

# NON CONTACT SHAFT TO SHAFT ROTARY TORQUE SENSOR W/ ENCODER MODEL TRS605

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

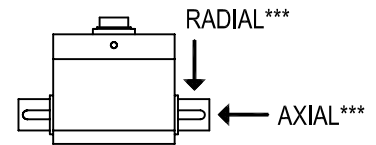
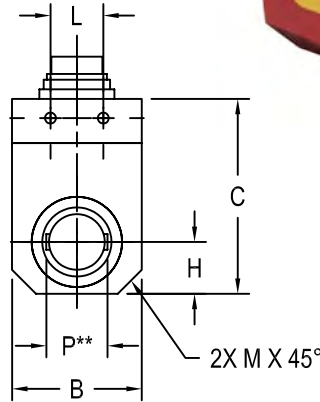
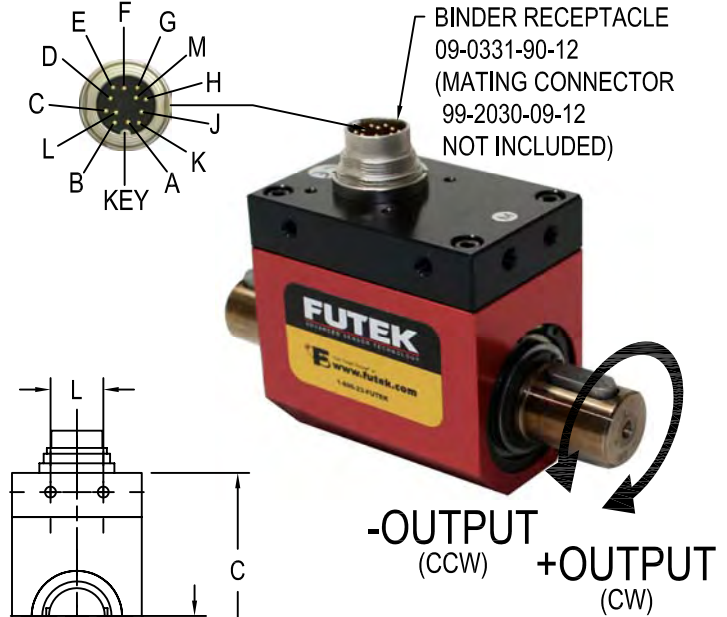
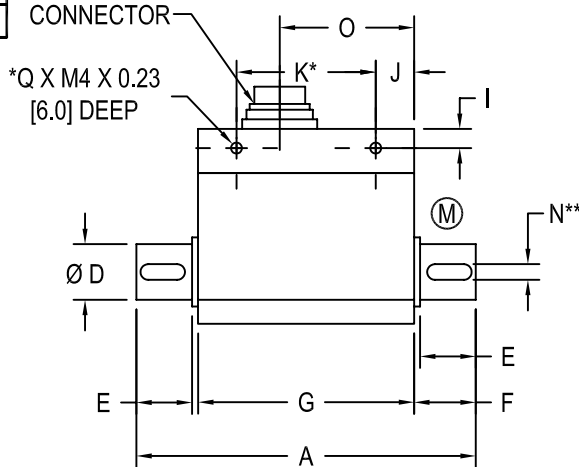
Power	GROUND	Signal (Angle 1)	Signal (Angle 2)
PIN 'H' (ORANGE)	PIN 'E' (BLACK)	PIN 'B' (BLUE)	PIN 'G' (BROWN)

Shunt Cal Connections

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

Shield Connection

Shield (Floating)
PIN 'M'



(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]	4.5 [20]	
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°)	

