



Opto-Electronic Level Switch OLS-F1

For sterile process engineering



- Autoclavable
- Compact design
- No moving parts
- Any installation length
- Accuracy ± 0.5 mm

D-EN-OLS-F1-20190528



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Description

The opto-electronic level switch OLS-F1 is used for liquid level monitoring of liquids in sterile process engineering. The opto-electronic sensor contains an infrared LED and a light receiver. The LED light is directed into a prism that forms the tip of the sensor. As long as the tip is not immersed in liquid, the light is reflected inside the prism to the receiver.

If the liquid in the container rises and encloses the tip, the light is refracted by the liquid and no longer, or only weakly, reaches the receiver, which responds to this change and initiates a switching process.

The optoelectronic sensor OLS-F1 has been specially developed for sterile process engineering and is suitable for a wide variety of single-use fields. Autoclavable applications can be carried out up to a temperature of 134 ° C.

Applications

- Food and beverage production
- Pharmaceutical industry, biotechnology, drug production
- Aseptic applications

Features

- Autoclavable
- Compact design
- No moving parts
- Any installation length
- Accuracy ± 0.5 mm

Technical data

General data

Accuracy	$\pm 0,5$ mm
Minimum distance of the glass tip to an opposite surface	≥ 10 mm ≥ 20 mm at electropolished surface
Installation position	any
Installation position EL	Standard: 30 mm, max. 300 mm Other lengths on request
Process connection	• Clamp connections according to DIN 32676 - DN 10 ... DN 50 design A - DN 21.3 --- DN 48.3 design B - DN $\frac{3}{4}$" ... DN 2" design C • Clamp connections according to ISO 2852 (DN 17.2 ... DN 51) • Tri-Clamp (DN $\frac{3}{4}$" ... DN 2")
Surface	$R_a < 0,8 \mu\text{m}$

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Technical data	
Design data	
Medium temperature	-30 ... +100°C autoclavable, max. 134°C at saturated steam conditions
Ambient temperature	-25 ... +70°C
Operating pressure	0 ... 2.5 Mpa (0 ... 25 bar)
Material	Quartz glass
- Optical fiber - Housing and process connection	Stainless steel 1.4435

Electrical data	
Auxiliary energy	DC 12 ... 32V
Max. current consumption	40 mA
Electrical connection	M12 round plug, 4-pin
Output	PNP-transistor, reverse polarity protected
Switching function	Normally open contact (closed in medium) or Normally closed contact (open in medium)
Protection	IP 65 with plug IP 69K with protective cap
Number of switching points	1

Accessories	Ordering No.
Protective cap for M12 x 1 round plug, PTFE seal, maximum torque 5 Nm, SW 15 Material: CuZn / Ni	 14113588

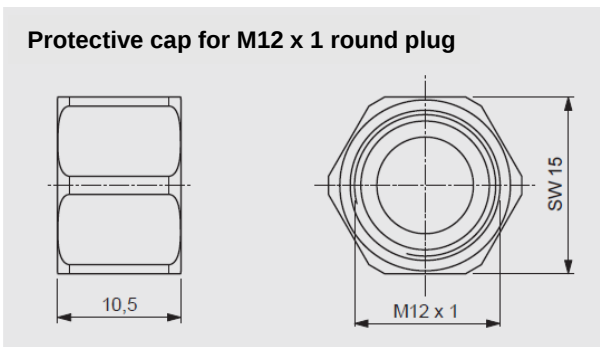
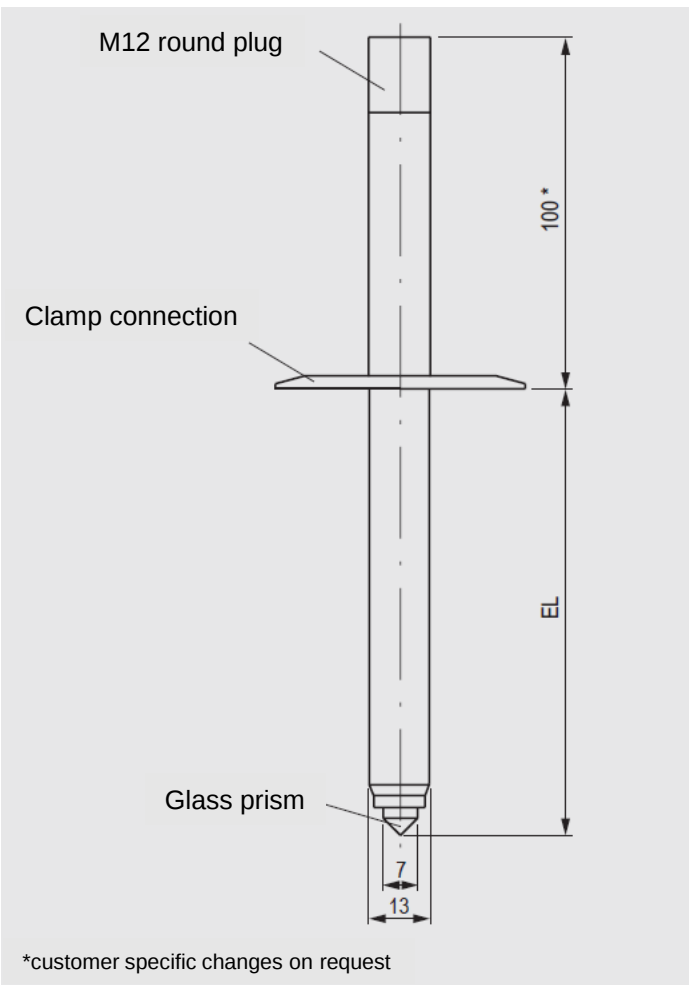
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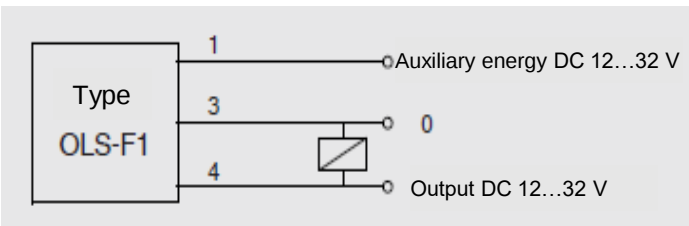
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Dimensions



Electrical connection scheme



Cable assign M12 round plug	
1	Auxiliary energy DC 12 ... 32V
3	0
4	Output DC 12 ... 32V

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