

# GENERAL PURPOSE FLANGED REACTION TORQUE SENSOR

## TRS SERIES TORQUE SENSOR

**CAPACITY RANGES:**  
 500, 1,000, 2,000, 5,000, 10,000,  
 20,000, 50,000, 100,000 INCH LBS.

The TRS Series reaction torque sensors offer long term reliability due to non moving parts and state of the art bonded foil strain gages. The anodized aluminum TRS Series is also available as a two axis sensor, torque and thrust, on special request. Whenever possible, the best approach for precision torque measurements is via reaction torque sensing, eliminating high maintenance and high cost of slip rings, bearings, and brushes.

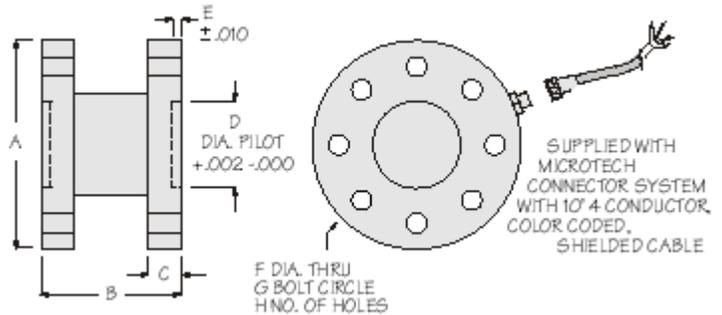


### SPECIFICATIONS

- Rated Output (R.O.): 2 mV/V nominal
- Nonlinearity: 0.1% of R.O.
- Hysteresis: 0.1% of R.O.
- Nonrepeatability: 0.05% of R.O.
- Zero Balance: 1.0% of R.O.
- Compensated
- Temp. Range: 60° to 160°F
- Safe Temp. Range: -65° to 200°F
- Temp. Effect on Output: 0.005% of Load/°F
- Temp. Effect on Zero: 0.005% of R.O./°F
- Terminal Resistance: 350 ohms nominal
- Excitation Voltage: 10 VDC
- Safe Overload: 150% of R.O.

### Options

- TH** Thrust Bridge  
 (Consult our applications engineers for torque thrust load combinations).
- GOD** Strain Gages installed on Outside Diameter for thru hole applications



### DIMENSIONS (INCHES)

MODEL	CAPACITY	A DIA.	B	C	D	E	F	G	H	WT. LBS.
TRS-500	500	3.00	2.00	.50	1.25	.125	.28	2.25	4	0.7
TRS-1K	1,000	3.00	2.00	.50	1.25	.125	.28	2.25	4	0.7
TRS-2K	2,000	3.00	2.00	.50	1.25	.125	.28	2.25	4	0.7
TRS-5K	5,000	4.00	2.50	.50	1.50	.125	.28	3.25	8	1.2
TRS-10K	10,000	4.50	2.50	.75	1.50	.125	.28	3.75	8	2.2
TRS-20K	20,000	4.50	3.00	.75	2.00	.125	.34	3.75	8	2.2
TRS-50K	50,000	6.75	3.50	1.00	3.00	.125	.41	5.75	8	7.2
TRS-100K	100,000	6.75	3.50	1.00	3.00	.125	.41	5.75	8	7.2

MODEL	TORSIONAL STIFFNESS INCH LBS./RAD.	MAX OVERHUNG MOMENT WxS INCH LBS.	MAX SHEAR W LBS.	MAX THRUST P LBS.
TRS-500	190K	500	1,500	1,500
TRS-1K	190K	500	1,500	1,500
TRS-2K	380K	1,000	2,000	2,000
TRS-5K	930K	2,000	3,000	3,000
TRS-10K	2,700K	5,000	6,000	6,000
TRS-20K	5,800K	10,000	10,000	10,000
TRS-50K	8,000K	24,000	18,000	18,000

### LOAD CARRYING CAPACITY

- W** = Weight of test device
- S** = Distance to center of gravity of test unit
- P** = Thrust
- W x S** = Overhung moment  
 Do not exceed (W x S) or shear (W), whichever value is attained first.