

Special Use Sensors – Cable-Extension Displacement Sensor

FEATURES

- Full-scale ranges from 5 to 50 inches
- Rugged, low profile design
- Switch-selectable potentiometer and Wheatstone bridge output circuits
- Standard RJ-45 electrical connections
- Compatible with all Micro-Measurements strain gage and high-level-signal instrumentation
- Easy to install and use



DESCRIPTION

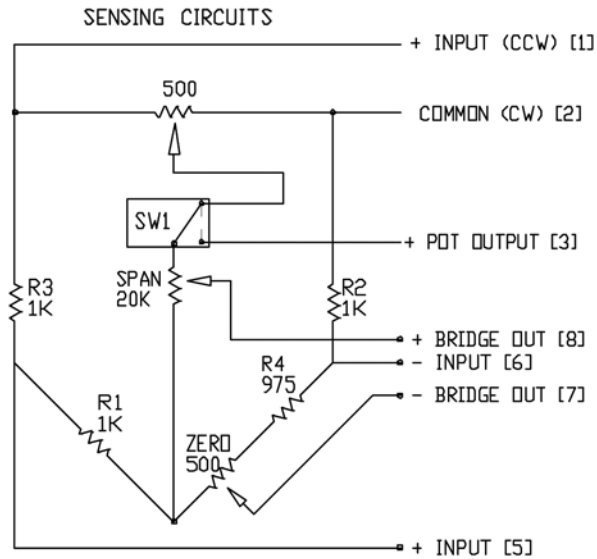
The Micro-Measurements Cable-Extension Displacement Sensor provides a voltage signal linearly proportional to the extension of a retractable stainless steel cable. Used for indicating the displacement of the test structure, member or part to which the cable is attached, installation is quick and easy. Simply attach the base of the sensor to a reference surface, the cable to the component being displaced, and the electrical leads to any instrument accepting strain-gage or high-level signal inputs. With the certified calibration data and wiring instructions provided with each sensor, you will be making displacement measurements in minutes.

SPECIFICATIONS

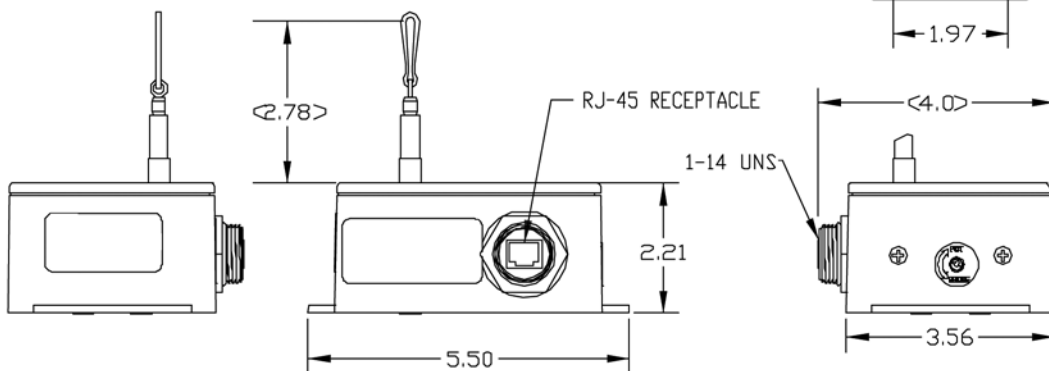
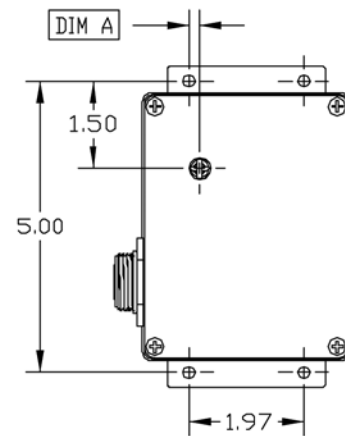
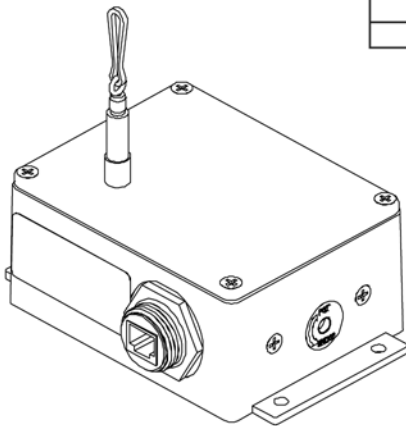
PARAMETER	MODEL						UNIT
	CDS-05	CDS-10	CDS-20	CDS-30	CDS-40	CDS-50	
Measurement Range	5 (127)	10 in (254)	20 (508)	30 (762)	40 (1016)	50 (1270)	in (mm)
Accuracy	0.25	0.15	0.10	0.10	0.10	0.10	% FS
Resolution	Analog (effectively infinite, limited only by instrumentation)						—
Repeatability	Greater of ± 0.001 in (± 0.025 mm) or 0.02% FS						—
Cable Retraction Force (min)	3.5 (1.0)	8.4 (2.3)	8.4 (2.3)	6.3 (1.8)	4.2 (1.1)	3.5 (1.0)	oz (N)
Cable Extension Force (max)	6.5 (1.8)	15.6 (4.3)	15.6 (4.3)	11.7 (3.3)	7.8 (2.2)	6.5 (1.8)	oz (N)
Cable Acceleration	3	11	11	5	4	3	g
Vibration	Up to 10, 0–2000						g, Hz
Shock	100, 0.1						g, mS
Sensor	Plastic-hybrid precision potentiometer						
Resistance	500						ohms
Maximum Supply Voltage – Potentiometer	30						V
Maximum Supply Voltage – Bridge	30						V
Output – Bridge	3.0 typical						mV/V FS
Case	Powder-painted aluminum alloy						
Cable	Nylon-coated stainless steel, 0.019 in [0.48 mm] diameter						
Electrical Connector	RJ-45 receptacle						
Weight	2 (1) typ.						lb (kg)
Operating Temperature	–40 to +200 (–40 to 93)						°F (°C)
TC of Sensor	88 (157)						ppm/°F (ppm/°C)
Humidity	100 at 90°F (32°C)						% RH

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OUTLINE DIMENSIONS in inches



MEASUREMENT RANGE (INCHES)	5	10	20	30	40	50
DIMENSION 'A'	0.16	0.65	0.65	0.43	0.35	0.16





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