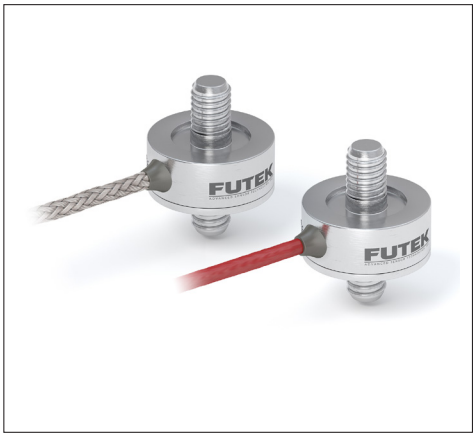
FUTEK
ADVANCED SENSOR TECHNOLOGY, INC.

MODEL LCM100
Miniature In Line Load Cell



FEATURES

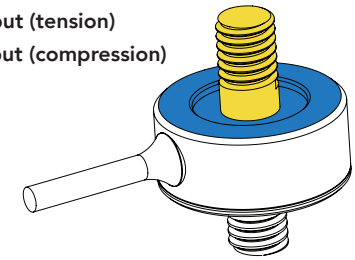
- High speed, low deflection
- Minimal mounting clearance
- Lightweight and ultra miniature solution
- Outer diameter of 0.38" [9.5 mm]
- 17-4 PH stainless-steel construction
- For use, both in-line tension and compression
- Utilizes metal foil strain gauge technology
- Adheres to RoHS directive 2015/63/EU

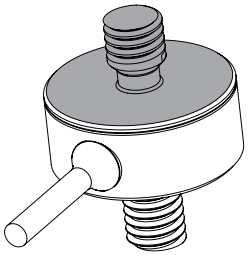
Non-loading surface

Active End

Fixed end

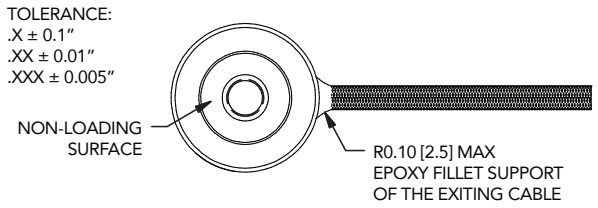
+ Output (tension)
– Output (compression)



