

The NewTek NT-HL-750 series LVDT sensors are made for use in hazardous and explosive environments. Approved by Intertek Testing Laboratories and carrying the ETL mark as intrinsically safe for use in Class I, Zone 0 & Zone 2, the NT-HL-750 series LVDTs operate safely and accurately in hostile environments with the presence of flammable or ignitable gases and liquids such as those found in refining and petrochemical plants, pipelines, and oil and storage tanks. Constructed using stainless steel and hermetically sealed to IP-67, the NT-HL series is rugged and robust with excellent protection against hostile environments. Electrical connections are made via lead wires exiting from a 1/2" NPT fitting making for a easy installation into hard conduit.

Features

- Class I, Zone 0 & Zone 2 Intrinsically Safe (IIB)
- Radially or axially mounted connector
- Measurement ranges from ± 1.0 to ± 10 inches
- Linearity $\pm 0.15\%$ of Full Range Typical ($\pm 0.25\%$ max)
- Shock and vibration tolerant
- Wide operating temperature range (-65°F to 275°F)
- Welded 3/4 inch hermetically sealed steel housing

Applications

- Pipeline Monitoring
- LNG Storage Tanks
- Oilfield Equipment
- Petrochemical Process Control
- Gas Turbines

Electrical Specifications

- Input Voltage:** 3 Vrms (Nominal)
Input Frequency: 2.5KHz
Linearity: $< \pm 0.25\%$ Full Range Max
Null Voltage: 0.5% Full Range
Hysteresis: $< 0.01\%$ of Full Range Typical
Repeatability: $< 0.01\%$ of Full Range Typical



Environmental Specifications

- Operating Temperature:** Zone 0: -29°C to 100°C ; Zone 2: -28°C to 150°C
Thermal Coefficient: $< -0.01\%/^{\circ}\text{F}$ ($< -0.02\%/^{\circ}\text{C}$) of Full Range
Humidity: 90% R.H., 240 Hours
Shock Survival: 1000 g, 11 ms
Vibration: 20 g to 2 KHz

Materials Specifications

- Housing:** Corrosion-resistant nickel-iron alloy
Core: Hi-permeability nickel-iron alloy
Magnet Wire: Film insulated copper
Connector: 6 ft lg Lead wires thru 1/2" NPT Fitting

Hazardous Location Markings

ETL21CA104678736X

Class I Zone 0 AEx ia IIB T3 Ga
 Class I Division 1 Group C, D T3
 Ex ia IIB T3 Ga
 $-29.89^{\circ}\text{C} \leq \text{Ta} \leq 100^{\circ}\text{C}$



Class I Zone 2 AEx ic IIB T3 Gc
 Class I Division 2 Group C, D T3
 Ex ic IIB T3 Gc
 $-28.29^{\circ}\text{C} \leq \text{Ta} \leq 150^{\circ}\text{C}$

