

T15 HEX DRIVE ROTARY TORQUE TRANSDUCER (U.S. & METRIC)

FEATURES & BENEFITS

- 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
- Bearingless non-contact design
- Angle measurement option
- Quick-Connect chuck
- 16-bit resolution

SPECIFICATIONS

	STANDARD	ENHANCED
ACCURACY – (MAX ERROR)		
Combined Error – %FS	± 0.25	± 0.1
Nonrepeatability – %	± 0.05	± 0.02
TEMPERATURE		
Effect on Zero – %RO / deg	$^{\circ}C$	± 0.05
	$^{\circ}F$	± 0.02
Effect on Output – % / deg	$^{\circ}C$	± 0.02
	$^{\circ}F$	± 0.01
Rated Range	$^{\circ}C$	+5 to +45
	$^{\circ}F$	+41 to +113
Operating Range	$^{\circ}C$	0 to +60
	$^{\circ}F$	+32 to +140
ELECTRICAL		
Output – VDC	± 5	
Bandwidth – kHz – dB	1 –3	3 –3
Calibration Signal – % RO	100	
Supply Voltage – VDC	+12 to +28	
Supply Current – mA	60	
Electrical Connection – pin	12	
MECHANICAL		
Safe Overload – %RO	200	
Max Speed – rpm	See table	
Material	Aluminum	

ELECTRICAL CONNECTION

12-PIN ELECTRICAL CONNECTION		
PIN	FUNCTION	DESCRIPTION
1	NC	-
2	Signal angle B (option)	5V TTL
3	Signal (+)	$\pm 5V$ ($\pm 10V$)
4	Signal (GND)	0V
5	Supply (GND)	0V
6	Supply (+)	12 - 28VDC
7	Signal angle A (option)	5V TTL
8	NC	-
9	NC	-
10	Control signal	L <2.0V; H >3.5V
11	NC	-
12	Shield	-

