

5600 AXIAL TORSION FORCE TRANSDUCER (U.S. & METRIC)

FEATURES & BENEFITS

- Capacities: Force lbf(kN) / Torque lbf-in(Nm) – from 6K(26.7)/5K(565) to 180K(801)/300K(33.9K)
- Measures compressive force and torque
- Low cross talk
- High stiffness
- Extraneous load resistance

STANDARD CONFIGURATION



Model 5611-20K (Shown)

WIRING DIAGRAM

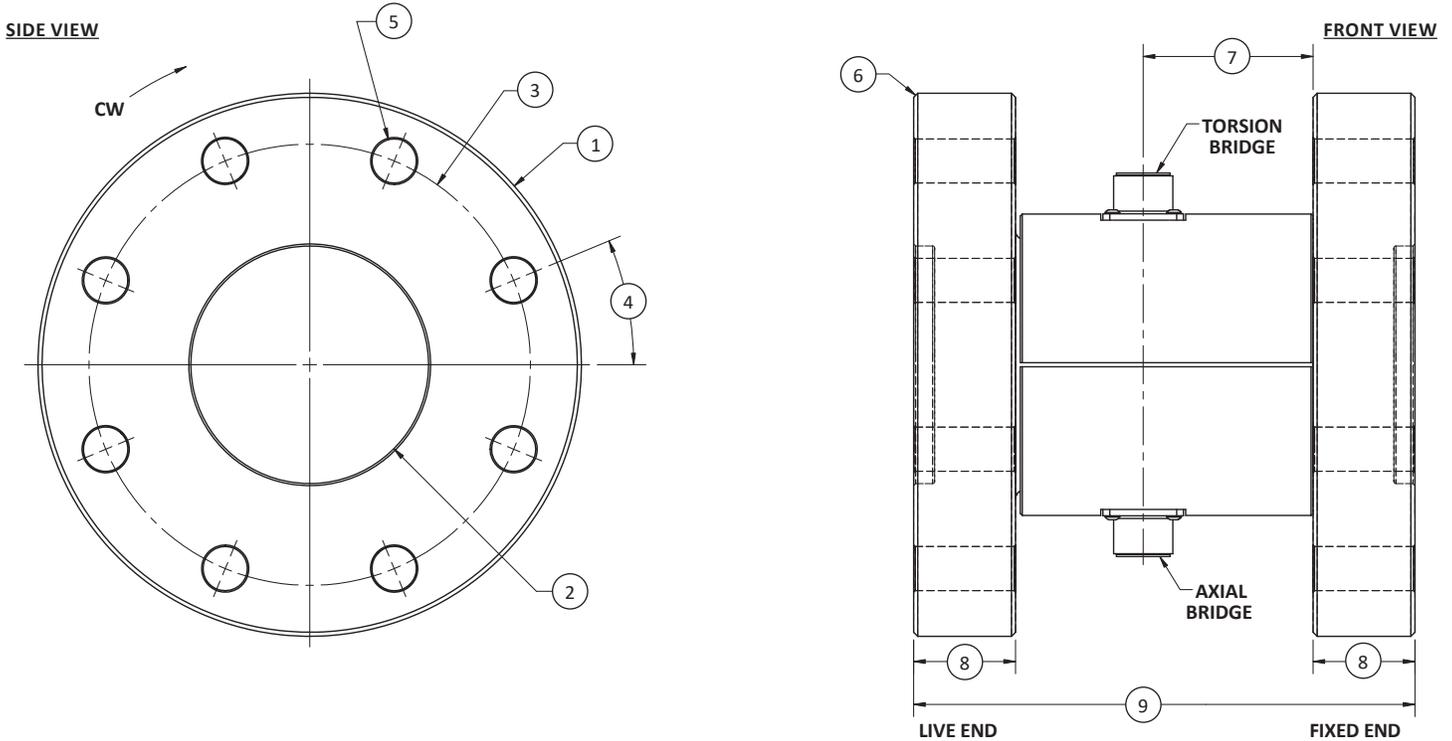
TORSION	CONNECTOR PINOUT		AXIAL
	PIN	FUNCTION	
	A	+ EXCITATION	
	B	+ SIGNAL	
	C	- SIGNAL	
	D	- EXCITATION	
	E	N / C	

CW UPSCALE	CONNECTOR PINOUT		TENSION UPSCALE
	PIN	FUNCTION	
	A	+ EXCITATION	
	B	+ SIGNAL	
	C	- SIGNAL	
	D	- EXCITATION	
	E	N / C	

