

# OPTICAL LEVEL SWITCH

The label *Trafag Industrial Components* extends the Trafag brand name to instruments manufactured by qualified partner companies.

*Trafag Industrial Components* complement the genuine Trafag product range to offer customers a complete portfolio from one single source.

The optical sensor is located in a metallic body which includes a polysulfone prism inside of which there is inserted an infrared transceiver.

As soon as the sensor is immersed in the liquid, the refraction index of the prism changes and a large part of the infrared beam is dispersed in the liquid, causing the output to change state.



## Applications

- Water treatment
- Machine tools
- Mobile hydraulics
- Food & Beverages
- Chemical & Pharmaceutical

### Features

- No moving parts
- Hermetic construction, sealed electronics
- Minimum degree of protection IP65

### Reference

- EN61010-1

08/2017

Data sheet H20042a

Standard parameters	
Sensor	Infrared transceiver
Ambient temperature	-30 ... +55°C
Media temperature	-40 ... +85°C
Working pressure	260 bar max (25°C) or 200 bar max (85°C)

## Ordering code

		TOS -	XXX -	X -	XX
1. Process connection	G 3/8" M		G10		
	G 1/2" M		G15		
	1/2" NPT M		N15		
2. Process connection material	Brass with NBR o-ring			0	
	AISI316 with FKM o-ring			S	
4. Electrical output	DIN 43650 A - IP65				S1
	M12x1 - IP67				S3

## Specifications

Sensor	Infrared transceiver
Media temperature	-40 ... +85°C
Working pressure	260 bar max (25°C) or 200 bar max (85°C)
Electrical output	PNP or NPN transistor
Power supply	15 ... 35 VDC
Current consumption	10 mA
Material sensor prism lens	Polysulfone

## Suitable / Not suitable media

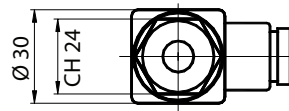
Water	✓
Hydraulic oil	✓
Diesel, gasoline	✓
Coffee	✓
Non-alcoholic beverages	✓
Wine, beer	✓
Cleaning liquids	✓
AD blue	✓
Milk	✗
Chocolate	✗
Fruit juices (high concentration)	✗

## Wiring and electrical output

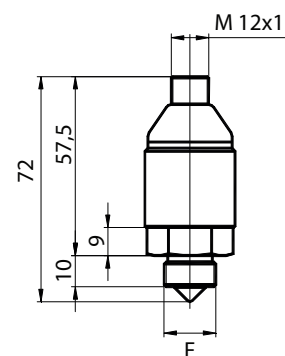
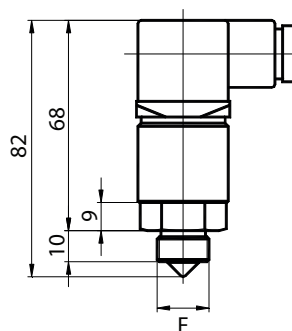
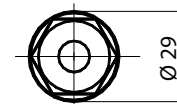
		Contact type	
		NPN	PNP
Code	S1	<p>Output low in no level condition</p> <p>15 ... 35 VDC      GND</p>	<p>Output high in no level condition</p> <p>15 ... 35 VDC      GND</p>
	S3	<p>Output low in no level condition</p> <p>15 ... 35 VDC</p>	<p>Output high in no level condition</p> <p>15 ... 35 VDC</p>

## Dimensions - All dimensions are in mm

S1  
DIN 43650-A



S2  
M12x1



## Maintenance

The only caution to be observed is a periodic check of the status of the sensor lens. If necessary proceed to the cleaning of the same, with non-corrosive liquids.

In case of vertical installation make sure that drops of liquid not adhere to the prism surface, causing false switching.

Additional information			
Documents	Data sheet	H20042	<a href="http://www.trafag.com/H20042">www.trafag.com/H20042</a>
	Instructions	H21042	<a href="http://www.trafag.com/H21042">www.trafag.com/H21042</a>