

WLS - Water Level Sensor for storage tanks

BENEFITS

- Gives important inventory data
- Rugged design
- Close to bottom measurements
- Accurate
- Special crude version available
- Integrates with the TankRadar Rex complete tank gauging system
- Easy to install
- Hart output and configuration
- Wide temp ranges



The Water Level Sensor, WLS, is used for continuous measurement of free water in oil tanks. The sensor is integrated with a Multiple Spot Thermometer (MST). It is also possible to add a Pt 100 spot element allowing temperature measurements at low levels.

The WLS continuously measures the interface level between water and oil, thereby providing net inventory for the user. The standard measuring range is 500 mm.

High reliability

The WLS is designed for heavy-duty service and has no moving parts. It is factory calibrated and requires no field tuning.

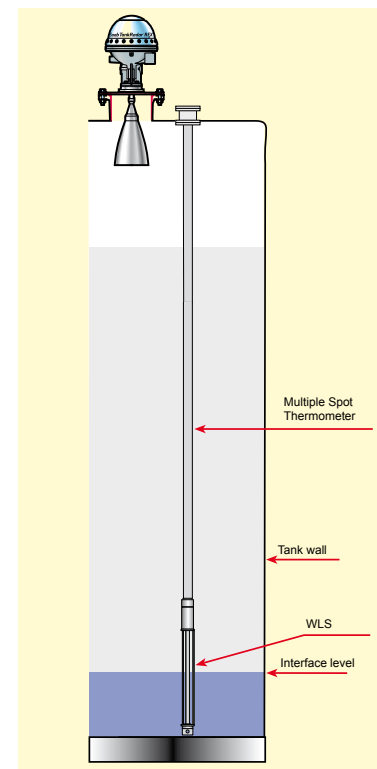
Rugged construction

The WLS is designed for difficult applications in a corrosive environment. Immersed parts are made of acid-proof steel AISI 316, FEP, PTFE and PEEK with 30% glass. The WLS is welded to the MST to get a hermetic design.

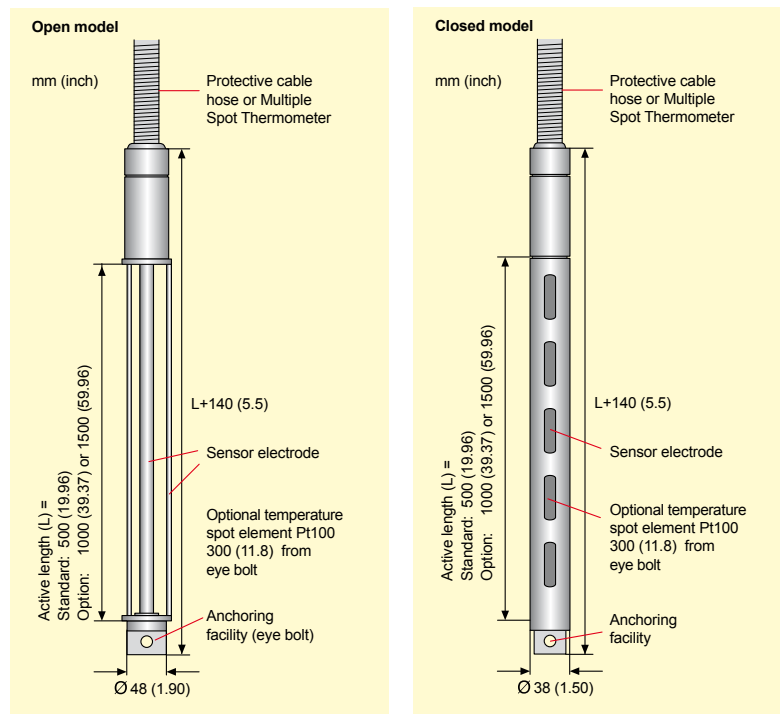
Typical application

The WLS is installed together with an MST to be hung from the top of the tank. The vertical position is chosen according to the actual bottom water range. It should be anchored to the tank bottom to ensure a fixed position in case of turbulence. The open model is suitable for crude oil applications. The closed model is suitable for lighter fuels such as diesel oil. For highest resolution, the HART communication option is used.

Anchor weights can be mounted in an eye bolt. It can also be mounted above the WLS. In that case the weight is hollow and fitted on the MST.



The WLS is typically installed together with a Multiple Spot Thermometer.



Specification WLS - Water Level Sensor	
Active measuring range	500 mm (20 in.), 1000 mm (40 in.) or 1500 mm (60 in.)
Analog output	2 wire 4 - 20 mA with I _{max} = 23mA
Digital output (for calibration)	HART (SMART) Transmitter
Accuracy	±2 mm (0.08 in.) [500 mm active length] ±4 mm (0.16 in.) [1000 mm active length] ±6 mm (0.24 in.) [1500 mm active length]
Factory Calibration	Calibrated under conditions $\epsilon_r = 2.3$ (diesel) via 2 wire loop (other on request)
Operating temperature	0 - 120 °C (32 °F to 250 °F) [Max. temp. at mounting flange 80 °C (180 °F)]
Mechanical dimensions	Connection thread $\varnothing 33 \times 1.5$ mm.
Outer diameter of WLS	Closed $\varnothing 38$ mm (1.5 in.) Open $\varnothing 48$ mm (1.9 in.)
Immersed materials	AISI 316, FEP, PTFE and PEEK with 30% glass
Max. pressure	6 bar (90 psig)
Ex approvals	DEMKO 01 ATEX 131128X, CE 0539, Ex 11 G, EEx ia 11B T4. UL approval pending

Technical details are subject to change without prior notice. For more technical details see the Rex Technical Description.