



## EXTREME TEMPERATURE

1000°F Operating Temperature

AC-LVDT Position Sensors

MACRO EXT 1000

### Overview

Macro Sensors' EXT 1000 Series of 1.0 inch (25.4 mm) diameter AC-operated ratiometric LVDTs are designed for a wide range of position measurement applications. Constructed of special materials, these sensors can operate at temperatures up to 1000°F (538°C).

Available in ranges of  $\pm 0.500$  inches ( $\pm 12.7$  mm) and  $\pm 1.00$  inch ( $\pm 25.4$  mm), the EXT 1000 series sensors feature the high resolution, excellent repeatability, and low hysteresis associated with LVDT technology, as well as good linearity. The maximum linearity error for the EXT 1000 series is  $\pm 0.5\%$  full range.

In addition to an extended operating temperature range, Macro Sensors EXT 1000 series offers extremely long mechanical and electrical life. With the absence of friction and contact between the coil and the core, there is nothing to wear. The frictionless operation of the LVDT combined with the induction function by which it operates, provides for resolution only limited by the readability of the external electronics.

EXT 1000 series LVDTs operate with a ratiometric LVDT signal conditioner that divides the difference in secondary voltages over their sum. Ratiometric signal conditioning minimizes the change in output due to temperature fluctuation.

## EXTREME TEMPERATURE

EXT 1000 | 1000°F Operating Temperature AC-LVDT Position Sensor

---

### Benefits

- 1000°F (538°C) Operation
- Ranges of  $\pm 0.500''$  to  $\pm 1.0''$  [ $\pm 12.7$  mm to  $\pm 25.4$  mm] standard
- Custom ranges available
- Ratiometric operation with constant sum of secondary voltages
- Through-bore design

### Applications

- Boiler feed and return
- Autoclave
- Power Generation
- Furnace

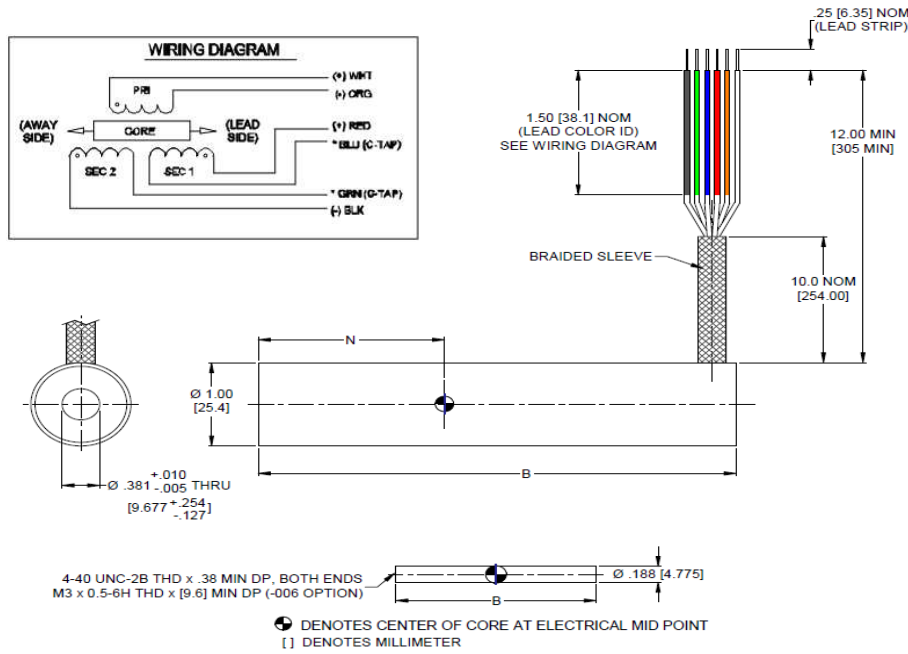
### General Specifications

<b>Input Voltage</b>	3 Vrms (nominal)
<b>Input Frequency</b>	2.5 kHz (nominal)
<b>Linearity Error</b>	$\pm 0.5\%$ of Full Range
<b>Repeatability Error</b>	$< 0.01\%$ of Full Range
<b>Hysteresis Error</b>	$< 0.01\%$ of Full Range
<b>Thermal Coefficient of Sensitivity</b>	0.0025%/°F (nominal) 0.0050%/°C (nominal)
<b>Operating Temperature</b>	-65°F to +1000°F -55°C to +538°C

# EXTREME TEMPERATURE

EXT 1000 | 1000°F Operating Temperature AC-LVDT Position Sensor

## Dimensions



	Range Code	500	1000
Parameter			
Range	inches	±0.500	±1.00
	mm	±12.7	±25.4
Sensitivity	mV/V/inch	0.418	0.225
	mV/V/mm	16.45	8.8
Primary Impedance	Ω	129	338
Body Length "A"	inches	4.77	7.87
	mm	121	200
Core Length "B"	inches	2.00	4.00
	mm	50.8	101.6
Core Position "N" (at null position)	inches	1.86	3.41
	mm	47.2	86.6
Weight - Body	ounces	6.10	9.81
	g	173	278
Weight - Core	ounces	0.50	0.6
	g	0.24	0.47

## Ordering Information

- Order by model number with range.
- For metric threaded core option, add -006 after model number with range.

## NORTH AMERICA

AST Macro Sensors  
a TE Connectivity Company  
7300 US Rt 130 North  
Pennsauken, NJ 08110-1541 USA  
Tel +1 856 662 8000  
Fax +1 856 317 1005  
customer.care.pens@te.com

### [te.com/sensorsolutions](http://te.com/sensorsolutions)

AST Macro Sensors, a TE Connectivity company.

Measurement Specialties (MEAS), American Sensor Technologies (AST), TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2016 TE Connectivity Ltd. family of companies All Rights Reserved.