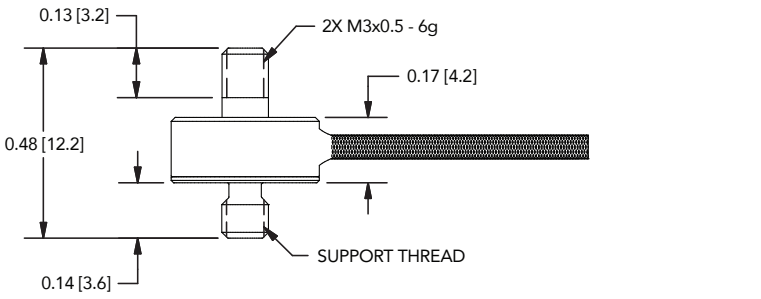


SPECIFICATIONS	
PERFORMANCE	
Nonlinearity	±0.5% of RO
Hysteresis	±0.5% of RO
Nonrepeatability	±0.1% of RO
ELECTRICAL	
Rated Output (RO)	1 mV/V (1000 g, 5 lb) 2 mV/V (10 lb, 25 lb)
Excitation (VDC or VAC)	7 max
Bridge Resistance	350 Ohm nom
Insulation Resistance	≥500 MOhm @ 50 VDC
Connection	#34 Awg 4 conductor braided shielded cable 5 ft [1.5 m] long #34 Awg 4 conductor braided shielded polyester cable 5 ft [1.5 m] long
Wiring/Connector Code	WC1 - Braided Polyester Jacketed Cable WC1s - Non-Jacketed Braided Cable
MECHANICAL	
Weight (approximate)	0.3 oz [8.5 g]
Safe Overload	150% of RO
Material	17-4 PH stainless-steel
IP Rating	IP64 (Non-Jacketed Braided Cable) IP65 (Braided Polyester Jacketed Cable)
TEMPERATURE	
Operating Temperature	–60 to 200°F (–51 to 93°C)
Compensated Temperature	60 to 160°F (16 to 71°C)
Temperature Shift Zero	±0.02% of RO/°F (±0.036 of RO/°C)
Temperature Shift Span	±0.02% of load/°F (±0.036 of load/°C)
CALIBRATION	
Calibration Test Excitation	5 VDC
Calibration (standard)	5-pt Tension
Calibration (available)	Compression
Shunt Calibration Value	100 kOhm (1000 g, 5 lb), 60.4 kOhm (10 lb, 25 lb)
CONFORMITY	
RoHS	EU 2015/863
CE	EN55011; EN61326-1

DIMENSIONS inches [mm]



*Avoid continuous bends near cable exit.



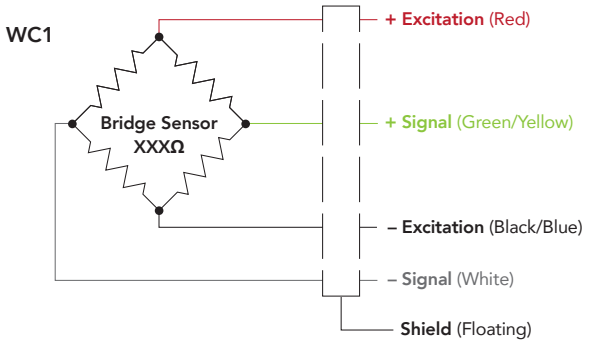
Note: Static one time bends are not to exceed 2-3 times the diameter of the cable. Continuous bends should not exceed a radius of 10 times the diameter of the sensor cable. Polyester Cable versions are available to offer support for applications with cable movement.

CAPACITIES

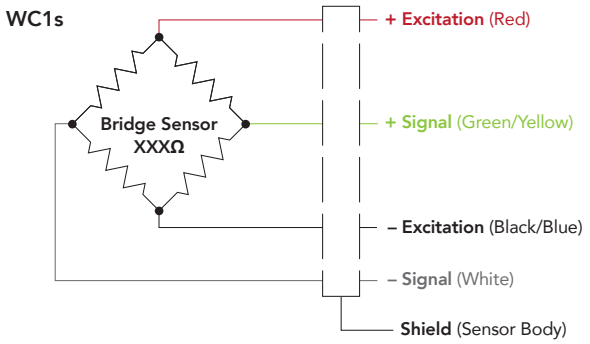
ITEM #	Cable Type	lb	N	Deflection (in)	Natural Frequency (kHz)
FSH03842	Braided	1000 g	9.8	0.0001	19
FSH04397	Polyester				
FSH03829	Braided	5 lb	22.2	0.0001	26
FSH04398	Polyester				
FSH03828	Braided	10 lb	44.5	0.0002	26
FSH04399	Polyester				
FSH03827	Braided	25 lb	111.2	0.0002	42
FSH04400	Polyester				

**In-line sensors are sensitive to off-axis or extraneous forces, please refer to Extraneous Load Factor sheet.

WIRING CODE	WC1s	WC1
RED	+ EXCITATION	+ EXCITATION
BLACK	– EXCITATION	– EXCITATION
GREEN	+ SIGNAL	+ SIGNAL
WHITE	– SIGNAL	– SIGNAL
SHIELDED	SENSOR BODY	FLOATING



For units with Braided Polyester Jacket Cables



For units with Non-Jacketed Braided Cables

Drawing Number: FI1367-H

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CE RoHS ANSI Z540-1 ISO 17025 ISO 9001 ISO 13485 U.S. Manufacturer