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Industrial Sensing Solutions

Level Probe :

These probes function on capacitive principle. It detects the change in capacitance when an electrode surrounded by air is immersed in a liquid medium. This change in capacitance is processed by digital electronics.

Models available:

Probes for Aqueous medium: (water, coolant, water/glucose mixture)

Probes for Non Aqueous medium: (engine oil, fuels, hydraulic oil)

Advantage over float and other Level switches :

- Compact design and high resistance to vibration
- Faster response than Pressure or Thermal Level Sensors. It indicates critical condition much sooner.
- Performance can not be impaired by dirt or metal particles in the fluid.
- No electrolysis as they do not pass current through the medium.
- Can monitor any Aqueous/ Non Aqueous medium up to 125°

Applications:

- Automatic filling machines
- Used in Engines, Commercial vehicles, Boats, Generators, Compressors etc. to monitor the coolant, oil and fuel levels.
- also to monitor supply tanks, waste water tanks

Delayed indication :

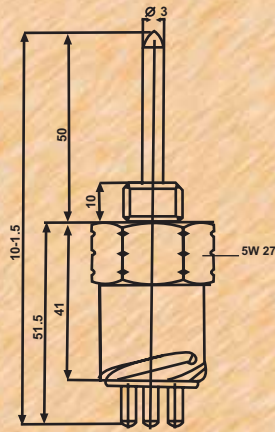
To avoid indication errors due to the fluctuations in liquid level surface, the output signal is delayed by approx. seven seconds. Further indication delay times are available upon request.

Specifications:

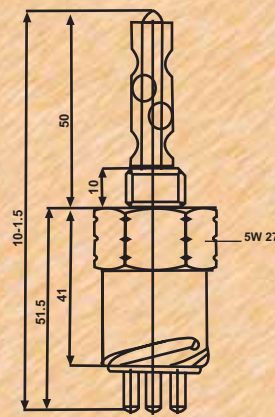
Housing	Brass / Stainless steel, non-magnetic
Thread	M14x1.5, max. tightening torque 30 Nm
Isolation of sensor	Teflon
Switch point	immersion depth, horizontal: approx. 3 mm +/- 2 mm immersion depth, vertical: approx. 20 mm +/- 6 mm
Weight:	approx. 200g
Medium temperature:	- 30°C to + 125°C
Relative humidity:	up to 100 %
Operating Voltage:	9 - 36 V
Level Type (Functional)	Minimum Probe OR Maximum Probe
Output type (Electrical)	Minus Switching OR Plus Switching
Output Logic	NO OR NC
No load current:	< 10 mA
Load Capacity:	<300 mA (resistive and inductive)
Load inductance:	500 mH
Reverse Polarity protection:	Provided
Short circuit protection:	Provided
Hysteresis:	Max. +/- 5 mm around the sensing point
Voltage Drop:	< 0, 5 V

Probe Dimensions:

Probe suitable for aqueous media



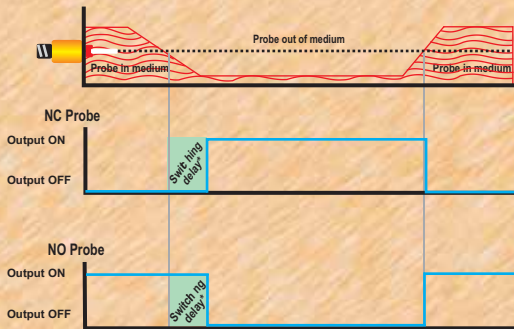
Probe suitable for oil or fuel



Probe Types (functional):

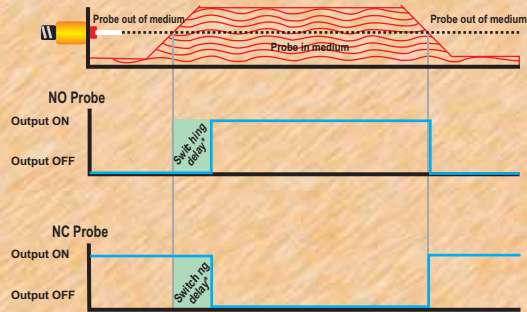
Minimum Probe (Probes for minimum level)

These types of probes are used to monitor minimum level in the tank. Here output changes immediately after immersion in the medium but changes after preset delay when removed from medium.



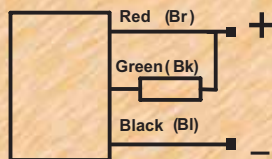
Maximum Probe (Probes for maximum level)

These types of probes are used to monitor maximum level in the tank. Here output changes immediately when the probe is removed from the medium but changes after preset delay when immersed in medium.

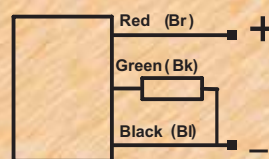


Connection Diagram

Minus Switching probes



Plus switching probes



Ordering Information :

Level Probe-Cable Version (TLR Series):

Functional Type	Output	Logic	Model No
Min Level	Plus Switching	NO	TLR-LPM
		NC	TLR-LPB
	Minus Switching	NO	TLR-LMM
		NC	TLR-LMB
Max Level	Plus Switching	NO	TLR-UPM
		NC	TLR-UPB
	Minus Switching	NO	TLR-UMM
		NC	TLR-UMB

Level Probe-Connector Version (TLC Series):

Functional Type	Output	Logic	Model No
Min Level	Plus Switching	NO	TLC-LPM
		NC	TLC-LPB
	Minus Switching	NO	TLC-LMM
		NC	TLC-LMB
Max Level	Plus Switching	NO	TLC-UPM
		NC	TLC-UPB
	Minus Switching	NO	TLC-UMM
		NC	TLC-UMB

Installation Instruction for Level Monitoring Probes

1. The level sensors should be installed in a calmed zone to avoid wrong signals because of splashing. This point is usually applicable for installation in gearboxes or for direct installation in engine oil pans. In such cases, the correct level is only possible during standstills.
2. When carrying out the installation, ensure that the distance from the sensor probe to the wall is at least 15 mm.

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