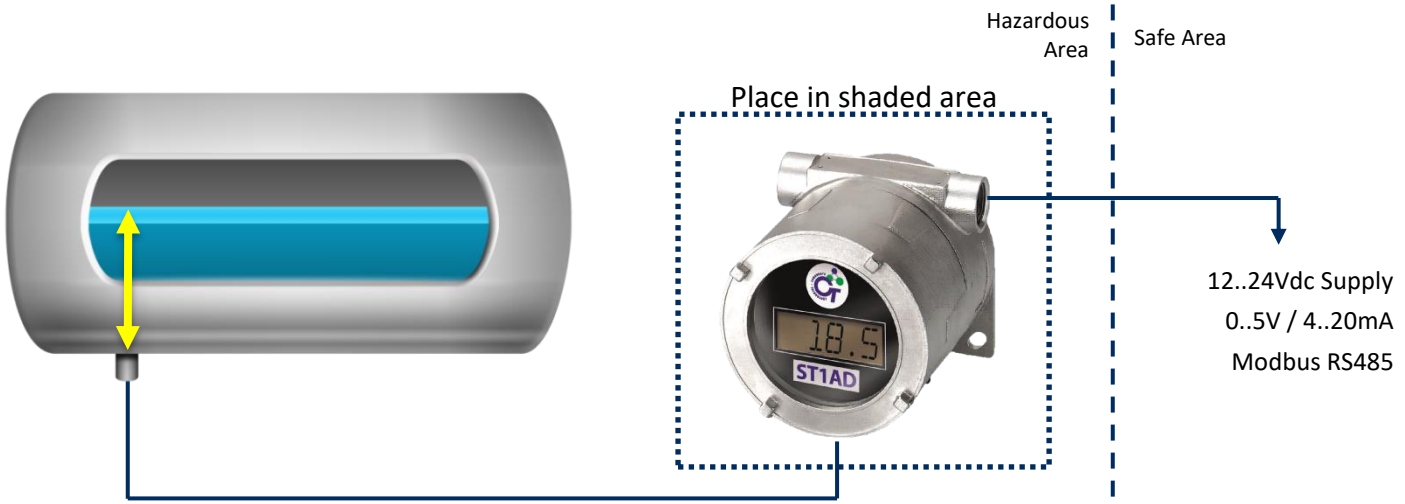


Non-contact Level Measurement

VesselCheck ST1AD
Non-contact Level Gauge



Principle of Operation

An ultrasonic sensor is bonded to the outside base of the vessel. By timing how long it takes for an ultrasonic signal to reflect against the liquid surface from a transmitter, the system calculates the height of the liquid in the tank. Signals from the transducer are fed into the processor and displayed locally. The displayed value is re-transmitted as an analogue signal and a Modbus serial communications message. The package is supplied as a sensor / processor pair.

A temperature integrated ultrasonic probe (TIUP) is available offering compensation for the effects of varying temperatures.

Maximum measurement distance = 3000 mm

Features:

- ▶ Truly non-invasive sensing technique
- ▶ Sensor bonds to outside of tank shell
- ▶ 0..5v / 4...20mA analogue output
- ▶ System approved for hazardous areas
- ▶ Ambient temperature compensated (in enclosure)
- ▶ Optional temperature sensor in ultrasonic sensor (TIUP)

Benefits:

- ▶ No tank break-in – easy installation
- ▶ No down-time during installation
- ▶ Suitable for tanks of most shapes and materials
- ▶ Not affected by pressure
- ▶ No moving parts – no maintenance
- ▶ Low cost & reliable tank gauging

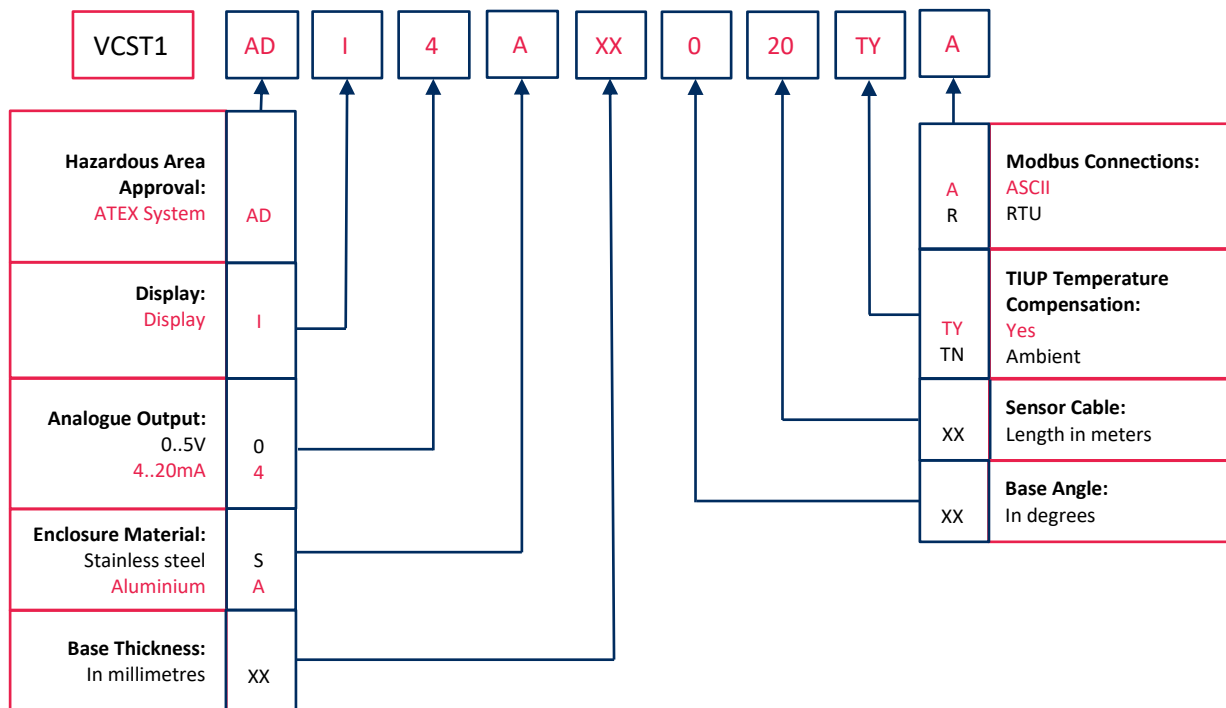


ATEX Sensor

VesselCheck ST1AD – Specification

Accuracy:	Dependent on liquid concentration and temperature variations
Measuring Range:	Up to 3m / 10 feet
Temperature Range (sensor):	-20°C to +60°C, -4°F to 140°F
Hazardous Area Approval (enclosure):	⊕ II 2G Ex d IIC T5 Gb (-20°C ≤ Ta ≤ +60°C). ATEX and IECEx certificates.
Hazardous Area Approval (sensor):	⊕ II 2G Ex mb IIC T5 Gb (-20°C ≤ Ta ≤ +60°C). ATEX and IECEx certificates.
Sensor Material:	Tufnol/Bakelaque, with stainless steel sleeve and backing
Analogue Output (optional):	0..5Vdc / 4..20mA
Serial Communications:	Modbus RS485 RTU / ASCII
Power Supply:	12..24Vdc
Protection Rating	IP66

Product Identification Code



VesselCheck ST1AD Application Overview

Typical Application	Maximum Height	Number of Tanks	Hazardous Area Approval	Display	Variant
LPG, solvents, acids, fuels, alcohol	3 meters	1	Sensor & Processor	Yes	ST1, ST1A