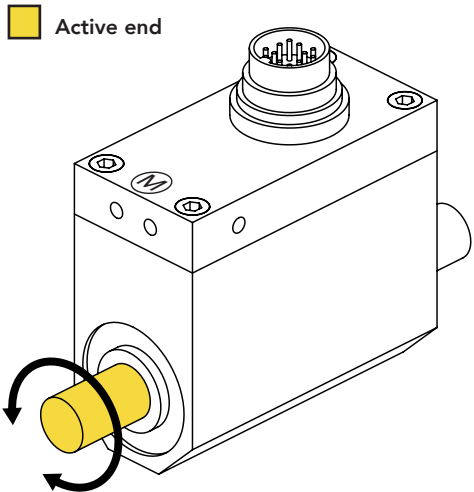




FEATURES

- Utilizes strain gauge technology
- Angle speed feedback
- Compact size
- Can operate up to 7000 RPM



– Output (CCW)
+ Output (CW)

(M) = Measuring Side

SPECIFICATIONS

PERFORMANCE

Nonlinearity	±0.2% of RO
Hysteresis	±0.1% of RO
Nonrepeatability	±0.2% of RO
Rotational Speed	7000 Max

ELECTRICAL

Bandwidth	3 kHz
Typical Noise	<50 mV p-p
Rated Output (RO)	±5 VDC
Excitation	11–26 VDC, 1 Watt
Connector	12 pin Binder Series #581 (09-0331-90-12)

MECHANICAL

Safe Overload	150% of RO
Zero Balance	±1% 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 RO/°F (±0.02% of RO/°C)

CALIBRATION

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

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
CE	Declaration of Conformity

Model TRS605

WARNING: DO NOT CONNECT OR DISCONNECT WITH THE POWER ON.

TORQUE CONNECTIONS

PIN	COLOR	DESCRIPTION
C	Green	+ Voltage Output
D	White	- Voltage Output
E	Black	Ground
F	Red	Power Supply

ANGLE CONNECTOR CODES

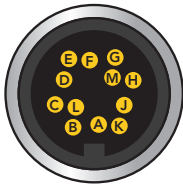
PIN	COLOR	DESCRIPTION
B	Blue	Signal (Angle 1)
E	Black	Ground
G	Brown	Signal (Angle 2)
H	Orange	Power

SHUNT CAL CONNECTOR CODES

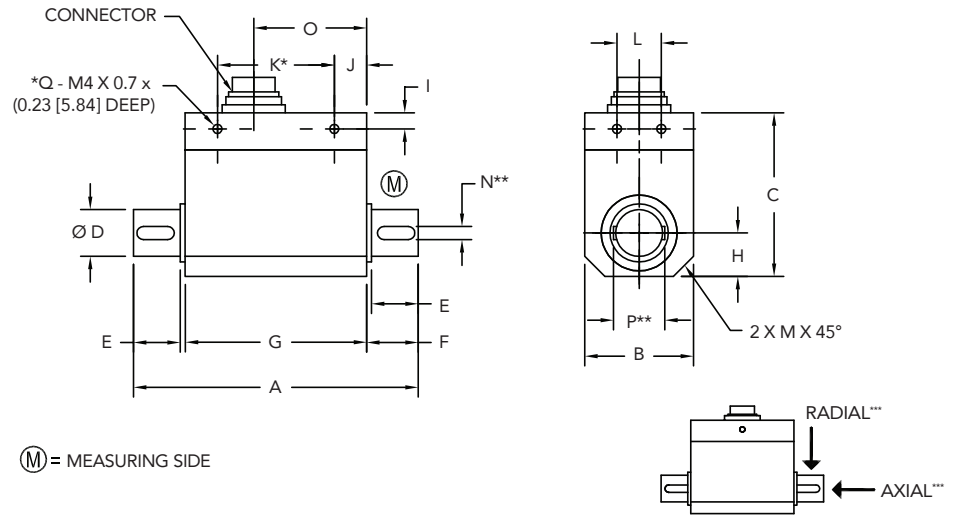
PIN	COLOR	DESCRIPTION
A	Yellow	Ground
K	Purple	Power

SHIELD CONNECTOR CODES

PIN	COLOR	DESCRIPTION
M	Braided	Shield connected to Chassis



DIMENSIONS inches [mm]



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

** FEATHER KEYWAYS APPLY TO 20 AND 50 Nm PER DIN 6885, KEYWAYS COME PRE-INSTALLED

*** MAXIMUM LOAD ALLOWED, NOT FOR MEASUREMENT

MASS MOMENT OF INERTIA (kg × cm²)

