

## T16 COMPACT SLIP RING ROTARY TORQUE TRANSDUCER (U.S. & METRIC)

### FEATURES & BENEFITS

- Capacities from 1 to 500 Nm (8.85 to 4.43K lbf-in)
- Very short axial length
- Compact design
- High accuracy 0.1% FS
- Keyed shaft

### SPECIFICATIONS

ACCURACY – (MAX ERROR)		
Combined Error – %FS		±0.1
Nonrepeatability – %RO		±0.05
TEMPERATURE		
Effect on Zero – %RO / deg	°C	±0.04
Effect on Output – RO% / deg	°C	±0.02
Rated Range	°C	+5 to +50
	°F	+41 to +122
Operating Range	°C	-10 to +60
	°F	+14 to +140
ELECTRICAL		
Output – mV/V	1 Nm	+0.5
	8.85 lbf-in	
	2 - 500 Nm	+1.0
	17.7 - 4.43K lbf-in	
Excitation Voltage – VDC		2 - 12
Bridge Resistance – Ohm		350
Electrical Connection – pin		6
MECHANICAL		
Safe Overload – %RO		200
Shaft Material		Stainless steel
Housing Material		Aluminum

### OPTIONS

- Internal R-CAL Resistor – 100% output

### PERFORMANCE PARAMETERS

CAPACITY		MAX RPM	SPRING RATE	MOMENT OF INERTIA – J (Kg•m <sup>2</sup> )		MAX THRUST LOAD		MAX SHEAR LOAD	
Nm	lbf-in			NM/rad	Drive Side	Test Side	N	lbf	N
1	8.85	2,000	2.1E + 02	1.3E - 06	3.1E - 07	380	85.4	6	1.35
2	17.7	2,000	2.1E + 02	1.3E - 06	3.1E - 07	380	85.4	6	1.35
5	44.3	2,000	5.5E + 02	1.4E - 06	3.3E - 07	690	155	14.5	3.26
10	88.5	2,000	6.4E + 02	1.4E - 06	3.3E - 07	780	175	15.5	3.48
20	177	1,500	4.1E + 03	1.2E - 05	6.7E - 06	1750	393	53	11.9
50	443	1,500	1.1E + 04	1.2E - 05	7.0E - 06	3300	742	135	30.3
100	885	1,500	1.9E + 04	1.4E - 05	8.6E - 06	5200	1.17K	260	58.5
200	1.77K	1,000	5.4E + 04	9.6E - 05	6.7E - 05	8500	1.91K	340	76.4
500	4.43K	1,000	9.0E + 04	1.0E - 04	7.3E - 05	15000	3.37K	850	191

U.S. dimensions and capacities are provided for conversion only. Standard products have International System of Units (SI) capacities and dimensions.

