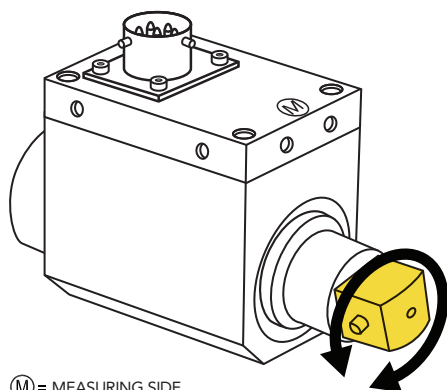




FEATURES

- Utilizes strain gauge technology
- Compact size
- Can operate up to 3000 RPM
- Slip ring assembly

■ Active end



(M) = MEASURING SIDE

– Output (CCW)
+ Output (CW)

SPECIFICATIONS

PERFORMANCE

Nonlinearity	±0.2% of RO
Hysteresis	±0.1% of RO
Nonrepeatability	±0.2% of RO
Rotational Speed	3000 RPM Max

ELECTRICAL

Rated Output (RO)	2 mV/V nom
Excitation (VDC or VAC)	11 max
Bridge Resistance	350 Ohm nom
Connection	10 Pin Bendix PT02A-12-10P

MECHANICAL

Safe Overload	150% of RO
Material	Aluminum (Housing) Steel Alloy (Shaft)
IP Rating	IP40

TEMPERATURE

Operating Temperature	14 to 194°F (–10 to 90°C)
Compensated Temperature	41 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	10 VDC
Calibration (standard)	Certificate of Conformance
Calibration (available)	5-pt CW & CCW
Shunt Calibration Value	43 kOhm

ENCODER

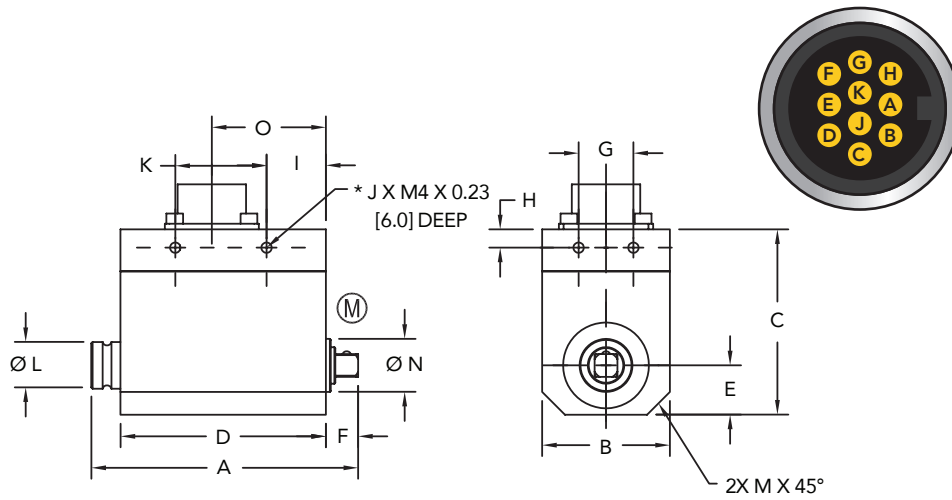
Output	Impulse (TTL)
Pulses per Revolution	2 × 360
Excitation	5 VDC, 40 mA max
Angle 1	Leading Pulse
Angle 2	Trailing Pulse (90°)

CONFORMITY

RoHS	2014/30/EU
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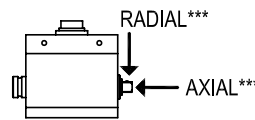
CE [Declaration of Conformity](#)

DIMENSIONS inches [mm]



(M) = MEASURING SIDE

TORQUE SENSOR WITH SQUARE DRIVE PER DIN 3121 E, F, G & H
 * ANTI-ROTATION HOLES, NOT TO BE USED TO SUPPORT LOAD
 ** MAXIMUM LOAD ALLOWED, NOT FOR MEASUREMENT



TORQUE CONNECTOR CODES

PIN	COLOR	DESCRIPTION
A	Red	+ Excitation
B	Black	- Excitation
C	Green	+ Signal
D	White	- Signal

ANGLE CONNECTOR CODES

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

SHUNT CAL CONNECTOR CODES

PIN	COLOR	DESCRIPTION
B	Black	Ground
K	Purple	Power

SHIELD CONNECTOR CODES

PIN	COLOR	DESCRIPTION
M	Floating	Shield

CAPACITIES

ITEM #	Nm [in-lb]	Sq Drive	A	B	C	D	E	F	G	H	I	J	K	ØL	M	ØN	O	***Max Axial Force lb [N]	***Max Radial Force lb [N]	Torsional Stiffness Nm/rad
FSH01984	6 [53]	1/4"	2.95 [75]	1.1 [28]	2.04 [52]	2.28 [58]	0.55 [14]	0.33 [8.5]	0.32 [8]	0.19 [5]	0.43 [11]	6	-	0.51 [13]	0.32 [8]	0.39 [10]	1.46 [37]	34 [150]	7 [30]	480
FSH01973	12 [106]	1/4"	2.95 [75]	1.1 [28]	2.04 [52]	2.28 [58]	0.55 [14]	0.33 [8.5]	0.32 [8]	0.19 [5]	0.43 [11]	6	-	0.51 [13]	0.32 [8]	0.39 [10]	1.46 [37]	34 [150]	7 [30]	600
FSH01974	30 [265]	3/8"	3.98 [101]	1.49 [38]	2.28 [58]	2.32 [59]	0.75 [19]	0.84 [21.5]	0.55 [14]	0.19 [5]	0.47 [12]	8	1.38 [35]	0.98 [25]	0.40 [10]	0.67 [17]	1.50 [38]	124 [550]	13.5 [60]	3060
FSH01975	63 [558]	3/8"	3.98 [101]	1.49 [38]	2.28 [58]	2.32 [59]	0.75 [19]	0.84 [21.5]	0.55 [14]	0.19 [5]	0.47 [12]	8	1.38 [35]	0.98 [25]	0.40 [10]	0.67 [17]	1.50 [38]	225 [1000]	13.5 [60]	6000
FSH01976	160 [1416]	1/2"	4.17 [106]	1.49 [38]	2.28 [58]	2.32 [59]	0.75 [19]	1.02 [26]	0.55 [14]	0.19 [5]	0.47 [12]	8	1.38 [35]	0.98 [25]	0.40 [10]	0.67 [17]	1.50 [38]	405 [1800]	22.5 [100]	11450
FSH01977	500 [4425]	3/4"	5.31 [135]	2.28 [58]	2.99 [76]	2.52 [64]	1.14 [29]	1.58 [40]	1.18 [30]	0.19 [5]	0.55 [14]	8	1.42 [36]	1.57 [40]	0.40 [10]	1.18 [30]	1.57 [40]	900 [4000]	34 [150]	57300
FSH01978	1000 [8851]	1"	6.97 [177]	2.87 [73]	3.54 [90]	2.87 [73]	1.44 [36.5]	2.26 [57.5]	1.77 [45]	0.19 [5]	0.55 [14]	8	1.77 [45]	1.97 [50]	0.71 [18]	1.57 [40]	1.77 [45]	1350 [6000]	56 [250]	127200

Drawing Number: FI1402-C

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