

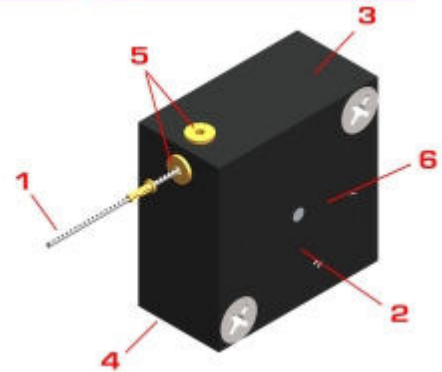
Data Sheet - Series 150 Subminiature Position Transducer

World's Smallest Cable Position Transducer

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
2. Analog Signal Using Precision Conductive Plastic Potentiometer
3. AccuTrak™ Grooved Drum for Enhanced Repeatability
4. Small, Robust Design
5. Choice of Displacement Cable Pull Direction
6. DirectConnect™ Sensor-To-Drum Technology = Zero Backlash, No Torsion Springs or Clutches



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

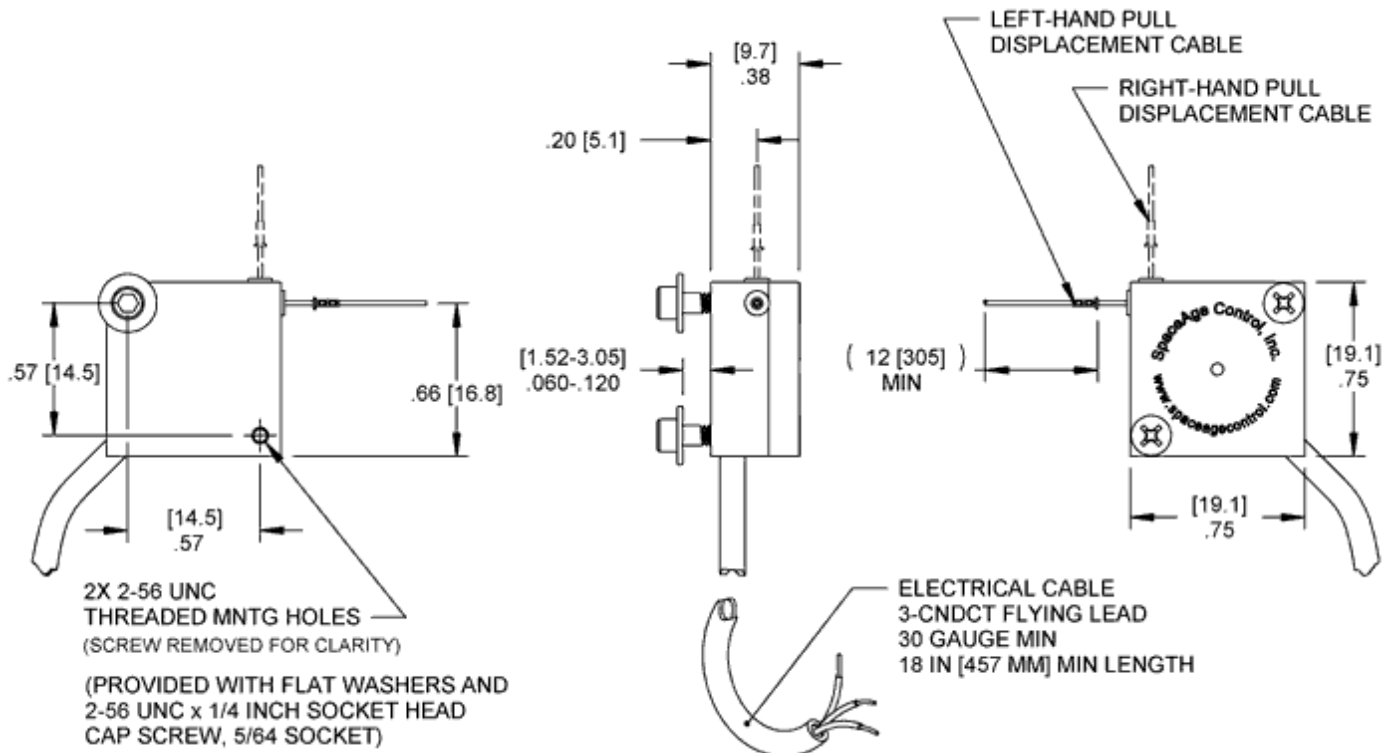
Displacement Cable Hardware	1 each of 300196 loop sleeve , 300292 copper sleeve , 300688 ball-end plug , 300495 pull ring , 160026 brass swivel , and 301003 nickel swivel ; all items provided uncrimped
Nominal Mass	0.5 oz (15.0 g)
Displacement Cable Tension and Cable Acceleration (Nominal): Opt. 1	1 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-abc	position transducer (1.50-inch (38-mm) range)
Example: 150-0121-L2N (left-hand displacement cable pull, cable tension: -020, no base)	

Variable	Value	Description
a	L	left-hand displacement cable pull
	R	right-hand displacement cable pull
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-