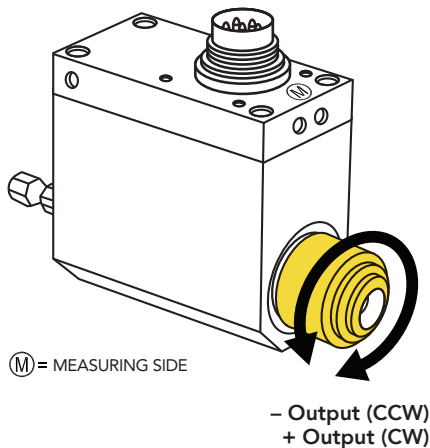




FEATURES

- Utilizes strain gauge technology
- Angle speed feedback included
- Compact size
- Can operate up to 7000 RPM

Active end



SPECIFICATIONS

PERFORMANCE

Nonlinearity	±0.2% of RO
Hysteresis	±0.1% of RO
Nonrepeatability	±0.2% of RO
Rotational Speed	7000 RPM Max

ELECTRICAL

Bandwidth	3 kHz
Typical Noise	<50 mV p-p
Rated Output (RO)	±5 VDC
Excitation (VDC or VAC)	11 to 26 VDC, 1 Watt
Connection	12 pin Binder Series #581 (09-0331-90-12)

MECHANICAL

Weight (approximate)	0.8 lb [0.35 kg]
Safe Overload	150% of RO
Material	Aluminum (Housing) Steel Alloy (Shaft)
IP Rating	IP40

TEMPERATURE

Operating Temperature	-13 to 176°F (-25 to 80°C)
Compensated Temperature	42 to 122°F (5 to 50°C)
Temperature Shift Zero	±0.01% of RO/°F (±0.02% of RO/°C)
Temperature Shift Span	±0.01% of Load/°F (±0.02% of Load/°C)

CALIBRATION

Calibration Test Excitation	12 VDC
Calibration (standard)	Certificate of Conformance
Calibration (available)	5-pt CW & CCW
Shunt Calibration	With sensor fully connected apply 11-26 VDC to Pins A & K to generate 5 VDC nom output

ENCODER

Output	Impulse (TTL)
Pulses per Revolution	360
Excitation	5 VDC, 40 mA max
Angle 1	Leading Pulse
Angle 2	Trailing Pulse (90°)

CONFORMITY

RoHS	2014/30/EU
CE	Declaration of Conformity

WARNING: DO NOT CONNECT OR DISCONNECT WITH THE POWER ON.

TORQUE CONNECTIONS

PIN	COLOR	DESCRIPTION
C	Green	+ Voltage Output
D	White	- Voltage Output
E	Black	Ground
F	Red	Power Supply

ANGLE CONNECTOR CODES

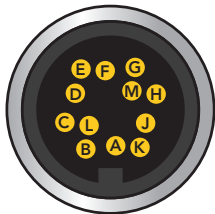
PIN	COLOR	DESCRIPTION
B	Blue	Signal (Angle 1)
E	Black	Ground
G	Brown	Signal (Angle 2)
H	Orange	Power

SHUNT CAL CONNECTOR CODES

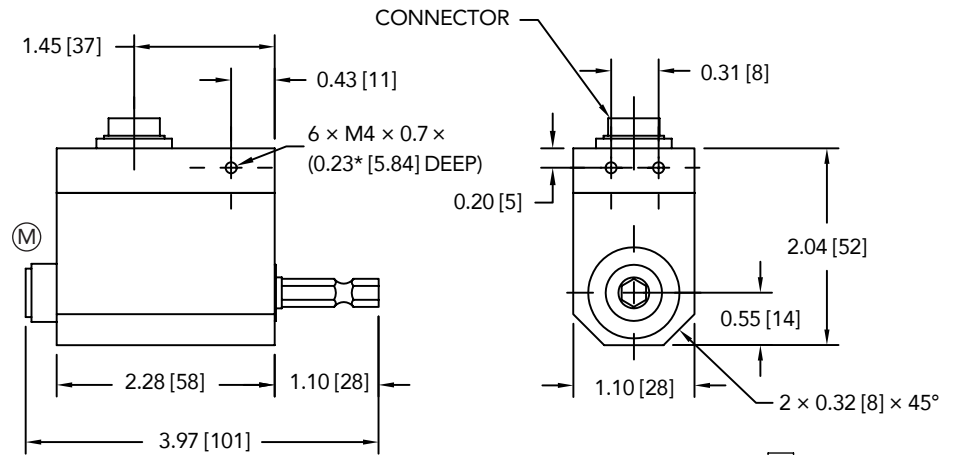
PIN	COLOR	DESCRIPTION
A	Yellow	Ground
K	Purple	Power

SHIELD CONNECTOR CODES

PIN	COLOR	DESCRIPTION
M	Braided	Connected to Chassis



DIMENSIONS inches [mm]



(M) = MEASURING SIDE

TORQUE SENSOR WITH STANDARD 1/4" HEX PER DIN 3126 E & F

* ANTI-ROTATION HOLES, NOT TO BE USED TO SUPPORT LOAD

** MAXIMUM LOAD ALLOWED, NOT FOR MEASUREMENT

MASS MOMENT OF INERTIA (kg × cm²)

ITEM #	Measuring End	Drive End
FSH02037	0.0134	0.0193
FSH02038	0.0134	0.0193
FSH02039	0.0135	0.0194
FSH02040	0.0137	0.0216
FSH02041	0.0140	0.0248
FSH02042	0.0140	0.0248

CAPACITIES

ITEM #	Nm [in-lb]	** Max Axial Force lb [N]	** Max Radial Force lb [N]	Torsional Stiffness Nm/rad
FSH02037	0.5 [4.5]	4.5 [20]	1.1 [5]	180
FSH02038	1 [9]	11.3 [50]	2.2 [10]	180
FSH02039	2 [18]	11.3 [50]	4.5 [20]	260
FSH02040	6 [53]	33.7 [150]	9.0 [40]	505
FSH02041	12 [106]	33.7 [150]	9.0 [40]	690
FSH02042	18 [159]	45 [200]	9.0 [40]	690

Drawing Number: FI1404-E

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

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RoHS



U.S. Manufacturer