Model T5 General Purpose-Pedestal Rotary Torque Transducer

T5 General Purpose-Pedestal Rotary Torque Transducer

Why the Interface model T5 General Purpose-Pedestal Rotary Torque Transducer is the best in class:

- **Integral mounting base**
- **±5 VDC output**
- **Digital electronics**
- **Stainless steel shaft**
- **12 to 28 VDC supply**
- **Contactless**
- **10 kHz sample rate**
- **Capacities from 0.1 to 1K Nm (0.85 to 8.85K lb-in)**

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
High RPM
Keyed Shafts
SAE Sized Shafts

SPECIFICATIONS

ACCURACY – (MAX ERROR)

Combined Error–% FS	±0.2
Nonrepeatability–%	±0.04

TEMPERATURE

Effect on Zero–% RO/˚C	±0.03
Effect on Output–%/˚C	±0.015
Rated Range–˚C	+5 to +45
Operating Range–˚C	0 to +60

ELECTRICAL

Output–VDC	±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

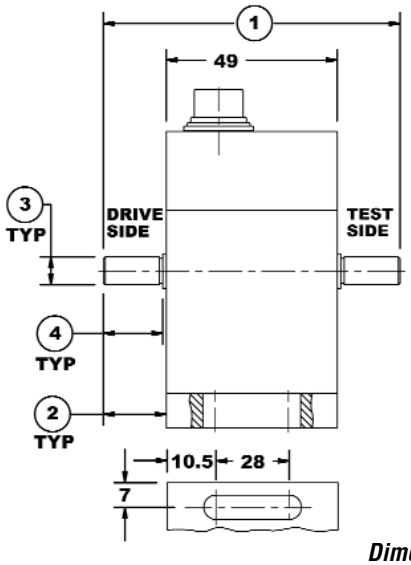
Safe Overload–% RO	200
Cyclic Load Rating–% RO	±70 peak
Max Speed - rpm	Varies with capacity, see table
Shaft	Stainless steel
Housing	Aluminum

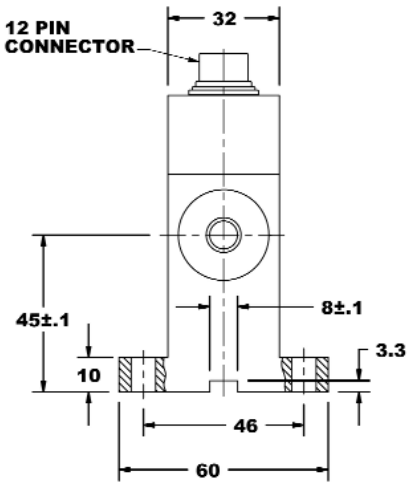
Model T5 General Purpose-Pedestal Rotary Torque Transducer -

Capacities 0.1 to 1 Nm

DIMENSIONS

Nominal Torque				
Capacity (Nm)	0.1, 0.2		0.5, 1	
Equivalent (lb-in)	0.85, 1.77		4.43, 8.85	
	inch	mm	inch	mm
①	3.35	85	3.35	85
②	0.71	18	3.86	98
③	0.3148/ 0.3144	8g6	0.3148/ 0.3144	8g6
④	0.67	17	0.67	17



