

GSA 750 Series

Low Cost Spring Loaded LVDT Position Sensors



Features

- Standard 3/4 inch (19 mm) diameter
- Ranges of ± 0.10 inches to ± 0.30 inches
- Non-linearity less than $\pm 0.5\%$ of FRO
- 220°F (105°C) operating temperature
- AGD number 9 hardened contact tip

Applications

- Medium accuracy dimension gaging
- Cost sensitive gaging arrays
- Short range motion control
- X-Y stage position measurement

Description

The GSA 750 series of short range spring loaded position sensors were developed for cost sensitive applications requiring LVDT reliability and performance. Available in ranges of ± 0.10 inches to ± 0.30 inches, these sensors offer the excellent measurement capabilities of an LVDT at very economical prices. This makes GSA 750 series LVDTs especially attractive for student projects, low overhead machine and fabrication shops, and R & D laboratories on a limited budget.

GSA 750 series sensors have a stainless steel housing and probe shaft, but utilize nylon sleeve bearings and an external helical spring to reduce costs. The LVDT's probe shaft accepts interchangeable AGD contact tips and is supplied with a number 9 hardened tip. The LVDT's body is encapsulated with epoxy to meet IEC IP-62 sealing requirements and magnetically shielded to reduce effects from external AC fields.

GSA 750 sensors are compatible with any of the Macro Sensors LVDT support electronics featured in series 9000 technical bulletins. They are often utilized with the DCM-1000 low cost signal conditioner to make a cost effective short range position measuring system.

General Specifications

Input Voltage: 3.0 Vrms (nominal)

Input Frequency: 2.5 - 3.0 kHz

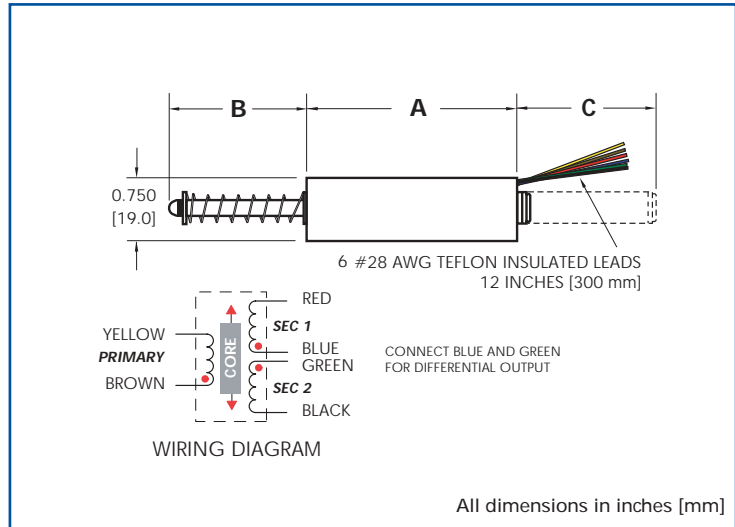
Linearity Error: < ±0.5% of FRO

Operating Temperature: -20°F to +220°F
(-30°C to +105°C)

Thermal Coefficient of Sensitivity: -0.015%/°F (nominal)
(-0.03%/°C nominal)

Vibration Tolerance: 20 g to 2 kHz

Shock Survival: 100 g, 11 ms



Ordering Information

Order by model number with range.
For accessories and compatible signal conditioners, please visit our website at www.macrosensors.com.

Specifications

Model ▶	GSA 750 -100	GSA 750 -200	GSA 750 -300
Parameter ▼			
Nominal Range (inches)	±0.100	±0.200	±0.300
Nominal Range (mm)	±2.5	±5.0	±7.5
Sensitivity (mV/V/.001 inch)	3.8	2.1	2.1
Sensitivity (mV/V/mm)	152	83	83
Primary Impedance (w)	760	1110	1110
Dimension "A" (inches)	1.75	2.50	2.50
Dimension "A" (mm)	44.5	63.5	63.5
Dimension "B" (inches)	0.79	0.83	1.64
Dimension "B" (mm)	20.1	21.1	41.6
Dimension "C" (inches)	0.43	0.56	1.28
Dimension "C" (mm)	10.9	14.1	32.5
Pretravel (inches)	0.23	0.23	0.33
Pretravel (mm)	5.8	5.8	8.3
Overtravel (inches)	0.34	0.22	0.85
Overtravel (mm)	8.6	5.5	21.5
Weight (ounces)	1.9	2.3	2.4
Weight (grams)	52	64	68



Innovators in Position Sensing

All specifications subject to change without notice.
© 2002 Macro Sensors 08/02/02