Optoelectronic level switch
High-temperature version
Model OLS-C05

Applications

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

Special features

- Use at temperatures of up to +170 °C
- Mounting position as required
- Accuracy ±2 mm
- Visual indication of the switching status
- Choice of electrical connections: PUR, PVC cable, circular connector M12 x 1 or angular connector EN 175301-803 A

Optoelectronic OEM level switch, model OLS-C05, with angular connector

Description

The model OLS-C05 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.

For versions with trimmer, the switching status can be read directly on the sensor (internal red LED).

The model OLS-C05 level switch is designed for use with liquids at high temperatures of up to +170 °C.

Data sheets showing similar products:
Optoelectronic level switch, for industrial applications; model OLS-C01; see data sheet LM 31.31
Optoelectronic level switch, selectable switch length; model OLS-C02; see data sheet LM 31.32
Optoelectronic level switch, for refrigeration technology; model OLS-C04; see data sheet LM 31.34

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
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	-40 … +170 °C
Ambient temperature	-30 … +80 °C
Operating pressure	0 … 2.5 MPa (0 … 25 bar)
Materials ■ Light guide ■ Case ■ Process connection	 Borosilicate glass, fixed with epoxy resin Stainless steel 1.4305 (non-wetted parts) Stainless steel 1.4571

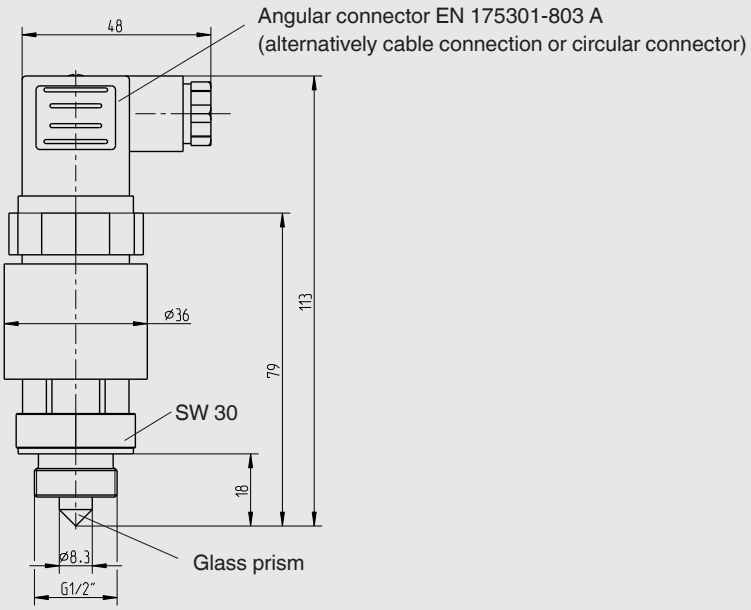
Electrical data	
Power supply	DC 12 ... 32 V
Max. current supply	40 mA
Electrical connection ■ PUR, PVC cable ■ Circular connector ■ Angular connector	 Cable length freely definable Diameter: 3 x 0.25 mm² Cable end: Cut to length M12 x 1 (4-pin) per EN 175301-803 A
Output signal	PNP transistor, protected 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

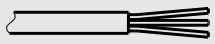
- Other versions on request

Dimensions in mm



Weight: 170 g

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
CE	**EU declaration of conformity** ■ 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 / Electrical connection / Switching function / Cable length / Options

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