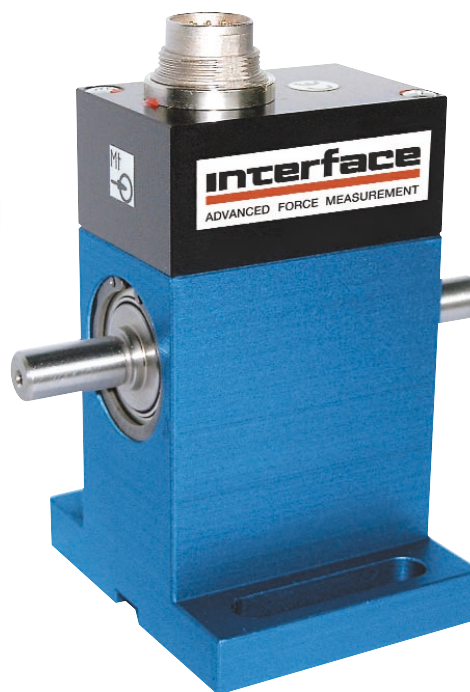


# Model T3 Precision-Pedestal Rotary Torque Transducer

Why the Interface model T3 Precision-Pedestal Rotary Torque Transducer is the best in class:

- Capacities from 0.1 to 20K Nm (0.88 to 177K lb-in)
- Integral mounting base
- $\pm 5$  VDC output
- Digital electronics
- Stainless steel shaft
- 12 to 28 VDC supply
- Contactless
- 10 kHz sample rate
- 16-bit resolution



*T3 Precision-Pedestal Rotary Torque Transducer*

## 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  
 $\pm 10$  V Torque Output  
 RS485  
 High RPM  
 Keyed Shafts  
 SAE Sized Shafts

## SPECIFICATIONS

### ACCURACY – (MAX ERROR)

Combined Error—% FS ..... $\pm 0.1$   
 Nonrepeatability—% ..... $\pm 0.02$

### TEMPERATURE

Effect on Zero—% RO/°C ..... $\pm 0.02$   
 Effect on Output—%/°C ..... $\pm 0.01$   
 Rated Range—°C .....+5 to +45  
 Operating Range—°C .....0 to +60

### ELECTRICAL

Output—VDC ..... $\pm 5$   
 Bandwidth, Hz .....3 kHz-3dB  
 Calibration Signal—% RO .....100  
 Supply Voltage—VDC .....12 to 28  
 Supply Current—mA .....60  
 Electrical Connection .....12-pin

### MECHANICAL

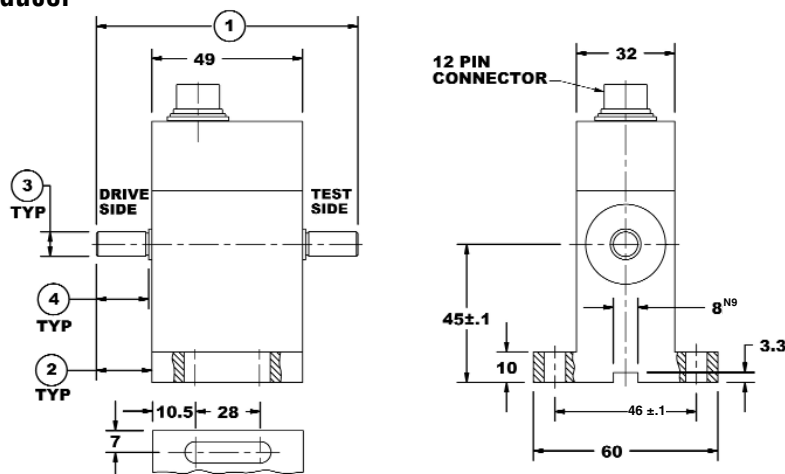
Safe Overload—% RO .....200  
 Cyclic Load Rating—% RO ..... $\pm 70$  peak  
 Max Speed - rpm .....Varies with capacity, see table  
 Shaft.....Stainless steel  
 Housing .....Aluminum

### Model T3 Precision-Pedestal Rotary Torque Transducer -

Capacities 0.1 to 1 Nm

#### DIMENSIONS

Nominal Torque				
Capacity (Nm)	0.1, 0.2		0.5, 1	
Equivalent (lb-in)	0.88, 1.77		4.43, 8.85	
	inch	mm	inch	mm
①	3.35	85	3.35	85
②	0.71	18	0.71	18
③	0.3148/ 0.3144	8g6	0.3148/ 0.3144	8g6
④	0.67	17	0.67	17

