

Product Features

Explosion Proof Design

USL/CNL – Class I Division 2 Groups A, B, C, and D Hazardous Locations.

CSA – Class I Division 2 Groups A, B, C, and D Hazardous Locations.

Easy Calibration

Calibration accomplished via 4 push buttons which are located on the electronic unit, non-interacting Zero and Span. No hand-held terminals are required for a fast set-up.

Consistent Accuracy

Microprocessor-based circuitry means precise level indication. Internal circuitry provides ambient temperature compensation.

Reliability

Intempco's exclusive circuitry ensures accurate level indication in applications with light to moderate coatings. No moving parts to break or wear out.

Housings

NEMA 4X (IP66) rated aluminum and stainless steel housings available.

Mountings and Probes

Many fitting and flange sizes available with various probes to suit different applications.

Description

Intempco LTX20 Series two-wire RF level transmitter provides highly reliable, low cost level indication and control that is suitable for all liquid level applications that do not leave a severe build-up on the sensing element. LTX20 transmitter measures the change in capacitance that occurs as the tank level changes, and outputs a standard loop-powered 4-20mA signal. It uses a very high frequency, very low amplitude sensing circuitry to greatly minimize the effects of coating on the sensing probe.

LTX20 is available as an integrally mounted package. A number of level sensing probes can be selected based on the application including bare stainless steel probe, rigid Teflon coated probe and rigid concentric. Available housings are aluminum and stainless steel NEMA 4X.



LTX20..Ex

RF Capacitance Level Transmitter
w/ 4-20 mA Output

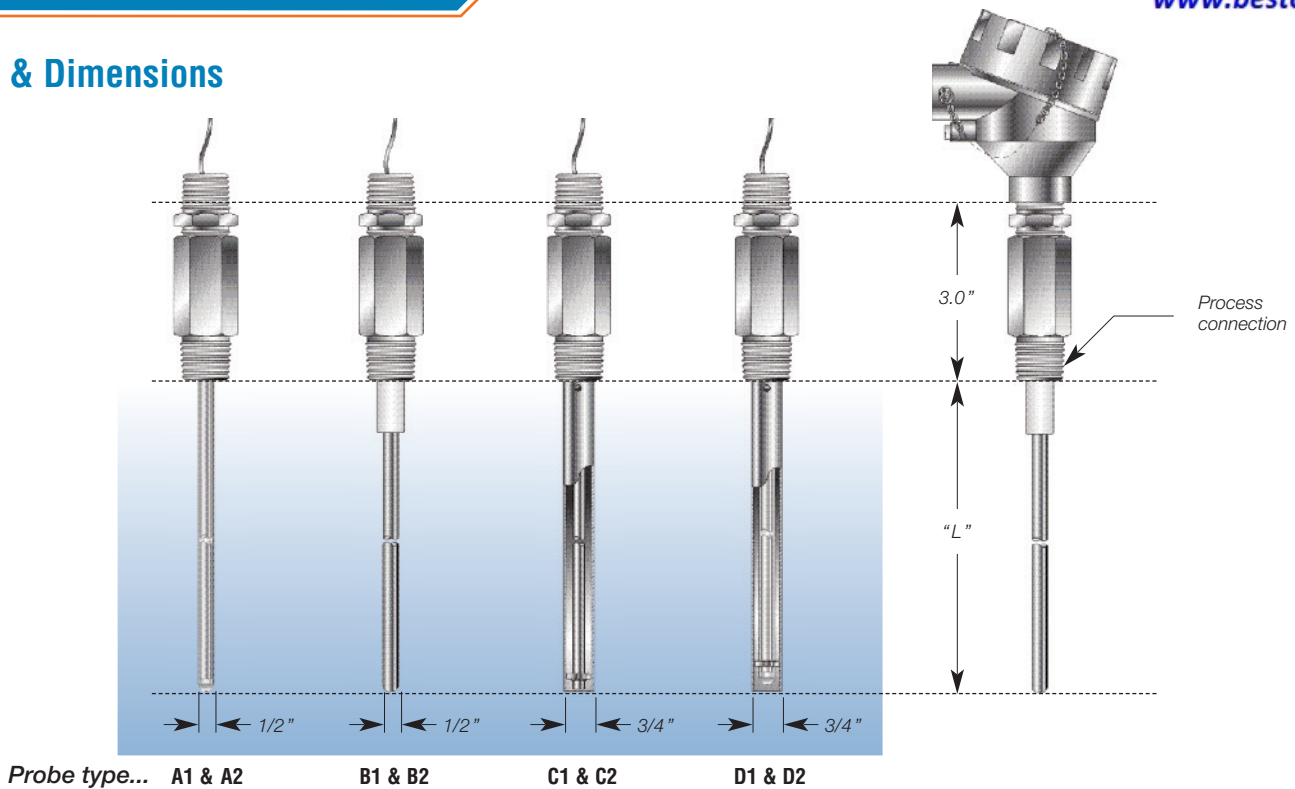
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SINCE / DEPUIS 1953

