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Digital Inventory Probes



Digital inventory and leak detection probes provide accurate tank level monitoring and reporting with optional leak detection capabilities. These probes employ digital communications and magnetostrictive position measurement technology for highly accurate tank readings.

HIGHLIGHTS

SPECIFICATIONS

ORDER INFO

DOWNLOADS

Operating Temperature	-40° to 140° F (-40° to 60° C)
Storage Temperature	-40° to 158° F (-40° to 70° C)
Temperature Sensors	5 thermistors located in the shaft

Length	10' long three conductor cables with shields and polyurethane jacket
Material	
ATEX	
Compliance	EVO™ Series, TS-5, TS-550, TS-5000, Colibri®, TS-1001/2011/750/504/508
Use	
Fluid	Diesel with or without biodiesel blends up to 5% (B5), diesel with biodiesel blends between 6% - 20% (B6 - B20), diesel with biodiesel blends between 97% - 100% (B99 - B100), gasoline with ethanol blends up to 10% (E10), mid-range ethanol/gasoline blends of (E15-20), high-range ethanol/gasoline blends (E51-83) commercially sold as E85
Approval	
Certification	UL & cUL listed, ATEX, IECEx, OIML
Notes	

Physical Values	Product	Water
Level Accuracy	+/- 0.008" (0.2 mm)	+/- 0.04" (1.0 mm)
Level Repeatability	+/- 0.001" (0.025 mm)	+/- 0.01" (0.25 mm)
Level Resolution	0.0006" (0.015 mm)	
Temperature Accuracy	+/- 0.54° F (0.3° C)	
Temperature Repeatability	+/- 0.36° F (0.2° C)	
Temperature Resolution	0.018° F (0.01° C)	

Operation

An electromagnetic field is created inside the probe head and forms around a long waveguide within the probe shaft when position measurements are taken. The electromagnetic field interacts with the magnetic field of the float(s) and produces a shock wave in the waveguide that travels at a known speed. When the shock wave is detected at the probe head, the probe creates a signal that corresponds precisely to the product level. Product expansion calculations are enabled by temperature sensors that are located at various points in the probe shaft.

Applications

Digital probes feature exceptional linearity, resolution, and stability, and are used in underground and aboveground storage tanks. Two types of probes are available for the following applications:

- The leak detection probes are typically used for underground storage tanks and petroleum applications when static or SCALD® leak detection is required.
- The inventory control probes are typically used for aboveground storage tanks, chemical or oil waste, or underground storage tanks that do not require in-tank leak detection.

Minimum Detectable Level

Typical Volume	Minimum Detectable Water Level	Minimum Detectable Product Level
TSP-IGF4P Phase Separation Float	0.75" (1.9.1 cm)	4.25" (10.80 cm)
TSP-IGF4 Gasoline Float	0.75" (1.9.1 cm)	4.25" (10.80 cm)
TSP-IDF4 Diesel Float	0.75" (1.9.1 cm)	4.16" (10.57 cm)
FMP-IDF4E Low Level Water for Diesel Float	0.25" (0.64 cm)	3.75" (9.53 cm)
TSP-IGF2P Phase Separation Float	1.00" (2.54 cm)	7.73" (19.63 cm)
TSP-IGF2 Gasoline Float	1.00" (2.54 cm)	7.73" (19.63 cm)
TSP-IDF2 Diesel Float	1.00" (2.54 cm)	7.28" (18.50 cm)