Intertek

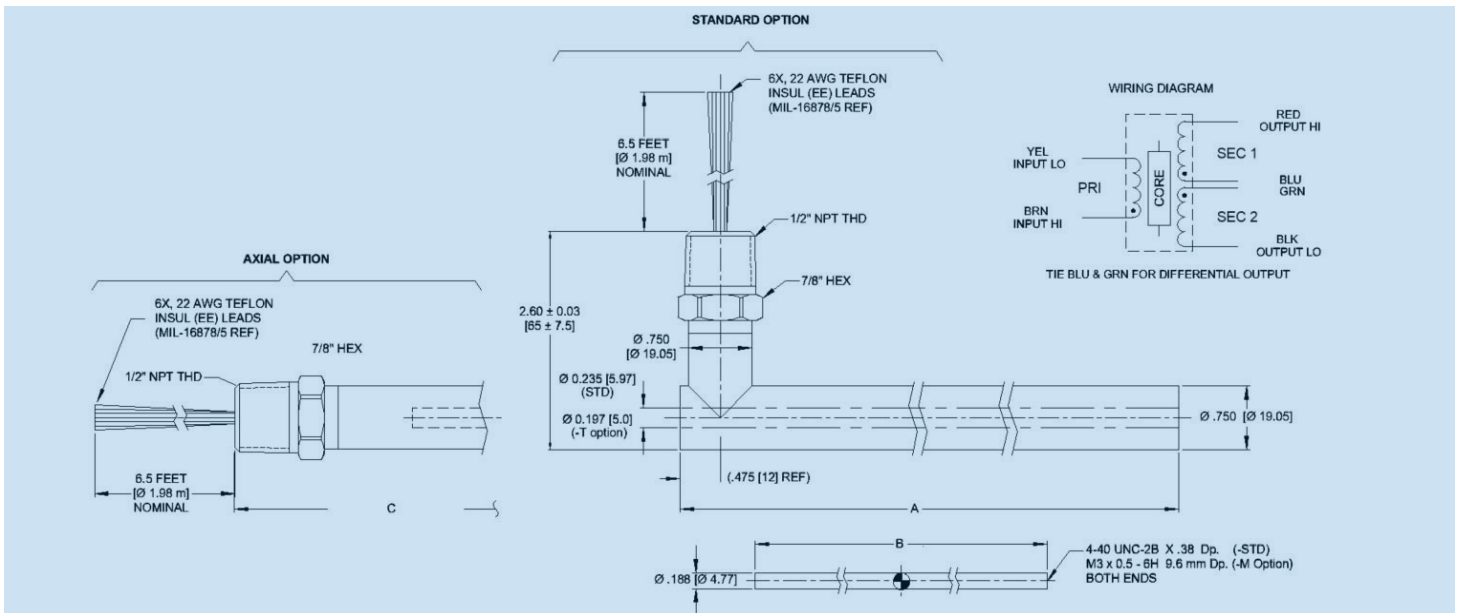
Intrinsically Safe, Securite Intrinsique Exia

Entity Parameters: $U_i = 9 \text{ VAC}$, $I_i = 100 \text{ mA}$ $P_i = 200 \text{ mW}$,
 $C_i = 0$ $L_i = 11.1 \text{ mH}$

Specifications

Model Parameter	NT-HL-750-1000	NT-HL-750-2000	NT-HL-750-3000	NT-HL-750-4000	NT-HL-750-5000	NT-HL-750-6000	NT-HL-750-7500	NT-HL-750-10000
Nominal Range (Inches)	± 1.0	± 2.0	± 3.0	± 4.0	± 5.0	± 6.0	± 7.5	± 10.0
Nominal Range (mm)	± 25.0	± 50.0	± 75.0	± 100.0	± 125.0	± 150.0	± 190.0	± 250.0
Sensitivity (mV/V/.001 Inch)	0.34	0.20	0.21	0.17	0.11	0.10	0.11	0.08
Sensitivity (mV/V/mm)	13.39	7.87	8.27	6.7	4.3	3.9	4.3	3.0
Primary Impedance (Ω)	785	574	169	420	538	450	775	620
Dimension "A" (Inches)	7.34	10.91	13.65	16.17	18.65	18.65	23.85	31.65
Dimension "B" (Inches)	4.00	5.30	6.20	6.20	6.20	4.00	7.00	9.50
Dimension "C" (Inches)	9.56	13.13	15.87	18.39	20.87	20.87	26.07	33.87
Approximate Body Weight (ounces)	10.30	12.20	14.70	15.30	16.50	16.50	23.00	25.10
Approximate Body Weight (grams)	292	346	417	434	280	468	652	712

Dimensions and Wiring



Ordering Info

NT - HL - 750 - XXX - XXX

Hazardous Locations LVDT Series

Range (See Table)

Options

- [none]: Standard Product
- M: Metric Threaded Core & Calibration
- T: Teflon Bore Liner
- MT: Metric Option / Teflon Bore Liner
- A: Axial
- AM: Axial / Metric Threaded Core & Calibration
- AT: Axial / Teflon Bore Liner
- AMT: Axial / Metric Option / Teflon Bore Liner

Notes

- Electrical specifications measured at 3KHz excitation frequency.
- Specifications subject to change.

Warranty

NewTek products are warranted against defective materials and workmanship for a period of one year from the date of delivery to the original purchaser. NewTek accepts no liability for damages in the misuse of our products.

