

The NewTek HIR Series sensors are rugged hermetically sealed 4-20 mA LVDTs with excellent linearity, high resolution, and superior repeatability. These sensors are constructed of 3/4 inch diameter stainless steel and manufactured for general industrial use. Electrical connection is made through a radially mounted connector, resulting in a reduced housing length. Designed for a wide range of position measurement applications, they are available in ranges of 0.1 inches (2.54mm) to 20 inches (500mm). In addition to being sealed to IP-68, the HIR Series windings are potted inside the housing with a 2 component epoxy, providing excellent protection against hostile environments.

## Features

- Welded 3/4 inch hermetically sealed steel housing
- Radially mounted connector
- Measurement ranges from 0.1 inches to 20 inches
- Linearity  $\pm 0.25\%$  of Full Range Max ( $\pm 0.1\%$  optional)
- Wide operating temperature range (-65°F to 275°F)
- Standard and custom models available
- "Plug & Play," 4-20 mA compatible with most PLCs and Controllers

## Applications

- Factory automation
- Materials testing
- Packaging equipment
- Valve position sensing
- Corrosive environments

## Electrical Specifications

- Input Power:** 11-28 VDC (24 VDC nom.)  
**Full Scale Output:** 4 - 20 mA  
**Linearity:**  $< \pm 0.15\%$  Full Range Typical  
**Hysteresis:**  $< 0.01\%$  of Full Range Typical  
**Repeatability:**  $< 0.01\%$  of Full Range Typical



## Environmental Specifications

- Operating Temperature:** -15°F to 185°F (-25°C to 85°C)  
**Thermal Coefficient:**  $< -0.01\%/^{\circ}\text{F}$  ( $< -0.02\%/^{\circ}\text{C}$ ) of Full Range  
**Humidity:** 90% R.H., 240 Hours  
**Shock Survival:** 100 g, 11 ms  
**Vibration:** 20 g to 2 KHz

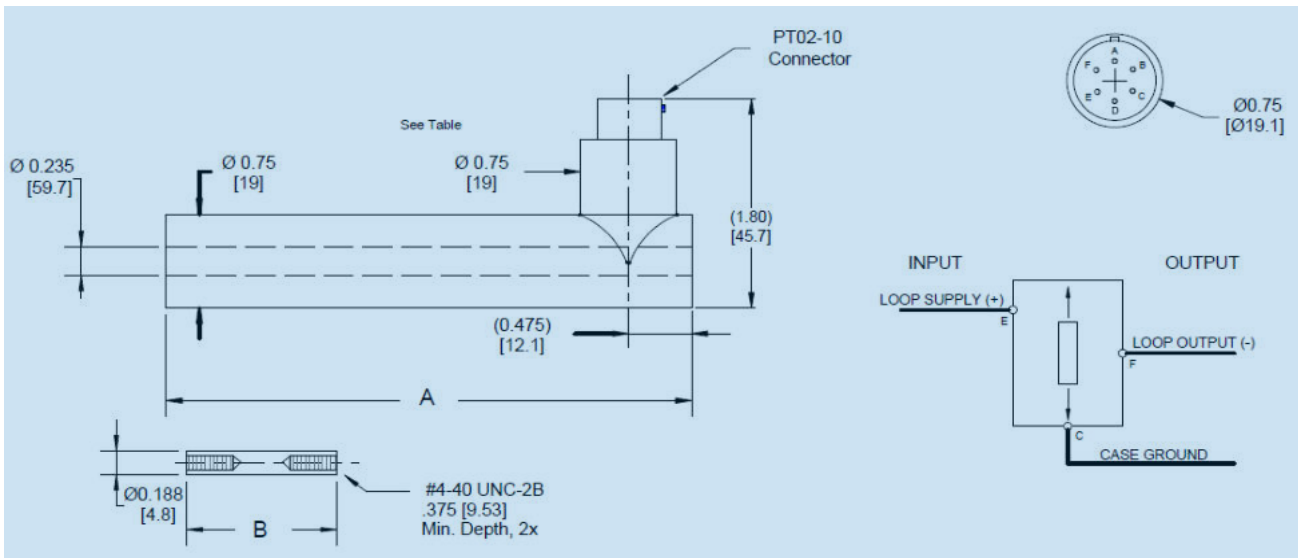
## Materials Specifications

- Housing:** Corrosion-resistant nickel-iron alloy  
**Core:** Hi-permeability nickel-iron alloy  
**Magnet Wire:** Film insulated copper  
**Connector:** PT02A-10-6P

## Specifications

Model	NT-HIR-750-100	NT-HIR-750-250	NT-HIR-750-500	NT-HIR-750-1000	NT-HIR-750-2000	NT-HIR-750-4000	NT-HIR-750-6000	NT-HIR-750-8000	NT-HIR-750-10000	NT-HIR-750-15000	NT-HIR-750-20000
<b>Parameter</b>											
Nominal Range (inches)	0.10	0.250	0.500	1.00	2.00	4.00	6.00	8.00	10.00	15.00	20.00
Nominal Range (mm)	2.54	6.00	12.60	25.4	50.0	100.0	150.0	200.0	250.0	380.0	500.0
Scale Factor (mA/inch)	160.0	64.0	32.0	16.0	8.0	4.0	2.7	2.0	1.6	1.1	0.8
Scale Factor (mA/mm)	6.30	2.52	1.26	0.63	0.31	0.16	0.10	0.08	0.06	0.04	0.03
Dimension "A" (inches)	2.86	3.48	4.25	6.7	8.2	11.7	14.5	16.95	19.45	25.01	32.38
Dimension "B" (inches)	0.80	1.25	1.65	3.45	3.45	5.30	6.20	6.20	6.20	7.00	9.50
Body Weight (ounces)	1.90	2.50	3.00	4.20	5.00	8.20	10.60	11.50	12.10	16.30	20.50
Core Weight (ounces)	0.10	0.12	0.18	0.41	0.41	0.66	0.80	0.80	0.80	0.91	1.20

## Dimensions and Wiring



## Ordering Info

HIR - 750 - XXX - X

Measuring Range

Options

M - Calibration in millimeters  
& Metric M3 Thread in Core

## Notes

- Electrical specifications measured at 24 VDC supply voltage.
- Additional customization options available. Please consult factory for custom designs.
- Specifications subject to change.

## Warranty

NewTek products are warrantied 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.

