

FUTEK MODEL TRS605

NON CONTACT SHAFT TO SHAFT ROTARY TORQUE SENSOR W/ ENCODER

CE COMPLIANT

Drawing Number: FI1029-F

INCH [mm] | R.O.= Rated Output

CONNECTOR CODE (CABLE PACKAGE WIRING CODE)

Torque Connections

Power	GROUND	SIGNAL OUTPUT	GROUND
PIN 'F' (RED)	PIN 'E' (BLACK)	PIN 'C' (GREEN)	PIN 'D' (WHITE)

Angle Connections

Power	GROUND	Signal (Angle 1)	Signal (Angle 2)
PIN 'H' (ORANGE)	PIN 'E' (BLACK)	PIN 'B' (BLUE)	PIN 'G' (BROWN)

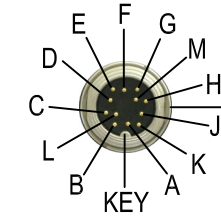
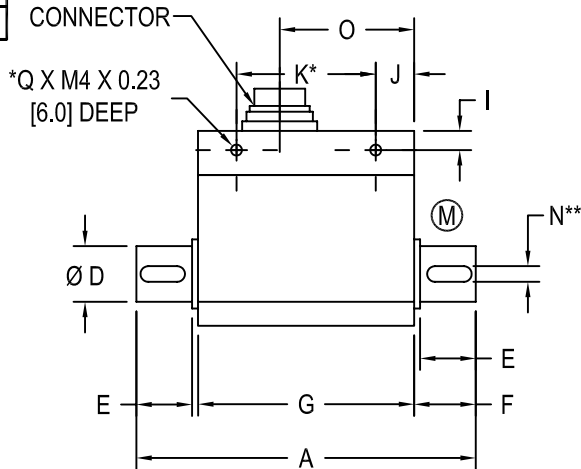
Shunt Cal Connections

Power	GROUND
PIN 'K' (PURPLE)	PIN 'A' (YELLOW)

Shield Connection

Shield (Floating)

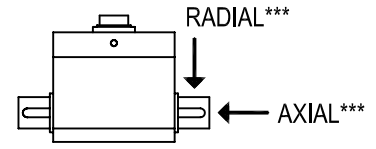
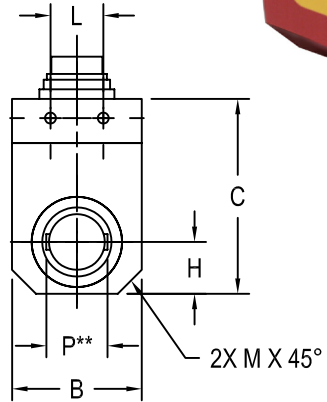
PIN 'M'



BINDER RECEPTACLE
09-0331-90-12
(MATING CONNECTOR
99-2030-09-12
NOT INCLUDED)



-OUTPUT (CCW) +OUTPUT (CW)



(M)=MEASURING SIDE

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

** FEATHER KEYWAYS PER DIN 6885, KEYWAYS COME PRE-INSTALLED.

*** MAXIMUM LOAD ALLOWED, NOT FOR MEASUREMENT.

STOCK #	CAPACITY		Ø D	A	B	C	E	F	G	H	I	J	K*	L	M	N**	O	P**	Q	*** MAX. AXIAL FORCE lb[N]	*** MAX. RADIAL FORCE lb[N]	WEIGHT lb[kg]
	in-lb	N m																				
FSH02052	9	1																		4.5 [20]	1 [5]	
FSH02053	18	2	0.394 [10] g6	3.62 [92]	1.10 [28]	2.04 [52]	0.63 [16]	0.67 [17]	2.28 [58]	0.55 [14]	0.19 [5]	0.43 [11]	-	0.31 [8]	0.31 [8]	N/A	1.46 [37]	N/A	6	11 [50]	1 [5]	0.7 [0.30]
FSH02054	44	5																		2 [10]	4.5 [20]	
FSH02055	89	10																		7 [30]	7 [30]	
FSH02056	177	20	0.630 [16] g6	4.09 [104]	1.49 [38]	2.28 [58]	0.78 [20]	0.90 [23]	2.32 [59]	0.75 [19]	0.19 [5]	0.47 [12]	1.38 [35]	0.55 [14]	0.40 [10]	0.197 [5]	1.50 [38]	0.787 [20]	8	34 [150]	7 [30]	1.3 [0.60]
FSH02057	443	50																		45 [200]	11 [50]	

