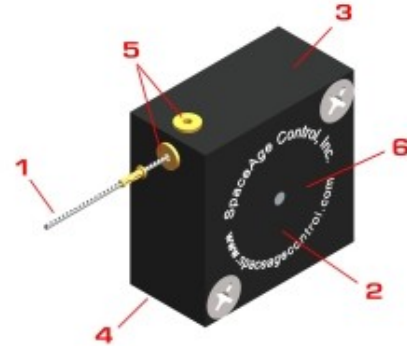


Data Sheet – Series 150 Analog–Output Ultra–Small Subminiature Position Transducer**World's Smallest Cable Position Transducer****Key Features**

- 1.5–Inch (38–mm) Maximum Travel
- Analog Signal Using Precision Conductive Plastic Potentiometer
- AccuTrak™ Grooved Drum for Enhanced Repeatability
- Small, Robust Design
- Choice of Displacement Cable Pull Direction
- 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 VRCL–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

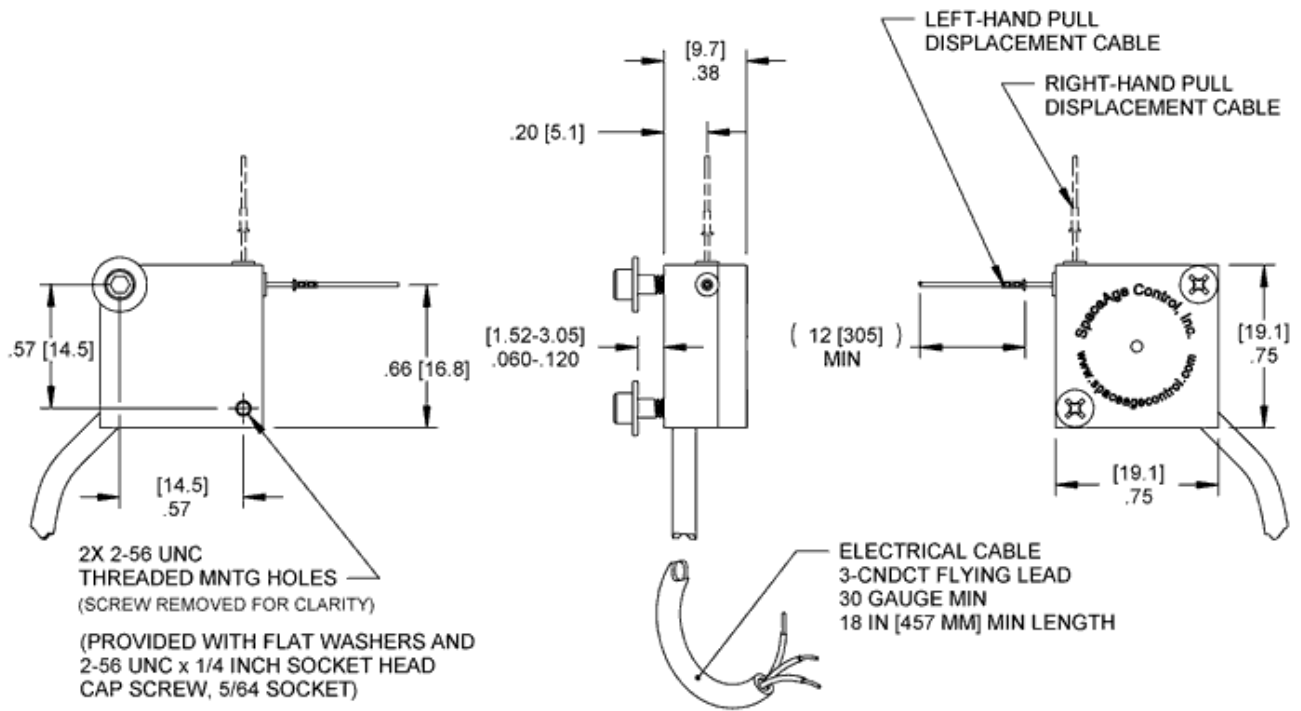
Case Materials	precision–machined anodized 2024 aluminum
Displacement Cable	0.018–inch (0.46–mm) dia., 7–by–7 stranded stainless steel, 40–lb (177–N) min breaking strength
Displacement Cable Hardware	1 each of 300196 loop sleeve , 300292 copper sleeve , 300688 ball–end plug , 300495 pull ring , 160026 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. E1E1ABXHFDXSAXXXXXXXXXXX

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

<p><i>Left-Hand Pull</i> black white red</p>	<p><i>Right-Hand Pull</i> red white black</p>	<p><i>Signal</i> input, V+ output, signal, S+ ground, common, V-, S-</p>
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For crimping of hardware to displacement cable, consider the [160001-01 installation kit](#).

All dimensions are REFERENCE and are in inches [mm] • Document number: S021F(040129)