



## FO-02

### Optoelectronic Compact Level Switch



- **Adjustable setpoint**
- **Compact design**
- **Integrated electronics**
- **High switching load**
- **Maintenance-free**

#### **Description:**

An optical sensor is mounted in a robust stainless steel housing. It consists of a quartz glass tip which contains an infrared diode, as a transmitter, and a light-sensitive semi-conductor as the receiver. If no fluid moisture touches the sensor tip, the infrared light will be fully reflected by the inside of the quartz glass. However, as soon as it dips into the medium a large portion of the transmitted light can pass into the fluid. Registering this, the receiver initiates a switching operation at the device's relay output which is then directly displayed by a green LED.

#### **Range of application:**

The applications for the optoelectronic level switch include tapping limit values in a number of fluids. The main advantage is that the method of measurement is to a large extent independent of physical parameters like refractive index, colour, density, dielectric constant or conductivity. The extremely compact design guarantees minimum space. As against the FO-01, the FO-02 can be supplied with variable measuring length of up to 2000 mm. The user can select the setpoint freely by means of an optionally available cutting ring joint. The direction of switching for the high-performance relay output on the device is reversible.

## Versions:

### FO-02 Optoelectronic Compact Level Switch

**Supply:** The supply voltage of FO-02 is always 24 V DC.

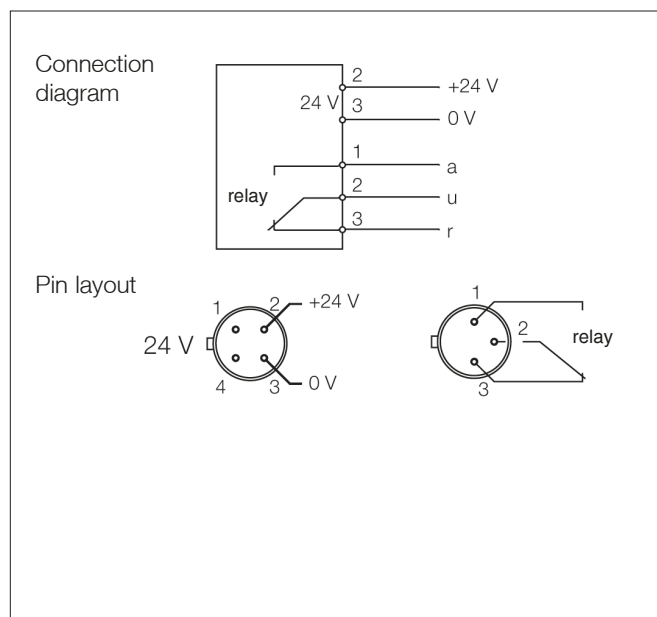
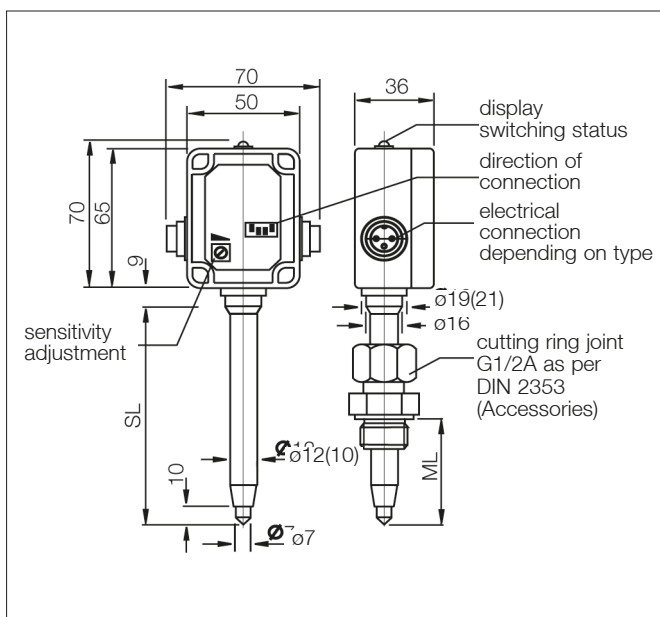
**Sensor length:** The sensor is available in 5 standard lengths for which the measuring length can be adjusted within the following bandwidth:

Sensor length	Operating range
100 mm	18 – 49 mm
250 mm	18 – 200 mm
550 mm	18 – 500 mm
1050 mm	18 – 1000 mm
2050 mm	18 – 2000 mm

\*Intermediate lengths can be manufactured on request.

## Electrical specifications:

<b>Supply voltage:</b>	24 VDC ±30%
<b>Consumption:</b>	max. 40 mA
<b>Output:</b>	relay output change-over 250 VAC, 3 A
<b>Load cycle No.:</b>	> 10 <sup>7</sup>
<b>EI. connection output:</b>	plug 3-pole series 723
<b>EI. connection supply:</b>	plug 4-pole series 723
<b>Protection class:</b>	IP 65 as per EN 60529, counter plug screwed on



## Ordering codes:

**Ordering number:** FO-02. 1. 5. 1

FO-02 Optoelectronic Compact Level Switch

**Supply:**  
1 = 24 VDC

**Sensor length:**  
1 = 100 mm  
2 = 250 mm  
3 = 550 mm  
4 = 1050 mm  
5 = 2050 mm

**Shaft diameter:**  
1 = 12 mm  
2 = 10 mm

## Technical specifications:

<b>max. Pressure:</b>	0 to 50 bar
<b>max. Media temp.:</b>	-30°C to +95°C
<b>max. Ambient temperature:</b>	-25°C to 151 +60°C
<b>Electronic housing:</b>	Macrolon
<b>Sensor housing:</b>	stainless steel 1.4571
<b>Lighting circuit:</b>	quartz glass
<b>Sealing:</b>	PTFE
<b>Weight:</b>	Operating range 18-49 mm: 0.12 kg + 5 g/cm ML
<b>Accuracy:</b>	± 0.5 mm
<b>Light source:</b>	IR-Light 930 nm
<b>Ambient light:</b>	max. 10.000 Lux
<b>min. Clearance to opposite-side surface:</b>	>10 mm
<b>Assembling position:</b>	any