### STANDARD CONFIGURATION

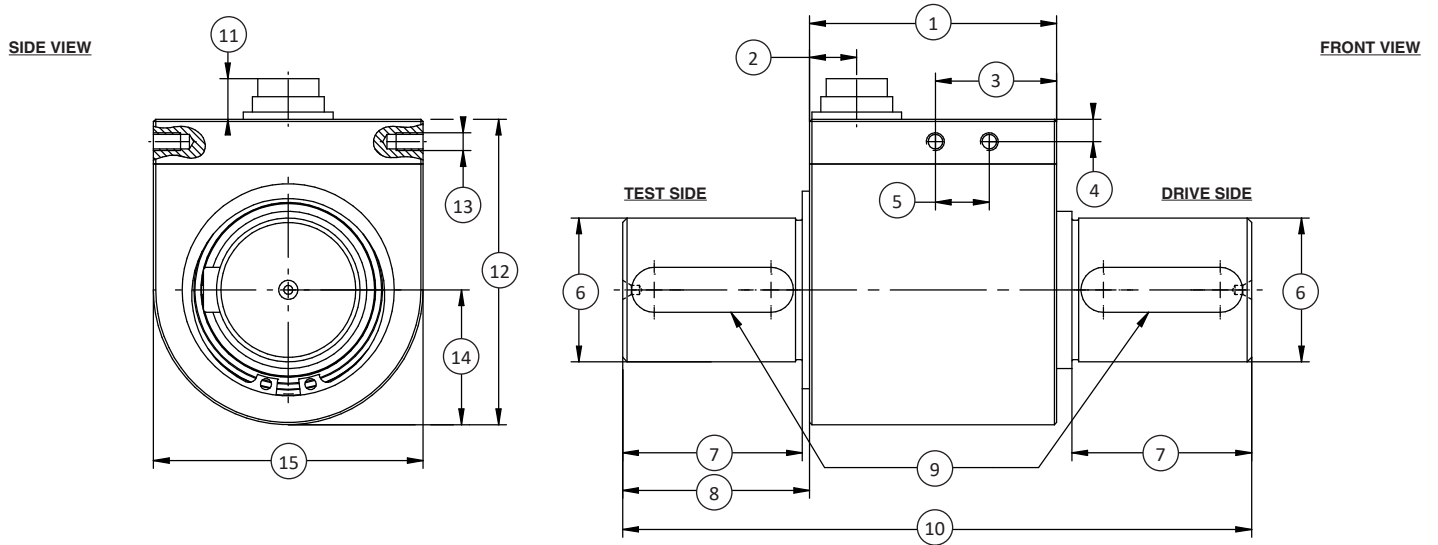


MODEL T16 (Shown)

### BRUSH LIFE

Speed (RPM)	CAPACITY					
	Nm	lbf-in	Nm	lbf-in	Nm	lbf-in
	1, 2, 5, 10	8.85, 17.7, 44.3, 88.5	20, 50, 100	177, 443, 885	200, 500	1.77K, 4.43K
10	10 years		7.6 years		5.7 years	
100	138 days		62 days		55 days	
500	233 hours		166 hours		100 hours	
1000	83 hours		50 hours		33 hours	
1500	44 hours		27 hours		-	
2000	25 hours		-		-	

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### DIMENSIONS

See Drawing	CAPACITIES							
	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)	Metric (Nm)	U.S. (lbf-in)
	1, 2, 5, 10	8.85, 17.7, 44.3, 88.5	20, 50	177, 443	100	885	200, 500	1770, 4425
	mm	in	mm	in	mm	in	mm	in
(1)	45.5	1.79	47.4	1.87	47.4	1.87	55	2.2
(2)	12.2	0.48	10.5	0.41	10.5	0.41	10.5	0.41
(3)	17.6	0.69	20.5	0.81	20.5	0.81	27	1.1
(4)	5	0.2	5	0.2	5	0.2	5	0.2
(5)	9	0.4	9.5	0.37	9.5	0.37	12	0.5
(6)	Ø8 g6	Ø(0.3156/0.3150)	Ø15g6	Ø(0.5913/0.5905)	Ø18g6	Ø(0.7094/0.7087)	Ø32g6	Ø(1.2608/1.2598)
(7)	18	0.7	20	0.8	22	0.9	40	1.6
(8)	19.7	0.78	21.1	0.83	24.1	0.95	41.6	1.64
(9)	Key DIN 6885-1		Key DIN 6885-1		Key DIN 6885-1		Key DIN 6885-1	
(10)	85	3.3	90	3.5	95	3.7	140	5.5
(11)	10	0.4	10	0.4	10	0.4	10	0.4
(12)	39	1.5	54	2.1	54	2.1	68	2.7
(13)	M4 ↓ 6	M4 ↓ 0.2	M4 ↓ 6	M4 ↓ 0.2	M4 ↓ 6	M4 ↓ 0.2	M4 ↓ 6	M4 ↓ 0.2
(14)	12	0.5	21	0.8	21	0.8	30	1.2
(15)	24	0.9	42	1.7	42	1.7	60	2.4