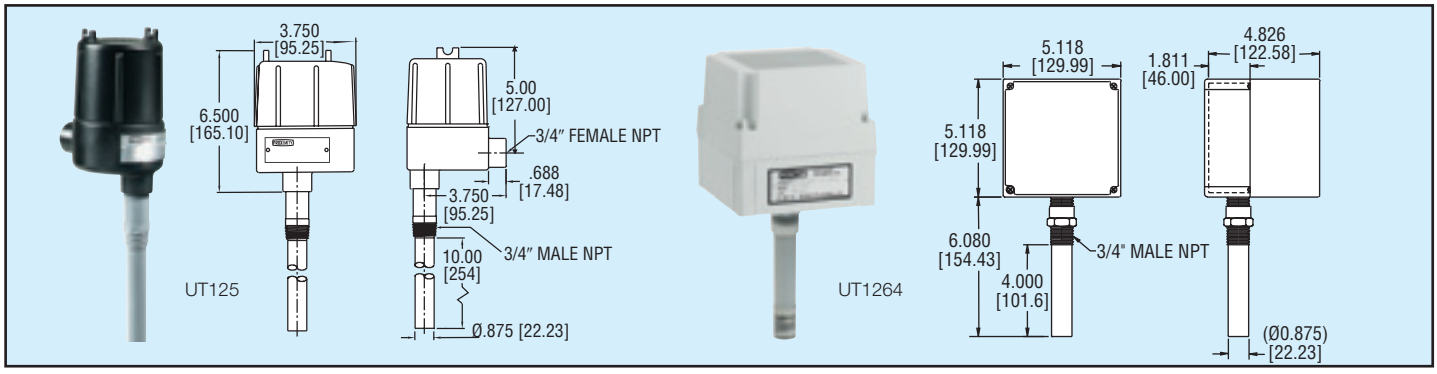
Series UT Ultrasonic Level Transmitter

Noncontact Measurement, ±0.25% Accuracy, 4-wire



Series UT Ultrasonic Level Transmitters provide reliable, noncontact measurement for liquid level control in tanks and other vessels. Integral electronics generate an ultrasonic pulse which is transmitted through the air space in the tank. The pulse is reflected back to the sensor at the liquid/air interface. From the received echo, the time of flight can be calculated which is directly proportional to the distance of the liquid surface to the sensor. A continuous 4 to 20 mA output signal is generated and updated every half second. Units feature a fully adjustable zero and span, height and distance mode adjustment, lost echo LED indication, and reverse polarity protection.

STOCKED MODELS

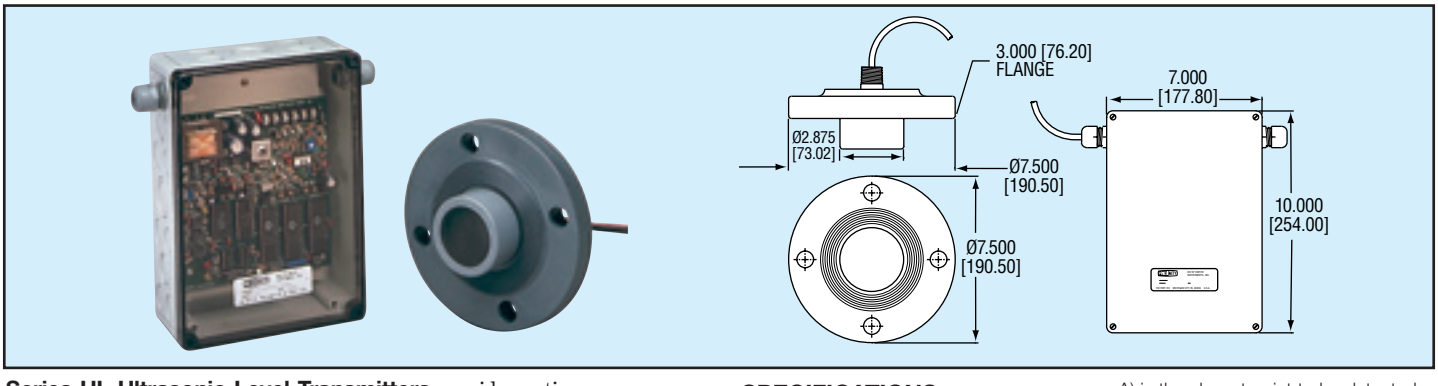
Model UT125 Ultrasonic Level Transmitter, CPVC . . . . . .
Model UT1264 Ultrasonic Level Transmitter, Kynar® . . . . . .

