

Model RT10E Series Rotary Torque Sensors

WHY INTERFACE RT10E SERIES TORQUE SENSORS ARE THE BEST IN CLASS:

- 4X Overload Rating
- Infinite Fatigue Life
- Hardened to EMI from Adjustable Speed Drives
- Accuracy to 0.1%
- Dual ± 5 Volt Outputs
- Single DC Power Supply Operation
- Ferrite-free Rotary Transformer Coupling
- Calibration & Balance Free of Cable Effects
- Unexcelled Immunity to Machinery Magnetic Fields
- 15-5 PH Stainless Shaft, Splashproof & Corrosion Resistant



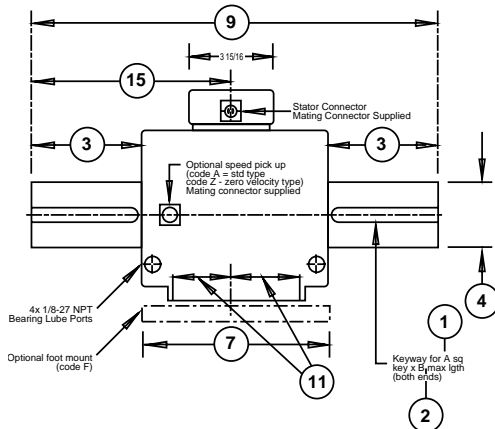
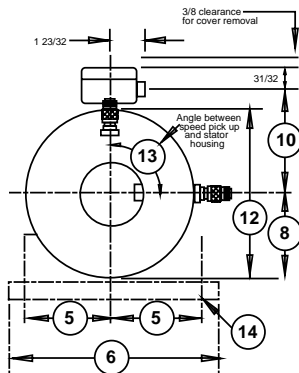
OPTIONS*

1. Enhanced Performance
2. Foot Mount (shown in photo)
3. Standard & Zero Velocity Speed Pickups

ACCESSORIES*

Interconnect Cables

* Please call for additional information



DIMENSIONS (INCHES)

See Drawing	CAPACITY [lb-in]								
	25 to 100	250 to 500	500 to 1K	2K to 5K	10K to 20K	25K to 50K	100K to 250K	500K to 1M	1.5M to 2M
①	0.187	0.187	0.250	0.375	0.625	0.750	1.000	Note 3	Note 4
②	1.125	1.625	1.750	2.750	3.500	4.500	6.500	8.000	12
③	1.50	2.00	2.31	3.69	4.13	5.13	7.56	9.00	13.50
④	0.625	0.750	1.000	1.500	2.500	3.000	4.500	7.750	9.375
⑤	2.25	2.25	2.625	2.625	4.25	4.25	4.25	7.00	8.50
⑥	5.50	5.50	6.25	6.25	10.00	10.00	10.00	15.50	18.50
⑦	5.50	5.50	5.50	5.50	8.75	8.75	7.75	18.00	20.00
⑧	2.250	2.250	2.500	2.500	5.000	5.000	5.000	8.000	9.750
⑨	8.50	9.50	10.00	12.75	17.00	19.00	23.00	36.00	47.00
⑩	2 11/16	2 11/16	2 31/32	2 31/32	4 7/8	4 7/8	5 1/8	7 7/8	9 1/2
⑪	1 1/2	1 1/2	1 1/2	1 1/2	2 13/16	2 13/16	2 13/16	7 7/8	8 7/8
⑫	3 15/32	3 15/32	3 31/32	3 31/32	7 15/16	7 15/16	8 1/2	3 7/8	17
⑬	90°	90°	90°	90°	0°	0°	0°	0°	0°
⑭	0.406D	0.406D	0.406D	0.406D	Note 2	Note 2	Note 2	Note 2	Note 2
⑮	4 1/4	4 3/4	5	6 3/8	8 1/2	9 1/2	12 27/32	18	23 1/2

1. Tolerance on 4 diameter is +0.0000/-0.0005 for shaft diameters ≤ 2.5 inches and +0.000/-0.001 for shaft diameter ≥ 2.5 inches
2. Slotted 0.531 wide by 1-1/8 long
3. Dual rectangular keyways at each end are 2" wide by 1.50" high.
4. Dual rectangular keyways at each end are 2.50" wide by 1.75" high.