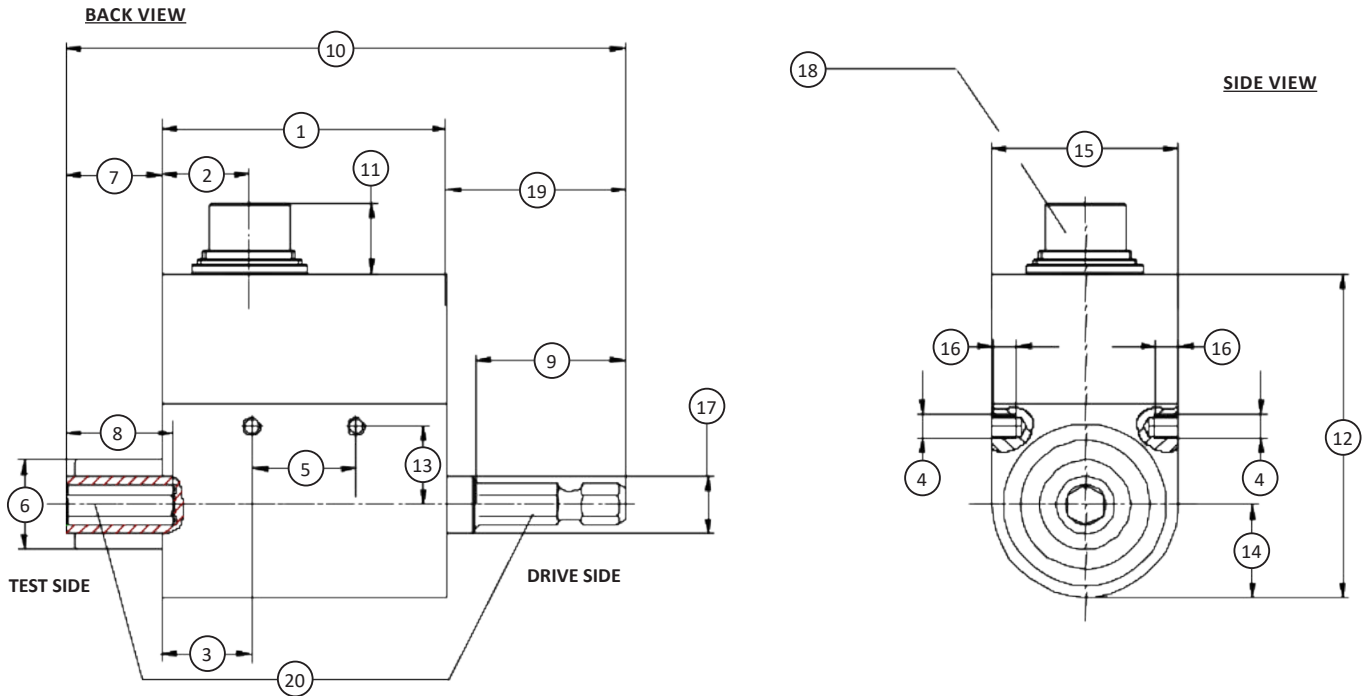


MODEL T15 (Shown)

OPTIONS

- Angle measurement - 360 pulse TTL, 2-tracks 90° offset
- +10V torque output
- Enhanced accuracy - combined error +0.1%
- RS485 Output (Uses 12-pin connector, replaces +5 V)
- USB Option Available

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DIMENSIONS

See Drawing	CAPACITIES	
	Metric (Nm)	U.S. (lbf-in)
	0.1, 0.2, 0.5, 1, 2, 5, 10, 15, 20	0.89, 1.77, 4.43, 8.85, 17.7, 44.3, 88.5, 133, 177
	mm	in
(1)	49	1.9
(2)	15	0.6
(3)	15.5	0.61
(4)	M4	
(5)	18	0.7
(6)	∅15.5	∅0.61
(7)	16.5	0.65
(8)	18.5	0.73
(9)	26 ^{+0.2}	1.0 ^{+0.008}
(10)	96.5	3.80
(11)	12	0.5
(12)	56	2.2
(13)	13.5	0.53
(14)	16	0.6
(15)	32	1.3
(16)	4	0.2
(17)	∅10	∅0.4
(18)	Connector 12-pin	
(19)	31	1.2
(20)	1/4" Hegaon DIN 3126 (ISO 1173) Design E/F –Quick action chuck	

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PERFORMANCE PARAMETERS

CAPACITY		Hexagon		MAX RPM	SPRING RATE	MOMENT OF INERTIA – (Kg•m ²)		MAX THRUST LOAD		MAX SHEAR FORCE	
Nm	lbf-in	mm	in		NM/rad	Drive Side	Test Side	N	lbf	N	lbf
0.1	0.89	6.35	0.25	3,000	1.8x10 ¹	2.6x10 ⁻⁶	2.9x10 ⁻⁷	43	9.7	1.2	0.27
0.2	1.77	6.35	0.25	3,000	1.8x10 ¹	2.6x10 ⁻⁶	2.9x10 ⁻⁷	58	13.0	1.6	0.36
0.5	4.43	6.35	0.25	3,000	1.1x10 ²	2.6x10 ⁻⁶	2.9x10 ⁻⁷	185	41.6	1.6	0.36
1	8.85	6.35	0.25	4,000	1.1x10 ²	2.6x10 ⁻⁶	2.9x10 ⁻⁷	260	58.5	2.6	0.58
2	17.7	6.35	0.25	4,000	2.9x10 ²	2.6x10 ⁻⁶	3.0x10 ⁻⁷	480	108	6.6	1.48
5	44.3	6.35	0.25	4,000	4.6x10 ²	2.6x10 ⁻⁶	3.1x10 ⁻⁷	865	194	17	3.8
10	88.5	6.35	0.25	4,000	5.2x10 ²	2.6x10 ⁻⁶	3.3x10 ⁻⁷	1150	259	24	5.4
15	133	6.35	0.25	4,000	5.2x10 ²	2.6x10 ⁻⁶	3.3x10 ⁻⁷	1150	259	24	5.4
20	177	6.35	0.25	4,000	5.2x10 ²	2.6x10 ⁻⁶	3.3x10 ⁻⁷	1150	259	24	5.4