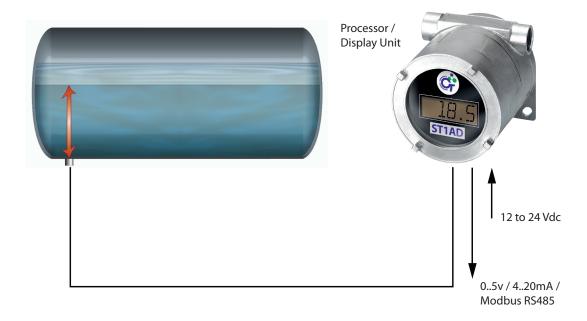
VesselCheck ST1AD

Non-Invasive Level Gauge



Data sheet: ST1AD/2012



Background

Rototherm Canongate Technology has been using ultrasound technology in a variety of applications for over twenty years. VesselCheck is used by most of the leading beverage, pharmaceutical and chemical companies around the world for accurate, reliable, simple and safe tank contents gauging. This particular configuration has been specifically designed to meet requirements on LPG vessels. A number of leading LPG suppliers and users are already using our technology to provide reliable level measurement.

Principle of Operation

A small ultrasonic sensor is bonded to the outside base of the vessel. Signals from the transceiver are fed into the processor, displayed beside the tank and/or output to a separate system. The ST1AD transmitter measures the time for the transmitted ultrasonic signal to return from the liquid surface. It applies ambient temperature compensation to that value and uses it to accurately calculate the height of the liquid in the tank. The package is supplied as a sensor / processor pair.

Features:

- Truly non-invasive sensing technique
- Transceiver bonds to outside of tank shell
- Ambient temperature compensated (temperature measurement in display unit)
- 0..5v / 4...20mA Analogue Output
- Approved for hazardous areas (flameproof Exd)

Benefits:

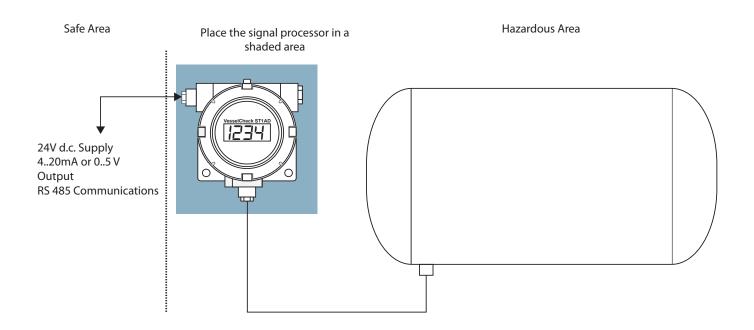
- No tank break-in Easy installation
- No down-time during installation
- Suitable for tanks of most shapes and materials
- Not affected by pressure
- No moving parts no maintenance
- Low cost & reliable tank gauging



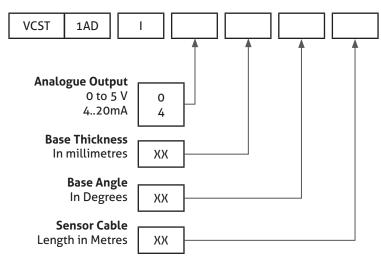
ATEX Sensor shown



Vessel Check ST1AD -Technical Specification				
Accuracy	Depends on liquid and temperature range			
Measuring Range	Up to 3000mm / 10 feet			
Temperature Range (sensors)	-20°C to +125°C / - 4°F to 257°F			
Hazardous Area Approval (processor/display)	IECEx BAS 10.0080 Exd IIC T5 (-20°C <ta<+60°c)< th=""></ta<+60°c)<>			
Hazardous Area Approval (sensor)	Ex mb IIC T5 Gb (-20°C ≤ Ta ≤ 60°C) Cert No. IECEx BAS 11.00.0039X			
Sensor Material	Tufnol with stainless steel cladding			
Analogue Output	05v / 420mA			
Serial Communications	Modbus RS485 RTU / ASCII			
Power Supply	12 to 24Vdc			
Protection Rating	IP66			



Product Identification Code (PIC)



VesselCheck Range Overview						
Typical Application	Maximum Height	Number of Tanks	Hazardous Area Approval	Display	Varient	
High accuracy: beer, spritis, acids, solvents, water, LPG spheres, wine	20 metres	2	Optional	Optional	ST2	
Less accurate: LPG spheres, wine	20 metres	4	Optional	Optional	ST4	
Fuel, water, light oils, acids	3 metres	1	No	Optional	ST1	
LPG, small spirit tanks	3 metres	1	Sensor Only	Optional	ST1(A)	
LPG, solvents, acids, fuels, Sulphur Dioxide, Chlorine	3 metres	1	Sensor & Processor	Yes	ST1AD	
Refrigerent Gas	2 metres	1	No	Optional	ST1(R)	
Graphic colour operator interface terminal & evaluation unit for use with VesselCheck systems	N/A	Up to 32	No	Yes	VCHMI	



Excellence the World can Measure™

Rototherm Canongate Technology

Midlothian Innovation Centre, Pentlandfield, Roslin EH25 9RE United Kingdom

T: +44 (0) 131 448 0786 **E**: sales@ct-uk.co.uk **W**: www.ct-uk.co.uk