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# LTB Level Transducer

- Submersible Level Transducer
- Municipal and Industrial Applications
- Wide Mouth Non-fouling Protective Cage
- 2.75” PTFE Flexible Diaphragm

The **LTB Level Transducer** is a submersible hydrostatic level transducer specifically designed to meet the rigorous environments encountered in wastewater and liquid level measurements and control.

Standard Certifications:

Optional Certifications:

## FEATURES

### Standard

- 0.25% FSO Accuracy
- Welded 316 Stainless Steel Enclosure
- One Year Warranty
- Pre-calibrated Pressure Ranges

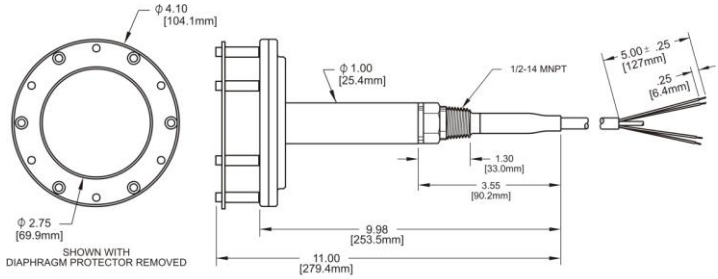
### Optional

- Two Year Warranty
- Custom Pressure Ranges
- Intrinsically Safe
- Lightning Protection

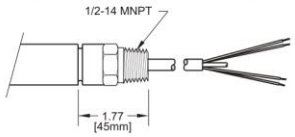
## APPLICATIONS

- Lift Station Monitoring
- Pump Control
- Slurry Tank Liquid Level
- Wastewater

## dimensions




MODEL LTB - CAGE NOSE W/OVERMOLDED CONDUIT CONNECTION




MODEL LTB - GLAND SEAL CONDUIT CONNECTION

## standard pressure ranges

| Pressure Range (PSI) | Feet $H_2O$ | LTB Vented |
|---|---|---|
| 0-005 | 11.5 ft | X |
| 0-010 | 23.1 ft | X |
| 0-015 | 34.6 ft | X |
| 0-030 | 69.2 ft | X |
| 0-050 | 115.4 ft | X |
| Custom Ranges Available | | |

# LTB Level Transducer

## specifications

| | | |
|---|---|---|
| **STATIC PERFORMANCE** | | |
| Static Accuracy (combined effects of non-linearity, hysteresis and repeatability, best fit straight line method) | ±0.25% FSO | BFSL method |
| Resolution | +0.0001% FS | |
| **ENVIRONMENTAL** | | |
| Wetted Materials | 316 SS; POM;<br>polyurethane or FKM | |
| Compensated Temp Range | 0 to 50ºC | |
| Thermal Error (maximum allowable deviation from the Best Fit Straight Line due to a change in temperature) | ±0.10% FSO/ºC | Worst case for level ranges <23' (7m) $H_2O$<br>Prorated for level ranges <= 23' (7m) $H_2O$ |
| Operating Temp Range | -20 to 60 ºC | when attached to polyurethane cable |
| Protection Rating | IP 68, NEMA 6P | |
| **ELECTRICAL** | | |
| Excitation | 9-28V – VDC output<br>9-28V – mA output<br>15-28V – VDC output<br>10-28V – VDC output | 0-5V, 0-2.5V, 0-4V<br>4-20<br>0-10V<br>1.5-7.5V |
| Input Current | 20 mA max<br>3.5 mA max | for mA output<br>for VDC output |
| Output | 4-20mA, 0-5 VDC, 0-2.5VDC,<br>0-4VDC, 0-10VDC, 1.5-7.5VDC | for ranges < 5 ft (1.5m) $H_2O$,<br>only 4-20mA output is available |
| Zero Offset | ±0.25 mA for mA output<br>< 0.25 VDC for VDC output | |
| Output Impedance | See loop diagram for mA output<br>20 ohm for VDC output | |
| Insulation Resistance | 100 mega ohm at 50 VDC | |
| Circuit Protection | Polarity, surge/shorted output | |
| **CERTIFICATIONS** | | |
| | Standard – WEEE/RoHS, CE compliant | EN 61326-1:2001 and 61326-2-3:2006 Waste from Electrical and Electronic Equipment (WEEE) and Restrictions on the use of Hazardous Substances (RoHS) |
| | Optional - UL, CUL and FM | Class I, II, III, Div 1, Groups A,B,C,D,E,F&G |
| **PHYSICAL** | | |
| Approximate Weight | 3.5 lbs (1588 g) transducer<br>0.05 lbs/ft (79 g/m) cable | |
| Cable Jacket Material | Polyurethane (standard)<br>ETFE (optional) | |
| Cable Pull Strength | 200 lbs (90 kg) | |
| Cable Number of Conductors | 4 | |
| Cable Conductor Size | 22 AWG | |
| Cable Seal | Molded Polyurethane<br>FKM Gland | for polyurethane cable<br>for ETFE cable |
| **TEMPERATURE OUTPUT OPTION (not intrinsically safety approved)** | | |
| Temperature Range | -20 to 60ºC | available for 4-20mA output versions only |
| Output Signal | 4-20mA | |
| **LIGHTNING PROTECTION (power supply needs to be limited to 150mA to avoid lock up of the gas tube after a suppression event)** | | |
| Life Expectancy | >1,000 Operations | |
| Peak Clamping Voltage | 36 Volts | |
| Response Time | <10 nsecs | |
| Shunts | 20,000 Amperes | |

