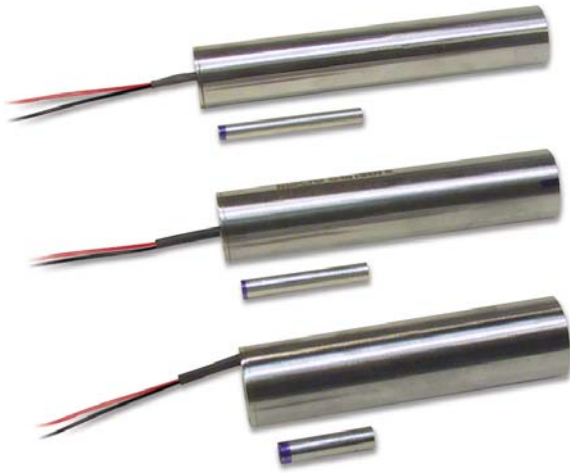


# SI 750 Series

## General Purpose 4-20 mA Position Transmitters



### Features

- Standard measurement ranges of 1 to 20 inches
- 4 to 20 mA input/output
- Non-linearity of  $\pm 0.25\%$  of FRO or better
- Industry-standard 3/4 inch (19 mm) diameter
- Through-bore design
- Sealed to IEC IP-62

### Applications

- Servo valve positioning
- Pneumatic cylinder position sensing
- Hydraulic cylinder position
- Valve position sensing
- Medical equipment

### Description

The SI 750 Series of 3/4 inch diameter, loop-powered 4-20 mA LVDT position transmitters is designed for a wide range of position monitoring and feedback applications. Their exceptional reliability is a result of manufacturing processes and assembly techniques developed and optimized by Macro Sensors over many years of manufacturing LVDT sensors. Their stainless steel housings act as magnetic shields to reduce the effects of external AC magnetic fields, and their sealing meets IEC standard IP-62.

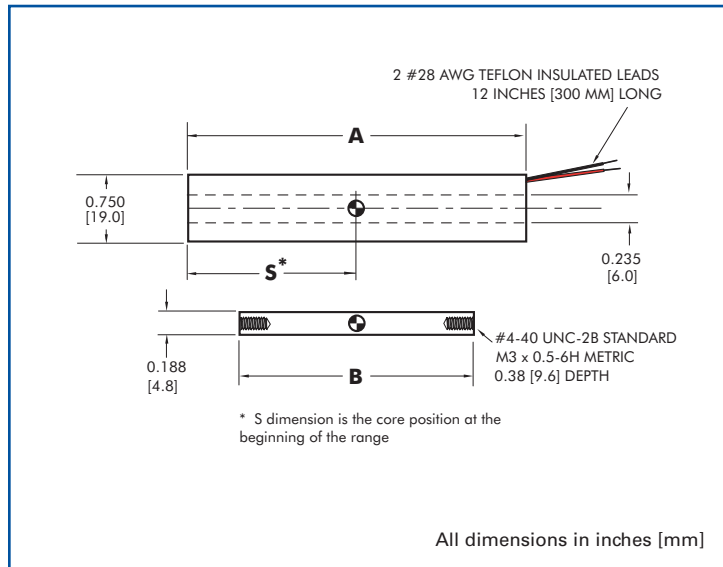
Available in standard ranges of 1 inch (25 mm) to 20 inches (500 mm), the maximum linearity error for an SI 750 Series sensor is  $\pm 0.25\%$  of full range output using a statistically best-fit straight line derived by the least squares method.

SI 750 Series transmitters offer the frictionless operation, high resolution, excellent repeatability, and low hysteresis associated with LVDT technology, along with the convenience and simplicity of a precalibrated 4-20 mA current loop operation. The unit can be operated as 2-wire loop-powered or 3-wire sourcing externally powered. The built-in electronics operate over a wide range of loop supply voltages and resistances, and are designed to operate with many PLCs, digital indicators, A/D converters, computer-based data processors, and QC data collection systems.

Macro Sensors offers several standard options that permit a user to customize SI 750 Series LVDTs, including Teflon® bore liners and metric threaded cores. In addition, Macro Sensors can provide mounting accessories and core extension rods.

**General Specifications**

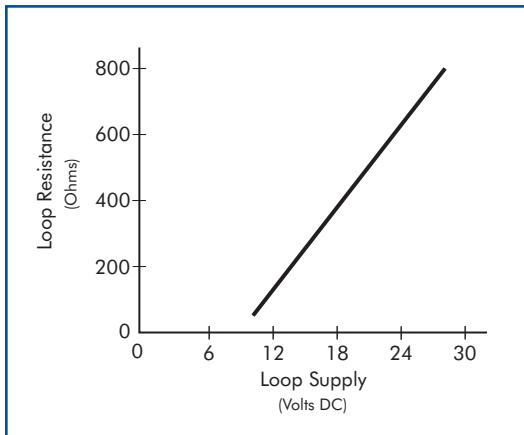
- Loop Supply Voltage:** 10 V to 28 V DC
- Loop Resistance (Min.):** 50 Ohms
- Output:** 4-20 mA
- Output Noise & Ripple:**  $\leq 10 \mu\text{Arms}$
- Frequency Response (-3dB):** 50 Hz (nominal)
- Linearity Error:**  $\leq \pm 0.25\%$  of FRO
- Repeatability Error:**  $< 0.01\%$  of FRO
- Hysteresis Error:**  $< 0.01\%$  of FRO
- Operating Temperature:** -20°F to +175°F (-30°C to +80°C)
  
- Thermal Coefficient of Scale Factor:** -0.015%/°F (nominal) (-0.027%/°C nominal)
- Vibration Tolerance:** 20 g to 2 kHz
- Shock Survival:** 100 g, 11 ms



**Specifications**

Model ▶	SI 750 -1000	SI 750 -2000	SI 750 -4000	SI 750 -6000	SI 750 -10000	SI 750 -20000
<b>Parameter ▼</b>						
Nominal Range (inches)	1.00	2.00	4.00	6.00	10.00	20.00
Nominal Range (mm)	25	50	100	150	250	500
Scale Factor (V/inch)	10	5.0	2.5	1.65	1.0	0.5
Scale Factor (V/mm)	0.4	0.2	0.1	0.06	0.04	0.02
Dimension "A" (inches)	6.74	8.24	11.21	14.49	19.49	32.38
Dimension "A" (mm)	171.2	209.3	284.7	368.0	495.0	822.5
Dimension "B" (inches)	3.45	3.45	5.30	6.20	6.20	9.50
Dimension "B" (mm)	87.6	87.6	134.6	157.5	157.5	241.3
Dimension "S" (inches)	2.07	2.33	3.07	3.45	3.95	5.42
Dimension "S" (mm)	52.6	59.2	78.0	87.6	100.3	137.7
Weight - Body (ounces)	3.7	5.5	7.5	9.5	11.0	15.7
Weight - Body (g)	104	158	212	268	318	445
Weight - Core (ounces)	0.40	0.40	0.65	0.80	0.80	1.20
Weight - Core (g)	11.6	11.6	18.0	22.0	22.0	34.0

**Loop Resistance vs. Minimum Loop Supply Voltage**



**Ordering Information**

- For standard SI 750, order by model number with range.
- For metric threaded core option, add -006 after model number with range.
- For Teflon® bore liner option, add -010 after model number with range.
- For combinations of options, add option numbers together (eg. -006, -010, -016).
- For accessories, please visit our website at [www.macrosensors.com](http://www.macrosensors.com).



*Innovators in Position Sensing*

All specifications subject to change without notice.  
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