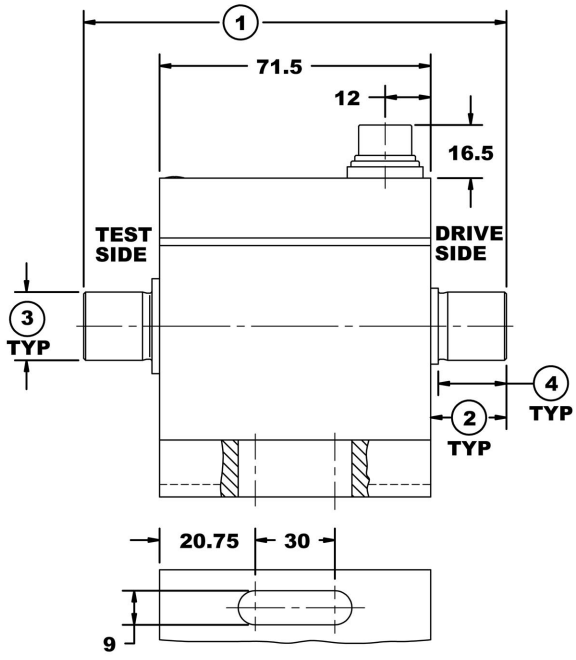


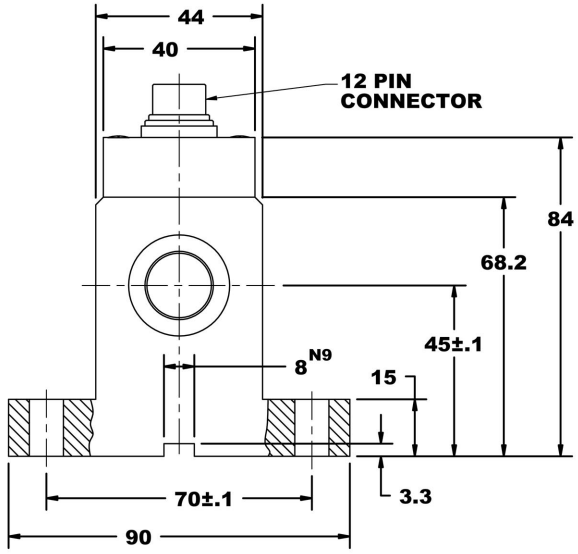
Dimensions in mm

Model T5 General Purpose-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





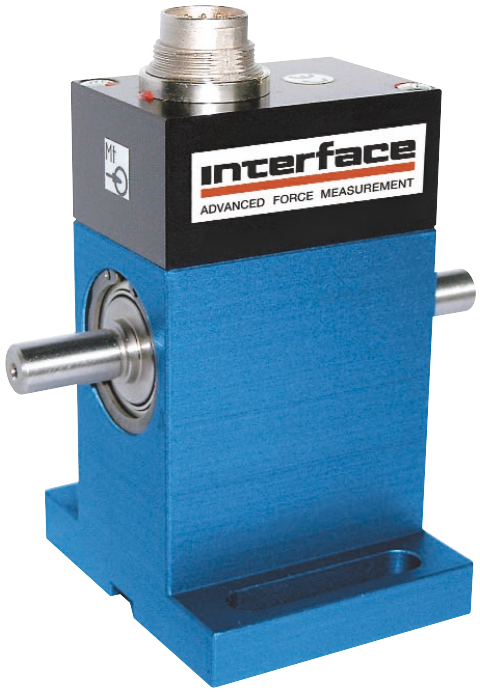
Dimensions in mm

Model T5 General Purpose-Pedestal Rotary Torque Transducer -

Capacities 200 to 1,000 Nm

DIMENSIONS

Nominal Torque				
Capacity (Nm)	**200, 500**		**1K**	
Equivalent (lb-in)	**1.77K, 4.43K**		**8.85K**	
	inch	**mm**	**inch**	**mm**
①	3.50	89	3.50	89
②	8.54	217	10.31	262
③	1.71	43.5	2.60	66
④	1.2595/ 1.2598	32 h6	1.9685/ 1.9675	50 h7
⑤	1.50	38	2.28	58
⑥	5.12	130	5.12	130
⑦	4.53	115	4.63	115
⑧	7.50	190.4	7.50	190.4
⑨	4.41	112	4.41	112
⑩	0.79	20	0.79	20
⑪	6.89	175	6.89	175
⑫	1.18	30	1.18	30
⑬	5.71	145	5.71	145



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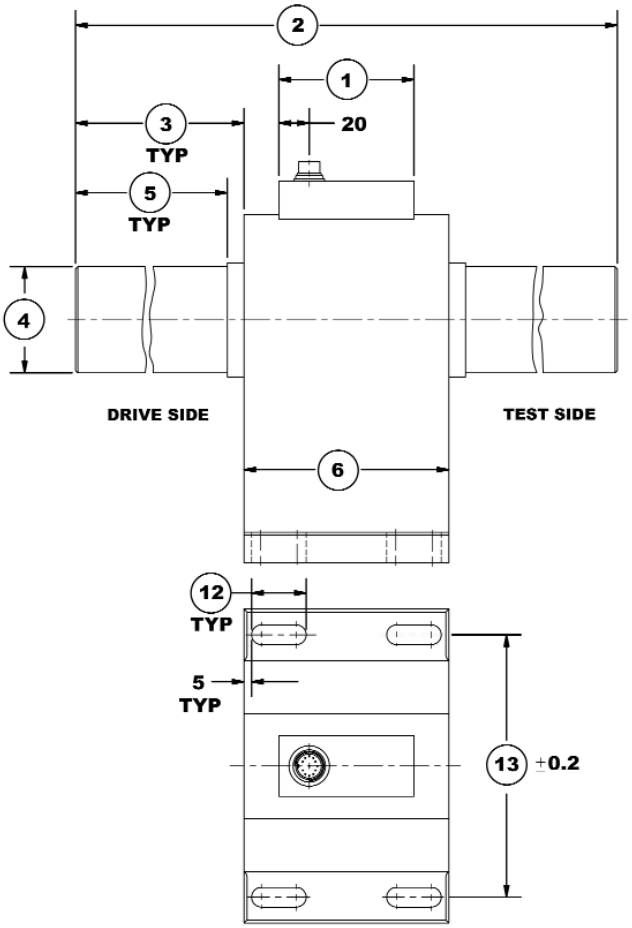

