



## XS-C SERIES

### High Pressure Sealed AC LVDT

#### SPECIFICATIONS

- Operating pressures to 3,000 PSI
- Bulkhead mounting
- Stroke ranges from  $\pm 0.25$  to  $\pm 1$  inch
- AISI 304 stainless steel housing
- Magnetically shielded
- Wide operating temperature range
- Shock and vibration tolerant

The **XS-C Series** high pressure sealed LVDTs are the ideal solution for displacement measurement in pressure-sealed chambers, hydraulic actuators and pressure vessels. Constructed with heavy-wall 304 Series stainless steel, the all-welded XS-C is highly resistant to corrosive environments. It is suitable for operating pressures up to 3,000 PSI (proof pressures up to 4,500 PSI) and temperatures up to +300°F [+150°C].

The XS-C is available in stroke ranges of  $\pm 0.25$  inch [ $\pm 6.35$ mm] to  $\pm 1$  inch [ $\pm 25.4$ mm], with imperial or metric threaded cores. All models incorporate internal magnetic and electrostatic shielding, protecting it from external magnetic influences. The XS-C Series is compatible with all Measurement Specialties LVDT signal conditioners, controllers and readouts.

#### FEATURES

- Sealed 304 Series stainless steel housing
- High pressure and temperature operation
- Bulkhead mount design
- 400Hz to 5KHz operating frequency range
- Shock and vibration tolerant
- Calibration certificate supplied with all units

#### APPLICATIONS

- Hydraulic actuators
- Pressure chambers & vessels
- Continuous casting mold clamping
- Tundish slide valve position feedback
- Automatic transmission servo testing
- Rolling mill gap feedback

**PERFORMANCE SPECIFICATIONS**

<b>ELECTRICAL SPECIFICATIONS</b>			
<b>Parameter</b>	<b>XS-C 249</b>	<b>XS-C 499</b>	<b>XS-C 999</b>
Stroke range	±0.25 [±6.35]	±0.50 [±12.7]	±1.00 [±25.4]
Sensitivity V/V/inch [mV/V/mm]	1.7 [66.9]	1.0 [39.4]	0.8 [31.5]
Output at stroke ends (*)	425mV/V	500mV/V	800mV/V
Phase shift	+5°	+2°	-1°
Input impedance (PRIMARY)	800Ω	938Ω	770Ω
Output impedance (SECONDARY)	940Ω	1130Ω	1400Ω
Non-linearity (% of FR), maximum	±0.25		
Input voltage, sine wave	3 VRMS		
Input frequency range	400Hz to 5kHz		
Test input frequency	2.5kHz		
Null voltage, maximum	0.5% of FRO		

<b>ENVIRONMENTAL SPECIFICATIONS &amp; MATERIALS</b>	
<b>Parameter</b>	<b>All Models</b>
Operating pressure	3,000 PSI [207 bars]
Proof Pressure	4,500 PSI [310 bars]
Operating temperature	-67°F to +302°F [-55°C to +150°C]
Shock survival	1, 000 g (11ms half-sine)
Vibration tolerance	20 g up to 2KHz
Housing material	AISI 304 Series stainless steel
Electrical connection	Six lead-wires, stranded 28 AWG, PTFE insulated, 1 foot [0.3m] long <i>(longer wires optional)</i>
IEC 60529 rating	IP61

**Notes:**

*Dimensions are in inch [mm]*

*All values are nominal unless otherwise noted*

*Electrical specifications are for the test frequency indicated in the table*

*(\*): Unit for output at stroke ends is millivolt per volt of excitation (input voltage)*

*FR: Full Range is the stroke range, end to end; FR=2xS for ±S stroke range*

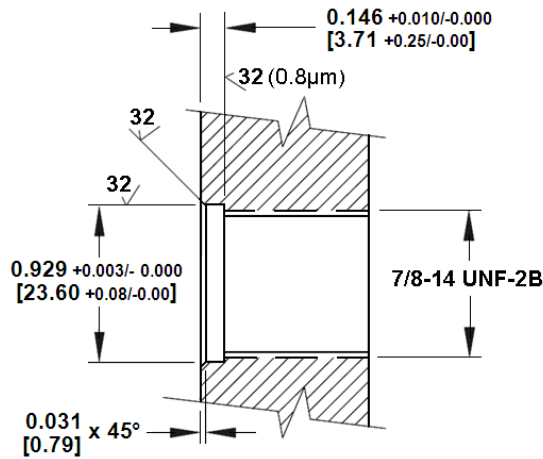
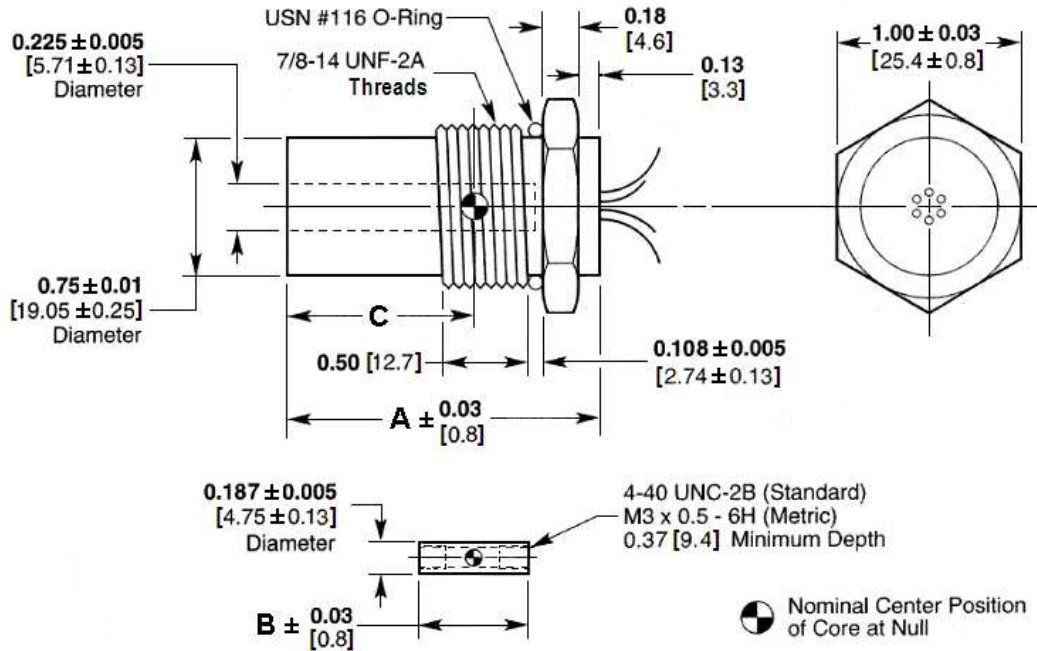
*FRO (Full Range Output): Algebraic difference in outputs measured at the ends of the range*

