

FUTEK MODEL TRD305

SQ DRIVE ROTARY TORQUE SENSOR w/ ENCODER

Drawing Number: FI1032-D

INCH [mm] R.O.= Rated Output

CONNECTOR CODE (CABLE PACKAGE WIRING CODE)

Torque Connections

+Excitation	-Excitation	+Signal	-Signal
PIN 'A' (RED)	PIN 'B' (BLACK)	PIN 'C' (GREEN)	PIN 'D' (WHITE)

Angle Connections

Power	Ground	Signal (Angle 1)	Signal (Angle 2)
PIN 'F' (ORANGE)	PIN 'E' (YELLOW)	PIN 'G' (BLUE)	PIN 'H' (BROWN)

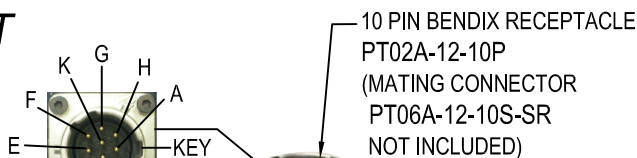
Shunt Cal Connections

Power	Ground
PIN 'K' (PURPLE)	PIN 'B' (BLACK)

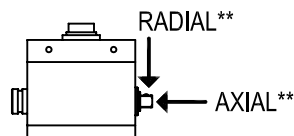
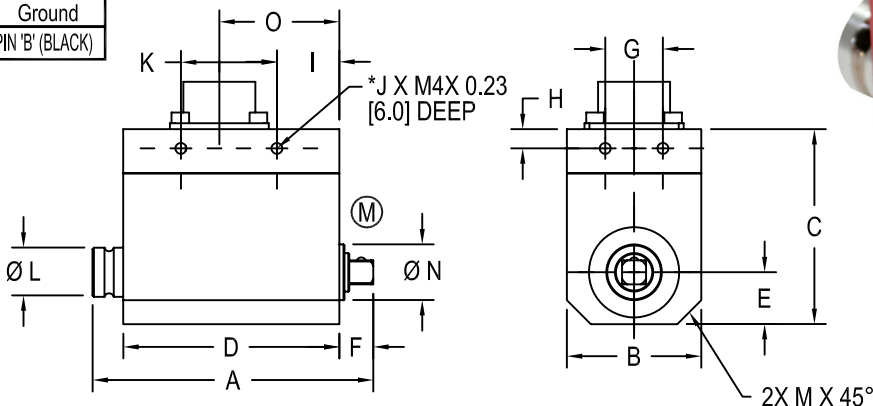
Shield Connections

Shield (Floating)
PIN 'M'

CE COMPLIANT



-OUTPUT (CCW) +OUTPUT (CW)



(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.

ITEM #	Capacity in-lb N m	Drive	A	B	C	D	E	F	G	H	I	J	K	Ø L	M	Ø N	O	**MAX.AXIAL FORCE lb[N]	**MAX.RADIAL FORCE lb[N]	WEIGHT lb[kg]	
FSH01984	53 6	1/4"	2.95	1.1	2.04	2.28	0.55	0.33	0.32	0.19	0.43	6	-	0.51	0.32	0.39	1.46	34	7	0.7 [0.30]	
FSH01973	106 12		[75]	[28]	[52]	[58]	[14]	[8.5]	[8]	[5]	[11]			[13]	[8]	[10]	[37]	[150]	[30]		
FSH01974	265 30	3/8"	3.98	1.49	2.28	2.32	0.75	0.85	0.55	0.19	0.47	8	1.38	0.98	0.40	0.67	1.50	124	13.5	0.8 [0.36]	
FSH01975	558 63		[101]	[38]	[58]	[59]	[19]	[21.5]	[14]	[5]	[12]		[35]	[25]		[17]	[38]	[1000]	[60]		[550]
FSH01976	1416 160	1/2"	4.17	1.49	2.28	2.32	0.75	1.02	0.55	0.19	0.47	8	1.38	0.98	0.40	0.67	1.50	405	22.5	1.1 [0.52]	
FSH01977	4425 500	3/4"	5.31	2.28	2.99	2.52	1.14	1.58	1.18	0.19	0.55	8	1.42	1.57		1.18	1.57	900	34		3.2
FSH01978	8851 1000	1"	6.97	2.87	3.54	2.87	1.44	2.26	1.77	0.19	0.55	8	1.77	1.97		0.71	1.57	1.73	1350		56
			[177]	[73]	[90]	[73]	[36.5]	[57.5]	[45]	[5]	[14]		[45]	[50]	[18]	[40]	[44]	[6000]	[250]	[2.70]	

TORQUE SPECIFICATIONS:

RATED OUTPUT	2 mV/V nom.
SAFE OVERLOAD	150% of R.O.
ZERO BALANCE	±1% of R.O.
EXCITATION	5 to 11 (VDC OR VAC)
BRIDGE RESISTANCE	350 Ω nom.
NONLINEARITY	±0.2% of R.O.
HYSTERESIS	±0.1% of R.O.
NONREPEATABILITY	±0.2% of R.O.
TEMP. SHIFT ZERO	±0.01% of R.O. / °F [±0.02% of R.O. / °C]
TEMP. SHIFT SPAN	±0.01% of Load / °F [±0.02% of Load / °C]
OPERATING TEMP.	14 to 194°F [-10 to +90°C]
COMPENSATED TEMP.	41 to 122°F [+5 to +50°C]
ROTATIONAL SPEED	3000 RPM MAX

CONNECTOR:
CALIBRATION (STD)
CALIBRATION (AVAILABLE)
SHUNT CAL VALUE (INTERNAL)
CALIBRATION TEST EXCITATION
SHUNT CALIBRATION

10 Pin Bendix PT02A-12-10P
Certificate of Conformance
5pt CW and CCW
43K ohm
10VDC
With sensor fully connected jump Pins B & K
to generate 2 mV/V nom output.

ENCODER SPECIFICATIONS:

OUTPUT	IMPULSE (TTL)
PULSES / REV	360
EXCITATION	5 VDC±10%
ANGLE 1- LEADING PULSE	
ANGLE 2- TRAILING PULSE (90°)	