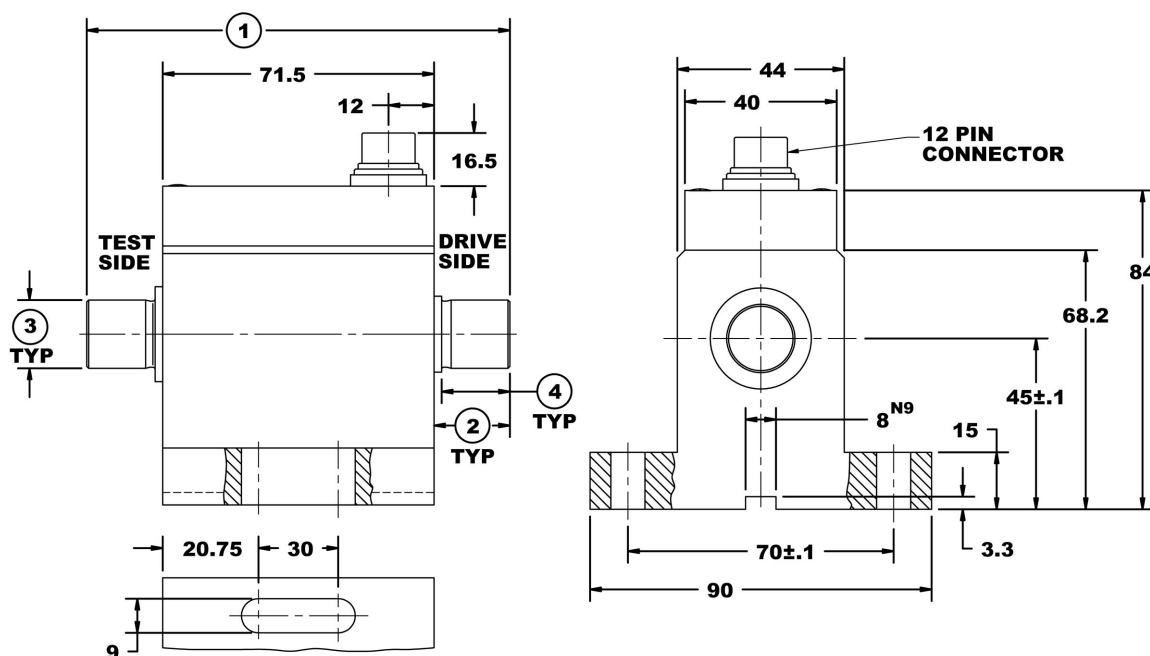


Dimensions in mm

### Model T3 Precision-Pedestal Rotary Torque Transducer - Capacities 2 to 100 Nm

#### DIMENSIONS

Nominal Torque								
Capacity (Nm)	2, 5		10, 15		20, 30		50, 100	
Equivalent (lb-in)	17.7, 44.3		88.5, 133		177, 265		443, 885	
	inch	mm	inch	mm	inch	mm	inch	mm
①	4.23	107.5	4.23	107.5	4.39	111.5	5.81	147.5
②	0.71	18	0.71	18	0.79	20	1.50	38
③	0.3148/ 0.3144	8g6	0.3935/ 0.3931	10g6	0.7087/ 0.7082/	18 h6	0.7087/ 0.7082/	18 h6
④	0.67	17	0.67	17	0.71	18	1.42	36



