

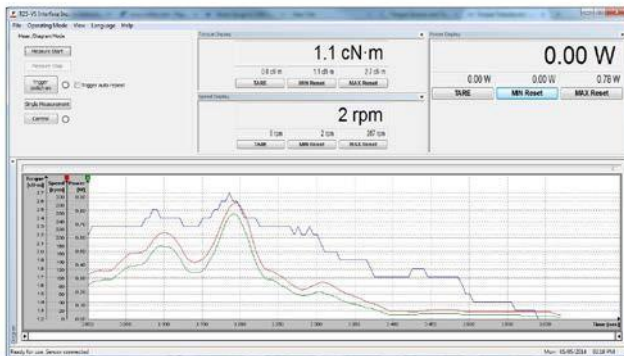
Model T25 High Speed Rotary Torque Transducer

- Capacities from 0.1 to 5K Nm (0.885 to 44.3K lb-in)
- 0.1% combined error
- Speed up to 30K RPM
- Unique design eliminates RPM dependent bearing friction effects
- Foot or float mount
- Remote activated on-shaft shunt calibration
- ± 5 VDC output
- 12-28 VDC supply
- Contactless data transmission
- Digital electronics
- 10 kHz sample rate
- 16-bit resolution



OPTIONS

- $\pm 0.05\%$ combined error
- Encoder for speed/angle measurement
- Keyed shaft per DIN 6885.1
- Right angle mating connector or cable assembly
- ± 10 VDC output
- RS485 output
- USB output – includes encoder option and display, graphing and logging software (replaces ± 5 V output)



SPECIFICATIONS

ACCURACY – (MAX ERROR)	
Combined Error-% FS	± 0.1
Nonrepeatability-% RO	± 0.02
Resolution	16-bit
TEMPERATURE	
Effect on Zero-% RO/ $^{\circ}$ C	± 0.02
Effect on Zero-% RO/ $^{\circ}$ F	± 0.01
Effect on Output-%/ $^{\circ}$ C	± 0.01
Effect on Output-%/ $^{\circ}$ F	± 0.006
Compensated Range- $^{\circ}$ C	5 to 45
Compensated Range- $^{\circ}$ F	41 to 113
Operating Range- $^{\circ}$ C	0 to 60
Operating Range- $^{\circ}$ F	32 to 140
Storage Range- $^{\circ}$ C	-10 to 70
Storage Range- $^{\circ}$ F	14 to 158
ELECTRICAL	
Supply Voltage- VDC	12 to 28
Supply Current- mA	≤ 60
Output- VDC	± 5
Bandwidth, Hz (-3dB)	1000
Sample Rate- Hz	10,000
Calibration Signal-%FS	100
Electrical Connection	12-pin Binder series 581 (includes mate)
ENCODER OPTION	
	360 pulse/rev, 2-track, +5V TTL, 90 $^{\circ}$ offset, quadrature encoder
MECHANICAL	
Safe Overload-%RO	200
Cyclic Load Rating-%RO	70 (DIN 50100)
Max Speed- RPM	Varies with capacity-see table
Shaft Material	Stainless Steel
Housing Material	Aluminum

DIMENSIONS

Capacity (Nm)	0.1, 0.2, 0.5 1, 2, 5		10	20, 30, 50, 100			200, 500		1K	2K, 5K		
Equivalent (lb-in)	0.885, 1.77, 4.43 8.85, 17.7, 44.3		88.5	177, 266, 443, 885			1770, 4425		8.85K	17.7K, 44.3K		
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
1	4.33	110	4.33	110	6.42	163	9.21	234	9.21	234	14.6	372
2	0.75	19	0.75	19	1.44	6.5	2.22	56.5	2.22	56.5	4.49	114
3	0.70	17	0.70	17	1.38	35	2.17	55	2.17	55	4.33	110
4	0.31	8	0.40	10	0.71	18	1.30	32	1.65	42	2.76	70
5	2.80	71	2.80	71	3.54	90	4.72	120	4.72	120	5.67	144
6	2.48	63	2.48	63	3.46	88	4.65	118	4.65	118	6.42	163
7	1.57	40	1.57	40	2.56	65	3.74	95	3.74	95	5.51	140
8	0.79	20	0.79	20	1.28	2.5	1.87	47.5	1.87	47.5	2.76	70
9	1.38	35	1.38	35	2.17	55	3.25	82.5	3.25	82.5	4.72	120
10	1.18	30	1.18	30	1.77	45	2.76	70	2.76	70	3.94	100
11	0.47	12	0.47	12	0.59	15	0.79	20	0.79	20	0.98	25
12	1.40	35.5	1.40	35.5	1.77	45	2.36	60	2.36	60	2.83	72
13	2.32	59	2.32	59	2.95	75	3.94	100	3.94	100	4.68	119
14	0.16	4	0.16	4	0.24	6	0.31	8	0.31	8	0.47	12
15	M4x0.7		M4x0.7		M6x1		M8x1.25		M8x1.25		M12x1.75	
16	0.31	8	0.31	8	0.31	8	0.55	14	0.55	14	0.79	20

PERFORMANCE PARAMETERS

Measuring Range (Nm)	Weight (kg)	Max Speed (RPM)	Springrate (Nm/rad)	Moment of Inertia (kg x m ²)		MAX Thrust **	MAX Shear **
				Drive Side	Test Side*		
0.1	0.5	30,000	1.80E+01	9.20E-06	2.50E-07	40	0.5
0.2	0.5	30,000	1.80E+01	9.20E-06	2.50E-07	40	0.5
0.5	0.5	30,000	9.40E+01	9.20E-06	2.50E-07	120	1.5
1	0.5	30,000	9.40E+01	9.20E-06	2.50E-07	120	1.5
2	0.5	30,000	3.70E+02	9.20E-06	2.50E-07	250	3.5
5	0.5	30,000	7.70E+02	9.20E-06	2.60E-07	450	8
10	0.6	30,000	8.80E+02	9.30E-06	3.40E-07	550	10
20	1.5	20,000	5.10E+03	1.20E-04	6.80E-06	1200	22
30	1.5	20,000	5.10E+03	1.20E-04	6.80E-06	1200	22
50	1.5	20,000	9.60E+03	1.20E-04	7.40E-06	2500	70
100	1.5	20,000	9.60E+03	1.20E-04	7.40E-06	2500	70
200	4.8	15,000	8.90E+04	5.40E-04	4.40E-04	5000	140
500	4.8	15,000	1.30E+05	5.40E-04	4.40E-04	6800	200
1K	5.1	15,000	1.70E+05	6.40E-04	5.30E-04	10000	450
2K	19	12,000	6.30E+5	5.70E-03	5.10E-03	17000	600
5K	19	12,000	9.60E+05	5.80E-03	5.20E-03	32000	1500

* With encoder option

** Allowable without significant effect on measurement and applies to unsupported shaft only