TORQUE SPECIFICATIONS:

RATED OUTPUT	±5VDC
SAFE OVERLOAD	150% of R.O.
ZERO BALANCE	±1% of R.O.
EXCITATION (VDC)	11-26 VDC, 1 Watt
NONLINEARITY	±0.2% of R.O.
HYSTERESIS	±0.1% of R.O.
NONREPEATABILITY	±0.2% 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.	-13 to 176°F [-25 to +80°C]
COMPENSATED TEMP.	41 to 122°F [+5 to +50°C]
ROTATIONAL SPEED	7000 RPM MAX
CONNECTOR:	12 pin Binder Series #581 (09-0331-90-12)

ACCESSORIES AND RELATED INSTRUMENTS AVAILABLE
 CALIBRATION (STD) Certificate of Conformance
 CALIBRATION (AVAILABLE) 5pt CW and CCW
 CALIBRATION TEST EXCITATION 12 VDC
 SHUNT CALIBRATION With sensor fully connected apply 11-26 VDC to Pins A & K to generate 5VDC nom output.

ENCODER SPECIFICATIONS:

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



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FUTEK MODEL TRS605

Drawing Number: FI1033-D

INCH [mm] R.O.= Rated Output

CONNECTOR CODE (CABLE PACKAGE WIRING CODE)

Torque Connections

Power	GROUND	SIGNAL OUTPUT	GROUND
PIN 'F' (RED)	PIN 'E' (BLACK)	PIN 'C' (GREEN)	PIN 'D' (WHITE)

Angle Connections

Power	GROUND	Signal (Angle 1)	Signal (Angle 2)
PIN 'H' (ORANGE)	PIN 'E' (BLACK)	PIN 'B' (BLUE)	PIN 'G' (BROWN)

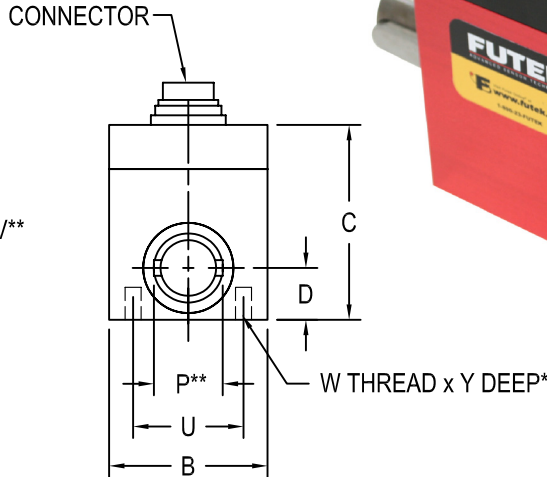
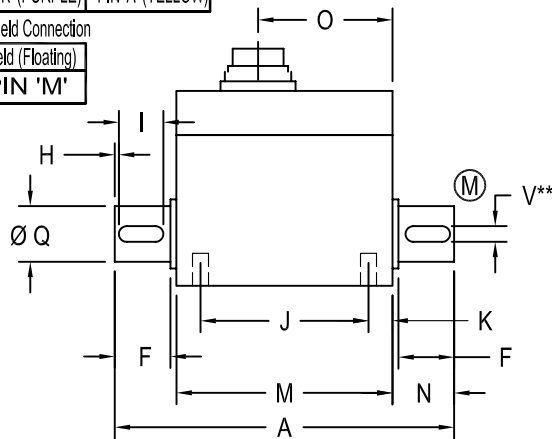
Shunt Cal Connections