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SPECIFICATIONS

PARAMETERS	MODEL	
	STANDARD	ENHANCED
ACCURACY – (MAX ERROR)		
Combined Error % F.S.	≤± 0.20	≤± 0.10
Nonlinearity % F.S.	≤± 0.15	≤± 0.07
Hysteresis % F.S.	≤± 0.15	≤± 0.07
Nonrepeatability % F.S.	≤± 0.07	≤± 0.03
Stability, 6 MTHS % F.S.	≤± 0.20	≤± 0.10
Rotational Effect on Zero % F.S.	≤± 0.10	≤± 0.03
TEMPERATURE		
Zero % of F.S./deg. F.	≤± 0.003	≤± 0.0015
Span % of RDG./deg.F.	≤± 0.003	≤± 0.0015
Compensated Range	+75 to + 175 deg F	
Minimum Usable Range	-25 to + 185 deg F	
Storage Range	-65 to + 225 deg F	
ELECTRICAL		
Fully bi-directional, dual output with common characteristics, as follows		
Clockwise (CW) Torque ¹	+5 VOLTS	
Counterclockwise (CCW) Torque ¹	-5 VOLTS	
Minimum Resistive Load	10KΩ	
Maximum Capacitive Load	0.05 μF	
Overrange % of F.S.	± 33	
Measurement Bandwidth: (Both outputs are present simultaneously)		
High Frequency Output	dc to 500 Hz	
Low Frequency Output	dc to 1 Hz	
Output Noise (rms % of F.S.)	0.10 at 500 Hz Output, 0.01 at 1 Hz Output	
Zero Control Range	± 5% of F.S., nominal	
Span Control Range	± 5% of F.S., nominal	
Supply Voltage	10.5 to 24 Volts dc nominal	
Supply Current	85mA, nominal	

TORQUE RANGE		TORQUE OVERLOAD		SPEED RATING	SHAFT STIFFNESS	ROTATING INERTIA	MAX. WT.
[lb-in]	[n-m]	[lb-in]	[n-m]	[rpm]	[lb-in/radian]	[oz-in sec ²]	[lbs]
25	2.82	100	11.3	0 to ± 15,000	5,590	0.035	11
50	5.65	200	22.6	0 to ± 15,000	11,700	0.035	11
100	11.3	400	45.2	0 to ± 15,000	21,400	0.035	11
250	28.2	1,000	113	0 to ± 15,000	50,200	0.036	12
500	56.5	2,000	226	0 to ± 15,000	56,000	0.036	12
500	56.5	2,000	226	0 to ± 10,000	154,000	0.11	23
1K	113	4,000	452	0 to ± 10,000	214,000	0.11	23
2K	226	8,000	904	0 to ± 10,000	421,000	0.16	26
5K	565	20,000	2,260	0 to ± 10,000	593,000	0.16	26
10K	1,130	40,000	4,520	0 to ± 8,000	1,800,000	2.3	105
20K	2,260	80,000	9,040	0 to ± 8,000	2,700,000	2.4	105
25K	2,820	100,000	11,300	0 to ± 5,000	5,700,000	2.8	115
50K	5,650	200,000	22,600	0 to ± 5,000	7,100,000	3.0	115
100K	11,300	400,000	45,200	0 to ± 3,600	29,000,000	11.0	150
250K	28,200	750,000	84,700	0 to ± 3,600	36,000,000	11.7	150
500K	56,500	2,000,000	226,000	0 to ± 1,800	125,000,000	207	780
1M	113,000	4,000,000	452,000	0 to ± 1,800	142,000,000	218	800
1.5M	170,000	6,000,000	678,000	0 to ± 1,200	221,000,000	567	1455
2M	226,000	7,350,000	830,000	0 to ± 1,200	227,000,000	582	1475

*Stiffness is conservatively rated from flange face-to-flange face.

NOTES: 1. CW torque causes the torquemeter shaft to turn clockwise when viewed from the drive end.
CCW torque (counterclockwise) causes the opposite rotation.