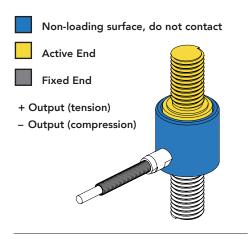


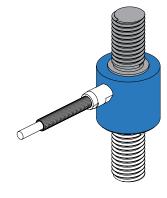
## MODEL LCM350 Miniature Threaded In Line Load Cell



## FEATURES

- Miniature size
- Fast response and low deflection •
- Robust cable strain relief •
- For use in both tension and compression ٠





Sensor Solution Source Load · Torque · Pressure · Multi-Axis · Calibration · Instruments · Software

SPECIFICATIONS     PERFORMANCE     Nonlinearity   ±0.5% of RO     Hysteresis   ±0.1% of RO     Nonrepeatability   ±0.1% of RO     ELECTRICAL   2 mV/V (4 klb)     Rated Output (RO)   1.6 mV/V (4 klb)     2 mV/V (5 klb)   2 mV/V (5 klb)     Excitation (VDC or VAC)   18 max     Bridge Resistance   350 Ohm nom     nsulation Resistance   >500 MOhm @ 50 VDC     Connection   #28 AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] long     Wiring/Connector Code   WC1     WECHANICAL   VC1     Weight (minus cable)   3.5 oz [156 g]     Weight (minus cable)   3.5 oz [99 g]     Safe Overload   150% of RO     Deeflection   0.002 in [0.05 mm] nom     Material (flexure)   17-4 PH stainless-steel     P Rating   IP64     TEMPERATURE   Deprating Temperature     Operating Temperature   -45 to 200°F (-42 to 93°C)     Compensated Temperature   60 to 160°F (15 to 72°C)     Temperature Shift Zero   ±0.005% of RO/~F (0.01% of RO/~C)
Nonlinearity±0.5% of ROHysteresis±0.5% of RONonrepeatability±0.1% of ROELECTRICALRated Output (RO)1.6 mV/V (4 klb) 2 mV/V (5 klb)Excitation (VDC or VAC)18 maxBridge Resistance350 Ohm nomnsulation Resistance≥500 MOhm @ 50 VDCConnection#28 AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] longMiring/Connector CodeWC1VECHANICALWeight (minus cable)3.5 oz [156 g]Neight (approximate)5.5 oz [156 g]Safe Overload150% of RODeflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64ETEMPERATURECompensated Temperature-45 to 200°F (42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Emerature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
+ysteresis $\pm 0.5\%$ of RONonrepeatability $\pm 0.1\%$ of ROELECTRICALRated Output (RO) $1.6$ mV/V (4 klb) $2$ mV/V (5 klb)Excitation (VDC or VAC) $18$ maxBridge Resistance $350$ Ohm nomnsulation Resistance $\geq 500$ MOhm @ $50$ VDCConnection $\# 28$ AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] longMiring/Connector CodeWC1WECHANICAL $WC1$ Veight (approximate) $5.5$ oz [156 g]Neight (approximate) $3.5$ oz [99 g]Safe Overload $150\%$ of RODeflection $0.002$ in [0.05 mm] nomMaterial (flexure) $17.4$ PH stainless-steelP RatingIP64TEMPERATUREDeperating Temperature $-45$ to $200^{\circ}$ F (-42 to $93^{\circ}$ C)Compensated Temperature $60$ to $160^{\circ}$ F (15 to $72^{\circ}$ C)Emperature Shift Zero $\pm 0.005\%$ of RO/"F (0.011% of RO/"C)
Nonrepeatability±0.1% of ROELECTRICALRated Output (RO)1.6 mV/V (4 klb) 2 mV/V (5 klb)Excitation (VDC or VAC)18 maxBridge Resistance350 Ohm nomnsulation Resistance≥500 MOhm @ 50 VDCConnection#28 AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] longWring/Connector CodeWC1WECHANICALVC1Weight (approximate)5.5 oz [156 g]Neight (minus cable)3.5 oz [99 g]Safe Overload150% of RODeflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64TEMPERATUREOperating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Temperature Shift Zero±0.05% of RO/*F (0.01% of RO/*C)
ELECTRICAL     Rated Output (RO)   1.6 mV/V (4 klb) 2 mV/V (5 klb)     Excitation (VDC or VAC)   18 max     Bridge Resistance   350 Ohm nom     nsulation Resistance   >500 MOhm @ 50 VDC     Connection   #28 AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] long     Niring/Connector Code   WC1     MECHANICAL   VC1     Weight (approximate)   5.5 oz [156 g]     Safe Overload   150% of RO     Deflection   0.002 in [0.05 mm] nom     Material (flexure)   17-4 PH stainless-steel     P Rating   IP64     TEMPERATURE   -45 to 200°F (-42 to 93°C)     Compensated Temperature   60 to 160°F (15 to 72°C)     Temperature Shift Zero   ±0.005% of RO/°F (0.01% of RO/°C)
Rated Output (RO)   1.6 mV/V (4 klb) 2 mV/V (5 klb)     Excitation (VDC or VAC)   18 max     Bridge Resistance   350 Ohm nom     nsulation Resistance   >500 MOhm @ 50 VDC     Connection   #28 AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] long     Wiring/Connector Code   WC1     MECHANICAL   WC1     Weight (approximate)   5.5 oz [156 g]     Neight (minus cable)   3.5 oz [99 g]     Safe Overload   150% of RO     Deflection   0.002 in [0.05 mm] nom     Material (flexure)   17-4 PH stainless-steel     P Rating   IP64     TEMPERATURE   -45 to 200°F (-42 to 93°C)     Compensated Temperature   60 to 160°F (15 to 72°C)     Femperature Shift Zero   ±0.005% of RO/°F (0.01% of RO/°C)
