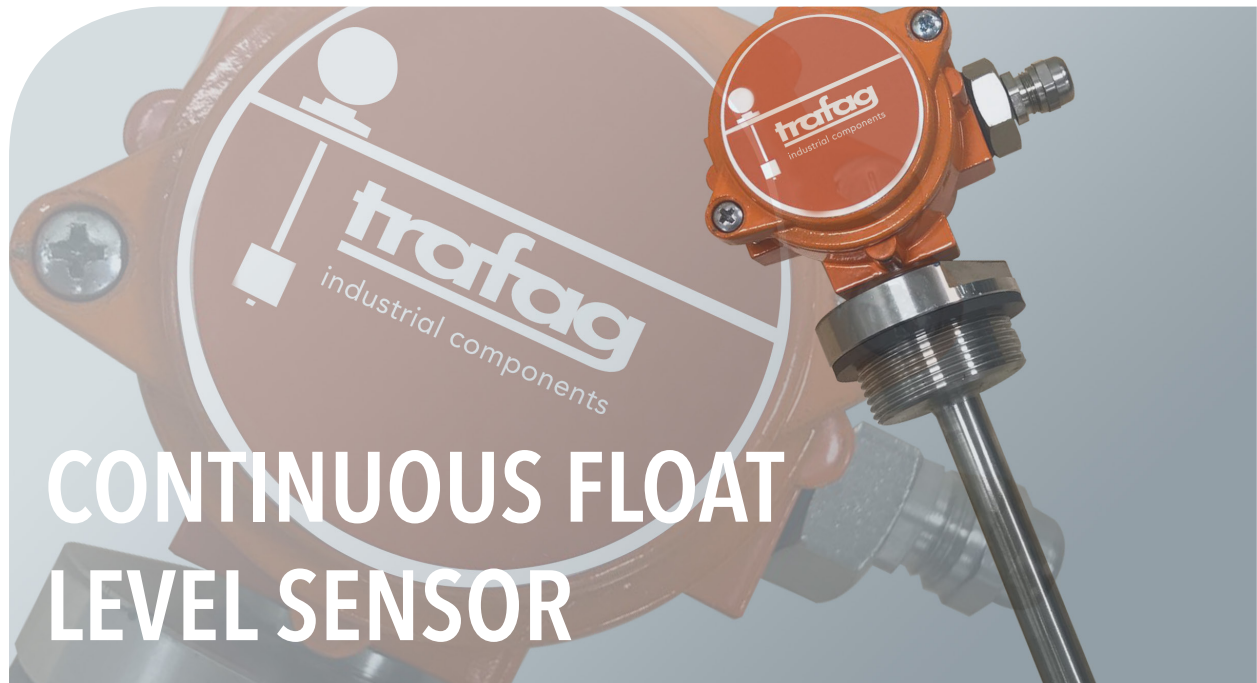


LEVEL MEASUREMENT



Catalogue H20201c



Applications

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.

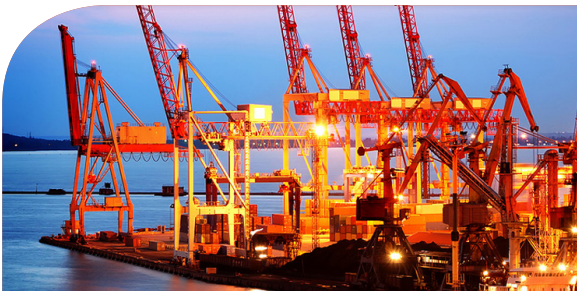
Level Sensors applications



Water treatment



Machine tools



Mobile hydraulics



Food and Beverages



Chemical



Pharmaceutical

Product lines: level sensors and level switches

In order to get a precise level measurement in a wide range of different application, it's possible to choose between different measurement systems as reed contact, conductive or optoelectronic.

The level sensors or level switches are also available in different materials as stainless steel, PP, PVFD, PVC or brass, in order to satisfy requirements of every industrial applications.