# NON CONTACT SHAFT TO SHAFT ROTARY TORQUE SENSOR W/ ENCODER MODEL TRS605

**CE COMPLIANT**

**MODEL TRS605**

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

**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**

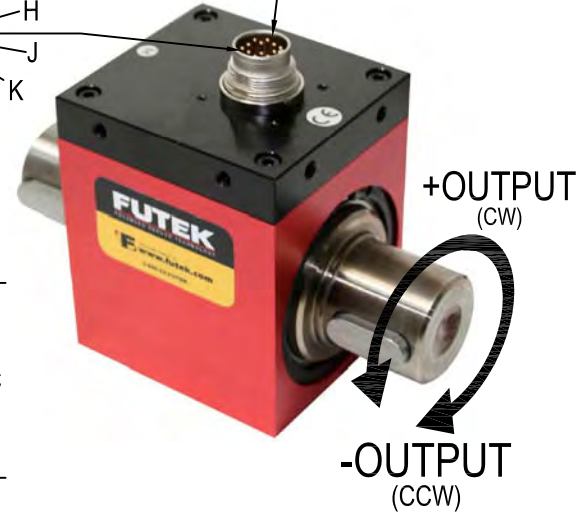
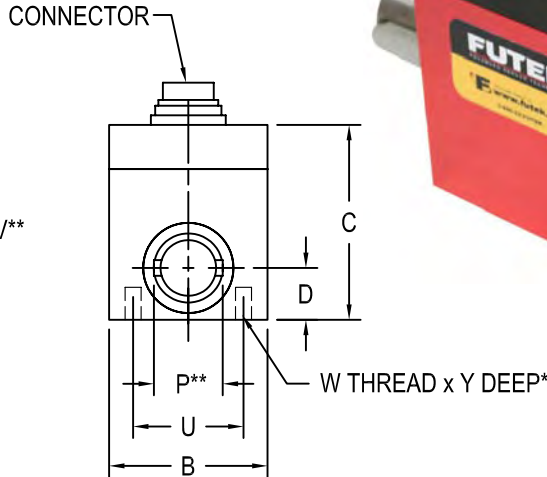
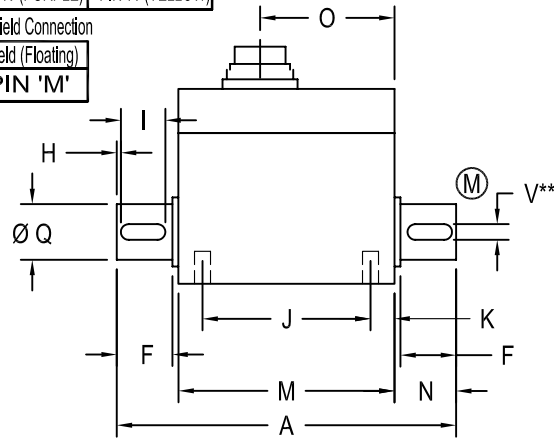
Power	GROUND	Signal (Angle 1)	Signal (Angle 2)
PIN 'H' (ORANGE)	PIN 'E' (BLACK)	PIN 'B' (BLUE)	PIN 'G' (BROWN)

**Shunt Cal Connections**

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

**Shield Connection**

Shield (Floating)
PIN 'M'

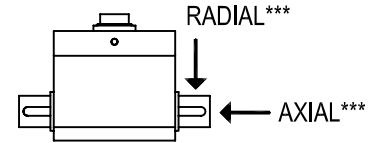


(M) = MEASURING SIDE

\* 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.
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ROTATIONAL SPEED	7000 RPM MAX
CONNECTOR:	12 pin Binder Series #581 (09-0331-90-12)

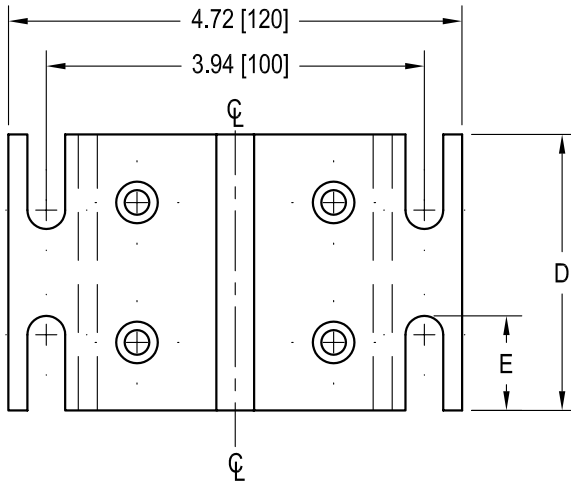
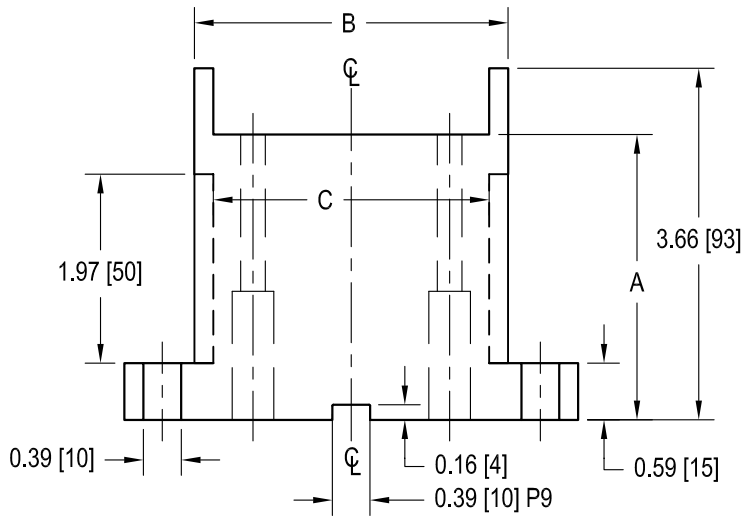
**ACCESSORIES AND RELATED INSTRUMENTS AVAILABLE**

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°)	

# 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