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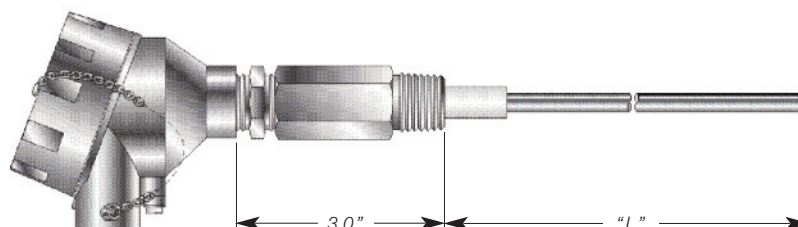
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Design & Dimensions



Model Ordering

Probe Type	Typical Application	Standard Construction	Standard Mounting	Temperature Pressure Limits
A1	Water-like conductive liquids, thick conductive liquids in metallic tanks	PFA-covered rod, 1/2" OD	1/2", 3/4", 1" NPT	500 PSI (34 bar) @ 25°C (77°F), 250 PSI (17 bar) @ 100°C (212°F), 14.5 PSI (1 bar) @ 200°C (392°F)
A2	Water-like conductive liquids, thick conductive liquids in metallic tanks	PTFE-covered rod, 1/2" OD	1/2", 3/4", 1" NPT	500 PSI (34 bar) @ 25°C (77°F), 250 PSI (17 bar) @ 100°C (212°F), 14.5 PSI (1 bar) @ 200°C (392°F)
B1	Non-conductive liquids such as oils and diesel fuels, low and medium viscosity, in metallic tanks	Bare stainless 316 rod, 1/2" OD	3/4", 1" NPT	500 PSI (34 bar) @ 25°C (77°F), 250 PSI (17 bar) @ 100°C (212°F), 14.5 PSI (1 bar) @ 200°C (392°F)
B2	Non-conductive corrosive liquids, low and medium viscosity, in metallic tanks	Bare Hastelloy C276 rod, 1/2" OD	3/4", 1" NPT	500 PSI (34 bar) @ 25°C (77°F), 250 PSI (17 bar) @ 100°C (212°F), 14.5 PSI (1 bar) @ 200°C (392°F)
C1	Non-conductive liquids such as oils and diesel fuels, low viscosity, in metallic and non-metallic tanks	Concentric tube and bare rod, stainless 316 rod, 3/4" OD	3/4", 1" NPT	500 PSI (34 bar) @ 25°C (77°F), 250 PSI (17 bar) @ 100°C (212°F), 14.5 PSI (1 bar) @ 200°C (392°F)
C2	Non-conductive corrosive liquids, low viscosity, in metallic and non-metallic tanks	Concentric tube and bare rod, Hastelloy C276, 3/4" OD	3/4", 1" NPT	500 PSI (34 bar) @ 25°C (77°F), 250 PSI (17 bar) @ 100°C (212°F), 14.5 PSI (1 bar) @ 200°C (392°F)
D1	Water-like conductive liquids and semi-conductive liquids, low viscosity, in metallic and non-metallic tanks	Concentric stainless 316 tube and PFA covered rod, 3/4" OD	3/4", 1" NPT	500 PSI (34 bar) @ 25°C (77°F), 250 PSI (17 bar) @ 100°C (212°F), 14.5 PSI (1 bar) @ 200°C (392°F)
D2	Conductive liquids and semi-conductive liquids, corrosive, low viscosity, in metallic and non-metallic tanks	Concentric Hastelloy C276 tube and PFA covered rod, 3/4" OD	3/4", 1" NPT	500 PSI (34 bar) @ 25°C (77°F), 250 PSI (17 bar) @ 100°C (212°F), 14.5 PSI (1 bar) @ 200°C (392°F)



