

# Optoelectronic level switch For refrigeration technology Model OLS-C04

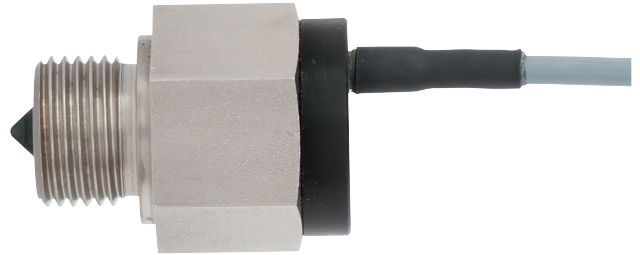
WIKA data sheet LM 31.34

## Applications

- Level monitoring in refrigeration plants

## Special features

- Application with refrigerants
- Mounting position as required
- Accuracy  $\pm 2$  mm
- Visual indication of the switching status
- Choice of electrical connections: PUR, PVC cable or circular connector M8



Optoelectronic OEM level switch, model OLS-C04,  
with cable outlet

## Description

The model OLS-C04 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 switching status can be read directly on the sensor (yellow LED).

The model OLS-C04 level switch can be used in refrigeration plants, since the glass prism is fused within the steel case.

## 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
Visual indication of the switching status	1 LED
Process connection G	G ½" or ½" NPT (male)

Design data	
Responsiveness	Preset for the detection of refrigerants, aqueous media and oils  Option: Adjustable responsiveness (trimmer) for other liquids and foaming media
Medium temperature	-40 ... +100 °C
Ambient temperature	-30 ... +70 °C
Operating pressure	0 ... 4 MPa (0 ... 40 bar)
Materials	
■ Light guide	Glass, fused within the steel case
■ Case and process connection	Steel, nickel-plated

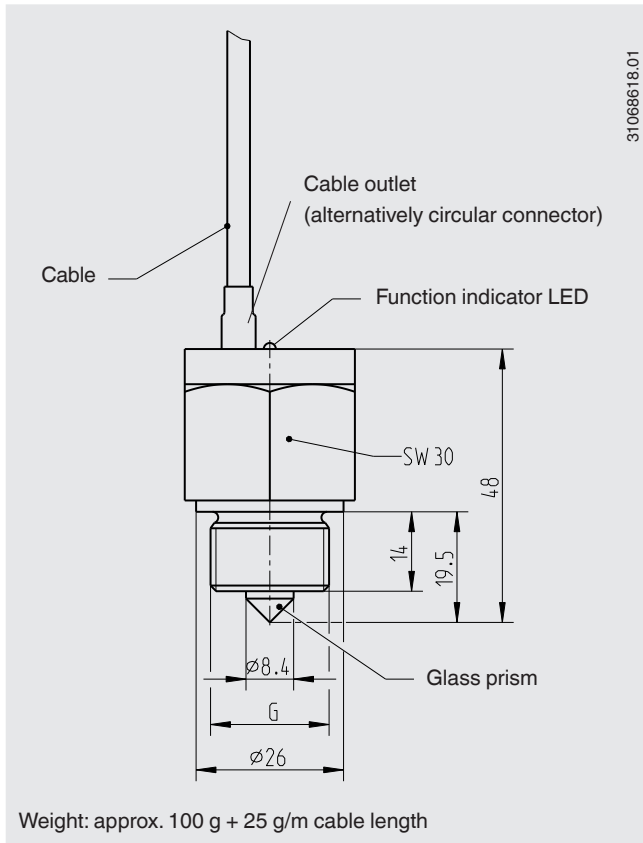
Electrical data	
Power supply	DC 12 ... 32 V
Max. current supply	40 mA
Electrical connection	
■ PUR, PVC cable	Cable length freely definable Diameter: 3 x 0.25 mm <sup>2</sup> Cable end: Cut to length
■ Circular connector	M8 x 1 (3-pin)
Output signal	PNP transistor, protected against reverse polarity, 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

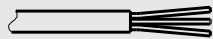
- Other versions on request

## Dimensions in mm



## Electrical connection diagram

### Cable assignment





BN	U <sub>+</sub>
WN	U <sub>-</sub>
GN	SP

### Assignment, M8 x 1 circular connector




1	U <sub>+</sub>
3	U <sub>-</sub>
4	SP

## Accessories

Description	Order no.
<b>M8 connector with moulded cable</b>	
 Straight version, cut to length, 3-pin, 2 m (6.6 ft), PUR cable, UL listed, IP67	14159311
	14159313
 Angled version, cut to length, 3-pin, 2 m (6.6 ft), PUR cable, UL listed, IP67	14159309
	14159310

## Approvals

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