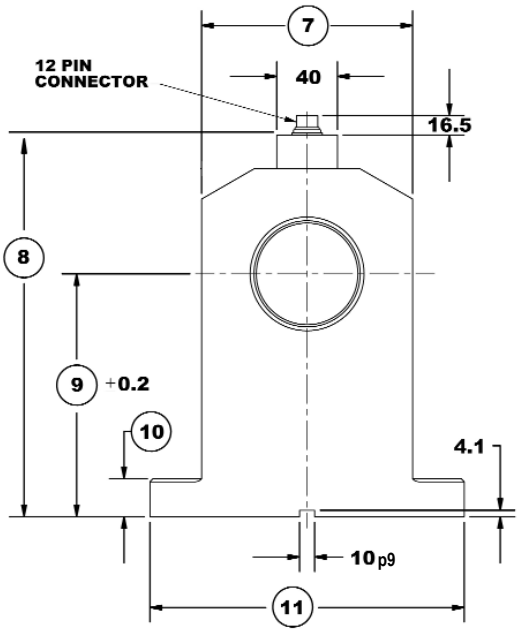

Dimensions in mm

T5 GENERAL PURPOSE-PEDESTAL ROTARY TORQUE TRANSDUCER PERFORMANCE PARAMETERS

CAPACITY (Nm)	MAX RPM		SPRINGRATE (Nm/rad)	MOMENT OF INERTIA, J (Kgxm²)		MAX THRUST LOAD (N)
	Standard	Special		Drive Side	Test Side	
0.1	10,000	15,000	1.0	$2.0x10^{-6}$	$2.8x10^{-7}$	15
0.2	10,000	15,000	1.0	$2.0x10^{-6}$	$2.8x10^{-7}$	15
0.5	10,000	15,000	9.9	$2.0x10^{-6}$	$2.8x10^{-7}$	30
1	10,000	15,000	9.9	$2.0x10^{-6}$	$2.8x10^{-7}$	40
2	8,000	12,000	$4.4x10^{2}$	$1.0x10^{-5}$	$8.1x10^{-6}$	50
5	8,000	12,000	$4.4x10^{2}$	$1.0x10^{-5}$	$8.1x10^{-6}$	50
10	8,000	12,000	$1.4x10^{3}$	$1.0x10^{-5}$	$8.2x10^{-6}$	50
15	8,000	12,000	$1.4x10^{3}$	$1.0x10^{-5}$	$8.2x10^{-6}$	100
20	8,000	12,000	$4.5x10^{3}$	$1.2x10^{-5}$	$9.9x10^{-6}$	300
30	8,000	12,000	$4.8x10^{3}$	$1.3x10^{-5}$	$9.9x10^{-6}$	1,000
50	6,000	12,000	$6.1x10^{3}$	$1.3x10^{-5}$	$1.1x10^{-5}$	1,600
100	6,000	12,000	$9.7x10^{3}$	$1.4x10^{-5}$	$1.2x10^{-5}$	2,600
200	4,000	7,000	$9.2x10^{4}$	$1.3x10^{-3}$	$8.0x10^{-4}$	3,200
500	4,000	7,000	$9.2x10^{4}$	$1.3x10^{-3}$	$8.0x10^{-4}$	7,500
1,000	4,000	7,000	$2.8x10^{5}$	$1.7x10^{-3}$	$1.2x10^{-3}$	10,000

ELECTRICAL CONNECTION

	12-PIN T5		12-PIN T5 RS485 OPTION	
Pin	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	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	