

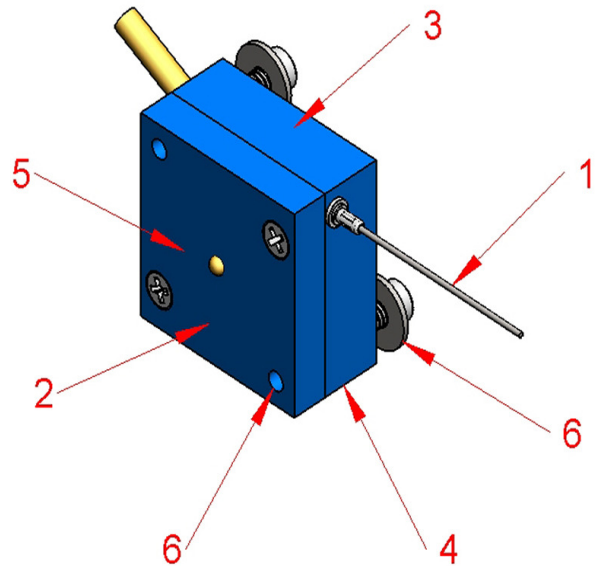
Data Sheet - Series 150 Universal Mount Subminiature Position Transducer

World's Smallest Cable Position Transducer Offering Center Line Displacement Cable Extraction

Shaded characteristics are verified during production and test. All others are for REFERENCE and information only.

Key Features

1. 1.5-Inch (38-mm) Maximum Travel with Center Line Cable Extraction
2. Analog Signal Using Precision Conductive Plastic Potentiometer
3. AccuTrak™ Grooved Drum for Enhanced Repeatability
4. Small, Robust Design
5. DirectConnect™ Sensor-To-Drum Technology = Zero Backlash, No Torsion Springs or Clutches
6. Universal Mounting option



Potentiometer Specifications

Potentiometer Type	1-turn, precision, conductive plastic
Resistance: Value, Tolerance	5K ohms, ±10%
Travel: Electrical, Mechanical	340°, 340° min
Mechanical Life	5 million shaft revolutions min
Output Signal	analog signal from 0 to supply voltage (voltage divider circuit)
Power Rating	0.75 W at 158° F (70° C)
Supply Current	12 mA max
Supply Voltage	35 VDC max (using voltage divider circuit)
Independent Linearity Error	±1.0% max per VRCI-P-100A
Output Smoothness	0.1% max
Insulation Resistance	1000 Mohms at 500 VDC min
Dielectric Strength	500 VDC min
Resolution	infinite signal
Operating Temperature	-85° to +257° F (-65° to +125° C)
Shock, Vibration	100 g for 6 ms, 10 to 2000 Hz at 15 g per Mil-R-39023
Temperature Coefficient	±400 ppm/°C max

Other Specifications

Case Materials	precision-machined anodized 2024 aluminum
Displacement Cable	0.018-inch (0.46-mm) dia., 7-by-7 stranded stainless steel, 40-lb (177-N) min breaking strength
Displacement Cable Hardware	1 each of 300196 loop sleeve , 300292 copper sleeve , 300688 ball-end plug , 300495 pull ring , 160026 brass swivel , and 301003 nickel swivel ; all items provided uncrimped
Nominal Mass	0.5 oz (15.0 g)
Displacement Cable Tension and Cable Acceleration (Nominal): Opt. 1	1 oz 0.3 N min 6 oz 1.7 N max 29 g max

