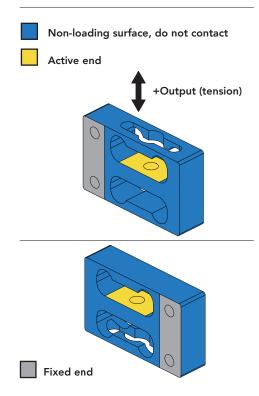


FEATURES

- Intended for high volume applications
- Easily integrates into OEM applications •
- 50 to 200x Built-in overload protection •
- Low Power consumption ٠
- Exceptional nonlinearity and nonrepeatability •
- Can integrate with analog VDC, mA, digital • SPI, I2C, RS-232, UART output, and more



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

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PERFORMANCE Nonlinearity ±0.05% of RO Hysteresis ±0.05% of RO Nonrepeatability ±0.05% of RO ELECTRICAL ELECTRICAL Rated Output (RO) 1.5 mV/V nom (0.25 lb) 2 mV/V nom (0.5 – 1 lb) Excitation (VDC or VAC) 18 max Bridge Resistance 1000 Ohm nom Insulation Resistance >500 Mohm @ 50 VDC Connection #29 AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] long Wiring/Connector Code WC2 MECHANICAL V Weight (approximate) 1 oz [28 g] Safe Overload 50 lb [222.4 N] Material Aluminum IP Rating IPO0 TEMPERATURE Operating Temperature Operating Temperature -60 to 200°F [-50 to 93°C] Compensated Temperature 60 to 160°F [15 to 72°C] Temperature Shift Zero ±0.005% of Load/°F [0.01% of Load/°C] Temperature Shift Span ±0.005% of Load/°F [0.01% of Load/°C] Calibration Test Excitation 10 VDC Calibration Test Excitation Certificate of Conformance			
Nonlinearity $\pm 0.05\%$ of ROHysteresis $\pm 0.05\%$ of RONonrepeatability $\pm 0.05\%$ of ROELECTRICAL $\pm 0.05\%$ of ROELECTRICALIs mV/V nom (0.25 lb) 2 mV/V nom (0.5 - 1 lb)Excitation (VDC or VAC)18 maxBridge Resistance1000 Ohm nomInsulation Resistance ≥ 500 Mohm @ 50 VDCConnection#29 AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] longWring/Connector CodeWC2MECHANICALVUC2Weight (approximate)1 oz [28 g]Safe Overload50 lb [222.4 N]MaterialAluminumIP RatingIP00TEMPERATURE $= 600 to 200^\circ F [-50 to 93^\circ C]$ Compensated Temperature $= 600 to 600^\circ F [0.01\% of RO/°C]$ Temperature Shift Zero $\pm 0.005\%$ of RO/°F [0.01% of Load/°C]Calibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	SPECIFICATIONS		
Hysteresis $\pm 0.05\%$ of RONonrepeatability $\pm 0.05\%$ of ROELECTRICAL $\pm 0.05\%$ of RORated Output (RO) 1.5 mV/V nom (0.25 lb) 2 mV/V nom (0.5 - 1 lb)Excitation (VDC or VAC)18 maxBridge Resistance1000 Ohm nomInsulation Resistance ≥ 500 Mohm @ 50 VDCConnection $\#29$ AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] longWiring/Connector CodeWC2MECHANICAL \times Weight (approximate)1 oz [28 g]Safe Overload50 lb [222.4 N]MaterialAluminumIP RatingIPO0TEMPERATURE \sim Operating Temperature \sim 60 to 200°F [-50 to 93°C]Compensated Temperature \approx 0.005% of RO/"F [0.01% of RO/"C]Temperature Shift Zero \pm 0.005% of Load/°F [0.01% of Load/°C]Calibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	PERFORMANCE		
Nonrepeatability ±0.05% of RO ELECTRICAL Rated Output (RO) 1.5 mV/V nom (0.25 lb) 2 mV/V nom (0.5 - 1 lb) Excitation (VDC or VAC) 18 max Bridge Resistance 1000 Ohm nom Insulation Resistance 2500 Mohm @ 50 VDC Connection #29 AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] long Wiring/Connector Code WC2 MECHANICAL Weight (approximate) Vieight (approximate) 1 oz [28 g] Safe Overload 50 lb [222.4 N] Material Aluminum IP Rating IP00 TEMPERATURE Operating Temperature Operating Temperature -60 to 200°F [-50 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] Temperature Shift Span ±0.005% of Load/°F [0.01% of RO/°C] Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	Nonlinearity	±0.05% of RO	
ELECTRICALRated Output (RO) $1.5 \text{ mV/V nom } (0.25 \text{ lb}) \\ 2 \text{ mV/V nom } (0.5 - 1 \text{ lb})$ Excitation (VDC or VAC)18 maxBridge Resistance1000 Ohm nomInsulation Resistance>500 Mohm @ 50 VDCConnection#29 AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] longWiring/Connector CodeWC2MECHANICALWeight (approximate)Weight (approximate)1 oz [28 g]Safe Overload50 lb [222.4 N]MaterialAluminumIP RatingIP00TEMPERATUREOperating Temperature-60 to 200°F [-50 to 93°C]Compensated Temperature60 to 160°F [15 to 72°C]Temperature Shift Zero $\pm 0.005\%$ of RO/°F [0.01% of RO/°C]Temperature Shift Span $\pm 0.005\%$ of Load/°F [0.01% of RO/°C]Calibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	Hysteresis	±0.05% of RO	
Rated Output (RO)1.5 mV/V nom (0.25 lb) 2 mV/V nom (0.5 – 1 lb)Excitation (VDC or VAC)18 maxBridge Resistance1000 Ohm nomInsulation Resistance>500 Mohm @ 50 VDCConnection#29 AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] longWiring/Connector CodeWC2MECHANICALVWC2Weight (approximate)1 oz [28 g]Safe Overload50 lb [222.4 N]MaterialAluminumIP RatingIPO0TEMPERATURE-60 to 200°F [-50 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]Temperature Shift Span±0.005% of RO/°F [0.01% of Load/°C]Calibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	Nonrepeatability	±0.05% of RO	
2 mV/V nom (0.5 − 1 lb) Excitation (VDC or VAC) 18 max Bridge Resistance 1000 Ohm nom Insulation Resistance >500 Mohm @ 50 VDC Connection #29 AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] long Wiring/Connector Code WC2 MECHANICAL Weight (approximate) 1 oz [28 g] Safe Overload Safe Overload 50 lb [222.4 N] Material Aluminum IP Rating IP00 TEMPERATURE Operating Temperature -60 to 200°F [-50 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] Temperature Shift Span ±0.005% of RO/°F [0.01% of Load/°C] CaliBRATION Calibration Test Excitation Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	ELECTRICAL		
