FO-01

Optoelectronic Level Switch



Features

/ Small and compact

/ Easy to mount

/ No mechanical components

/ Easy to maintain

Description:

An optical sensor is mounted in a robust stainless steel housing. It consists of a quartz glass tip which contains an infrared diode, as a transmitter, and a light-sensitive semi-conductor as the receiver. If no fluid moisture touches the sensor tip, the infrared light will be fully reflected by the inside of the quartz glass. However, as soon as it dips into the medium a large portion of the transmitted light can pass into the fluid. Registering this, the receiver initiates a switching operation at the device's PNP transistor output which is then directly displayed by a green LED.

Application:

The field of applications for the optoelectronic level switch is the detection of limit values in a number of fluids. The main advantage is that the method of measurement is to a large extent independent of physical parameters like refractive index, colour, density, dielectric constant or conductivity. The extremely compact design guarantees minimum space; consequently, measurements in very small volumes becomes convenient. It can be mounted anywhere and the range of high pressure and temperature assure a broad spectrum of applications.

Technical Specifications:

max. Pressure /	0. . .50 bar
max. Media temp. /	-30. . .+135°C
max. Ambient temp. /	-25. . .+70°C
Electronic housing /	stainless steel
Sensor housing /	stainless steel
Lighting circuit /	quartz glass
Sealing /	graphite / PTFE
Weight /	approx. 75 g without cable
Accuracy /	± 0.5 mm
Light source /	IR light 930 nm
Ambient light /	max. 10.000 Lux
min. Clearance to opposite-side surface /	> 10 mm > 20 mm with electropolished surface
Assembling position /	any
Spanner width /	SW24 at M16 x 1.5 and ½"-NPT SW30 at G½"

Ordering Codes:

Order number	**FO-01.**	**1.**	**2.**	**1.**	**1.**	**0**

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Process connection /
1 = M16 x 1.5 male
2 = ½" NPT male
3 = G ½" A male

Electrical connection /
1 = 3m PVC cable
2 = plug connection Binder 713 M12

Output /
1 = switching when immersing
2 = switching when surfacing

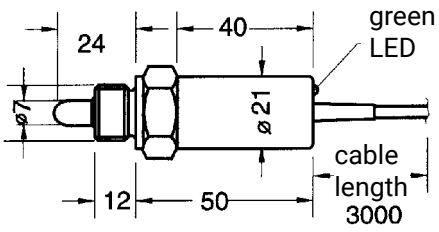
Sensor housing material /
1 = stainless steel
99 = special material on request

Options /
0 = no option
1 = counter plug 4-pole Series 713

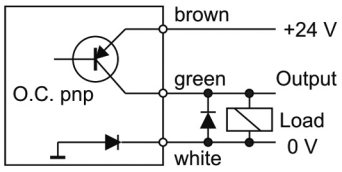
Electrical Specifications:

Supply voltage /	24 VDC -25. . .+30%
Consumption /	max. 40 mA
Output /	PNP open collector transistor, short-circuit protected, current, voltage and power limitation
Switching status /	green LED
Switching current /	For Tu = +70°C: 0.5 A
Electrical connection /	PVC cable 3 x 0.14 mm² or plug 4-pole Series 713, M12
Protection class /	with cable IP 66 per EN 60 529 with plug IP 65 per EN 60 529

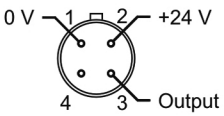
Dimensions in mm:



Connection diagram



pin assignment



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