

# Model T15 Hex Drive Rotary Torque Transducer

Why the Interface model T15 Hex Drive Rotary Torque Transducer is the best in class:

- Capacities from 0.2 to 20 Nm (1.77 to 177 lbf-in)
- Contactless - no slip rings
- High-level  $\pm 5V$  output
- 12-28V supply
- Angle measurement option
- Quick-Connect chuck
- 16-bit resolution



T15 Hex Drive Rotary Torque Transducer

## OPTIONS

Angle Measurement - 360 Pulse TTL, 2-Tracks 90° Offset  
 $\pm 10 V$  Torque Output  
 Enhanced Accuracy - Combined Error  $\pm 0.1\%$   
 RS485 Output (Uses 12-pin connector, replaces  $\pm 5 V$ )

## ELECTRICAL CONNECTION

### 8-PIN T12 ELECTRICAL CONNECTION

Pin	Function	Description
1	Supply (+)	12-28 VDC
2	Supply (GND)	0 VDC, TTL
3	Signal (+)	$\pm 5$ VDC
4	Signal (GND)	0 VDC
5	Cal. Control	$L < 2.0 / H > 3.5 V$
6	Option Angle A	TTL
7	Option Angle B	TTL
8	NC	-

## SPECIFICATIONS

ACCURACY – (MAX ERROR)	Standard	Enhanced
Combined Error-% FS	$\pm 0.25$	$\pm 0.1$
Nonrepeatability-%	$\pm 0.05$	$\pm 0.02$

### TEMPERATURE

Effect on Zero-% RO/ $^{\circ}C$	$\pm 0.05$	$\pm 0.02$
Effect on Output-%/ $^{\circ}C$	$\pm 0.02$	$\pm 0.01$
Rated Range- $^{\circ}C$	+5 to +45	+5 to +45
Operating Range- $^{\circ}C$	0 to +60	0 to +60

### ELECTRICAL

Output-VDC	$\pm 5$	$\pm 5$
Bandwidth, Hz	1 kHz-3dB	3 kHz-3dB
Calibration Signal-% RO	100	100
Supply Voltage-VDC	12 to 28	12 to 28
Supply Current-mA	60	60
Electrical Connection	8-pin	8-pin

### MECHANICAL

Safe Overload-% RO	200	200
Cyclic Load Rating-% RO	$\pm 70$ peak	$\pm 70$ peak
Max Speed - rpm	See table	See table
Housing	Aluminum	Aluminum

**T15 HEX DRIVE ROTARY TORQUE TRANSDUCER  
PERFORMANCE PARAMETERS**

CAPACITY (Nm)	HEXAGON (INCH)	MAX RPM	SPRINGRATE (Nm/rad)	MOMENT OF INERTIA (Kgx <sup>m</sup> <sup>2</sup> )		MAX. THRUST LOAD (N)
				Drive Side	Test Side	
0.1	0.25	3,000	1.0	2.5x10 <sup>-6</sup>	2.9x10 <sup>-7</sup>	15
0.2	0.25	3,000	1.0	2.5x10 <sup>-6</sup>	2.9x10 <sup>-7</sup>	20
0.5	0.25	3,000	5.8	2.5x10 <sup>-6</sup>	2.9x10 <sup>-7</sup>	30
1	0.25	4,000	2.3x10 <sup>2</sup>	2.6x10 <sup>-6</sup>	3.0x10 <sup>-7</sup>	40
2	0.25	4,000	2.9x10 <sup>2</sup>	2.6x10 <sup>-6</sup>	3.0x10 <sup>-7</sup>	50
5	0.25	4,000	4.6x10 <sup>2</sup>	2.6x10 <sup>-6</sup>	3.1x10 <sup>-7</sup>	50
10	0.25	4,000	5.2x10 <sup>2</sup>	2.6x10 <sup>-6</sup>	3.3x10 <sup>-7</sup>	50
15	0.25	4,000	5.2x10 <sup>2</sup>	2.6x10 <sup>-6</sup>	3.3x10 <sup>-7</sup>	100
20	0.25	4,000	5.2x10 <sup>2</sup>	2.6x10 <sup>-6</sup>	3.3x10 <sup>-7</sup>	100

**T15 Hex Drive Rotary Torque Transducer -**

Capacities 0.2 to 20 Nm

**DIMENSIONS**

Nominal Torque							
Capacity (Nm)	0.2	0.5	1	2	5	10	20
Equivalent (lb-in)	1.77	4.43	8.85	17.7	44.3	88.5	177
<b>See Drawing</b>							

