

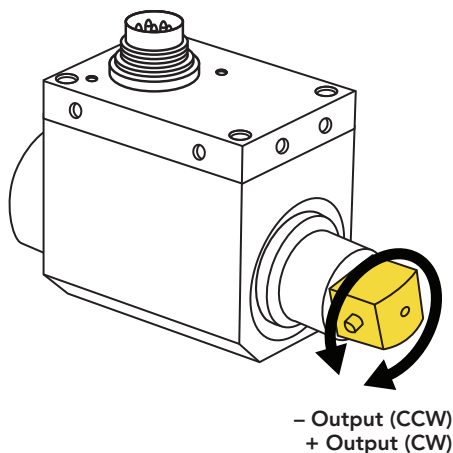
## Rotary Torque Sensor – Non-Contact Square-Drive with Encoder



### 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

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

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

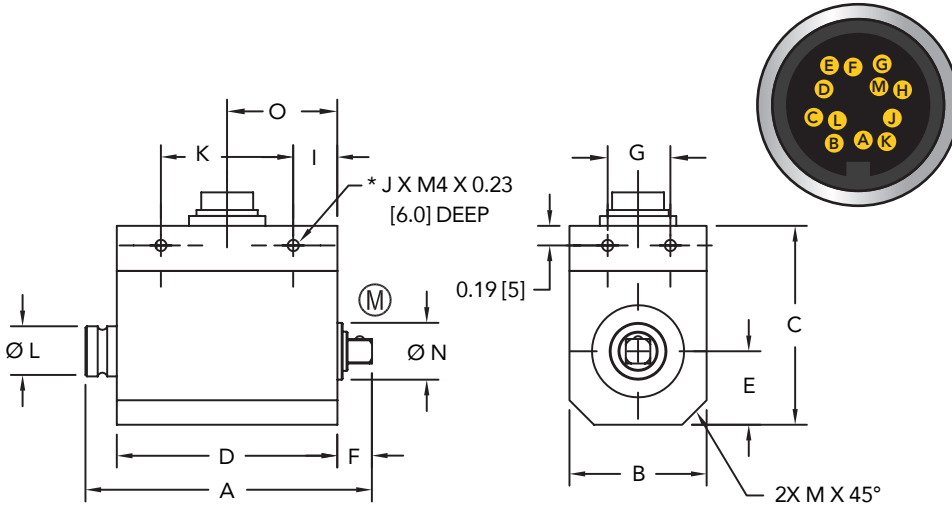
#### ENCODER

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

#### CONFORMITY

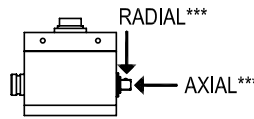
RoHS	2014/30/EU
CE	<a href="#">Declaration of Conformity</a>

## DIMENSIONS inches [mm]



Ⓜ = 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
C	Green	Signal Output
D	White	Ground
E	Black	Ground
F	Red	Power

## 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	Floating	Shield

## CAPACITIES

ITEM #	in-lb	Nm	Sq. Drive	A	B	C	D	E	F	G	J	I	K	ØL	M	ØN	O	*** Max Axial Force lb [N]	*** Max Radial Force lb [N]			
FSH02024	106	12	1/4"	2.95 [75]	1.1 [28]	2.04 [52]	2.28 [58]	0.55 [14]	0.33 [8.5]	0.31 [8]	6	0.43 [11]	-	0.51 [13]	0.32 [8]	0.39 [10]	1.46 [37]	34 [150]	7 [30]			
FSH02025	159	18		FSH02026	443	50	3/8"	3.97 [101]	1.49 [38]	2.28 [58]	2.32 [59]	0.75 [19]	0.84 [21.5]	0.55 [14]	8	0.47 [12]	1.38 [35]	0.98 [25]	0.67 [17]	1.50 [38]	112 [500]	13.5 [60]
FSH02027	558	63	FSH02028	885	100	1/2"		4.17 [106]	1.49 [38]	2.28 [58]	2.32 [59]	0.75 [19]	1.02 [26]	0.55 [14]	8	0.47 [12]	1.38 [35]	0.98 [25]	0.67 [17]	1.50 [38]	157 [700]	22.5 [100]
FSH02029	1328	150	FSH02030	1416	160		3/4"	5.31 [135]	2.28 [58]	2.99 [76]	2.52 [64]	1.14 [29]	1.57 [40]	1.18 [30]	8	0.55 [14]	1.41 [36]	1.57 [40]	1.18 [30]	1.57 [40]	225 [1000]	22.5 [100]
FSH02031	2213	250	FSH02032	2655	300	1"		6.97 [177]	2.87 [73]	3.54 [90]	2.87 [73]	1.43 [36.5]	2.26 [57.5]	1.77 [45]	8	0.55 [14]	1.77 [45]	1.97 [50]	0.71 [18]	1.57 [40]	1.73 [44]	450 [2000]
FSH02033	4425	500	FSH02034	8851	1000		900 [4000]	56 [250]														

Drawing Number: FI1401

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### Sensor Solution Source

Load · Torque · Pressure · Multi-Axis · Calibration · Instruments · Software

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ROHS



U.S. Manufacturer