Power	GROUND
PIN 'K' (PURPLE)	PIN 'A' (YELLOW)

Shield Connection

Shield (Floating)

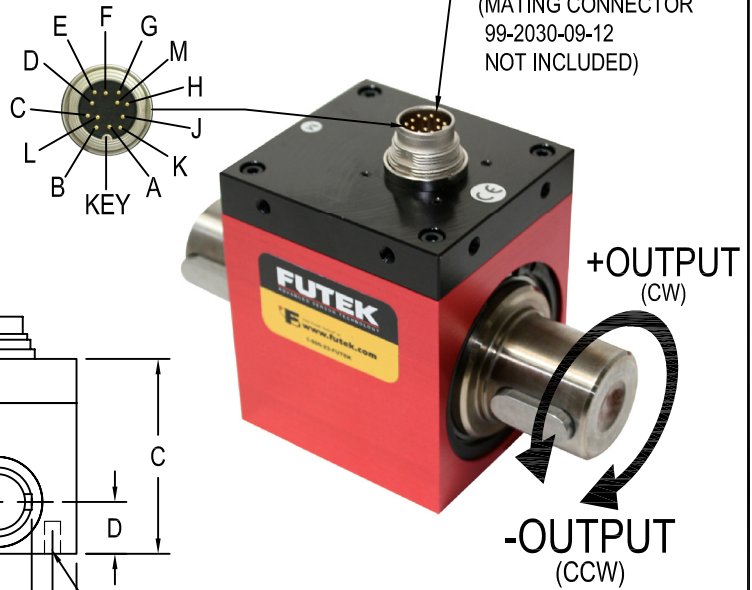
PIN 'M'



NON CONTACT SHAFT TO SHAFT ROTARY TORQUE SENSOR W/ ENCODER

CE COMPLIANT

BINDER RECEPTACLE
09-0331-90-12
(MATING CONNECTOR
99-2030-09-12
NOT INCLUDED)

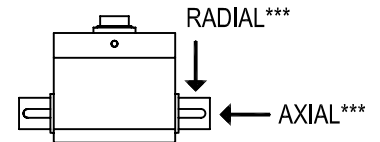


(M)=MEASURING SIDE

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

** FEATHER KEYWAYS PER DIN 6885, KEYWAYS COME PRE-INSTALLED.

*** MAXIMUM LOAD ALLOWED, NOT FOR MEASUREMENT.



ITEM #	CAPACITY in-lb	N-m	Ø Q	A	B	C	D	F	H	I	J	K	M	N	O	P**	U	V**	W	Y	***MAX. AXIAL FORCE lb[N]	***MAX. RADIAL FORCE lb[N]	WEIGHT lb[kg]
FSH02058	885	100	1.102	4.92	2.28	2.99	1.14	1.06	0.08	0.87	1.54	0.49	2.52	1.20	1.57	1.34	1.69	0.315	M5	0.31	90 [400]	56 [250]	2.3
FSH02059	1770	200	[28] g6	[125]	[58]	[76]	[29]	[27]	[2]	[22]	[39]	[12.5]	[64]	[30.5]	[40]	[34]	[43]	[8] p9		[8]	90 [400]	67 [300]	[1.06]
FSH02060	4425	500	1.654	7.76	2.87	3.54	1.44	2.28	0.12	1.97	1.46	0.71	2.87	2.44	1.73	1.89	2.05	0.551	M6	0.39	180 [400]	90 [400]	6.4
FSH02061	8851	1000	[42] g6	[197]	[73]	[90]	[36.5]	[58]	[3]	[50]	[37]	[18]	[73]	[62]	[44]	[48]	[52]	[14] p9		[10]	225 [1000]	90 [400]	[2.90]

TORQUE SPECIFICATIONS:

RATED OUTPUT	±5VDC
SAFE OVERLOAD	150% of R.O.
ZERO BALANCE	±1% of R.O.
EXCITATION (VDC)	11-26 VDC, 1 Watt
NONLINEARITY	±0.2% of R.O.
HYSTERESIS	±0.1% of R.O.
NONREPEATABILITY	±0.2% R.O.
TEMP. SHIFT ZERO	±0.01% of R.O. / °F [±0.02% of R.O. / °C]
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ROTATIONAL SPEED	7000 RPM MAX
CONNECTOR:	12 pin Binder Series #581 (09-0331-90-12)

ACCESSORIES AND RELATED INSTRUMENTS AVAILABLE

CALIBRATION (STD)	Certificate of Conformance
CALIBRATION (AVAILABLE)	5pt CW and CCW
CALIBRATION TEST EXCITATION	12 VDC
SHUNT CALIBRATION	With sensor fully connected apply 11-26 VDC to Pins A & K to generate 5VDC nom output.

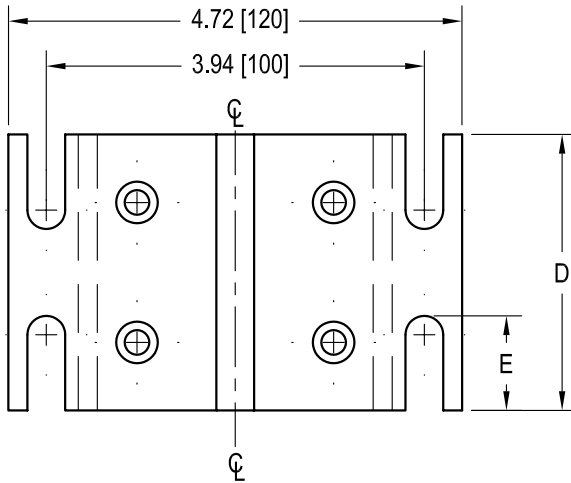
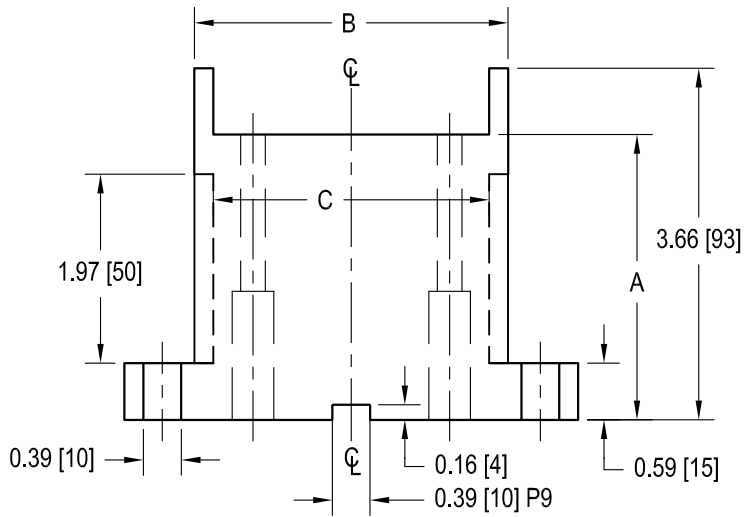
ENCODER SPECIFICATIONS:

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

Drawing Number: F11321

INCH [mm] | R.O.= Rated Output

TRS605 ROTARY TORQUE SENSOR MOUNTING BASE MOUNTING HARDWARE INCLUDED



ITEM #	CAPACITY	A	B	C	D	E	MOUNTING BASE	HARDWARE
FSH03470	100-200 N-m	3.268±0.002 [83±0.03]	2.68 [68]	-	2.52 [64]	0.79 [20]	MCP02081	GOD02875 SCREW SOCKET HEAD CAP, S.S. M5 x 0.8 x 45 mm
FSH03471	500-1000 N-m	2.972±0.001 [75.5±0.03]	3.27 [83]	2.87 [73]	2.88 [73]	0.98 [25]	MCP02082	GOD02876 SCREW SOCKET HEAD CAP, S.S. M6 x 1.0 x 50 mm