

The NewTek GAR Series gage head sensors are spring-loaded AC LVDTs with excellent linearity, high sensitivity and infinite resolution. Construction consists of a stainless steel probe assembly and ¾ inch diameter hermetically sealed housing. Electrical connection is made through a radially mounted connector, resulting in a reduced housing length. Designed for a wide range of position measurement and dimensional gaging applications, they are available in ranges of ±0.50 inch (1.27mm) to ±2 inches (50mm). The GAR Series windings are potted inside its housing with a 2 component epoxy, providing excellent protection against hostile environments.

## Features

- Spring loaded probe
- Radially mounted connector
- Welded 3/4 inch hermetically sealed steel housing
- Measurement ranges from ± 0.05 to ± 2 inches
- Linearity ±0.15% of Full Range Typical
- Shock and vibration tolerant
- Wide operating temperature range (-65°F to 275°F)
- Choice of probe contact tips
- Standard and custom models available

## Electrical Specifications

<b>Input Voltage:</b>	3 Vrms (Nominal)
<b>Input Frequency:</b>	400Hz to 10KHz
<b>Linearity:</b>	< ± 0.15% Full Range Typical
<b>Null Voltage:</b>	0.5% Full Range
<b>Hysteresis:</b>	<0.01% of Full Range Typical
<b>Repeatability:</b>	<0.01% of Full Range Typical



## Applications

- Dimensional gaging
- Factory automation
- Materials testing
- Packaging equipment
- Automotive testing

## Environmental Specifications

<b>Operating Temperature:</b>	-65°F to 275° F (-55°C to 135°C)
<b>Thermal Coefficient:</b>	< -0.01%/°F (< -0.02%/°C) of Full Range
<b>Humidity:</b>	90% R.H., 240 Hours
<b>Shock Survival:</b>	1000 g, 11 ms
<b>Vibration:</b>	20 g to 2 KHz

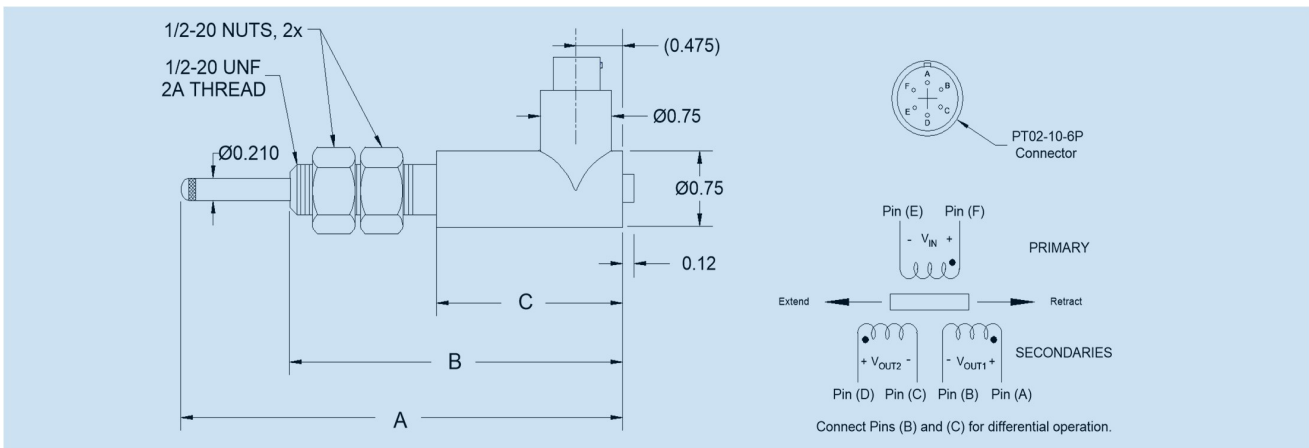
## Materials Specifications

<b>Housing:</b>	Corrosion-resistant nickel-iron alloy
<b>Core:</b>	Hi-permeability nickel-iron alloy
<b>Magnet Wire:</b>	Film insulated copper
<b>Connector:</b>	PT02A-10-6P
<b>Probe:</b>	AGD #9 contact tip

## Specifications

Model	NT-GAR-750-050	NT-GAR-750-125	NT-GAR-750-250	NT-GAR-750-500	NT-GAR-750-1000	NT-GAR-750-2000
<b>Parameter</b>						
Nominal Range (Inches)	± 0.05	± 0.125	± 0.25	± 0.5	± 1	± 2
Nominal Range (mm)	± 1.27	± 3.0	± 6.3	± 12.5	± 25.0	± 50.0
Sensitivity (mV/V/.001 Inch)	6.3	4.0	2.75	0.70	0.65	0.40
Sensitivity (mV/V/mm)	248	158	108	28	26	16
Primary Impedance (Ω)	330	740	1410	1210	1300	2200
Dimension "A" (inches)	4.62	5.30	6.00	11.00	13.00	21.00
Dimension "B" (inches)	3.50	4.20	5.00	9.00	10.45	16.45
Dimension "C" (inches)	2.00	2.65	3.38	5.85	7.38	10.80
Body Weight (ounces)	2.7	3.3	3.6	5.6	7.0	11.0
Body Weight (grams)	77	94	102	159	198	312

## Dimensions and Wiring



## Ordering Info

**NT – GAR – 750 – xxx – xxx**  
 Gage Head AC LVDT      Range (See Table)      Options Consult factory

## Notes

- Electrical specifications measured at 3KHz excitation frequency.
- Additional options available (alternate contact tips, high temperature, mild radiation tolerant etc.). 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.