Centeron Non-Intrusive Monitor

The Centeron Non-Intrusive Monitor designed for top mounted poly tanks using cellular communication to remotely monitor the fluid liquid level of the tank. The Centeron WebView application then allows visualization of data for delivery optimization.

Applications

- Remote liquid level monitoring for non-intrusive poly tanks
  - DEF
  - Chemicals
  - Water
  - Additives
  - Lubricants
  - Gasoline/ Petroleum
  - Diesel fuel
  - Motor oil
  - Hydraulic fluid
  - Waste Oil
  - Other hazardous/non-hazardous liquids

Features

- Non-intrusive tank monitoring.
- Up to 10-year battery life - ATEX data logger.
- Accurate, reliable level reporting to server monitoring application.
- Spot and continuous inventory management.
- Configurable reporting schedule and alarms.
- Programmable alarms
  - High level
  - Low levels
- GPS / GLONASS Global Positioning.
- IP68 protected.
- FCC Approved.

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Specification

Characteristic	Transmitter
Dimensions	Height (Top) = 49.4mm (height above tank mount - not including horn section 50mm). Diameter (115mm).a
Weight	10oz (280g)
Housing material	UV Stabilized PVDF [Kynar] and PP material.
Operating temperature	-13°F to 122°F (-25°C to 50°C) (Note 1)
Recommended storage temperature	32°F to 86°F (0°C to 30°C) (Note 1)
Humidity range	10% - 100%
Altitude range	<6500 feet (<2Km) above sea level
Environmental Protection	IP68 – Outdoors
Battery	Lithium $LiSOCl_2$ replaceable
Battery Life	Up to 13 years (Note 4)
Radar Range	>3'2" to < 12' (Note 2)
Radar Resolution	Up to 0.079 inches
Radar Accuracy	Non-intrusive mounting: +/- 5% of FS (Note 5)
Material Compatibility	(Note 3)
Communications	Cat M1/Cat NB1: LTE FDD: B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 LTE TDD: B39 (For Cat M1 Only). EGPRS: 850/900/1800/1900MH 2G fall-back.
ATEX Approval	IECEx II (1)G Ex ia IIB T4-[25 < Ta < +50°C] [-13 < Ta < +122°F] and North American Class 1, Division 1 UL913.

Accessories

Gasket (included)	Viton seal included
Adaptor	Non-intrusive adapter with adhesive pad.

Part #040497A0001 Rev-A

Conformity	
EMC directive 2014/30/EU	The Electromagnetic Compatibility (EMC) Directive ensures that electrical and electronic equipment does not generate, or is not affected by, electromagnetic disturbance. The overall regulatory framework is the Radio Equipment Directive (RED) 2014/53/EU.
LVD directive 2014/35/EU	The Low Voltage Directive (LVD) ensures that electrical equipment within certain voltage limits provides a high level of protection for European citizens, and benefits fully from the Single Market
RoHs directive 2011/65/EU	This Directive lays down rules on the restriction of the use of hazardous substances in electrical and electronic equipment (EEE) with a view to contributing to the protection of human health and the environment, including the environmentally sound recovery and disposal of waste EEE.
EN 60079-0:2014 EN 60079-11:2014 EN 60079-18: 2014	Electrical apparatus for explosive gas atmospheres - Part 0: General requirements Electrical apparatus for explosive gas atmospheres - Part 11: Intrinsic safety 'i' Electrical apparatus for explosive gas atmospheres - Part 18: Encapsulation 'm'
FCC compliance	Yes
CE compliance	Yes

Note 1 : Storage and operation above 68°F (20°C) may reduce battery life. Minimum distance measured is derated with temperatures <32°F (<0°C)

Note 2 : Based on a measurement to a flat liquid target of size 4.65in2 (30cm2) and y reflectivity of liquid or object. E.g.: Kerosene range is typically 4m due to lower dialectric constant. Consult factory for range limits for various media. Non-intrusive range is dependant on tank and liquid type - consult factory for further details. Maximum nominal range for hydrocarbons is 4m. For aqueous liquids up to 6.75m.
For ullage measurements less than 20cm, there is an increased likelihood that measurements will have variation/jitter of a few cm.

Note 3 : Suitable for use in tanks for the storage of water diesel fuel, kerosene, gas oil types A2, C1, C2 and D as defined by BS2869. Consult factory for other applications.

Note 4 : One communication per day and assumes a good signal strength, so that no retries are required.
One radar sample every 60 mins and assumes 1m tall tank with hydrocarbon liquid. Consult factory for other setups.

Note 5 : For non-intrusive sensor mounting on plastic tanks. The material and plastic thickness affect the absolute accuracy of the measurements. Water condensation also impacts the accuracy measurement. Note this also assumes vertical mounting.

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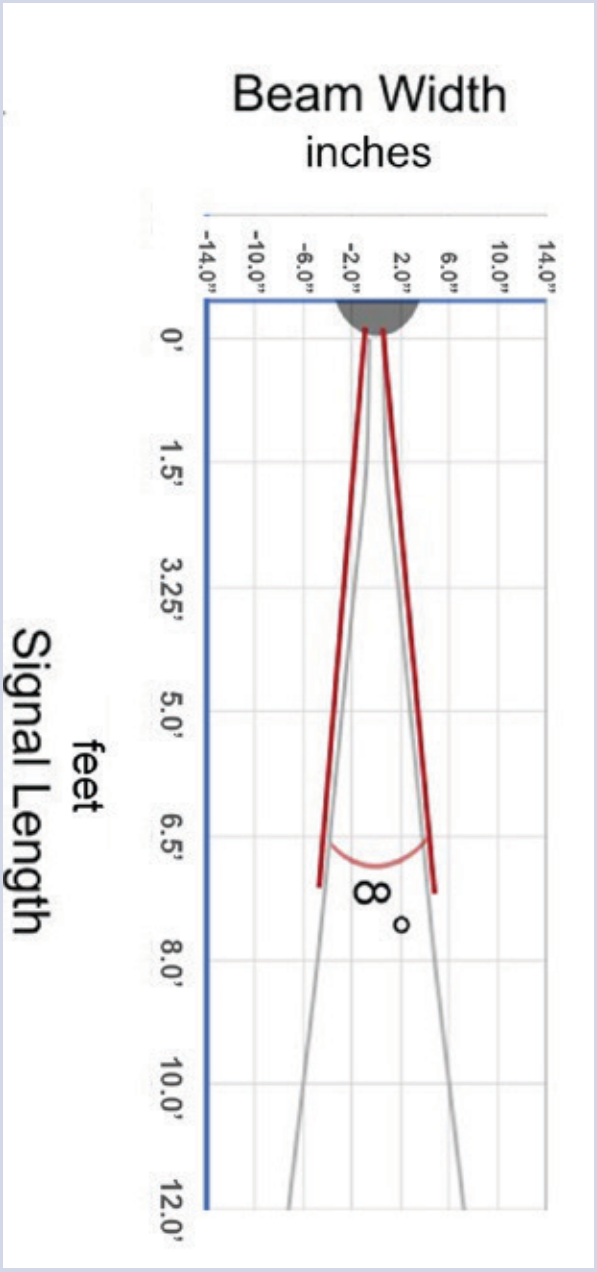
Signal Diversion Chart



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