Bridge Resistance 1000 Ohm nom Insulation Resistance ≥500 Mohm @ 50 VDC Connection #29 AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] long Wiring/Connector Code WC2 MECHANICAL Weight (approximate) 1 oz [28 g] Safe Overload Safe Overload 50 lb [222.4 N] Material Aluminum IP Rating IP00 TEMPERATURE Operating Temperature Operating Temperature -60 to 200°F [-50 to 93°C] Compensated Temperature 60 to 160°F [15 to 72°C] Temperature Shift Zero ±0.005% of Load/°F [0.01% of RO/°C] Temperature Shift Span ±0.005% of Load/°F [0.01% of Load/°C] Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	Rated Output (RO)		
Insulation Resistance ≥500 Mohm @ 50 VDC Connection #29 AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] long Wiring/Connector Code WC2 MECHANICAL Weight (approximate) 1 oz [28 g] Safe Overload Safe Overload 50 lb [222.4 N] Material Aluminum IP Rating IP00 TEMPERATURE Operating Temperature Operating Temperature -60 to 200°F [-50 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] Temperature Shift Span ±0.005% of Load/°F [0.01% of Load/°C] Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	Excitation (VDC or VAC)	18 max	
Connection#29 AWG, 4 conductor, spiral teflon cable, 6 in [152.4 mm] longWiring/Connector CodeWC2MECHANICALVWeight (approximate)1 oz [28 g]Safe Overload50 lb [222.4 N]MaterialAluminumIP RatingIP00TEMPERATUREOperating Temperature-60 to 200°F [-50 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]Temperature Shift Span±0.005% of Load/°F [0.01% of Load/°C]Calibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	Bridge Resistance	1000 Ohm nom	
[152.4 mm] longWiring/Connector CodeWC2MECHANICALI oz [28 g]Weight (approximate)1 oz [28 g]Safe Overload50 lb [222.4 N]MaterialAluminumIP RatingIP00TEMPERATURE-60 to 200°F [-50 to 93°C]Operating Temperature-60 to 160°F [15 to 72°C]Temperature Shift Zero±0.005% of RO/°F [0.01% of RO/°C]Temperature Shift Span±0.005% of Load/°F [0.01% of Load/°C]Calibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	Insulation Resistance	≥500 Mohm @ 50 VDC	
MECHANICALWeight (approximate)1 oz [28 g]Safe Overload50 lb [222.4 N]MaterialAluminumIP RatingIP00TEMPERATURE-60 to 200°F [-50 to 93°C]Operating Temperature-60 to 200°F [-50 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]Temperature Shift Span±0.005% of Load/°F [0.01% of Load/°C]Calibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	Connection		
Weight (approximate)1 oz [28 g]Safe Overload50 lb [222.4 N]MaterialAluminumIP RatingIP00TEMPERATUREOperating Temperature-60 to 200°F [-50 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]Temperature Shift Span±0.005% of Load/°F [0.01% of Load/°C]CALIBRATIONCalibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	Wiring/Connector Code	WC2	
Safe Overload50 lb [222.4 N]MaterialAluminumIP RatingIP00TEMPERATUREOperating Temperature-60 to 200°F [-50 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]Temperature Shift Span±0.005% of Load/°F [0.01% of Load/°C]Calibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	MECHANICAL		
MaterialAluminumIP RatingIP00TEMPERATUREOperating Temperature-60 to 200°F [-50 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]Temperature Shift Span±0.005% of Load/°F [0.01% of Load/°C]CALIBRATIONCalibration Test Excitation10 VDCCalibration (standard)Certificate of Conformance	Weight (approximate)	1 oz [28 g]	
IP Rating IP00 TEMPERATURE -60 to 200°F [-50 to 93°C] Operating Temperature -60 to 160°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 Shift Span ±0.005% of Load/°F [0.01% of Load/°C] Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	Safe Overload	50 lb [222.4 N]	
TEMPERATURE Operating Temperature -60 to 200°F [-50 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] Temperature Shift Span ±0.005% of Load/°F [0.01% of Load/°C] CALIBRATION Calibration Test Excitation Calibration (standard) Certificate of Conformance	Material	Aluminum	
Operating Temperature -60 to 200°F [-50 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] Temperature Shift Span ±0.005% of Load/°F [0.01% of Load/°C] CALIBRATION I0 VDC Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	IP Rating	IP00	
Compensated Temperature 60 to 160°F [15 to 72°C] Temperature Shift Zero ±0.005% of RO/°F [0.01% of RO/°C] Temperature Shift Span ±0.005% of Load/°F [0.01% of Load/°C] CALIBRATION Calibration Test Excitation Calibration (standard) Certificate of Conformance	TEMPERATURE		
Temperature Shift Zero ±0.005% of RO/°F [0.01% of RO/°C] Temperature Shift Span ±0.005% of Load/°F [0.01% of Load/°C] CALIBRATION Calibration Test Excitation Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	Operating Temperature	-60 to 200°F [-50 to 93°C]	
Temperature Shift Span ±0.005% of Load/°F [0.01% of Load/°C] CALIBRATION Calibration Test Excitation Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	Compensated Temperature	60 to 160°F [15 to 72°C]	
CALIBRATION Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	Temperature Shift Zero	±0.005% of RO/°F [0.01% of RO/°C]	
Calibration Test Excitation 10 VDC Calibration (standard) Certificate of Conformance	Temperature Shift Span	±0.005% of Load/°F [0.01% of Load/°C]	
Calibration (standard) Certificate of Conformance	CALIBRATION		
	Calibration Test Excitation	10 VDC	
Calibration (available) 5-pt Tension and Compression	Calibration (standard)	Certificate of Conformance	
	Calibration (available)	5-pt Tension and Compression	
Shunt Calibration Value200 kOhm (0.25 lb)150 kOhm (0.5 – 1 lb)	Shunt Calibration Value		
CONFORMITY	CONFORMITY		
RoHS 2015/63/EU	RoHS	2015/63/EU	
	CE	EN55011; EN61326-1	
	CE	EINOOUTI; EINOT320-1	