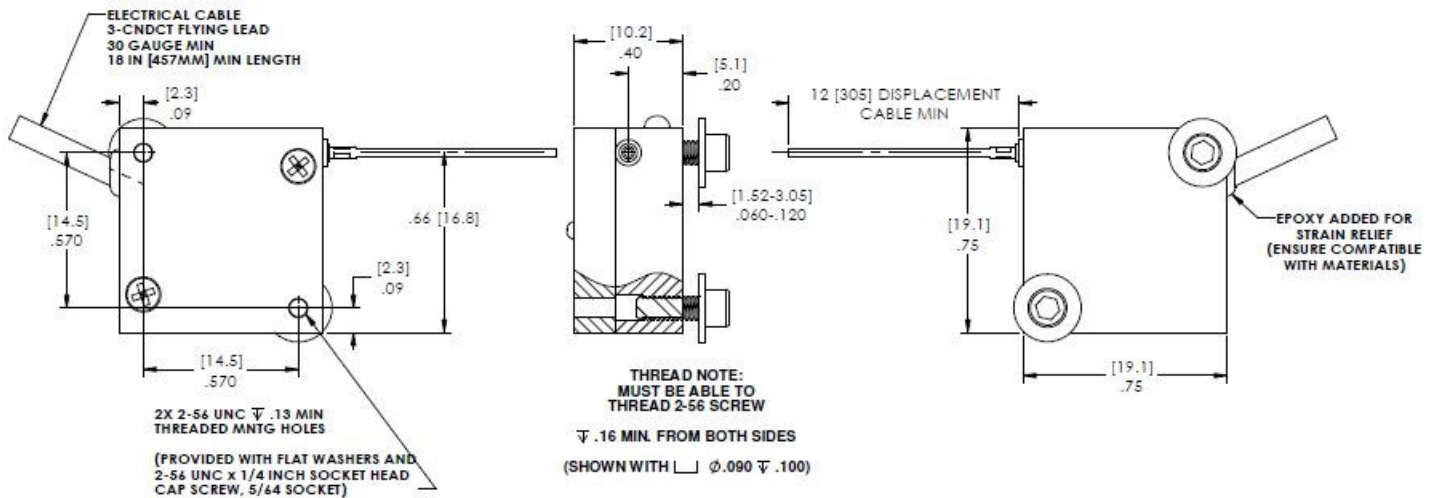
Displacement Cable Tension and Cable Acceleration (Nominal): Opt. 2	3 oz 0.8 N min 14 oz 3.9 N max 49 g max
Environmental Protection	NEMA 3S / IP 54; DO-160D (ED-14D) Env. Cat. E1E1ABXHFXDXSAXXXXXXXXXXX

Model Numbers and Ordering Codes

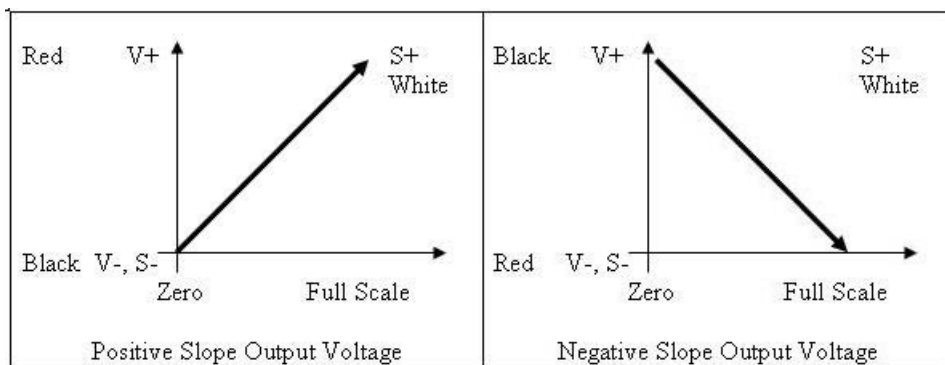
150-0121-Ubc	position transducer (1.50-inch (38-mm) range)
Example: 150-0121-U2N (Center line displacement cable pull, cable tension: -020, no base)	

Variable	Value	Description
b	1	cable tension: -010
	2	cable tension: -020
c	N	no base
	B	base: L; pn 150015

Drawing



Electrical Connection for Increasing Output with Displacement Cable Extraction		
<i>Left-Hand Pull</i> black white red	<i>Right-Hand Pull</i> red white black	<i>Signal</i> input, V+ output, signal, S+ ground, common, V-, S-



For crimping of hardware to displacement cable, consider the [160001-01 installation kit](#).

Need something not shown? Complete a [Custom Solution Request](#).

All dimensions are REFERENCE and are in inches [mm] • Data Sheet Series 150-0121-Uab Rev. -

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