

The NewTek P Series AC LVDTs are specially designed for Extreme High-Pressure applications demanding the highest levels of reliability while performing in the rugged environments required for deep sub-sea applications. These transducers are constructed of special High-Pressure materials, allowing operation at pressure up to 20,000 psi. The P Series High-Pressure and Seawater Resistant LVDT Position Sensors offer extraordinary performance, regardless of offsets due to pressure and/or temperature. These P Series are available  $\pm 0.900$  inch ( $\pm 22.86$  mm) and offer high sensitivity, high resolution and excellent linearity.

## Features

- 20,000 PSI operating pressure
- 400° F operating temperature
- 0.52 inch diameter stainless steel housing
- Ratiometric output for reduced thermal sensitivity
- Standard and custom models available

## Applications

- Deep Subsea Applications
- Hydraulic actuators
- Extreme high pressure applications
- Pressure test vessels

## Mechanical and Electrical Specifications

**Nominal Range (Inches)**  $\pm 0.90$   
**Nominal Range (mm)**  $\pm 22.86$

**Sensitivity (mV/V/.001 Inch)** 0.468 (Ratiometric)  
**Sensitivity (mV/V/mm)** 10.4 (Ratiometric)  
**Primary Impedance (  $\Omega$  )** 200  
**Input Voltage** 3 Vrms (Nominal)  
**Input Frequency** 400Hz to 10KHz  
**Linearity**  $< \pm 0.15\%$  Full Range Typical  
**Null Voltage** 0.5% Full Range Typical  
**Hysteresis**  $< 0.01\%$  of Full Range Typical  
**Repeatability**  $< 0.01\%$  of Full Range Typical  
**Body Weight ( grams )** 105  
**Core Weight ( grams )** 42



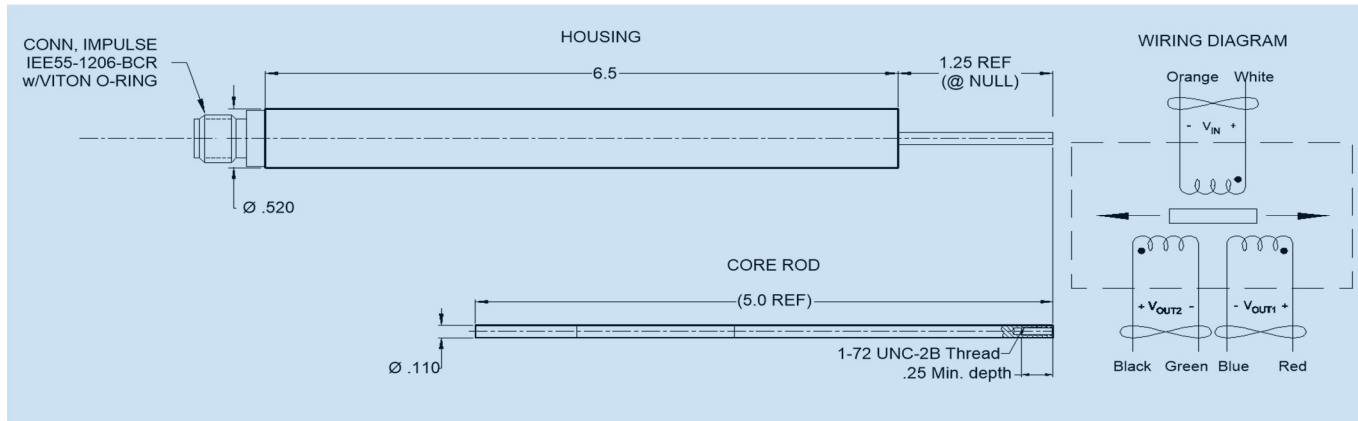
## Environmental Specifications

**Operating Temperature:** -65°F to 400° F (-55°C to 204°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  
**Coil Form:** Ceramic/Plastic  
**Magnet Wire:** Film insulated copper  
**Connector** IMPULSE IEE55-1206-BCR w/VITON O-RING

## Dimensions and Wiring



## Ordering Info

|                                 |                   |   |
|---------------------------------|-------------------|---|
| <b>NT - P - 520 - 900 - XXX</b> |                   |   |
| High Pressure LVDT              | Range<br>0.9 inch | Options<br>- M : Metric Threads<br>[none]: Standard Product |

### Notes

- Electrical specifications measured at 3KHz excitation frequency.
- Additional options and displacements 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.



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