

Model T6 Dual Range Rotary Torque Transducer

- Dual range capacities – 10:1 ratio
(5/0.5 to 20K/2K Nm)
(44.3/4.43 to 177K to 17.7K lb-in)
- ± 5 VDC output
- Digital electronics
- Stainless steel shaft
- 12 to 28 VDC supply
- Contactless
- 5 kHz sample rate - each range
- 16-bit



OPTIONS

Speed & Angle Measurement - 360 Pulse TTL,
2-tracks 90° offset, available on capacities up to
1,000 Nm only
Speed Output - 60 Pulse TTL, 1-track, available on
capacities 2,000 Nm & above
+10 V torque output
RS485
Keyed shafts - per Din 6885.1

SPECIFICATIONS

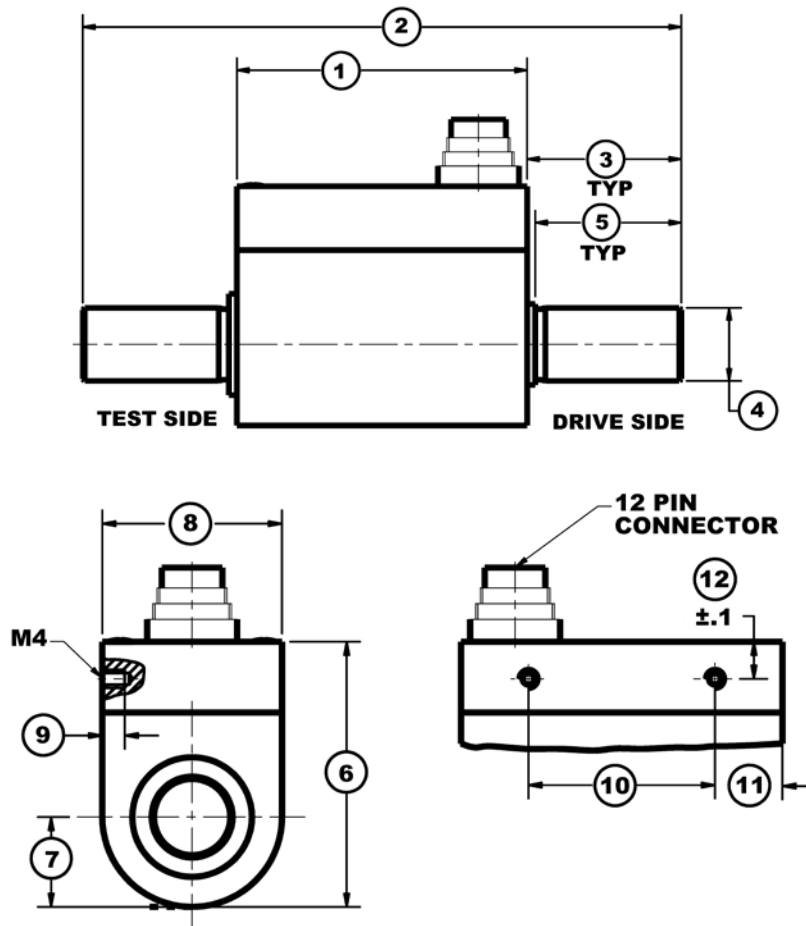
ACCURACY – (MAX ERROR)	
Combined Error-% FS	± 0.1
Nonrepeatability-%	± 0.02
TEMPERATURE	
Effect on Zero- % RO/ $^{\circ}$ C	± 0.02
Effect on Output-%/ $^{\circ}$ C	± 0.01
Rated Range- $^{\circ}$ C	+5 to +45
Operating Range- $^{\circ}$ C	0 to +60
ELECTRICAL	
Output-VDC	± 5
Bandwidth, Hz	3 kHz-3dB
Calibration Signal-%RO	100
Speed Output – puls/rev.	60
Supply Voltage-VDC	12 to 28
Supply Current-mA	60
Electrical Connection	12-pin
Resolution	16-bit
Sample Rate-kHz	5
MECHANICAL	
Safe Overload-% RO	200
Cycle Load Rating-% RO	± 70 peak
Max Speed-rpm	Varies with capacity. See Table
Shaft	Stainless Steel
Housing	Aluminum

