

Liquid-Level Sensors

with Temposonics® Magnetostrictive Technology



M-Series Model USTD II
Underground Storage Tank Level Sensor
For Leak Detection and Inventory Monitoring

550949 C

Product Specification

Model USTD II
Underground Storage Tank (UST) gauge
for Gas Station Applications

FEATURES

- Continuous absolute level gauging
- Gauge order length 737 mm to 3800 mm in various lengths (29 in. to 149 in.)
- Only one probe for temperature, product and water levels
- Output: EIA RS-485 interface
- 2-wire multidrop network
- Non-linearity 0.025%
- Intrinsically safe
- Safety approvals:
 - ATEX EEx ia IIB T4
 - FM IS Class I, Div 1
- Continuous temperature measurement using 5 Digital Thermometers (DTs)
- No recalibration needed

APPLICATIONS

- Fuels and solvents

MARKETS

- Underground Storage Tank (UST)

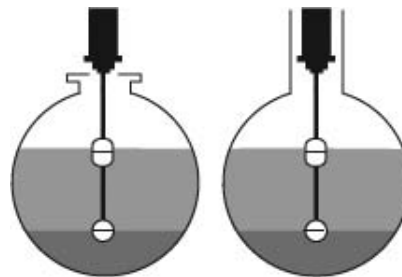


Parameter	Specification (continued)
LEVEL OUTPUT	
Measured Variable:	Product level, water level, temperature
Full Range:	29 in. to 149 in. (737 mm to 3800 mm)
Non-Linearity:	0.025% of full scale
Repeatability:	0.001%
Process Temperature:	Electronics: -40 to 160 °F (-40 to 71 °C)
TEMPERATURE OUTPUT	
Measured Variable:	Average and multi-point temperature (up to 5 Digital Thermometers)
Temperature Accuracy:	± 0.5 °F (± 0.25 °C)
ELECTRONICS	
Input Voltage Range:	10.5 to 30.1 VDC
Safety Approval:	ATEX EEx ia IIB T4, FM IS Class I, Div 1
ENVIRONMENTAL	
Operating Temperature:	Electronics: -40 to 160 °F (-40 to 71 °C)
Vessel Pressure:	Up to 60 psi (4.0 bar)
FIELD INSTALLATION	
Length (excluding housing):	29 in. to 149 in. (737 mm to 3800 mm)
Mounting:	3/4 in. NPT adjustable fitting and/or fill tube hanger with centering disks. Note: Fill-tube mount is not ATEX/PTB approved).

All specifications are subject to change. Please contact MTS for specifications that are critical to your needs. For more information, go to www.mtssensors.com.

MODEL USTD II GAUGE

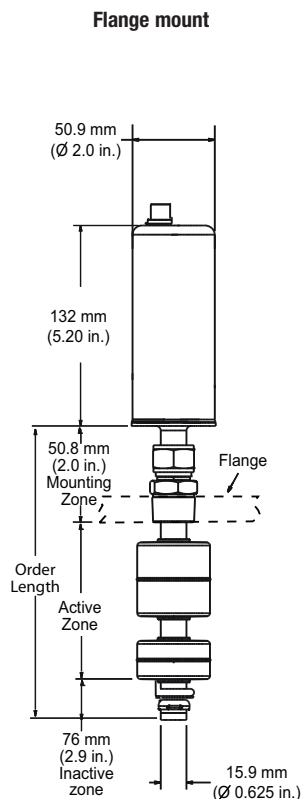
The robust Model USTD II is the pioneering Underground Storage Tank (UST) gauge for gas station applications. Dual floats are used to measure product level and water. In addition, the gauge determines the individual and average temperature with 5 integrated temperature transmitters. The RS-485 interface is used for remote data transfer to the tank management system.



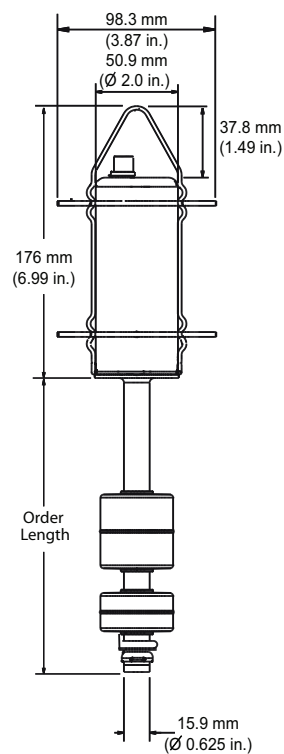
Flange mounting

Fill-tube mounting

DIMENSIONS, MODEL USTD II GAUGE

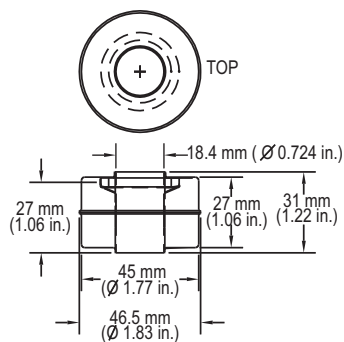


Fill-tube mount
(Not ATEX/PTB approved)

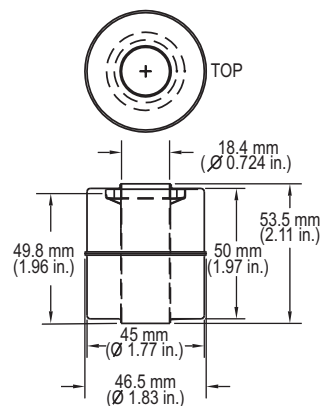


DIMENSIONS, FLOATS

Float, gas or diesel/water interface
round SST
Part number 201606-2



Float, product/round SST
Part number 201605-2



HOW TO ORDER

HOW TO ORDER

U	S	T	D	I	I		L	L	L	L		
1	2	3	4	5	6	7	8	9	10	11	12	13

UNIT OF MEASURE

- U** = US Customary (inches)
M = Metric (millimeters)

LENGTH

- **U** = 0LLL (in.)
 --- **M** = LLLL (mm)

MOUNTING AND CATEGORY OF APPARATUS

- H** = Fill tube mounting (hanger w/centering disk) - FM
A = Flange mounting (3/4" NPT adjustable fitting) -FM
6 = Flange mounting (3/4" NPT adjustable fitting) - ATEX

GAUGE MOUNTING TYPE

- S** = Standard product without cable - FM
9 = Standard product without cable - ATEX
7 = Cable gland & cable pigtail - ATEX

STANDARD FEATURES

Five DTs evenly spaced
 Data output format is USTD type

CABLE ASSEMBLY AVAILABLE

402486 12' cable assembly straight

FLOATS AVAILABLE

201605-2 Product, SS, 46.5 mm dia. (1.83 in.), 53.3 mm tall (2.11 in.)
 201606-2 Gas or diesel/water interface, SS 46.5 mm dia. (1.83 in.), 31 mm tall, (1.22 in.)
 201605 & 201606 must be used in ATEX approved versions



Part Number: 09-06 550949 Revision C

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All Temposonics sensors are covered by US patent number 5,545,984. Additional patents are pending.

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