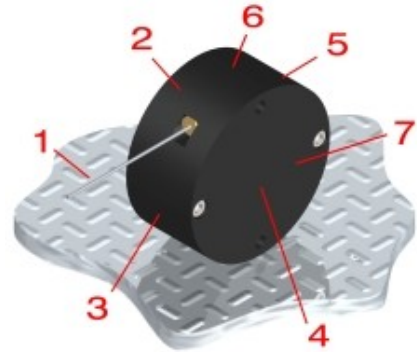


Data Sheet – Series 170 Analog–Output Subminiature Position Transducer

Subminiature Size, Flexible Mounting

Key Features

1. 2.0–Inch (51–mm) Maximum Travel
2. Analog Signal Using Precision Conductive Plastic Potentiometer
3. AccuTrak™ Grooved Drum for Enhanced Repeatability
4. Bearing–Mounted Rotating Components
5. Optional Flexible Mounting Bases
6. Integrated Left–Hand and Right–Hand Mounting
7. 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	100 million shaft revolutions min
Output Signal	analog signal from 0 to supply voltage (voltage divider circuit)
Power Rating	1.0 W at 158° F (70° C)
Supply Current	12 mA max
Supply Voltage	35 VDC max (using voltage divider circuit)
Independent Linearity Error	±0.5% max per VRCL–P–100A
Output Smoothness	0.1% max
Insulation Resistance	1000 Mohms at 500 VDC min
Dielectric Strength	1000 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

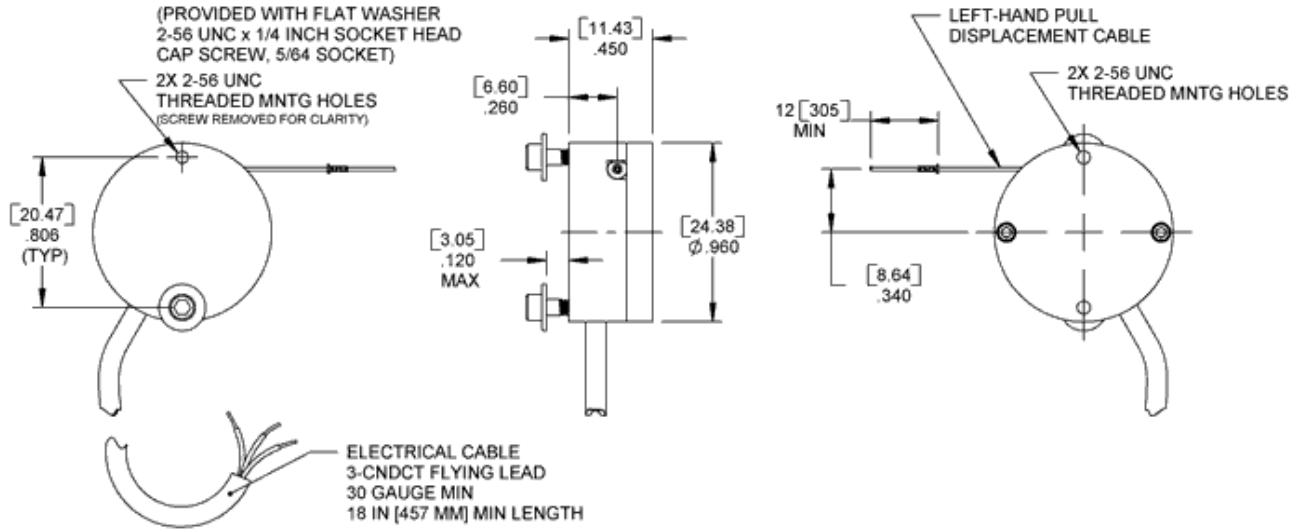
Case Materials	precision–machined anodized 2024 aluminum
Displacement Cable	0.018–inch (0.46–mm) dia., 7–by–7 stranded stainless steel, 40–lb (177–N) min breaking strength
Displacement Cable Hardware	1 each of 300196 loop sleeve, 300292 copper sleeve, 300688 ball–end plug, 300495 pull ring, 160026 brass swivel, and 301003 nickel swivel; all items provided uncrimped
Nominal Mass	1 oz (28 g)
Displacement Cable Tension and max Cable Acceleration (Nominal): Opt. 1	1.5 oz 0.4 N min 4 oz 1.1 N max 20 g max
Displacement Cable Tension and max Cable Acceleration (Nominal): Opt. 2	1.5 oz 0.4 N min 12 oz 3.3 N max 40 g max
Environmental Protection	NEMA 3S / IP 54, DO–160D (ED–14D) Env. Cat. E1E1ABSHXFDXSAXXXXXXXXXXX

Model Numbers and Ordering Codes

170–0161–ab	position transducer (2.0–inch (51–mm) range)
Example: 170–0161–1N (cable tension: –010, no base)	

Variable	Value	Description
a	1	cable tension: –010
	2	cable tension: –020
b	N	no base
	B	base: L (150/170 only); pn 150015

Drawing



Electrical Connection for Increasing Output with Displacement Cable Extraction

<p>Wire Color black white red</p>	<p>Signal 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: S021G(040129)