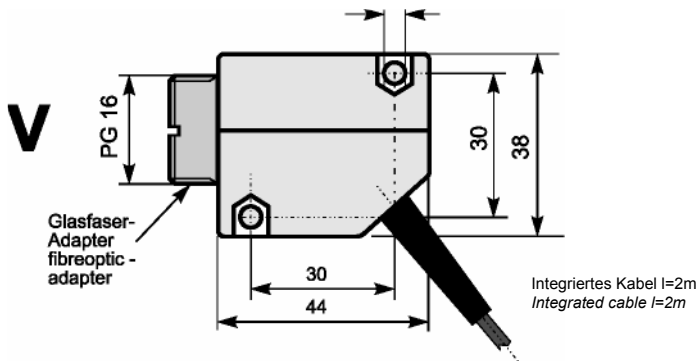
Scope of delivery

- Optical proximity switch
- 1 mounting bracket and 2 M4 screws/nuts

Hint

The new type OPD 1500 TA 24 C is an alternative to the OPE and OPR types which are described on this data sheet. The OPD offers higher distance and speed and it is more precise due to teach-in programming (see separate data sheet OPD).

Housings



Befestigungswinkel OPM06 für Geräte der Serie OPE
Mounting bracket OPM06 for OPE series

Electrical connection