Model T6 Dual Range Rotary Torque Transducer –
Capacities 5/0.5 to 500/50 Nm

DIMENSIONS

Capacity (Nm)	Nominal Torque							
	5/0.5, 10/1		20/2, 30/3		50/5, 100/10		200/20, 300/30, 500/50	
Equivalent (lb-in)	44.3/4.43, 88.5/8.85		177/17.7, 265/26.5		443/44.3, 885/88.5		1.77K/177, 2.7K/267, 4.43K/443	
	inch	mm	inch	mm	inch	mm	inch	mm
(1)	2.81	71.5	2.81	71.5	2.81	71.5	3.17	80.5
(2)	4.31	107.5	4.39	111.5	5.81	147.5	6.28	159.5
(3)	0.71	18	0.08	20	0.08	38	0.06	39.5
(4)	0.31	*g6	0.71	18 h6	0.71	18 h6	1.26	32 h6
(5)	0.67	17	0.71	18	1.42	36	1.50	38
(6)	2.70	68.5	2.70	68.5	2.70	68.5	3.41	86.5
(7)	0.79	20	0.79	20	0.79	20	1.20	30.5
(8)	1.57	40	1.57	40	1.57	40	2.40	61
(9)	0.20	5	0.20	5	0.20	5	0.20	5
(10)	1.63	41.5	1.63	41.5	1.63	41.5	1.16	29.5
(11)	0.59	15	0.59	15	0.59	15	1.02	26
(12)	0.69	17.5	0.69	17.5	0.69	17.5	0.69	17

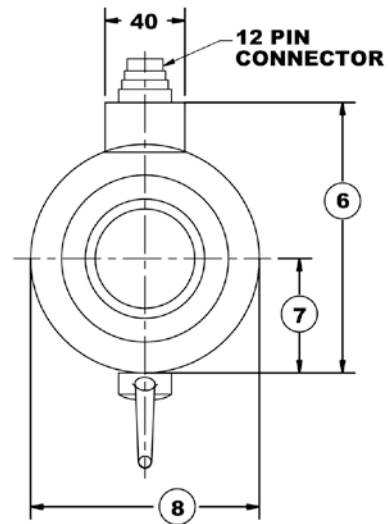
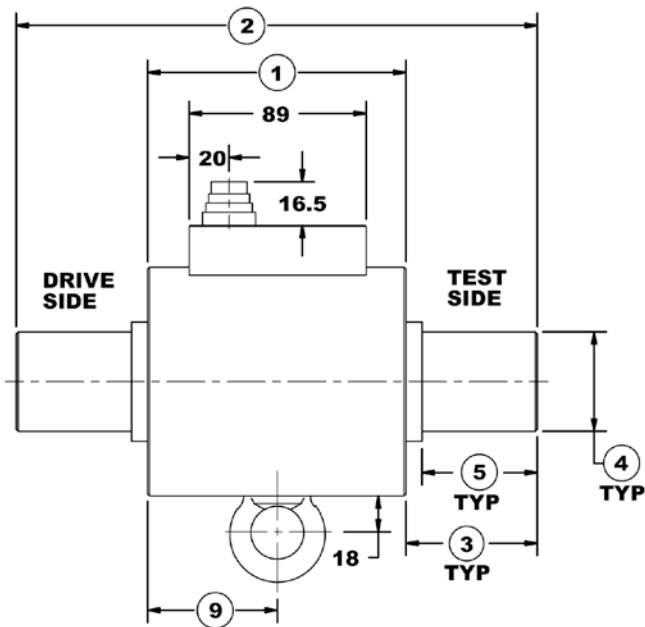
*5/0.1 Nm Capacity has 8 mm g6 shaft and 10/1 Nm Capacity has 10 mm g6 shaft



