Optoelectronic level switch
For the shipbuilding industry
Model OLS-5200

WIKA data sheet LM 31.06

DNV·GL for further approvals
see page 3

Applications

- Shipbuilding
- Engine technology
- Hydraulic power packs
- For liquids such as oils, water, distilled water, aqueous media

Special features

- Resistant to vibration and shocks
- High reliability
- Operable up to 130 °C and 25 bar
- Approved per DNV GL

Optoelectronic level switch, model OLS-5200

Description

The model OLS-5200 optoelectronic level switch is used for monitoring the level of liquids in the shipbuilding industry. 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-5200 has been developed for use in maritime applications and has thus been designed physically to be particularly resistant to both vibration and shocks.

Data sheets showing similar products:
Optoelectronic level switch, for industrial applications; model OLS-C01; see data sheet LM 31.31
Optoelectronic level switch, high-temperature version; model OLS-C05; see data sheet LM 31.33
Optoelectronic level switch, intrinsic safety Ex i; model OLS-C51; see data sheet LM 31.04

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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 1/2" male or M18 x 1.5 (male)

| Design data	
Responsiveness	Preset for the detection of aqueous media and oils
Medium temperature	-40 … +130 °C
Ambient temperature	-30 … +80 °C
Operating pressure	0 … 2.5 MPa (0 … 25 bar)
Vibration resistance	10 ... 5,000 Hz, 0 ... 60 g
Materials ■ Light guide ■ Case und process connection	 Borosilicate glass, fixed with silicone adhesive (Option: Fixed with epoxy resin) Stainless steel 1.4571

Electrical data	
Power supply	DC 12 ... 32 V
Max. current supply	40 mA
Electrical connection	■ Polyolefin cable ■ Cable length freely definable, up to 20 m (longer lengths on request) ■ Diameter: 2 x 2 x 0.75 mm² (twisted pair) ■ Cable end: Cut to length
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: 270 g + 100 g/m cable length
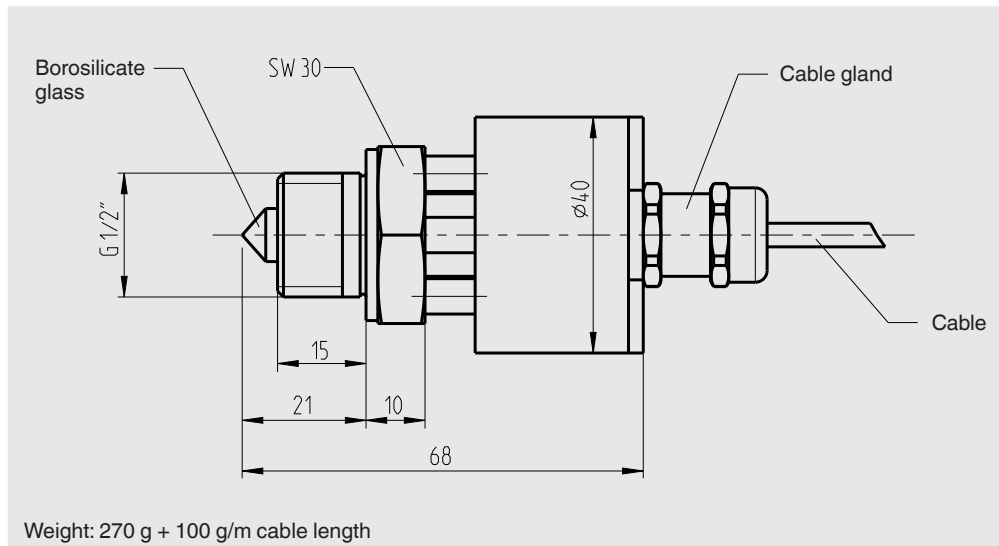
Electrical connection diagram

Cable assignment	
1 (WH)	U_+
2 (BU)	U_-
3 (WH)	SP
4 (BU)	U_-

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
	DNV GL Ships, shipbuilding (e.g. offshore) (previous model designation: OPG 052)	International

Manufacturer's information and certificates

Logo	Description
-	**China RoHS directive**

Approvals and certificates, see website

Ordering information

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

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