SPECIFICATIONS

Range: 10 ft (3 m).
Service: Liquids.
Wetted Material: UT125: CPVC; UT1264: Kynar®.
Accuracy: ±0.25% full scale.
Repeatability: 1/8" (3.2 mm) typical.
Temperature Limits: Sensor: –20 to 160°F (–29 to 71°C), Electronics: –10 to 170°F (–23 to 77°C) compensated over full range of sensor.
Pressure Limits: 100 psig (6.9 bar).
Blind Zone: 6″ (15 cm).
Beam Angle: Conicle 12°.
Power Requirements: 16 to 30 VDC.
Output Signal: 4 to 20 mA DC (isolated), 4-wire.
Zero and Span Adjustments: Zero: 6″ to 114″ (15 to 290 cm), Span: 1″ to 120″ (2.5 to 305 cm).
Process Connection: 3/4″ male NPT.
Enclosure Rating: UT125: NEMA 7, cast aluminum; UT1264: NEMA 4X (IP67), ABS plastic.
Mounting Orientation: Vertical.
Weight: UT125: 5 lb (2.3 kg); UT1264: 2.0 lb (0.91 kg).

Series UL Ultrasonic Level Transmitter

Continuous, Noncontact, 4 to 20 mA Output



Series UL Ultrasonic Level Transmitters provide continuous noncontact sensing for level control of liquids or slurries. The sensor emits an ultrasonic pulse which is reflected back to the sensor at the liquid/air interface. The distance traveled by the pulse is calculated and converted into a 4 to 20 mA output signal. Internal microprocessor performs self diagnostics to indicate possible operating problems such as out-of-range or loss of echo. Failsafe feature can be set to deliver a 3 or 21 mA output in the event the echo is lost.

APPLICATIONS

Monitor and control levels of water, wastewater, oils, chemicals, acids, viscous liquids, and slurries.

STOCKED MODELS

MODEL NUMBER	RANGE	CONNECTION	
UL111	15 ft (4.5 m)	2" PVC flange	
UL213	35 ft (10.5 m)	3" PVC flange	

SPECIFICATIONS

Service: Liquids or solids.
Wetted Materials: None, noncontact.
Accuracy: ± 0.3% of span.
Repeatability: ± 0.125″ (±3 mm).
Temperature Limits: Sensor: -20 to 180°F (-30 to 82°C). Control Box: -10 to 160°F (-23 to 71°C).
Compensated Temperature Range: -20 to 180°F (-30 to 82°C).
Pressure Limit: 150 psig (10.34 bar).
Blind Zone: 15 ft (4.57 m) range: 12″ (304.8 mm). 35 ft (10.67 m) range: 18″ (457.2 mm).
Beam Angle: Conical, 6.5° from centerline.
Power Requirements: 115 ±10% VAC, 50/60 Hz.
Output Signal: 4 to 20 mA, 2-wire.
Zero and Span Adjustments: The zero setting (4 mA) is the furthest point to be detected and the span setting (20 mA) is the closest point to be detected and must be greater than the blind zone. Both are set in inches or centimeters in the control box. The measuring range will be the zero setting minus the span setting.
Loop Resistance: 600 Ohms at 24 VDC.
Current Consumption: 5 VA.
Electrical Connections: Screw terminal.
Conduit Connection: Cable gland.
Process Connection: 2″ or 3″ 150# flange in PVC or Kynar®.
Enclosure Rating: NEMA 4X.
Mounting Orientation: Not position sensitive. Must be obstruction free.
Weight: 9.45 lb (4.29 kg).
Sensor: Standard CPVC. Optional Kynar®, Teflon®, or 316 SS.
Options: Sensor materials and process connection.