

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 3/4 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 $\pm 0.15\%$ 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

Applications

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

Electrical Specifications

Input Voltage:	3 Vrms (Nominal)
Input Frequency:	400Hz to 10KHz
Linearity:	$< \pm 0.15\%$ Full Range Typical
Null Voltage:	0.5% Full Range
Hysteresis:	$< 0.01\%$ of Full Range Typical
Repeatability:	$< 0.01\%$ of Full Range Typical



Environmental Specifications

Operating Temperature:	-65°F to 275° F (-55°C to 135°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

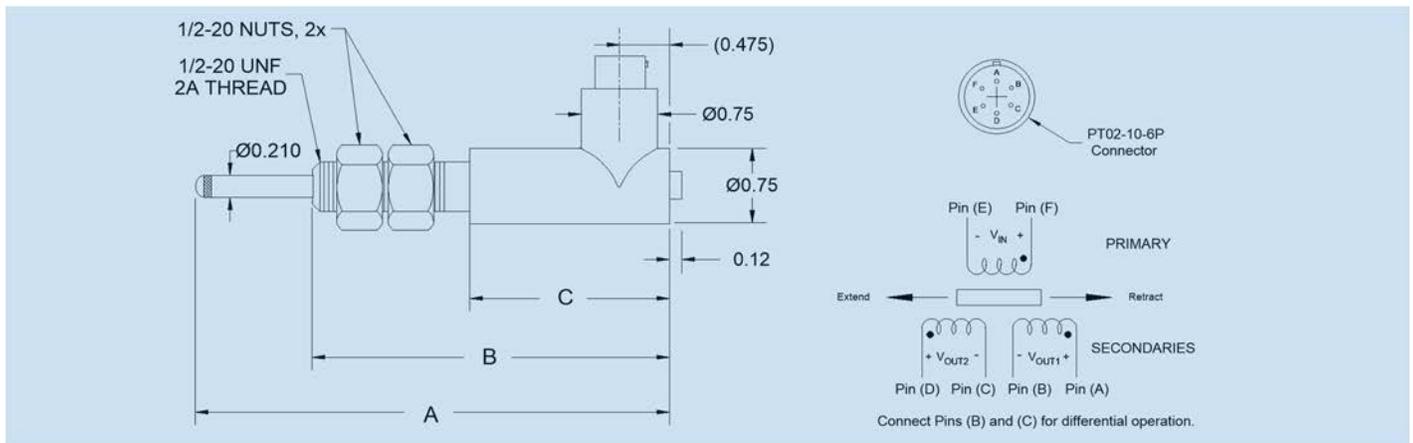
Materials Specifications

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

Specifications

Model Parameter	NT-GAR-750-050	NT-GAR-750-125	NT-GAR-750-250	NT-GAR-750-500	NT-GAR-750-1000	NT-GAR-750-2000
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 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.

