



## MEAS LTR LEVEL TRANSDUCERS

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

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

### Applications

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

### Features

#### Standard

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

#### Optional

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

## Specifications

### STATIC PERFORMANCE

Static Accuracy (combined effects of non-linearity, hysteresis and repeatability, best fit straight line method)	±0.25% FSO	BFSL method
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Resolution	+0.0001% FS
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### ENVIRONMENTAL

Wetted Materials	316 SS; PTFE; FKM; Polyurethane or ETFE
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Compensated Temp Range	0 to 50°C
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Thermal Error (maximum allowable deviation from the Best Fit Straight Line due to a change in temperature)	±0.10% FSO/°C	Worst case for level ranges <23' (7m) H <sub>2</sub> O Prorated for level ranges ≤ 23' (7m) H <sub>2</sub> O
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Operating Temp Range	-20 to 60 °C	When attached to polyurethane cable
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Protection Rating	IP 68, NEMA 6P
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### ELECTRICAL

Excitation	9-28V – VDC output 9-28V – mA output 15-28V – VDC output 10-28V – VDC output	0-5V, 0-2.5V, 0-4V 4-20 0-10V 1.5-7.5V
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Input Current	20 mA max 3.5 mA max	For mA output For VDC output
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Output	4-20mA, 0-5 VDC, 0-2.5VDC, 0-4VDC, 0-10VDC, 1.5-7.5VDC	For ranges < 5 ft (1.5m) H <sub>2</sub> O, only 4-20mA output is available
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Zero Offset	±0.25 mA for mA output < 0.25 VDC for VDC output
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Output Impedance	See loop diagram for mA output 20 ohm for VDC output
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Insulation Resistance	100 mega ohm at 50 VDC
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Circuit Protection	Polarity, surge/shorted output
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### CERTIFICATIONS

	Standard – WEEE/RoHS, CE compliant	EN 61326-1:2013 and 61326-2-3:2013 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 0.05 lbs./ft. (79 g/m) cable
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Cable Jacket Material	Polyurethane (standard) ETFE (optional)
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Cable Pull Strength	200 lbs. (90 kg)
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Cable Number of Conductors	4
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Cable Conductor Size	22 AWG
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Cable Seal	Molded Polyurethane FKM Gland	For polyurethane cable For ETFE cable
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### TEMPERATURE OUTPUT OPTION (not intrinsically safety approved)

Temperature Range	-20 to 60°C	Available for 4-20mA output versions only
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Output Signal	4-20mA
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### 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
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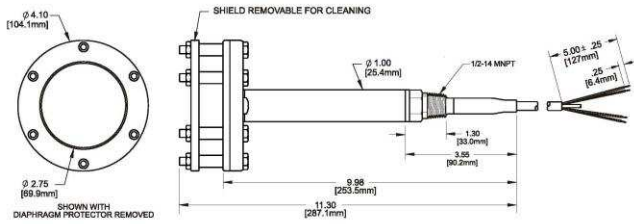
Peak Clamping Voltage	36 Volts
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Response Time	<10 nsecs
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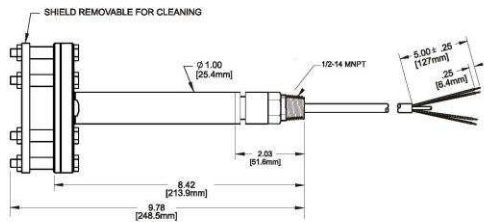
Shunts	20,000 Amperes
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# MEAS LTR LEVEL TRANSDUCER

## Dimensions



MODEL LT (THICK PLATE) - CAGE NOSE W/OVERMOLD CONDUIT CONNECTION



MODEL LT (THICK PLATE) - CAGE NOSE W/GLAND SEAL CONDUIT CONNECTION

### STANDARD PRESSURE RANGES

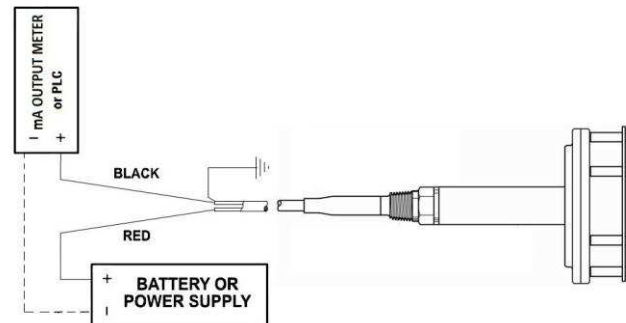
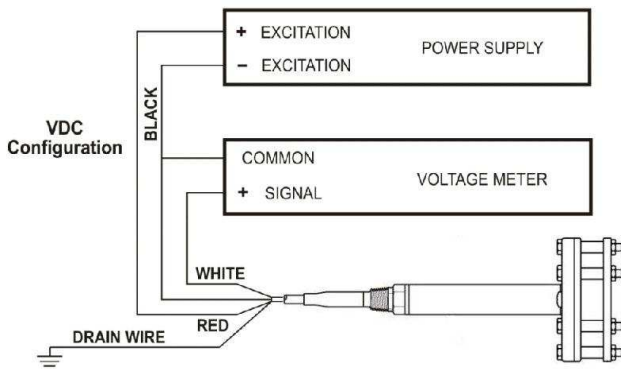
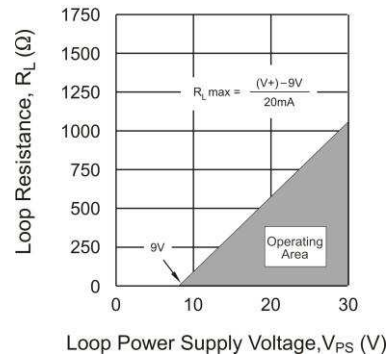
Pressure Range (PSI)	Feet H <sub>2</sub> O
0-005	11.5 ft
0-010	23.1 ft
0-015	34.6 ft
0-030	69.2 ft
0-050	115.4 ft
Custom (whole number) Ranges Available	

## Electrical Termination/Loop Resistance

### ELECTRICAL TERMINATION

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

### LOOP RESISTANCE vs. LOOP POWER SUPPLY



## Ordering Information

TRANSDUCER															
L	T	Submersible Level Transducer													
↓	↓	PRESSURE PORT													
		R	Heavy-duty 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											
		↓	ACCURACY												
			B	±0.25% FS											
		↓	INTRINSIC SAFETY APPROVALS												
			B	UL, FM & CUL											
			D	None											
		↓	WARRANTY <sup>1</sup>												
			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/ 1/2" – 14 NPT Conduit											
			F	Gland Seal w/ 1/2" – 14 NPT Conduit											
		↓	PRESSURE RANGE												
			x	x	x	Refer to chart page 1									
		↓	↓	↓	↓										
			UNITS												
			P	PSI											
			M	M H <sub>2</sub> O											
			F	Ft. H <sub>2</sub> O											
		↓	PRESSURE REFERENCE												
			G	Vented Gage											
		↓	CABLE LENGTH (FT)												
			x	x	x	Cable length in feet									
		↓	↓	↓	↓										
L	T	R				B			S			G			

<sup>1</sup> Contact Measurement Specialties if private labeling is required.

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