ITEM #	Measuring End	Drive End
FSH02052	0.0146	0.0147
FSH02053	0.0146	0.0147
FSH02054	0.015	0.015
FSH02055	0.015	0.015
FSH02056	0.9	1.02
FSH02057	0.91	1.04

CAPACITIES

ITEM #	Nm [in-lb]	∅ 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]	Torsional Stiffness Nm/rad
FSH02052	1 [9]	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	4.5 [20]	1 [5]	0.7 [0.30]	317
FSH02053	2 [18]																		11 [50]	1 [5]		317
FSH02054	5 [44]																		11 [50]	2 [10]		855
FSH02055	10 [89]																		34 [150]	4.5 [20]		855
FSH02056	20 [177]	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]	5450
FSH02057	50 [443]																		45 [200]	11 [50]		8190



RoHS



U.S. Manufacturer

Model TRS605

WARNING: DO NOT CONNECT OR DISCONNECT WITH THE POWER ON.

TORQUE CONNECTIONS

PIN	COLOR	DESCRIPTION
C	Green	+ Voltage Output
D	White	- Voltage Output
E	Black	Ground
F	Red	Power Supply

ANGLE CONNECTOR CODES

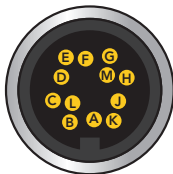
PIN	COLOR	DESCRIPTION
B	Blue	Signal (Angle 1)
E	Black	Ground
G	Brown	Signal (Angle 2)
H	Orange	Power

SHUNT CAL CONNECTOR CODES

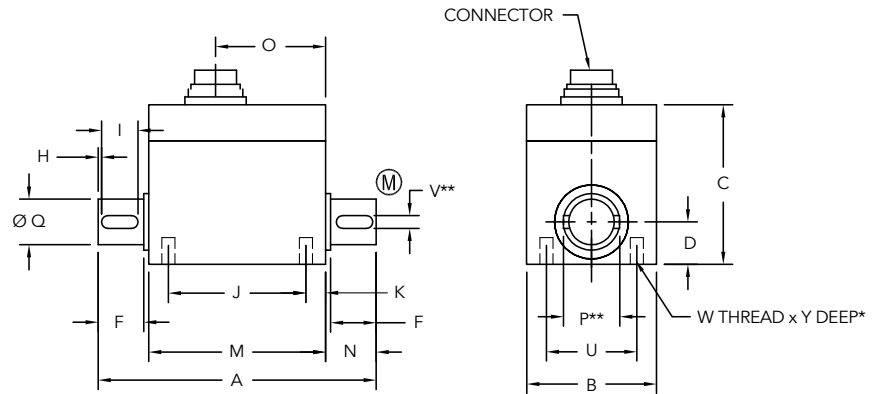
PIN	COLOR	DESCRIPTION
A	Yellow	Ground
K	Purple	Power

SHIELD CONNECTOR CODES

PIN	COLOR	DESCRIPTION
M	Braided	Shield Sensor Body



DIMENSIONS inches [mm]

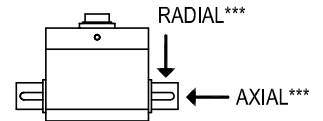


Ⓜ = MEASURING SIDE

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

** FEATHER KEYWAYS COME PRE-INSTALLED.

*** MAXIMUM LOAD ALLOWED. NOT FOR MEASUREMENT.



MASS MOMENT OF INERTIA (kg × cm²)

ITEM #	Measuring End	Drive End
FSH02058	0.665	0.605
FSH02059	0.68	0.62
FSH02060	3.2	2.63
FSH02061	3.21	2.67

CAPACITIES

ITEM #	Nm [in-lb]	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]	Torsional Stiffness Nm/rad
FSH02058	100 [885]	1.102 [28] g6	4.92 [125]	2.28 [58]	2.99 [76]	1.14 [29]	1.06 [27]	0.08 [2]	0.87 [22]	1.54 [39]	0.49 [12.5]	2.52 [64]	1.20 [30.5]	1.57 [40]	1.34 [34]	1.69 [43]	0.315 [8] p9	M5	0.31 [8]	90 [400]	56 [250]	2.3 [1.06]	28600
FSH02059	200 [1770]																			90 [400]	67 [300]		45845
FSH02060	500 [4425]	1.654 [42] g6	7.76 [197]	2.87 [73]	3.54 [90]	1.44 [36.5]	2.28 [58]	0.12 [3]	1.97 [50]	1.46 [37]	0.71 [18]	2.87 [73]	2.44 [62]	1.73 [44]	1.89 [48]	2.05 [52]	0.551 [14] p9	M6	0.39 [10]	180 [800]	90 [400]	6.4 [2.90]	130000
FSH02061	1000 [8851]																			225 [1000]	90 [400]		173600

Drawing Number: FI1410-E

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