SPECIFICATIONS

PARAMETERS			MODEL				
			5610-5K	5611 - 20K	5612 - 100K	5613 - 200K	5614 - 300K
Measuring Range	Mz	lbf-in	5K	20K	100K	200K	300K
		Nm	560	2.2K	11K	22K	33K
	Fz (Compression)	lbf	6K	30K	100K	150K	180K
		kN	27	130	450	670	800
ACCURACY							
Nonlinearity – %FS			±0.1	±0.1	±0.1	±0.1	±0.1
Hysteresis – %FS			±0.1	±0.1	±0.1	±0.1	±0.1
Nonrepeatability – %RO			±0.02	±0.02	±0.02	±0.02	±0.02
TEMPERATURE							
Effect on Zero – %RO / deg	°C	Fz	±0.007	±0.007	±0.007	±0.007	±0.007
		Mz	±0.004	±0.004	±0.004	±0.004	±0.004
	°F	Fz	±0.004	±0.004	±0.004	±0.004	±0.004
		Mz	±0.002	±0.002	±0.002	±0.002	±0.002
Effect of Output – % / deg			°C	±0.004	±0.004	±0.004	±0.004
			°F	±0.002	±0.002	±0.002	±0.002
Compensated Range			°C	+21 to +77	+21 to +77	+21 to +77	+21 to +77
			°F	+70 to +170	+70 to +170	+70 to +170	+70 to +170
Operating Range			°C	-54 to +93	-54 to +93	-54 to +93	-54 to +93
			°F	-65 to +200	-65 to +200	-65 to +200	-65 to +200
ELECTRICAL							
Rated Output – mV/V (Nominal)		Fz	0.25	0.5	0.5	0.5	0.5
		Mz	2	2	2	2	2
Excitation Voltage – VDC MAX			20	20	20	20	20
Bridge Resistance – Ohm (Nominal)			350	350	350	350	350
Electrical Connection			MS3102E-14S-5P	MS3102E-14S-5P	MS3102E-14S-5P	MS3102E-14S-5P	MS3102E-14S-5P
MECHANICAL							
Safe Overload – % CAP			±150	±150	±150	±150	±150
Deflection at Capacity – (in/rad)		Fz	0.001	0.001	0.002	0.002	0.002
		Mz	0.005	0.004	0.005	0.006	0.005
Overhung Moment – lbf-in MAX			2	10	50	90	200
Side load – lbf MAX			2K	7K	20K	30K	55K

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DIMENSIONS

See Drawing	MODEL									
	5610		5611		5612		5613		5614	
	CAPACITY									
	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)
	5K	550	20K	2.2K	100K	11K	200K	22K	300K	33K
in	mm	in	mm	in	mm	in	mm	in	mm	
(1)	Ø4.0	Ø101.6	Ø5.0	Ø127.0	Ø8.0	Ø203.2	Ø9.75	Ø247.7	Ø14.0	Ø355.6
(2)	Ø1.500 ^{+0.002} _{-0.000} ↓ 0.13 BOTH ENDS	Ø38.10 ^{+0.002} _{-0.000} ↓ 3.3 BOTH ENDS	Ø2.000 ^{+0.002} _{-0.000} ↓ 0.25 BOTH ENDS	Ø50.80 ^{+0.05} _{-0.00} ↓ 6.4 BOTH ENDS	Ø3.500 ^{+0.002} _{-0.000} ↓ 0.31 BOTH ENDS	Ø88.90 ^{+0.05} _{-0.00} ↓ 7.9 BOTH ENDS	Ø4.000 ^{+0.002} _{-0.000} ↓ 0.31 BOTH ENDS	Ø101.60 ^{+0.05} _{-0.00} ↓ 7.9 BOTH ENDS	Ø6.000 ^{+0.002} _{-0.000} ↓ 0.31 BOTH ENDS	Ø152.40 ^{+0.05} _{-0.00} ↓ 7.9 BOTH ENDS
(3)	Ø3.25	Ø82.55	Ø4.25	Ø107.95	Ø6.5	Ø165.1	Ø8.0	Ø203.2	Ø11.0	Ø279.4
(4)	22.5°	22.5°	22.5°	22.5°	22.5°	22.5°	22.5°	22.5°		
(5)	8X Ø0.328 THRU, EQ SP BOTH FLANGES	8X Ø8.33 THRU, EQ SP BOTH FLANGES	8X Ø0.390 THRU, EQ SP BOTH FLANGES	8X Ø9.91 THRU, EQ SP BOTH FLANGES	8X Ø0.650 THRU, EQ SP BOTH FLANGES	8X Ø16.51 THRU, EQ SP BOTH FLANGES	8X Ø0.781 THRU, EQ SP BOTH FLANGES	8X Ø19.84 THRU, EQ SP BOTH FLANGES	12X Ø1.031 THRU, EQ SP BOTH FLANGES	12X Ø26.19 THRU, EQ SP BOTH FLANGES
(6)	4x 0.06 x 45°	4x 1.5 x 45°	4x 0.06 x 45°	4x 1.5 x 45°	4x 0.06 x 45°	4x 1.5 x 45°	4x 0.06 x 45°	4x 1.5 x 45°	4x 0.06 x 45°	4x 1.5 x 45°
(7)	0.94	23.8	0.94	23.8	2.5	63.5	2.5	63.5	3.5	88.9
(8)	0.5	12.7	0.75	19.1	1.5	38.1	1.5	38.1	3.0	76.2
(9)	3.0	76.2	3.5	88.9	7.38	187.5	8.5	215.9	12.5	317.5

* Metric Model 5611, 5613, & 5614 have larger mounting holes than their equivalents to accommodate standard metric fasteners

International System of Units (SI) dimensions and capacities are provided for conversion only. Standard products have U.S. capacities and dimensions. SI capacities available upon special request and at an additional cost.