

## Product Features

- *Continuous loop powered 4-20 mA operation with 4-digit LCD display*
- *Microprocessor Based*
- *Accuracy 1 % of span for constant dielectric of material*
- *Non-interactive zero and span calibration*
- *Calibration accomplished with 4 push buttons*
- *Heavy duty industrial design*
- *NEMA rated aluminum, explosion proof housing*
- *Standard fitting 3/4" NPT, flange and special fittings are available*

## Description

The series LTX03 are highly reliable microprocessor based capacitance level transmitters designed to measure tank levels of liquids and certain dry bulk media in metal tanks. They measure the change in capacitance that occurs as the tank level changes and outputs a standard loop powered 4-20mA signal. The 4-digit LCD display can be configured to read from 999 to 9999 with a 4-20mA input signal. The decimal point location and engineering units can be adjusted using membrane switches. LTX03 transmitters use very high frequency and very low amplitude sensing circuitry to greatly minimize the effects of coating on the sensing probe.

The LTX03 includes a standard 4-20mA loop powered LTX transmitter with LCD display installed in a rugged explosion proof enclosure, a mounting fitting and a rigid probe for ranges of up to 12 feet (4m). Probe material supplied is PFA Teflon jacketed or bare SS316. The LTX03 is designed for tanks which have fitting connections of 1/2" NPT or larger.

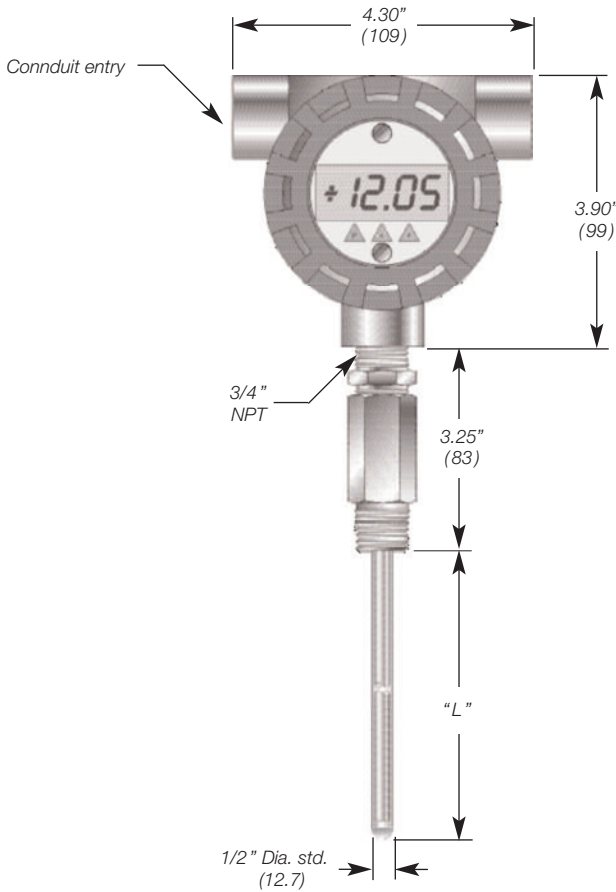
## Application / Process Notes

- *Water and water-based liquids.*
- *Jacketed probes required for conductive media*
- *Organic Acids*
- *Oils and fuels in some metallic tanks*
- *Use bare probes with non-conductive media*
- *Use cable probes where top side access is limited*
- *On-site calibration required*
- *Not recommended where material dielectric changes*
- *Tank must be conductive or grounding may be required or see other Intempco level probes.*



# LTX03 LEVEL SENSORS

Continuous Capacitance Level Transmitter  
4-20 mA Loop Powered w/LCD Display



## Electrical Specifications

### Transmitter

<b>Supply Voltage :</b>	12 VDC - 36 VDC
<b>Output :</b>	4-20 mA, loop powered
<b>Maximum Loop Res.:</b>	[Vs - 10] / 0.02 (i.e. 700 Ω @ 24 VDC)
<b>Calibration :</b>	Via 4 push-button switches non-interactive settings
<b>Capacitance Range :</b>	10 pF to 10000 pF
<b>Accuracy :</b>	± 1% of full span (constant dielectric)
<b>Repeatability :</b>	± 0.1 % of span
<b>Damping Adjust :</b>	0-30 sec.
<b>Ambient Temperature :</b>	-40 to 70 °C (-40 to 158 °F)

### LCD Display

<b>Indication Accuracy :</b>	± 0.1% of calibrated range, ± 1 digit
<b>Stability Over Time :</b>	± 0.1% of calibrated range ± 1 digit over 6 months
<b>Calibration :</b>	Via 3 push-button membrane switches
<b>Display Height :</b>	0.30" (7.6mm)
<b>Over Indication :</b>	Indication of "1" on display
<b>Response Time :</b>	75 ms
<b>Failure Mode :</b>	Failure will not affect the loop integrity
<b>Voltage Drop :</b>	5.5 VDC at 20 mA

## Mechanical Specifications

<b>Enclosures</b>	<b>XD3</b> : Class I, Div 1 Gps. B,C & D, Class II, III Div 1 Gps. E,F & G, NEMA TYPE 4X (IP68)
<b>Mounting Thread :</b>	3/4" NPT standard, others available
<b>Process Temperature:</b>	200 °C max (392 °F)-consult factory for higher temperatures
<b>Pressure Limits:</b> (PH Model only)	500 psi (34 bar) @ 25 °C (77 °F) 250 psi (17 bar) @ 150 °C (302 °F) 14.5 psi (1 bar) @ 200 °C (392 °F)
<b>Probe Mat'l :</b>	PFA Teflon jacketed, or bare SS316

## Custom Builder

MODEL      1      2      3      4      5

**LTX03** -  -  -  -  -

BOX1 CODE	Electronic Module
LD	4-20 mA, 2-wire output module installed with 4-digit LCD display

BOX2 CODE	Enclosure
XD3	Aluminum Explosion Proof

BOX3 CODE	Fitting.
P**	NPT male, 3/4" std.
PH**	NPT male, 3/4" std., high pressure
F**	Flange SS316, RF 150lb.

Consult factory for custom fittings and flanges

<b>** Fittings</b>	<b>** Flanges</b>
<b>12</b> 1/2" NPT	<b>20</b> 2" Flange
<b>34</b> 3/4" NPT	<b>25</b> 2-1/2" Flange
<b>44</b> 1" NPT	<b>30</b> 3" Flange
<b>54</b> 1-1/4" NPT	<b>40</b> 4" Flange
<b>64</b> 1-1/2" NPT	<b>50</b> 5" Flange
	<b>60</b> 6" Flange

BOX4 CODE	Probe Material
A	Teflon jacketed solid probe
B	SS316 Bare solid probe

BOX5 CODE	Probe Length "L"
---	In inches (20 ft max.) Ex.: <b>065</b> = 65" long