Model T6 Dual Range Rotary Torque Transducer –
Capacities 1K/100 to 20K/2K Nm

DIMENSIONS

Capacity (Nm)	1K/100		2K/200, 5K/500		10K/1K, 20K/2K	
Equivalent (lb-in)	8.85K/885		17.7K/1.77K, 44.3K/4.43K		88.5K/8.85K, 177K/17K	
	inch	mm	inch	mm	inch	mm
(1)	5.12	130	5.31	135	7.48	190
(2)	10.31	262	14.84	377	18.50	470
(3)	2.60	66	4.76	121	5.51	140
(4)	1.97	50 h7	2.76	70 h7	4.33	110 h7
(5)	2.28	58	4.33	110	4.72	120
(6)	5.35	136	6.34	161	9.17	233
(7)	2.26	57.5	2.74	69.5	4.09	105
(8)	4.53	115	5.47	139	8.27	210
(9)	2.58	65.5	2.66	67.5	3.74	95
(10)	0.71	18	0.71	18	0.71	18
(11)	3.50	89	3.50	89	3.50	89



Dimensions in mm

T6 DUAL RANGE ROTARY TORQUE TRANSDUCER PERFORMANCE PARAMETERS

CAPACITY (Range 1/Range 2) (Nm)	MAX RPM	SPRINGRATE (Nm/rad)	MOMENT OF INERTIA , J (Kgx ^m ²)		MAX THRUST LOAD (N)
			Drive Side	Test Side	
5/0.5	15,000	6.5x10 ²	1.9x10 ⁻⁶	3.0x10 ⁻⁷	50
10/1	15,000	8.3x10 ²	1.1x10 ⁻⁵	9.8x10 ⁻⁶	50
20/2	15,000	8.3x10 ³	1.1x10 ⁻⁵	9.8x10 ⁻⁶	300
30/3	15,000	8.3x10 ³	1.1x10 ⁻⁵	9.8x10 ⁻⁶	1,000
50/5	15,000	5.4x10 ³	1.3x10 ⁻⁵	1.1x10 ⁻⁵	1,600
100/10	12,000	5.4x10 ³	1.3x10 ⁻⁵	1.1x10 ⁻⁵	2,600
200/20	12,000	3.4x10 ⁴	1.1x10 ⁻⁴	8.4x10 ⁻⁵	3,200
300/30	10,000	4.7x10 ⁴	1.1x10 ⁻⁴	8.5x10 ⁻⁵	4,200
500/50	10,000	3.4x10 ⁴	1.1x10 ⁻⁴	8.4x10 ⁻⁵	7,500
1,000/100	7,000	2.0x10 ⁵	1.6x10 ⁻³	1.1x10 ⁻³	10,000
2,000/200	5,500	5.1x10 ⁵	5.3x10 ⁻³	4.2x10 ⁻³	18,000
5,000/500	5,500	7.2x10 ⁵	5.3x10 ⁻³	4.3x10 ⁻³	32,000
10,000/1,000	5,000	3.1x10 ⁶	4.1x10 ⁻²	3.6x10 ⁻²	125,000
20,000/2,000	5,000	3.7x10 ⁶	4.1x10 ⁻²	3.7x10 ⁻²	200,000

ELECTRICAL CONNECTION

12-Pin Dual Range		
Pin	Function	Description
A	NC	-
B	Option Angle B	TTL
C	Signal (+)	±5 VDC
D	Signal (GND)	0 VDC
E	Supply (GND)	0 VDC
F	Supply (+)	12-28 VDC
G	Option Angle A	TTL
H	Signal 2 (+)	±5 VDC
J	NC	-
K	Cal. Control	L < 2.0 / H > 3.5V
L	NC	-
M	Shield	Transducer Housing

