Dwyer

SERIES ULSS, ULSM & ULSL

ULTRASONIC LEVEL SENSORS
Non-Contact Transmitter, SPST Programmable Relays

CE
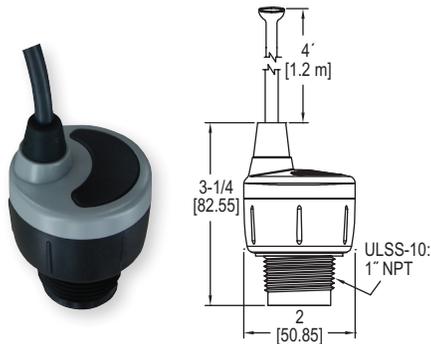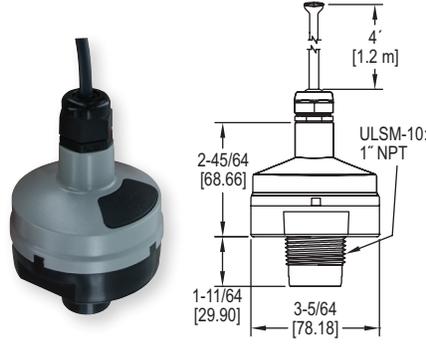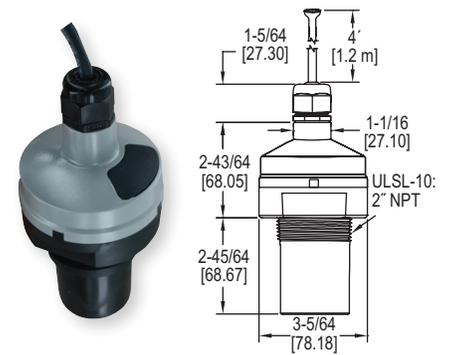
ULSS

ULSM

ULSL

The **Series ULSS Ultrasonic Level Sensor** provides non-contact, continuous ultrasonic level measurement of fluids for short range applications. It has a 4.1´ (1.2 m) measuring range with a 0.125˝ (3 mm) accuracy.

The **Series ULSM Ultrasonic Level Sensor** provides non-contact, continuous ultrasonic level measurement of fluids for medium range applications. It has a 9.8´ (3 m) measuring range with a ±0.2% of range accuracy.

The **Series ULSL Ultrasonic Level Sensor** provides non-contact, continuous ultrasonic level measurement of fluids for tall range applications. It has a 18´ (5.5 m) measuring range with a ±0.2% of range accuracy.

FEATURES/BENEFITS
• Via free software, units can be programmed to transmit an output signal and operate four relays for control applications
• Provides reliable, accurate, and non-contact level measurement of compatible liquids
• Non-contact technology offers no moving parts to wear, jam, corrode, or get coated like contact technologies
• Mapping software makes effective measuring surface only a 3˝ (76.2 mm) diameter column with no concerns of ladders, pipes, or other tank intrusions in the remaining sound cone
• Ultrasonic technology paired with automatic temperature compensation provides accurate and reliable measurements in almost all conditions
• Fail-safe logic is easily configured to custom applications via free software removing the need for target calibration
• Full NEMA 6P submersible enclosure rating to ensure excellent product durability

APPLICATIONS
• Water and wastewater
• Pulp and paper processing
• Sump and process tanks
• Chemical processing
• Food and beverage

SPECIFICATIONS
Service: Compatible fluids.
Wetted Materials: Sensor: PVDF; O-ring: FKM.
Ranges: See chart.
Accuracy: ULSS: 0.125˝ (3 mm); ULSM & ULSL: ±0.2% of range.
Resolution: ULSS: 0.019˝ (0.5 mm); ULSM: 0.039˝ (1 mm); ULSL: 0.079˝ (2 mm).
Blind Zone: ULSS: 2˝ (5 cm); ULSM: 4˝ (10 cm); ULSL: 8˝ (20 cm).
Beam Width: ULSS & ULSM: 2˝ (5 cm); ULSL: 3˝ (7.62 cm).
Temperature Limits: Process: 20 to 140°F (-7 to 60°C); Ambient: -31 to 140°F (-35 to 60°C).
Temperature Compensation: Automatic.
Pressure Limit: 30 psi (2 bar).
Power Requirement: 12 to 28 VDC.
Output Signal: 4-20 mA, 2-wire; Invert: 4-20 mA or 20-4 mA; Fail-safe: 4 mA, 20 mA, 21 mA, 22 mA, or hold last.
Loop Resistance: 400 Ω max.
Electrical Connections: 4´ (1.2 m) 9 conductor shielded cable.
Contact Type: 4 SPST relays.
Contact Rating: 1 A max @ 28 VDC max.
Deadband: Selectable (no hysteresis, 1/4˝, 1/2˝, 1˝, 1/2 cm, 1 cm, 2 cm, 5 cm or not available).
Process Connection: 1˝ NPT, 1˝ BSPP (optional).
Enclosure Rating: NEMA 6P (IP68).
Enclosure Material: Polycarbonate; Gland: TPE.
Mounting Orientation: Vertical.
Memory: Non-volatile.
Failsafe: Contact: Power loss: Holds last contact; Power on: Open, close, or last contact.
Programming: Free PC software download (USB adapter required).
Weight: 1 lb (0.45 kg).
Agency Approvals: CE.

MODEL CHART

Model	Range
ULSS-10	4.1´ (1.25 m)
ULSM-10	9.8´ (3 m)
ULSL-10	18´ (5.5 m)

Note: USB adapter necessary for calibration. One adapter can program multiple units.

ACCESSORIES

Model	Description
ULS-ACC-USB	USB adapter for calibration, PVC
ULS-ACC-121	2˝ x 1˝ NPT reducer bushing fitting (sch. 40), PVC
ULS-ACC-122	2˝ x 1˝ NPT reducer bushing fitting (sch. 80), PVC
ULS-ACC-131	3˝ x 2˝ NPT reducer bushing fitting (sch. 40), PVC
ULS-ACC-132	3˝ x 2˝ NPT reducer bushing fitting (sch. 80), PVC
ULS-ACC-142	4˝ x 2˝ NPT reducer bushing fitting (sch. 80), PVC
ULS-ACC-221	2˝ socket x 1˝ NPT reducer bushing fitting (sch. 40), PVC
ULS-ACC-222	2˝ socket x 1˝ NPT reducer bushing fitting (sch. 80), PVC
ULS-ACC-231	3˝ socket x 2˝ NPT reducer bushing fitting (sch. 40), PVC
ULS-ACC-232	3˝ socket x 2˝ NPT reducer bushing fitting (sch. 80), PVC
ULS-ACC-241	4˝ socket x 2˝ NPT reducer bushing fitting (sch. 40), PVC
ULS-ACC-242	4˝ socket x 2˝ NPT reducer bushing fitting (sch. 80), PVC
ULS-ACC-510	1˝ NPT polypropylene side mount bracket
ULS-ACC-520	2˝ NPT polypropylene side mount bracket

Level Transmitters, Ultrasonic