

Fatigue Rated Shaft Coupled Reaction Torque Sensor T160



- *High torsional stiffness*
- *1.5" W X 2.25" H (incl receptacle) X 4" L*
- *0.1% accuracy*
- *Capacities 150 to 3K lb-in*
- *SAE 4340 Alloy Steel*
- *Supplied with mating connector*

SensorData's T160 shaft coupled reaction torque sensor was designed for a wide variety of applications requiring small package size, high torsional stiffness and where there is a small degree of angular rotation or reciprocating motion involved. The T160 with inherent low-end measurement capability can be installed at the driver or absorber end of the measurement chain. Double-keyed shafts on each end assist installation. AC carrier or DC strain gage signal conditioning electronics can be used with the T160. Interconnecting cable assemblies are available as an option. In-house calibration of the T160 with SensorData's electronics will be provided free of charge or with customer-supplied electronics for a fee.

Specifications

(Subject to change without notice)

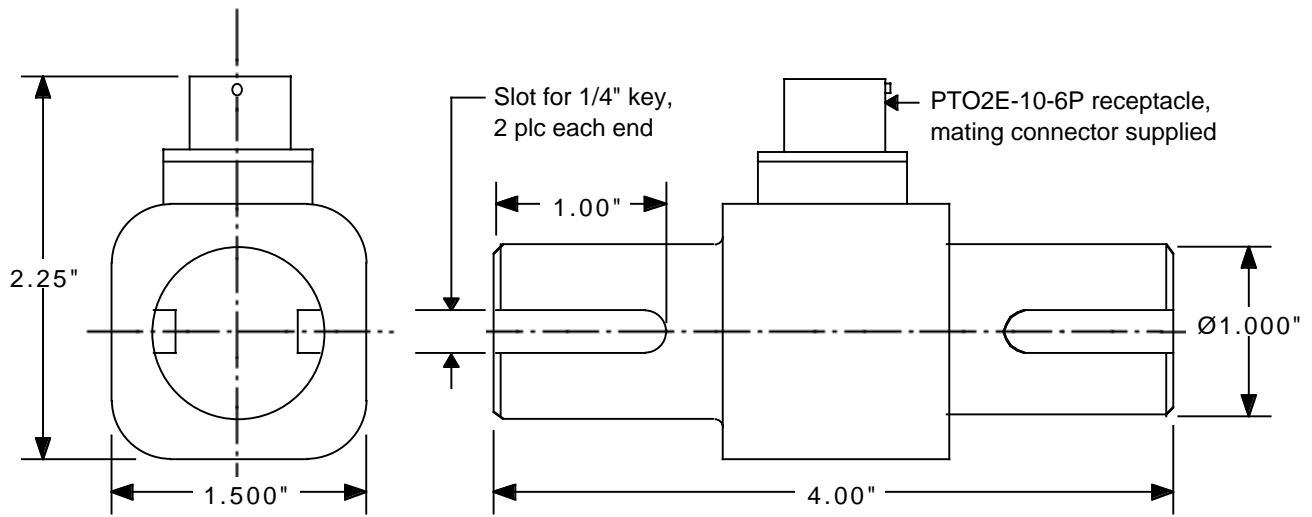
Rated Capacity	150, 300, 500, 1K, 2K, 3K lb-in
Nonlinearity	0.10% of rated output
Hysteresis	0.10% of rated output
Nonrepeatability	0.05% of rated output
Rated Output, typical	2.00 mV/V
Zero Balance	+/-1% of rated output
Temperature Range, operating	-65 to +200 F
Temperature Range, compensated	+70 to +170 F
Temperature Effect on Output	0.002% of load/F
Temperature Effect on Zero	0.002% of rated output/F
Bridge Resistance, typical	350 ohms
Excitation Voltage, bridge, typical	10 VDC or VAC rms
Excitation Voltage, bridge, maximum ⁽¹⁾	20 VDC or VAC rms
Insulation Resistance, bridge to case	>5000 megohms at 50 VDC
Maximum Load, safe ⁽²⁾	150%
Maximum Load, ultimate ⁽³⁾	300%
Torsional Stiffness, typical	See table next page
Extraneous Loads, maximum	See table next page
Number of Bridges	1
Weight	1 lb
Construction	SAE 4340 Alloy Steel

⁽¹⁾ Temperature gradients caused by higher excitation voltages may effect performance.

⁽²⁾ With load centered maximum torque that can be applied without producing a permanent shift in performance characteristics.

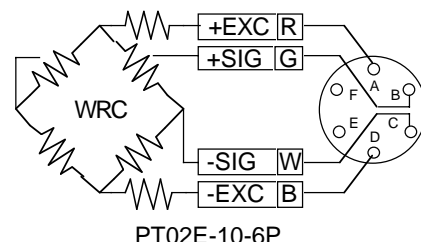
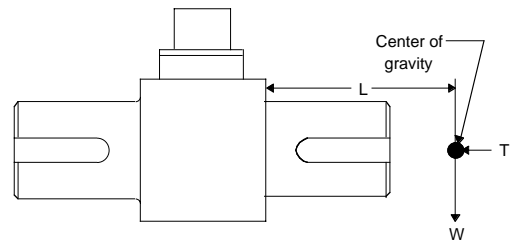
⁽³⁾ With load centered maximum torque that can be applied without physical damage.

Fatigue Rated Shaft Coupled Reaction Torque Sensor T160



Rated Capacity lb-in	Torsional Stiffness lb-in/rad	Maximum		
		Overhung Moment W X L lb-in	Shear W lb	Thrust T lb
150	9,250	320	30	360
300	31,800	480	92	500
500	62,500	510	1,010	1,050
1K	150,000	760	2380	1,800
2K	301,500	1,400	2850	2,900
3K	475,200	2,080	3,415	3,600

Do not exceed the maximum overhung moment or shear, whichever occurs first.



Amber Instruments Ltd

Tel: +44 (0)1246 260250 | E-mail: sales@amberinstruments.com
 Web: amberinstruments.com
 3 Mercury House, Calleva Park, Aldermaston, Berkshire, RG7 8PN.