**MECHANICAL SPECIFICATIONS**

<b>Parameter</b>	<b>XS-C 249</b>	<b>XS-C 499</b>	<b>XS-C 999</b>
Main body length "A"	3.00 [76.2]	4.65 [118.1]	7.88 [200.2]
Core length "B"	1.80 [45.7]	3.00 [76.2]	3.80 [96.5]
Core null position "C"	1.39 [35.3]	2.23 [56.6]	3.25 [82.6]
Body weight, oz [g]	3.88 [110]	4.62 [131]	6.04 [171]
Core weight, oz [g]	0.12 [3.4]	0.30 [8.5]	0.37 [10.5]

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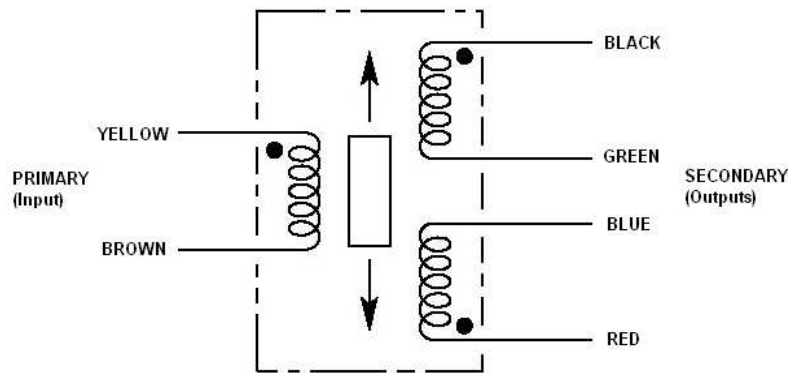
**Mating detail for installation**

*Dimensions are in inches [mm]*

## XS-C SERIES

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### WIRING INFORMATION



Connect Blue to Green for differential output

### ORDERING INFORMATION

Description	Model	Part Number
±0.25 inch LVDT	XS-C 249	02560551-000
±0.5 inch LVDT	XS-C 499	02560549-000
±1 inch LVDT	XS-C 999	02560548-000
OPTIONS		
Metric threaded (M3x0.5-6H) core option	All models	XXXXXXXX-006
10 foot long lead-wires	Consult factory	XXXXXXXX-040

#### NORTH AMERICA

Measurement Specialties, Inc.,  
a TE Connectivity Company  
1000 Lucas Way  
Hampton, VA 23666  
United States  
Phone: +1-800-745-8008  
Fax: +1-757-766-4297  
Email: sales@meas-spec.com

#### EUROPE

MEAS Deutschland GmbH (Europe)  
a TE Connectivity Company  
Hauert 13  
D-44227 Dortmund  
Germany  
Phone: +49-(0)231-9740-0  
Fax: +49-(0)231-9740-20  
Email: info.de@meas-spec.com

#### ASIA

Measurement Specialties (China), Ltd.,  
a TE Connectivity Company  
No. 26 Langshan Road  
Shenzhen High-Tech Park (North)  
Nanshan District, Shenzhen 518057  
China  
Phone: +86-755-33305088  
Fax: +86-755-33305099  
Email: info.cn@meas-spec.com

#### TE.com/sensorsolutions

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**DEALER / REVENDEDOR**

Brazil and South America / Brasil e América do Sul



**Address / Endereço:**

Rua Sete de Setembro, 2656  
13560-181 - São Carlos - SP  
Brazil / Brasil

**Phone / Telefone:**

+55 (16) 3371-0112  
+55 (16) 3372-7800

**Internet:**

[www.metrolog.net](http://www.metrolog.net)  
[metrolog@metrolog.net](mailto:metrolog@metrolog.net)

**[www.metrolog.net](http://www.metrolog.net)**