

# Model T22 Pulley Rotary Torque Transducer

Why the Interface model T22 Pulley Rotary Torque Transducer is the best in class:

- Capacities from 20 to 5K Nm (177 to 44K lb-in)
- $\pm 5$  VDC output
- Digital electronics
- 10 kHz sample rate
- Contactless



T22 Pulley 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  
 High Speed to 12,000 RPM

## SPECIFICATIONS

### ELECTRICAL CONNECTION

12-PIN T22 PULLEY		
Pin	Function	Description
A	NC	-
B	Option Angle B	TTL
C	Signal (+)	$\pm 5$ VDC
D	Signal (GND)	0 VDC
E	Supply (GND)	0 VDC
F	Supply (+)	12-28 VDC
G	Option Angle A	TTL
H	NC	-
J	NC	-
K	Cal. Control	L < 2.0 / H > 3.5 V
L	NC	-
M	Shield	Transducer Housing

#### 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  
 Speed Output - puls/rev. ....60  
 Supply Voltage-VDC .....12 to 28  
 Supply Current-mA .....60  
 Electrical Connection .....12-pin

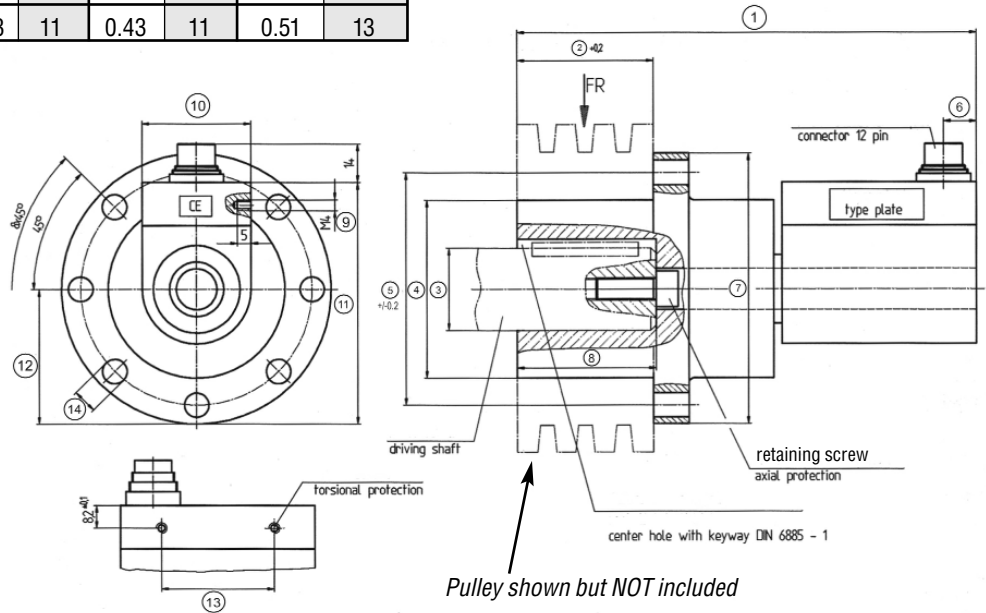
#### MECHANICAL

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

**Model T22 Pulley Rotary Torque Transducer**-Capacities 20 to 5K Nm (177 to 44K lb-in)

**DIMENSIONS**

Nominal Range Torque								
Capacity (Nm)	20, 50, 100, 200		500		1000		2000, 5000	
Equivalent (lb-in)	177, 443, 885, 1,770		4,425		8,850		17,700, 44,254	
	inch	mm	inch	mm	inch	mm	inch	mm
①	6.63	168.5	8.96	227.5	8.96	227.5	11.32	287.5
②	1.97	50	2.36	60	2.36	60	4.43	110
③	0.59 1.18	15 H7/ 30 H7	157 2.17	40 H7/ 55 H7	1.97 2.17	50 H7/ 55 H7	2.36 3.35	60 H7/ 85 H7
④	2.56	65g6	5.51	140g6	5.51	140g6	6.69	170g6
⑤	3.35	85	6.22	158	6.22	158	7.68	195
⑥	0.47	12	0.59	15	0.59	15	0.59	15
⑦	3.90	99	6.93	176	6.93	176	8.66	220
⑧	2.01	51	3.15	80	3.15	80	5.12	130
⑨	M8	M8	M12	M12	M12	M12	M16	M16
⑩	1.57	40	2.28	58	2.28	58	2.28	58
⑪	3.48	88.5	5.31	135	5.31	135	6.18	157
⑫	1.95	49.5	3.43	88	3.43	88	4.33	110
⑬	1.63	41.5	1.16	29.5	1.16	29.5	1.16	29.5
⑭	0.35	9	0.43	11	0.43	11	0.51	13



**T22 PULLEY TORQUE TRANSDUCER PERFORMANCE PARAMETERS**

CAPACITY (Nm)	MAX RPM		SPRINGRATE (Nm/rad)	MOMENT OF INERTIA, J (Kgxm <sup>2</sup> )		MAX RADIAL LOAD, FR (N)
	Standard	Special		Drive Side	Test Side	
20	6,000	12,000	1.3x10 <sup>4</sup>	1.6x10 <sup>-4</sup>	1.7x10 <sup>-3</sup>	11,000
50	6,000	12,000	2.6x10 <sup>4</sup>	1.6x10 <sup>-4</sup>	1.7x10 <sup>-3</sup>	11,000
100	6,000	12,000	5.3x10 <sup>4</sup>	1.6x10 <sup>-4</sup>	1.7x10 <sup>-3</sup>	11,000
200	6,000	12,000	1.1x10 <sup>5</sup>	1.6x10 <sup>-4</sup>	1.7x10 <sup>-3</sup>	11,000
500	5,000	10,000	3.1x10 <sup>5</sup>	2.4x10 <sup>-3</sup>	4.6x10 <sup>-2</sup>	37,000
1,000	5,000	10,000	6.7x10 <sup>5</sup>	2.4x10 <sup>-3</sup>	4.6x10 <sup>-2</sup>	37,000
2,000	3,000	5,000	9.4x10 <sup>5</sup>	1.8x10 <sup>-2</sup>	1.2x10 <sup>-1</sup>	48,000
5,000	3,000	5,000	2.5x10 <sup>6</sup>	1.8x10 <sup>-2</sup>	1.2x10 <sup>-1</sup>	48,000