Custom Builder

MODEL	1	2	3	4	5	6	7
LTX20	-	-	-	-	-	-	-

BOX1 CODE	Electronic Module
A	LTX1A continous RF 4-20 mA output loop-powered

BOX2 CODE	Housing
A2	Aluminum housing, model AD with 1/2" NPT conduit
A3	Aluminum housing, model AD with 3/4" NPT conduit
B2	Aluminum housing, model XD with 1/2" NPT conduit
B3	Aluminum housing, model XD with 3/4" NPT conduit
C2	Stainless steel housing, model SS with 1/2" NPT conduit
C3	Stainless steel housing, model SS with 3/4" NPT conduit

BOX3 CODE	Certificates of Compliance
X	None, for non-hazardous areas
U	USL/CNL - Class I, Division 2 Groups A, B, C and D Harzardous Locations
A	CSA - Class I, Division 2 Groups A, B, C and D Harzardous Locations
B	CE Mark -EMC Dirrective EN 61236-1:2006 EN 61236-2-3:2006

BOX4 CODE	Process Connection
P2	1/2" NPT
P3	3/4" NPT
P4	1" NPT
DA	1", 150 lbs, RF Flange ANSI B16.9
DB	1.5", 150 lbs, RF Flange ANSI B16.9
DC	2", 150 lbs, RF Flange ANSI B16.9
DD	2.5", 150 lbs, RF Flange ANSI B16.9
DE	3", 150 lbs, RF Flange ANSI B16.9
DF	4", 150 lbs, RF Flange ANSI B16.9
DG	6", 150 lbs, RF Flange ANSI B16.9
EA	1", 300 lbs, RF Flange ANSI B16.9
EB	1.5", 300 lbs, RF Flange ANSI B16.9
EC	2", 300 lbs, RF Flange ANSI B16.9
ED	2.5", 300 lbs, RF Flange ANSI B16.9
EE	3", 300 lbs, RF Flange ANSI B16.9
EF	4", 300 lbs, RF Flange ANSI B16.9
EG	6", 300 lbs, RF Flange ANSI B16.9
GA	25 mm, 16 bar, RF Flange
GB	50 mm, 16 bar, RF Flange
GC	80 mm, 16 bar, RF Flange
GD	100 mm, 16 bar, RF Flange
GE	150 mm, 16 bar, RF Flange
JA	25 mm, 40 bar, RF Flange
JB	50 mm, 40 bar, RF Flange
JC	80 mm, 40 bar, RF Flange
JD	100 mm, 40 bar, RF Flange
JE	150 mm, 40 bar, RF Flange

BOX5 CODE	Process Connection Material
S	Stainless 316L (low carbon)
H	Hastelloy C276
C	Carbon Steel
F	PTFE (non-hazardous)
P	PFA (non-hazardous)