# LTB Level Transducer

## ordering info

**TRANSDUCER**

L T Submersible Level Transducer

↓ ↓ **PRESSURE PORT**

B Cage

↓ **OUTPUT**

8 4 – 20 mA
1 0 – 2.5 VDC
2 0 – 4 VDC
3 0 – 5 VDC
4 0 – 10 VDC
5 1.5 – 7.5 VDC
G 4-20 mA w/Lightning
A 0-2.5 VDC w/Lightning
B 0-4 VDC w/Lightning
C 0-5 VDC w/Lightning
D 0-10 VDC w/Lightning
E 1.5-7.5 VDC w/Lightning

↓ **CABLE TYPE**

A Polyurethane
B ETFE
D None

↓ **ACCURACY**

B ±0.25% FS
R ±0.25% FS with Cal Report

↓ **INTRINSIC SAFETY APPROVALS**

B UL, FM & CUL
D None

↓ **WARRANTY**[1]

A Standard one year Warranty
B Custom Label one year Warranty
J Extended two year Warranty
K Custom Label Extended two year Warranty

↓ **MATERIAL**

S Stainless Steel

↓ **ELECTRICAL CONNECTION**

A Overmold
B Gland Seal (ETFE jacketed cable)
D Overmold w/ ½" – 14 NPT Conduit
F Gland Seal w/ ½" – 14 NPT Conduit

↓ **PRESSURE RANGE**

x x x Refer to chart page 1

↓ ↓ ↓ **UNITS**

P PSI

↓ **PRESSURE REFERENCE**

G Vented Gage

↓ **CABLE LENGTH (FT)**

x x x Cable length in feet

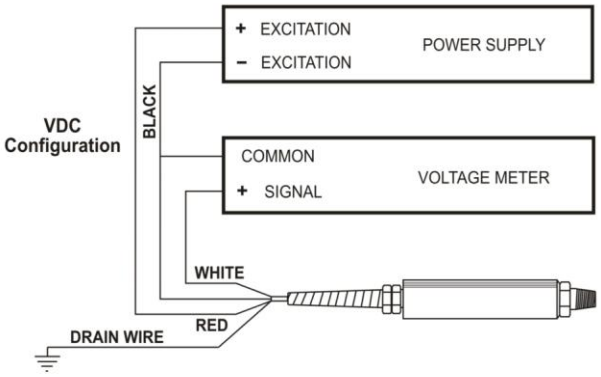
↓ ↓ ↓

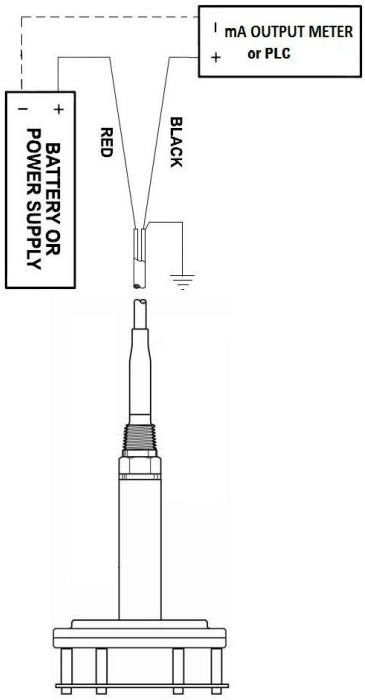
| | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| L | T | B | | | B | | | S | | | | | P | G | | | |

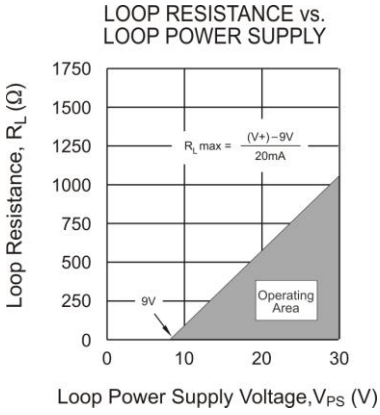
[1] Contact Measurement Specialties if private labeling is required.

# LTB Level Transducer

## electrical termination/loop resistance




| ELECTRICAL TERMINATION | | |
|---|---|---|
| 22AWG CONDUCTORS IN A SHIELDED CABLE WITH VENT TUBE | | |
| 4-20 mA | RED<br>BLACK | + EXCITATION<br>- EXCITATION |
| 0-5 VDC | RED<br>BLACK<br>WHITE | + EXCITATION<br>- EXCITATION<br>+ SIGNAL |
| ALL | DRAIN WIRE | SHIELD |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