2 mV/V (5 klb)Excitation (VDC or VAC)18 maxBridge Resistance350 Ohm nomnsulation Resistance≥500 MOhm @ 50 VDCConnection#28 AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] longWring/Connector CodeWC1Weight (approximate)5.5 oz [156 g]Weight (minus cable)3.5 oz [99 g]Safe Overload150% of RODeflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64TEMPERATUREOperating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Temperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
Bridge Resistance   350 Ohm nom     nsulation Resistance   ≥500 MOhm @ 50 VDC     Connection   #28 AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] long     Wiring/Connector Code   WC1     MECHANICAL   Weight (approximate)     Neight (minus cable)   3.5 oz [156 g]     Safe Overload   150% of RO     Deflection   0.002 in [0.05 mm] nom     Material (flexure)   17-4 PH stainless-steel     P Rating   IP64     TEMPERATURE   200°F (-42 to 93°C)     Compensated Temperature   60 to 160°F (15 to 72°C)     Femperature Shift Zero   ±0.005% of RO/°F (0.01% of RO/°C)
Insulation Resistance≥500 MOhm @ 50 VDCConnection#28 AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] longWiring/Connector CodeWC1MECHANICALVMeight (approximate)5.5 oz [156 g]Weight (minus cable)3.5 oz [99 g]Safe Overload150% of RODeflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64TEMPERATUREOperating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Femperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
Connection#28 AWG, 4 conductor, braided shielded PVC cable, 10 ft [3 m] longWiring/Connector CodeWC1WECHANICALWeight (approximate)Neight (approximate)5.5 oz [156 g]Neight (minus cable)3.5 oz [99 g]Safe Overload150% of RODeflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64TEMPERATUREOperating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Femperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
cable, 10 ft [3 m] longWring/Connector CodeWC1WECHANICAL5.5 oz [156 g]Weight (approximate)5.5 oz [156 g]Weight (minus cable)3.5 oz [99 g]Safe Overload150% of RODeflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64Deprating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Temperature Shift Zero±0.005% of RO/°C (0.01% of RO/°C)
WECHANICAL     Weight (approximate)   5.5 oz [156 g]     Weight (minus cable)   3.5 oz [99 g]     Safe Overload   150% of RO     Deflection   0.002 in [0.05 mm] nom     Material (flexure)   17-4 PH stainless-steel     P Rating   IP64 <b>TEMPERATURE</b> -45 to 200°F (-42 to 93°C)     Compensated Temperature   60 to 160°F (15 to 72°C)     Temperature Shift Zero   ±0.005% of RO/°F (0.01% of RO/°C)
Weight (approximate)5.5 oz [156 g]Weight (minus cable)3.5 oz [99 g]Safe Overload150% of RODeflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64 <b>TEMPERATURE</b> Derating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Temperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
Weight (minus cable)3.5 oz [99 g]Safe Overload150% of RODeflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64 <b>TEMPERATURE</b> Operating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Temperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
Safe Overload150% of RODeflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64 <b>TEMPERATURE</b> Operating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Temperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
Deflection0.002 in [0.05 mm] nomMaterial (flexure)17-4 PH stainless-steelP RatingIP64 <b>TEMPERATURE</b> Operating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Temperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
Material (flexure) 17-4 PH stainless-steel   P Rating IP64 <b>TEMPERATURE</b> Operating Temperature -45 to 200°F (-42 to 93°C)   Compensated Temperature 60 to 160°F (15 to 72°C)   Temperature Shift Zero ±0.005% of RO/°F (0.01% of RO/°C)
P Rating   IP64 <b>TEMPERATURE</b> -45 to 200°F (-42 to 93°C)     Operating Temperature   -45 to 200°F (15 to 72°C)     Compensated Temperature   60 to 160°F (15 to 72°C)     Temperature Shift Zero   ±0.005% of RO/°F (0.01% of RO/°C)
TEMPERATURE     Operating Temperature     -45 to 200°F (-42 to 93°C)     Compensated Temperature     60 to 160°F (15 to 72°C)     Temperature Shift Zero     ±0.005% of RO/°F (0.01% of RO/°C)
Operating Temperature-45 to 200°F (-42 to 93°C)Compensated Temperature60 to 160°F (15 to 72°C)Temperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
Compensated Temperature60 to 160°F (15 to 72°C)Temperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
Temperature Shift Zero±0.005% of RO/°F (0.01% of RO/°C)
Temperature Shift Span ±0.02% of Load/°F (0.036% of Load/°C)
CALIBRATION
Calibration Test Excitation 10 VDC
Calibration (standard) 5-pt Tension
Calibration (available) Compression
Shunt Calibration Value 100 kOhm (4 klb), 60.4 kOhm (5 klb)
CONFORMITY
RoHS EU 2015/863
CE EN55011; EN61326-1