BOX6 CODE	Probe Type
A1	General purpose, PFA fully insulated, 3/8"Stainless 316L rod, 1/2" OD (LTX-C003)
A2	General purpose, PTFE fully insulated, 3/8"Stainless 316L rod, 1/2" OD (LTX-C003)
B1	General purpose, non-insulated rod, Stainless 316L, 1/2" OD (LTX-C004)
B2	General purpose, non-insulated rod, Hastelloy C276, 1/2" OD (LTX-C004)
C1	Concentric shield 0.75" OD w/non-insulated rod, all Stainless 316L (LTX-C005)
C2	Concentric shield 0.75" OD w/non-insulated rod, all Hastelloy C276 (LTX-C005)
D1	Concentric shield 0.75" OD Stainless 316L w/PFA fully insulated rod (LTX-C006)
D2	Concentric shield 0.75" OD Stainless 316L w/PTFE fully insulated rod (LTX-C006)

BOX7 CODE	Probe Length " L "
---	In inches, Ex.: 065 = 65" long

LTX20..Ex

RF Capacitance Level Transmitter
w/ 4-20 mA Output

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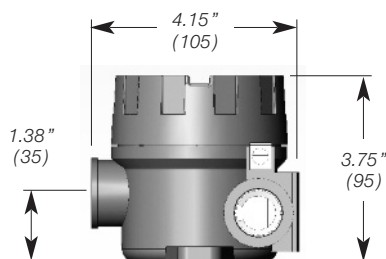
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TECHNICAL SPECIFICATIONS

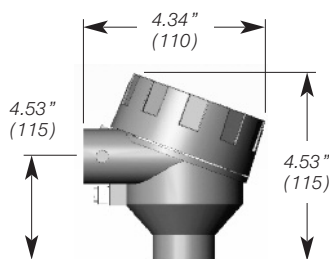
Supply Voltage :	12VDC - 30VDC
Output :	4-20mA, loop powered
Maximum Loop Resistance :	$[(V_{\text{supply}} - 10) / 0.02]$ (i.e. 700 ohms @ 24VDC)
Supply Voltage Effect :	Less than 0.1% of output at maximum span from 12 to 30 VDC
Capacitance Range :	10 pF to 10,000 pF
Calibration :	Via 4 push-button switches, non-interactive Zero & Span
Accuracy :	$\pm 0.5\%$ of full span (see note 1)
Response time :	Less than 2-3 sec. with no damping time, 2-30 sec. with adjustable damping time
Display (optional) :	Integral 4-digit LCD
Damping Adjust :	0-30 sec.
Enclosure :	Aluminum coated with chemically resistant paint, Type 4x, IP66 Stainless steel, Type 4x, IP66
Area Classifications :	The entire sensor assembly is suitable for use in Class I, Division 2, Groups A, B, C, and D, or non-hazardous locations only when powered from an approved source and without intrinsic safety barriers.
Ambient Temperature :	-40°C to 70°C (-40 to 158°F)
Approvals :	USL/CNL and CSA - Class I, Division 2, Groups A, B, C, and D, Hazardous locations only

1. Accuracy includes the combined effects of linearity, hysteresis and repeatability. It refers to transmitter only and is measured at reference conditions of 25°C $\pm$ 1 °C, 10 – 55% R.H. and 24 Vdc $\pm$ 1 Vdc, using an capacitance standard (applied to transmitter sensor terminals) in place of the sensor.

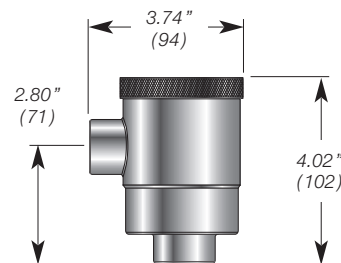
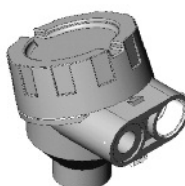
Housing & dimensions



Aluminum Housing
(XD)



Aluminum Housing
(AD)



Stainless Steel Housing
(SS)

