

Optoelectronic level switch

Selectable switch length

Model OLS-C02

WIKA data sheet LM 31.32

Applications

- Machine tools
- Hydraulics
- Plant construction and machine building
- Pump technology
- For liquids such as oils, water, distilled water, aqueous media

Special features

- Selectable switch length from 65 mm to 1,500 mm
- No moving components
- Mounting position as required
- Accuracy ± 2 mm
- Choice of electrical connections: PUR, PVC cable, circular connector M12 or angular connector EN 175301-803 A



Optoelectronic OEM level switch, model OLS-C02, with cable outlet

Description

The model OLS-C02 optoelectronic level switch is used for monitoring the level of liquids. The optoelectronic sensor consists of an infrared LED and a light receptor.

The light from the LED is directed at a prism which forms the tip of the sensor. So long as the tip is not immersed in liquid, the light is reflected within the prism to the receiver.

When the liquid rises within the vessel and surrounds the tip, the light beam is refracted by the liquid, so that the receiver is no longer or only weakly reached by the light and reacts to this change by triggering a switching operation.

The model OLS-C02 level switch offers the advantage that its switch length is selectable. This enables an optimal adaptation to the application-specific requirements.

Specifications

General data	
Measurement accuracy	±2 mm
Minimum distance from the glass tip to an opposite surface	≥ 10 mm ≥ 20 mm with electropolished surface
Mounting position	as required
Switch length L	Standard lengths: 65, 150, 300, 500, 750, 1,000 and 1,500 mm other lengths on request L _{min} = 65 mm L _{max} = 1,500 mm
Process connection G	G ½" male

Design data	
Responsiveness	Preset for the detection of aqueous media and oils Option: Adjustable responsiveness (trimmer) for other liquids and foaming media
Medium temperature	-30 ... +100 °C
Ambient temperature	-25 ... +70 °C
Operating pressure	0 ... 2.5 MPa (0 ... 25 bar)
Materials	
<ul style="list-style-type: none"> ■ Light guide 	Borosilicate glass, fixed with silicone adhesive (Option: Fixed with epoxy resin)
<ul style="list-style-type: none"> ■ Case and process connection 	Stainless steel 1.4571

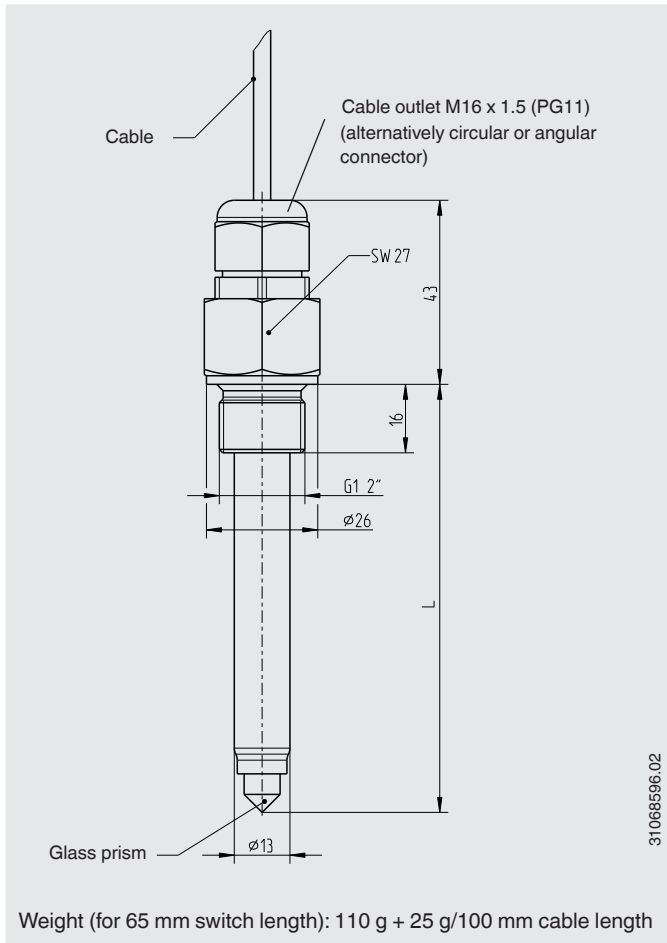
Electrical data	
Power supply	DC 12 ... 32 V
Max. current supply	40 mA
Electrical connection	
<ul style="list-style-type: none"> ■ PUR, PVC cable 	Cable length freely definable Diameter: 3 x 0.25 mm ² Cable end: Cut to length
<ul style="list-style-type: none"> ■ Circular connector ■ Angular connector 	M12 x 1 (4-pin) per EN 175301-803 A
Output signal	PNP transistor, protected against reverse polarity, 200 mA switching current
Switching function	Normally open (closed in medium) or normally closed (open in medium)
Ingress protection	IP65
Number of switch points	1

Switching delay of up to 7 s on request

Options

- Other versions on request

Dimensions in mm



Electrical connection diagram

Cable assignment

	BN	U ₊
	WN	U ₋
	GN	SP



Assignment, M12 x 1 circular connector

	1	U ₊
	3	U ₋
	4	SP


Assignment, angular connector per EN 175301-803 A

	1	U ₊
	2	U ₋
	3	SP

Accessories

Description	Temperature range	Cable Ø	Order no.	
M12 connector with moulded cable				
 Straight version, cut to length, 4-pin, 2 m (6.6 ft), PUR cable, UL listed, IP67	-20 ... +80 °C (-4 ... 176 °F)	4.5 mm (0.18 in)	14086880	
			Straight version, cut to length, 4-pin, 5 m (16.4 ft), PUR cable, UL listed, IP67	14086883
			Straight version, cut to length, 4-pin, 10 m (32.8 ft), PUR cable, UL listed, IP67	14086884
 Angled version, cut to length, 4-pin, 2 m (6.6 ft), PUR cable, UL listed, IP67	-20 ... +80 °C (-4 ... 176 °F)	4.5 mm (0.18 in)	14086889	
			Angled version, cut to length, 4-pin, 5 m (16.4 ft), PUR cable, UL listed, IP67	14086891
			Angled version, cut to length, 4-pin, 10 m (32.8 ft), PUR cable, UL listed, IP67	14086892

Approvals

Logo	Description	Country
	EU declaration of conformity <ul style="list-style-type: none"> ■ EMC directive EN 61326 emission (group 1, class B) and interference immunity (industrial application) ■ RoHS directive 	European Union

Manufacturer's information and certificates

Logo	Description
-	China RoHS directive

Approvals and certificates, see website

Ordering information

Model / Process connection / Switch length / Electrical connection / Cable length / Switching function / Options

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