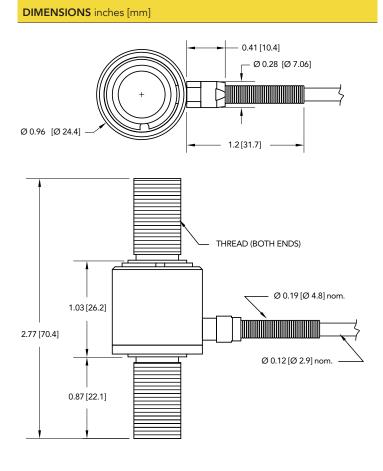
13485



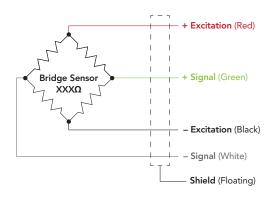
www.futek.com

U.S. Manufacturer

## Model LCM350



WIRING CODE (WC1 WITH SHIELD)			
RED	+ EXCITATION		
BLACK	– EXCITATION		
GREEN	+ SIGNAL		
WHITE	– SIGNAL		
SHIELD	FLOATING		



i
(

klb	kN	Thread	Natural Frequency (kHz)
4	17.8	1/2-20	14.5
4	17.8	M12x1.75	14.5
5	22.2	1/2-20	14.5
5	22.2	M12x1.75	14.5
	4 4 5	4 17.8 4 17.8 5 22.2	4     17.8     1/2-20       4     17.8     M12x1.75       5     22.2     1/2-20

## Drawing Number: FI1437-B

FUTEK reserves the right to modify its design and specifications without notice. Please visit <u>www.futek.com/salesterms</u> for complete terms and conditions.

**10 Thomas, Irvine, CA 92618 USA** Tel: (949) 465-0900 Fax: (949) 465-0905









りぐ

13485



www.futek.com