

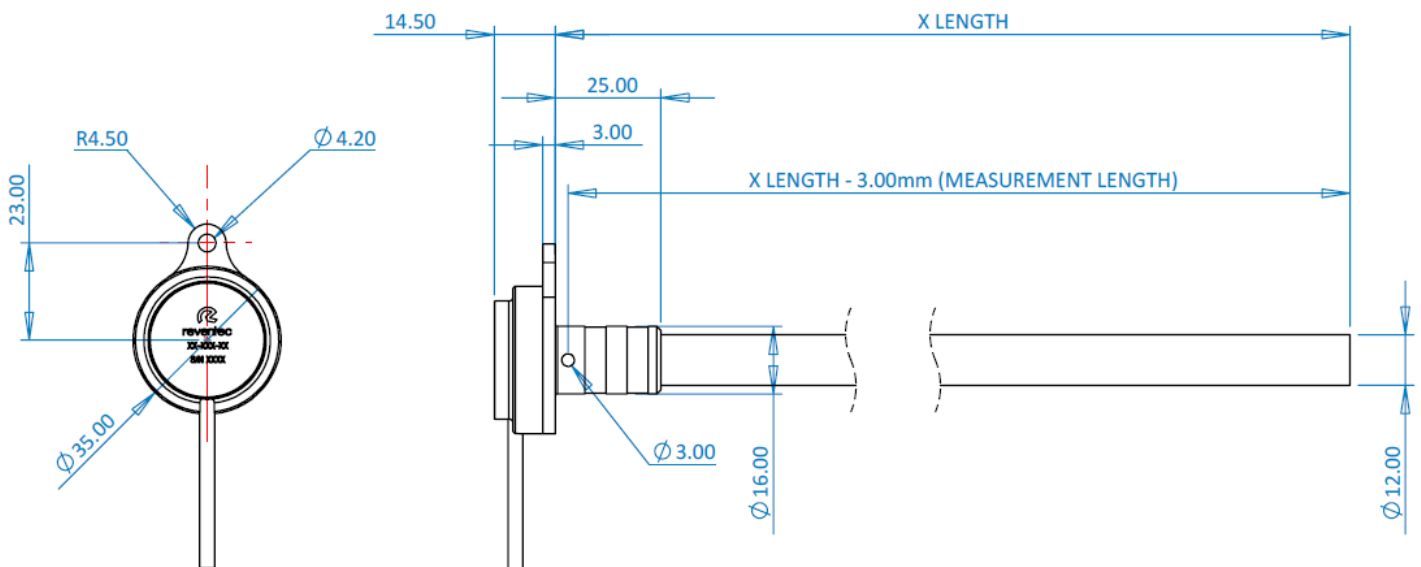
EcoSense™ Series

ECO-1 Low Cost Capacitive Level Sensor



The EcoSense series is a next-generation solid-state capacitive sensor, capable of continuous fluid level measurement in all common fuel and oil grades. The sensor is modular in design, and can be suited to fit any oil tank or fuel bladder with the addition of a stock or custom mounting adapter.

- Solid-state, continuous liquid level sensing
- Low cost
- $\pm 2\%$ of full scale accuracy
- No measurement dead-band
- Designed and tested for long-term reliability in harsh environments
- FIA homologation certified
- Multiple mounting arrangements available



DIMENSIONS IN MM
GENERAL TOLERANCE: ± 0.10

Level Measurement

Accuracy	±2% of full scale @20°C
Measurement Rate	100Hz
Calibration	Fluid specific; on-board storage of up to 24 fluid calibrations

Electrical

Supply Voltage	+6VDC to +31VDC
Typical Operating Current	<10mA at +12VDC
Overvoltage Protection	+45 VDC continuous
Reverse Polarity Protection	-45 VDC continuous

Signal Output

Type	Voltage
Typical Output range	0.25 VDC: Empty (Dry) 4.75 VDC: Full (Wet) Fully Configurable across 0-5VDC
Resolution	10 bit

Environmental

Environmental protection	IP67
Pressure Rating	2 bar (Differential)
Vibration	Designed to meet: 10Hz to 2000Hz sine sweep @10Grms (24hrs per each axis)
Shock	Designed to meet: 50G half sine wave for 11ms, 10 times each axis
EMC	Designed to meet: MIL461F- CE102, CS101, CS114, RE102, RS103, CS115, CS116 DO 160- Section 20 Cat R, Section 25 Cat A
Probe Operating Temperature	-40°C to +125°C

Mechanical

Fluid Compatibility	All common fuels, oils and engine coolants (Gasoline, Diesel, Biofuels, Hydraulic Oils, Synthetic Ester Oils, Glycol based coolants, salt water, de-ionised water etc.)
Construction Material	Anodised Aluminium, PEEK, PTFE
Sealing Elastomers	Fluorocarbon
Mass	135g for 340mm sensor including 1m of cable
Sealing Gasket	Supplied per sensor (Fluorocarbon)

Wiring Specification

Flying Leads	1 Meter supplied as standard
Jacket Elastomer	FEP Black
Wire Type	-5 core, FEP Insulated, 24 AWG

Wiring Definition / Connector

Description	Wire Colour
Supply (+)	Red
Ground (GND)	Black
Signal	Yellow
Tx Comms (Transmit)	White
Rx Comms (Receive)	Green

Configuration Interface

Type	RS-232 via FTDI USB cable. See accessories
GUI	Available on request

Accessories

USB calibration cable	P/N: 07-003-01
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Specifications may be subject to change without prior notice