Dimensions in mm

# Model T3 Precision-Pedestal Rotary Torque Transducer

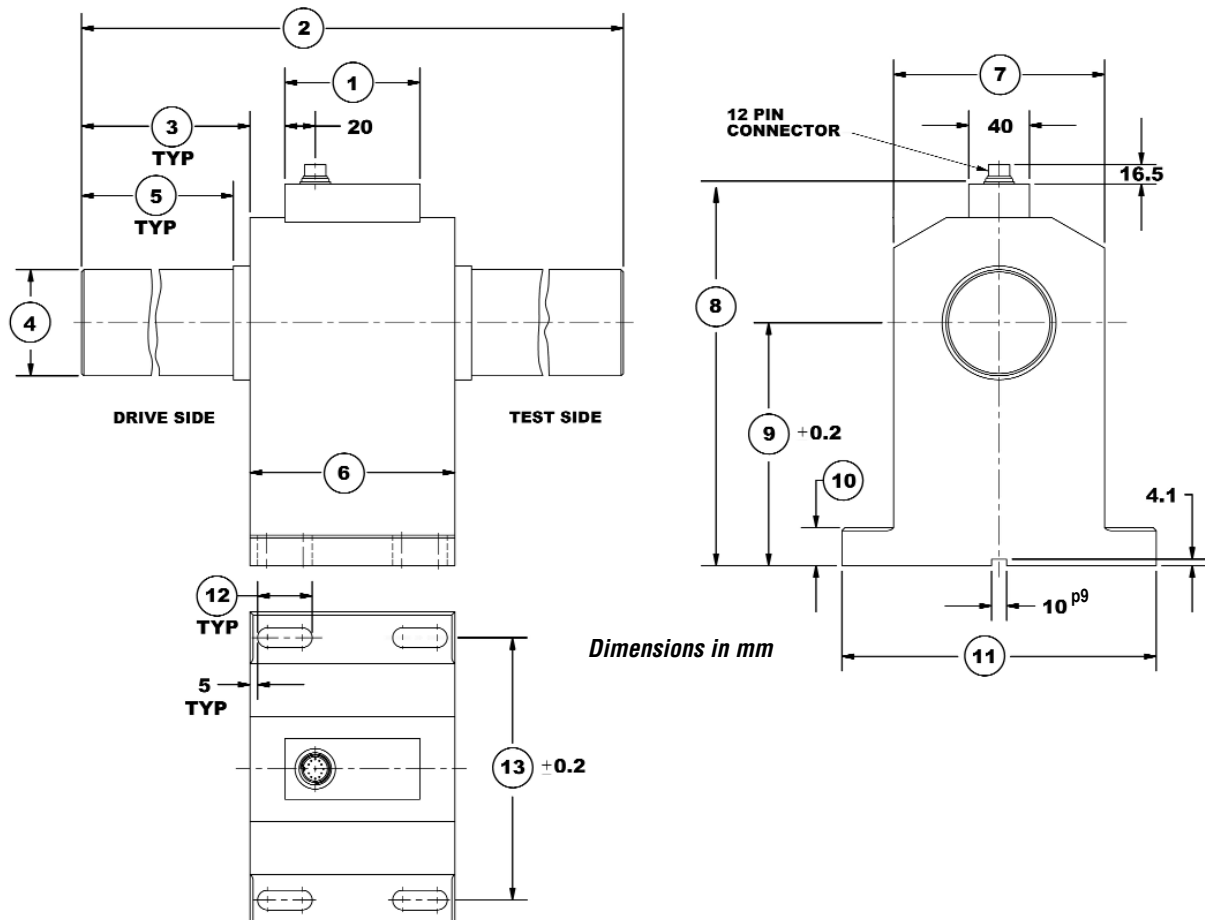
Model T3 Precision-Pedestal Rotary Torque Transducer - Capacities 200 to 20,000 Nm

## DIMENSIONS

		Nominal Torque							
Capacity (Nm)	200, 500		1K		2K, 5K		10K, 20K		
	Equivalent (lb-in)		8.85K		17K, 44.3K		85.5K, 177K		
	inch	mm	inch	mm	inch	mm	inch	mm	
①	3.50	89	3.50	89	3.50	89	3.50	89	
②	8.54	217	10.31	262	14.84	377	18.50	470	
③	1.71	43.5	2.60	66	4.76	121	5.51	140	
④	1.2595/ 1.2598	32 h6	1.9685/ 1.9675	50 h7	2.7559/ 2.7547	70 h7	4.3307/ 4.3293	110 h7	
⑤	1.50	38	2.28	58	4.33	110	4.72	120	
⑥	5.12	130	5.12	130	5.31	135	7.48	190	
⑦	4.53	115	4.63	115	5.47	139	8.27	210	
⑧	7.50	190.4	7.50	190.4	9.90	251.5	12.52	318	
⑨	4.41	112	4.41	112	6.30	160	8.46	215	
⑩	0.79	20	0.79	20	0.98	25	1.57	40	
⑪	6.89	175	6.89	175	8.15	207	11.81	300	
⑫	1.18	30	1.18	30	1.42	36	1.77	45	
⑬	5.71	145	5.71	145	6.81	173	10.24	260	



