XS-C SERIES

High Pressure Sealed AC LVDT



RoHS

SPECIFICATIONS

- **Operating pressures to 3,000 PSI**
- **Bulkhead mounting**
- **Stroke ranges from ±0.25 to ±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 ±0.25 inch [±6.35mm] to ±1 inch [±25.4mm], 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 Macro Sensors Macro Sensors 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

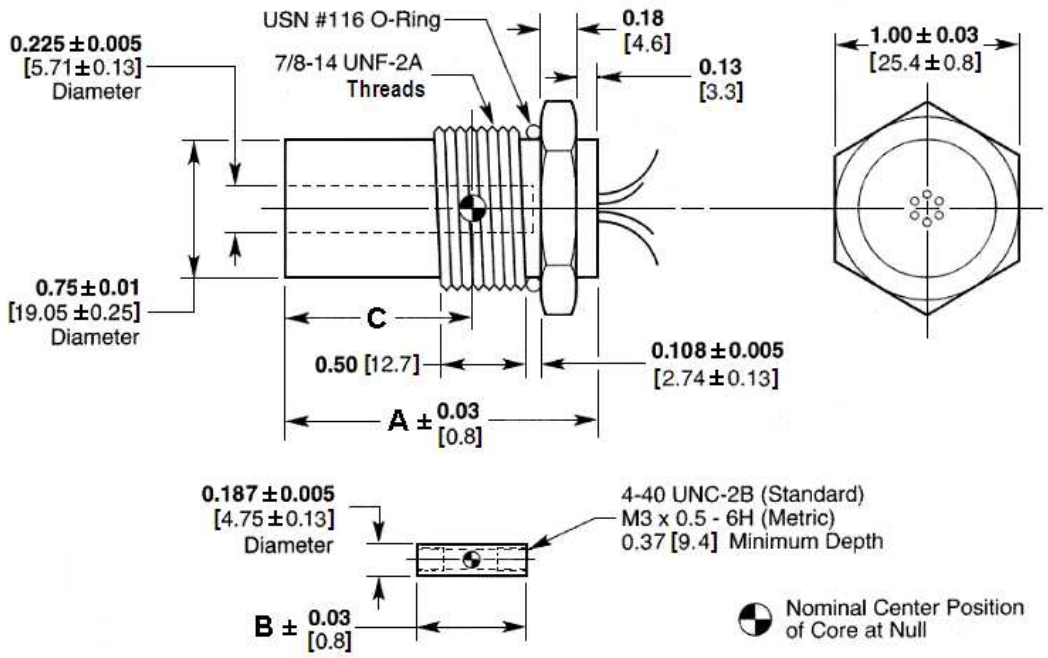
ELECTRICAL SPECIFICATIONS			
Parameter	**XS-C 249**	**XS-C 499**	**XS-C 999**
Stroke range	±0.25 [±6.35]	±0.50 [±12.7]	±1.00 [±25.4]
Sensitivity V/V/inch [mV/V/mm]	1.7 [66.9]	1.0 [39.4]	0.8 [31.5]
Output at stroke ends *(*)*	425mV/V	500mV/V	800mV/V
Phase shift	+5°	+2°	-1°
Input impedance (PRIMARY)	800Ω	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		

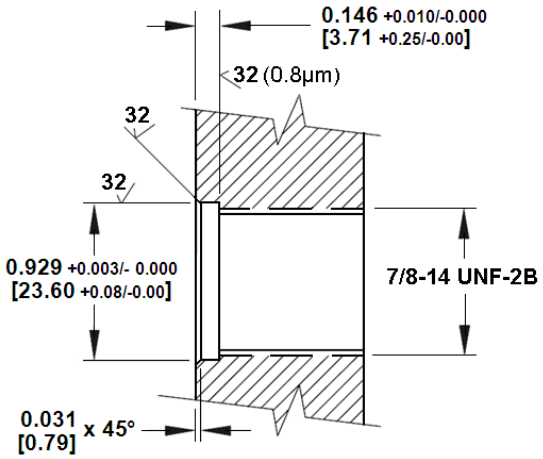
ENVIRONMENTAL SPECIFICATIONS & MATERIALS	
Parameter	**All Models**
Operating pressure	3,000 PSI [207 bars]
Proof Pressure	4,500 PSI [310 bars]
Operating temperature	-67°F to +302°F [-55°C to +150°C]
Shock survival	1, 000 g (11ms half-sine)
Vibration tolerance	20 g up to 2KHz
Housing material	AISI 304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

Parameter	**XS-C 249**	**XS-C 499**	**XS-C 999**
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]

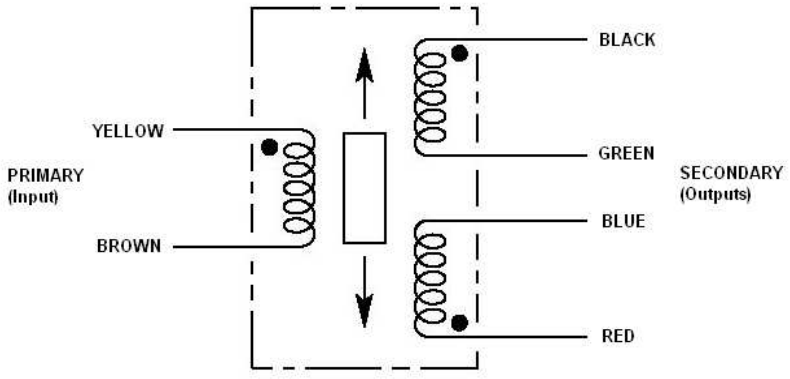




Mating detail for installation

Dimensions are in inches [mm]

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

ASIA

ABOUT MACRO SENSORS

Macro Sensors, founded by Howard A. Schaevitz, has more than three hundred man-years of experience in just one thing: the design and manufacture of LVDTs. We believe that you need solutions, not simply products. When you call us, you get the benefit of our experience and our commitment.

Most products listed are in stock for immediate delivery, and we strive to offer the finest customer service in the industry: technical support from people who understand LVDTs and how to apply them to your benefit, and a commitment to excellent pricing, quality products, and deliveries that you can truly rely on. Macro Sensors also has a comprehensive network of representatives and distributors in the U.S. and around the world to provide you with local support.

We manufacture an enormous array of LVDTs, from modified standards to complete custom designs. Our customers consistently tell us it is Macro Sensors? quality and service that keeps them coming back. Let our experience go to work for you.

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