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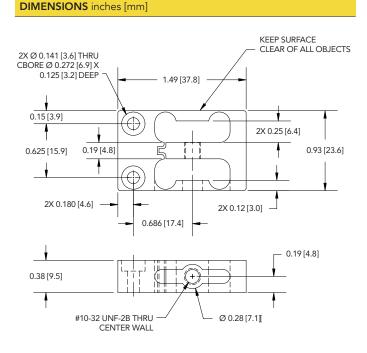
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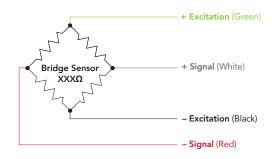
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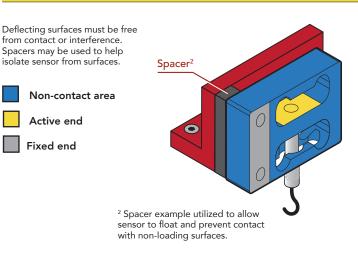
WIRING CODE (WC2)	
GREEN	+ EXCITATION
BLACK	– EXCITATION
WHITE	+ SIGNAL
RED	– SIGNAL

*Color code for this sensor is not FUTEK standard



DEFLECTION					
ITEM #	lb	N	Deflection (in.)	Natural Frequency (Hz)	
FSH03923	0.25	1.1	0.004 [0.1 mm]	200	
FSH03924	0.5	2.2	0.004 [0.1 mm]	290	
FSH03925	1	4.5	0.004 [0.1 mm]	400	

MOUNTING



Drawing Number: FI1414-A

sensori & trasduttori

FUTEK reserves the right to modify its design and specifications without notice.

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