T3 Precision-Pedestal Rotary Torque Transducer



**T3 PRECISION-PEDESTAL ROTARY TORQUE TRANSDUCER PERFORMANCE PARAMETERS**

CAPACITY (Nm)	MAX RPM		SPRINGRATE (Nm/rad)	MOMENT OF INERTIA, J (Kgxm <sup>2</sup> )		MAX THRUST LOAD (N)
	Standard	Special		Drive Side	Test Side	
0.03	10,000	15,000	5.8x10 <sup>-1</sup>	1.6x10 <sup>-6</sup>	1.7x10 <sup>-7</sup>	10
0.05	10,000	15,000	5.8x10 <sup>-1</sup>	1.6x10 <sup>-6</sup>	1.7x10 <sup>-7</sup>	10
0.1	10,000	15,000	1.0	2.0x10 <sup>-6</sup>	2.8x10 <sup>-7</sup>	15
0.2	10,000	15,000	1.0	2.0x10 <sup>-6</sup>	2.8x10 <sup>-7</sup>	15
0.5	10,000	15,000	9.9	2.0x10 <sup>-6</sup>	2.8x10 <sup>-7</sup>	30
1	10,000	15,000	9.9	2.0x10 <sup>-6</sup>	2.8x10 <sup>-7</sup>	40
2	8,000	12,000	4.4x10 <sup>2</sup>	1.0x10 <sup>-5</sup>	8.1x10 <sup>-6</sup>	50
5	8,000	12,000	4.4x10 <sup>2</sup>	1.0x10 <sup>-5</sup>	8.1x10 <sup>-6</sup>	50
10	8,000	12,000	1.4x10 <sup>3</sup>	1.0x10 <sup>-5</sup>	8.2x10 <sup>-6</sup>	50
15	8,000	12,000	1.4x10 <sup>3</sup>	1.0x10 <sup>-5</sup>	8.2x10 <sup>-6</sup>	100
20	8,000	12,000	4.5x10 <sup>3</sup>	1.2x10 <sup>-5</sup>	9.9x10 <sup>-6</sup>	300
30	8,000	12,000	4.8x10 <sup>3</sup>	1.3x10 <sup>-5</sup>	9.9x10 <sup>-6</sup>	1,000
50	6,000	12,000	6.1x10 <sup>3</sup>	1.3x10 <sup>-5</sup>	1.1x10 <sup>-5</sup>	1,600
100	6,000	12,000	9.7x10 <sup>3</sup>	1.4x10 <sup>-5</sup>	1.2x10 <sup>-5</sup>	2,600
200	4,000	7,000	9.2x10 <sup>4</sup>	1.3x10 <sup>-3</sup>	8.0x10 <sup>-4</sup>	3,200
500	4,000	7,000	9.2x10 <sup>4</sup>	1.3x10 <sup>-3</sup>	8.0x10 <sup>-4</sup>	7,500
1,000	4,000	7,000	2.8x10 <sup>5</sup>	1.7x10 <sup>-3</sup>	1.2x10 <sup>-3</sup>	10,000
2,000	3,500	5,500	7.2x10 <sup>5</sup>	5.3x10 <sup>-3</sup>	4.3x10 <sup>-3</sup>	18,000
5,000	3,500	5,500	8.0x10 <sup>5</sup>	5.4x10 <sup>-3</sup>	4.3x10 <sup>-3</sup>	32,000
10,000	3,000	3,500	3.1x10 <sup>6</sup>	4.1x10 <sup>-2</sup>	3.6x10 <sup>-2</sup>	125,000
20,000	3,000	3,500	3.7x10 <sup>6</sup>	4.1x10 <sup>-2</sup>	3.7x10 <sup>-2</sup>	200,000

**ELECTRICAL CONNECTION**

Pin	12-PIN T3		12-PIN T3 RS485 OPTION	
	Function	Description	Function	Description
A	NC	-	NC	-
B	Option Angle B	TTL	Option Angle B	TTL
C	Signal (+)	±5 VDC	NC	-
D	Signal (GND)	0 VDC	NC	-
E	Supply (GND)	0 VDC, TTL	Supply (GND)	0 VDC
F	Supply (+)	12-28 VDC	Supply (+)	12-28 VDC
G	Option Angle A	TTL	Option Angle A	TTL
H	NC	-	NC	-
J	NC	-	RS485 Option	RS485 (B)
K	Cal. Control	L < 2.0 / H > 3.5 V	NC	-
L	NC	-	RS485 Option	RS485 (A)
M	Housing		Housing	