Level sensor - TFC

The principle of operation is of potentiometric type, based on the gradual shutdown of a chain of resistors and reed contacts, placed inside the guiding rod, by a magnetic float. An analogue output signal is provided with a measuring resolution of 5, 10 or 20mm.



Level switch - TFS

The principle of operation of these instruments is based on the drive of one or more magnetic reed contacts, placed inside of the measuring rod, by one or more floats. Up to 6 floats with individual switchpoints are available for comprehensive monitoring of the liquid level.



Optical level - TOS

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.



Conductive level - TCS

Conductive probes constitute a valid solution for controlling the level of liquid with minimum value of conductivity of $5\mu\text{S}/\text{cm}$.

The resistance between two measuring electrodes changes by the presence or absence of a medium. In single-rod probes, the electrically conductive tank wall serves as a counter electrode.

TFC - Continuous float level sensor



Data sheet
www.trafag.com/H20040

The principle of operation is of potentiometric type, based on the gradual shutdown of a chain of resistors and reed contacts, placed inside the guiding rod, by a magnetic float. An analogue output signal is provided with a measuring resolution of 5, 10 or 20mm.

Features

- Measuring resolution 5, 10, 20 mm
- Analogue output 4 ... 20 mA, 0 ... 5 or 0 ... 10 VDC
- Optional temperature sensor PT1000
- Minimum degree of protection IP65

Reference

- EN61326-1



Standard parameters

Type	TFCO	TFCS	TFPC
Floats	Spansil - Butadiene - Acrylonitrile Copolymer	Stainless steel AISI316	PVDF - PP - PVC
Ambient temperature	-30 ... +55°C	-30 ... +55°C	-30 ... +55°C
Media temperature	Up to 105°C, optional 120°C	Up to 105°C, optional 150°C	Up to 130°C (PVDF) Up to 90°C (PP) Up to 60°C (PVC)
Working pressure ¹	20 bar max	50 bar max	6 bar (PVDF or PVC) max 3 bar (PP) max

¹ Depend of type of float.

TFS - Float level switch



Data sheet
www.trafag.com/H20041

The principle of operation of these instruments is based on the drive of one or more magnetic reed contacts, placed inside of the measuring rod, by one or more floats. Up to 6 floats with individual switchpoints are available for comprehensive monitoring of the liquid level.

Features

- Up to 6 switch points
- Minimum degree of protection IP65
- Optional temperature sensor PT1000 or thermostat
- Potted electrical contacts

Reference

- EN61010-1



Standard parameters

Type	TFSO	TFSS	TFSP
Floats	Spansil - Butadiene - Acrylonitrile Copolymer	Stainless steel AISI316	PVDF - PP - PVC
Ambient temperature	-30 ... +55°C	-30 ... +55°C	-30 ... +55°C
Media temperature	Up to 105°C, optional 120°C	Up to 105°C, optional 150°C or 180°C	Up to 130°C (PVDF) Up to 90°C (PP) Up to 60°C (PVC)
Working pressure ¹	20 bar max	50 bar max	6 bar (PVDF or PVC) max 3 bar (PP) max

¹ Depend of type of float.

TOS - Optical level switch



Data sheet
www.trafag.com/H20042

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.

Features

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

Reference

- EN61010-1



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)

TCS - Conductive level probe



Data sheet
www.trafag.com/H20044

Conductive probes constitute a valid solution for controlling the level of liquid with minimum value of conductivity of 5µS/cm. The resistance between two measuring electrodes changes by the presence or absence of a medium. In single-rod probes, the electrically conductive tank wall serves as a counter electrode.

Features

- No calibration required
- Coated electrodes
- Hermetic construction, epoxy resin sealed
- Minimum degree of protection IP65
- No moving parts in the tank

Reference

- EN61010-1



Standard parameters

Max electrodes length	2000 mm
Electrodes material	Inox 316 SS
Electrodes coating	Kynar, PTFE or Polyolefins
Working pressure	-1 ... 6 bar
Media temperature	100°C max
Degree of protection	IP65

Level measurement

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■ Main contact for Trafag Level measurement

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Germany

Great Britain

India

Japan

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