

FOS01

Optoelectronic Level Switch

- for liquids
- small and compact, no mechanics
- easy installation
- switching status indication by LED
- low maintenance
- max. pressure: 50 bar
- max. temperature: 135 °C



Description:

An optical sensor is mounted in a robust stainless steel housing. It consists of a quartz glass tip with an infrared diode as transmitter and a light-sensitive semiconductor as receiver. If no liquid wets the sensor tip, the infrared light is completely reflected from the inside of the quartz glass.

However, as soon as it is immersed in the medium, a large part of the transmitted light can be escape into the liquid. This is registered by the receiver, which then initiates a switching process at the PNP transistor output of the device, which is indicated directly by a green LED.

Typical applications:

The field of application for optoelectronic level indicators is the detection of limit values in a large number of liquids. The advantage here is that the measurement method is largely independent of physical variables such as refractive index, color, density, dielectric constant or conductivity. The very compact design guarantees minimal space requirements, making measurement in very small volumes possible. The arbitrary mounting position as well as the high pressure and temperature ranges offer a wide range of applications.

Models:

FOS01 Optoelectronic level switch

Process connection:

G 1/2 A threaded connection (standard)
optional: M16 x 1,5 and 1/2" NPT

Electrical connection:

3 m PVC cable (standard)
optional: plug connection Binder 713 available.

Output:

The factory setting of the switch is either immersion or submersible.

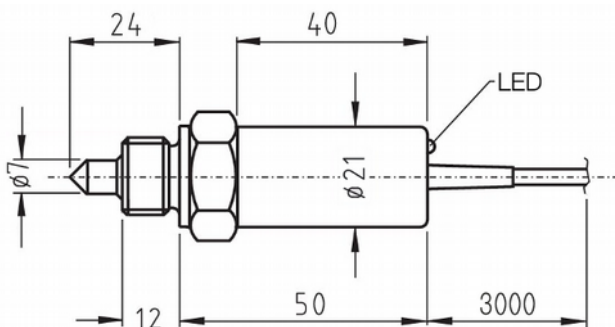
Sensor housing material:

The switch housing material is always stainless steel 1.4301, the sensor housing is optionally available in various stainless steels.

Technical Data:

Max. pressure:	0 to 50 bar
Max. media temp.:	-30 °C to +135 °C
Max. ambient temp.:	-25 °C to +70 °C
Switch housings:	stainless steel 1.4301
Sensor housings:	stainless steel 1.4301, 1.4541 or 1.4571
Light conductor:	quartz glass
Gasket:	graphite / PTFE
Switch status display:	green LED
Weight:	0,10 kg to 0,15 kg
Precision:	± 0,5 mm
Light source:	IR light 930 nm
Ambient light:	max. 10.000 Lux
Min. distance to an opposite surface:	>10 mm > 20 mm if electropolished
Mounting position:	any

Dimensions:



Order Code:

Order number:	FOS01.	3.	2.	1.	1.	0
Optoelectronic level switch						
Process connection:						
1 = M16 x 1,5						
2 = 1/2" NPT (with cable connection only)						
3 = G 1/2 A (standard)						
Electrical connection:						
1 = 3 m cable PVC						
2 = round plug M12x1						
Output:						
1 = immersion switching (N/O with rising level)						
2 = submerging switching						
Sensor housing material:						
1 = stainless steel 1.4571						
Options:						
0 = without						
9 = please specify in plain text						

Accessory:

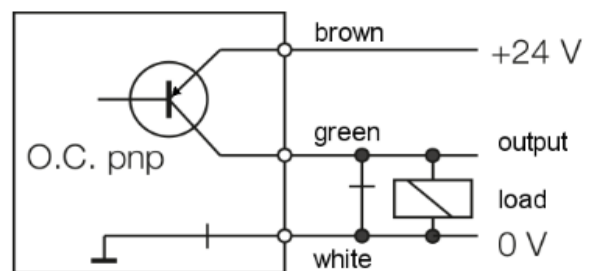
SM12: M12 connector plug with PVC- cable



Electrical Data:

Power supply:	24 VDC ± 30 %
Current consumption:	max. 40 mA
Output:	PNP open collector, short-circuit-proof, current, voltage and power limitation
Switching current:	(T _u = 70 °C): 0,5 A
Connection:	PVC cable 3 x 0,14 mm ² or plug 4-pole acc. to DIN 41524
Protection class:	IP 66 acc. to EN 60529 with cable, IP 65 acc. to EN 60529 with plug

Electrical Connection:



Pin assignment:

