



XS-C SERIES

High Pressure Sealed AC LVDT

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 [± 6.35 mm] to ± 1 inch [± 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

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 <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

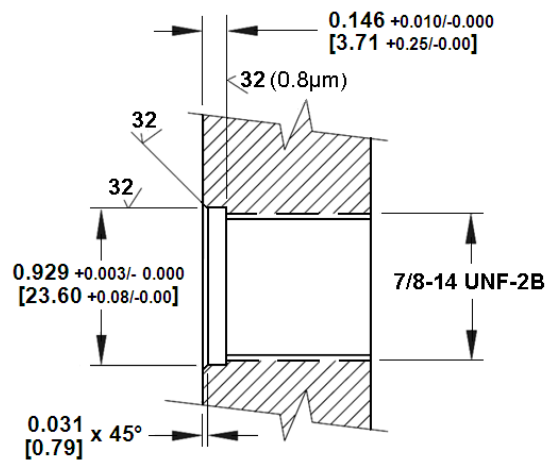
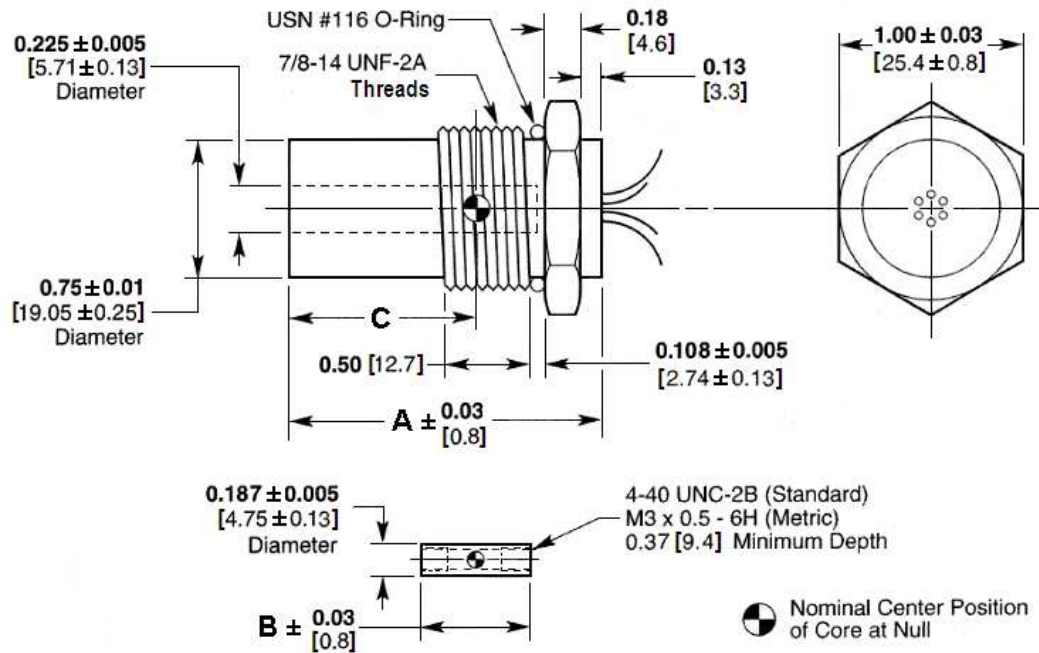
FRO (Full Range Output): Algebraic difference in outputs measured at the ends of the range

MECHANICAL SPECIFICATIONS

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]

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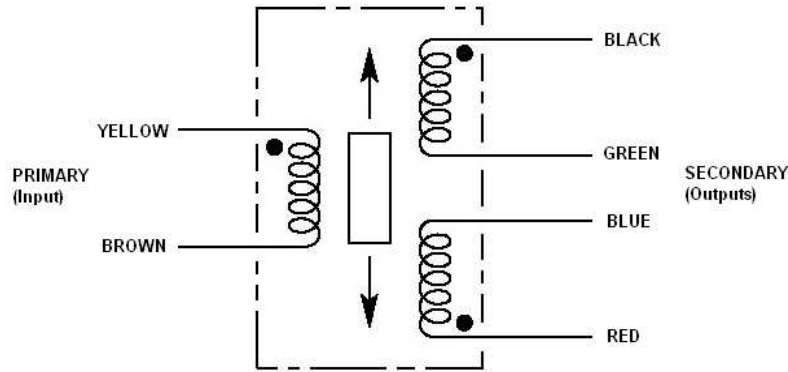
Mating detail for installation

Dimensions are in inches [mm]

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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

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