



# PIEZO LEVEL TRANSMITTER (LT-100)

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## Introduction

- Gauge, Absolute, Vacuum and Compound Pressure Models Available
- Submersible, General Purpose and Wash down Enclosures
- High Stability Achieved by CVD Sensing Element
- Millivolt, Voltage and Current Output Models



The LT series features stability and accuracy in a variety of enclosure options. The LT series extends the packaging options via an all welded stainless steel back end for demanding submersible and industrial applications. The LT feature had proven CVD sensing technology, an ASIC (amplified units), and modular packaging to provide a sensor line that can accommodate specials while not sacrificing high performance.

## Specifications

### INPUT

<b>Pressure Range</b>	Vacuum to 400 bar (6000psi)
<b>Proof Pressure</b>	2 x full Scale(FS)(1.5 x Fs for 400bar, >=5000psi)
<b>Burst Pressure</b>	>35 x Fs<=6bar (100psi); >20 x Fs<=60bar (1000psi); >5 x Fs<=400bar (6000psi);
<b>Fatigue Life</b>	Designed for more than 100 million FS cycles

### PERFORMANCE

<b>Long Term Drift</b>	0.2% FS/year (non-cumulative)
<b>Accuracy</b>	0.2% FS typical (optional 0.15% FS)
<b>Thermal Error</b>	1.5% FS typical (optional 1% FS)
<b>Compensated Temperatures</b>	-20° to 80°C (-5° to 180°F)
<b>Operating Temperatures</b>	-40°to125°C(-22°to260°F)for elec. Codes A,B,C,1 -20° to 80°C(-5° to 180°F)for elec. Codes 2,D,G,3 -20° to 50°C(-5° to 125°F) for elec. Codes F,M,P Amplified units >100°C maximum 24 Vdc supply
<b>Zero Tolerance</b>	1% of Span
<b>Span Tolerance</b>	1% of span
<b>Response Time</b>	0.5ms

### MECHANICAL CONFIGURATION

<b>Wetted Parts</b>	17-4 PH Stainless Steel
<b>Electrical Connection</b>	See ordering chart
<b>Enclosure</b>	316ss, 17-4 PH Stainless Steel IP65 for elec, codes A,B,C,D,G,1,2,3 IP67 for elec, codes F IP68 for elec, codes M,P(max depth 200mt H <sub>2</sub> O) IP65 for elec, codes "3" with flying leads
<b>Vibration</b>	70g, peak to peak sinusoidal, 5 to 2000 Hz (Random Vibration: 20 to 2000 Hz @=20g peak per MIL-STD.-180E Method 514.4)
<b>Acceleration</b>	100g steady acceleration in any direction 0.032% FS/g for 1bar(15psi) range decreasing logarithmically to 0.0007%FS/g for 400 bar (6000psi) range
<b>Shock</b>	20g, 11ms, per MIL-STD.-810E Method 516.4 Procedure I
<b>Approvals</b>	CE, UR (22ET, 26ET Intrinsically safe)

## Individual Specifications

### MILIVOLT OUTPUT UNITS

Output	100mV (10mv/v)
Supply Voltage (Vs)	10Vdc (15VDC max.) Regulated
Bridge resistance	2600-6000 ohms

### VOLTAGE OUTPUT UNITS

Output	See ordering chart
Supply Voltage (Vs)	1.5Vdc above span to 35VDC@ 6mA
Supply Voltage Sensitivity	0.01% FS/Volt
Min. load resistance current consumption	9FS output/2) Kohms approx 6mA at 7.5V output

### CURRENT OUTPUT UNITS

Output	4-20mA (2 wire)
Supply Voltage (Vs)	12.5-36VDC
Supply Voltage Sensitivity	0.01% FS/Volt
Max. loop resistance	(Vs-70 x 50 ohms)

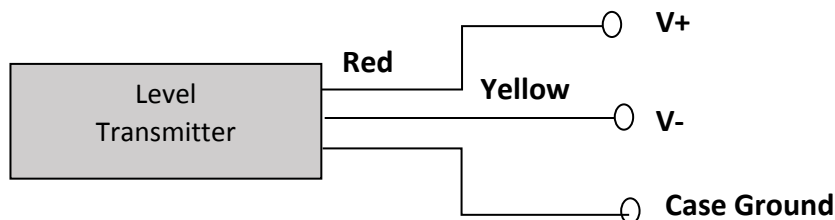
## Electromagnetic Capability

Meets the requirement for CE marking of EN50081-2 for emissions and EN50082-2 for susceptibility.

Test Data:

- EN61000-4-2 electrostatic Discharge, 8kV air discharge, 4kV contact discharge. Unit survived.
- ENV50140 Radiated RF Susceptibility. 10V/m, 80MHz-1GHz, 1kHz mod Maximum recorded output error was  $<\pm 1\%$
- ENV50204 Radiated RF Susceptibility to Mobile Telephones. 10V/m, 900MHz. Maximum recorded output error was  $<\pm 1\%$ 
  - EN61000-4-4 Fast Burst Transient. 2kV, 5/50ns, 50kHz for 1 minute. Unit survived
- ENV50141 Conducted RF Susceptibility. 10Vms, 1kHz mod, 150kHz-80MHz. Maximum recorded output error was  $<\pm 1\%$

## Wiring Diagram



LT-100 Series inputting type static pressure hydraulic press, using corrosion resistance stainless steel or ceramic membrane, the probe measuring the weight of liquid pressure, according to the density of the fluid, indirectly measured the height of the liquid, translated into standard voltage, current signal and output.



LT-101

### Product Features

1. LT-101, LT-102, LT-103 the diaphragm measure direct liquid pressure of directly, high precision (*maximum 80 DegC*)
2. LT-104, LT-105, LT-106 Diaphragm is not in contact with liquid, is not affected by temperature and the impurity
3. Multiple materials, multiple structure, can adapt to various working conditions

### Ordering Information

<b>Level Transmitter</b>	
<b>Type</b>	1 – Directly out of the line type 2 – The Cabling standard junction box type 3 – Pole type standard junction box 4 – Capillary gas collecting type standard junction box type 5 – Pole type and gas collecting standard junction box 6 – Rubber hose gas collecting type standard junction box ( <i>LT101/102 cannot use flame-proof</i> )
<b>Measure range</b>	XXX – with unit (example: M10)
<b>Length</b>	XXX – with unit (example: M15)
<b>Output</b>	A – 4 ~ 20mA Two wires      C – 0 ~ 10V    Three wires B – 0 ~ 5V    Three wires      D – 4 ~ 20mA Two wires with Hart X - Others
<b>Connection</b>	E – Screw      F – Flange      X - Others
<b>Wetted Material</b>	G – SUS304      H – SUS316L I – PTFE      J – PP X - Others
<b>Temperature</b>	K – Max 80 DegC      L – Max 120 DegC M – Max 150 DegC    N – Max 200 DegC O – Max 250 DegC
<b>Option</b>	P – LED Display      Q – LCD Display R – Flame-proof      S – Safety explosion-proof X - Others

\*\*\* Standard model:LT-101-M10/M15AXGKX



LT-103



LT-104

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