Model RT10F Series Rotary Torque Sensors

WHY INTERFACE RT10F 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 Output
- 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

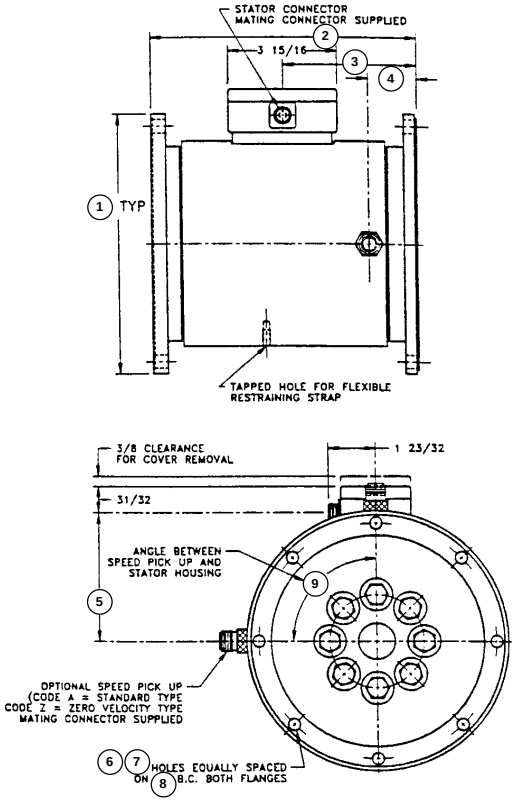
*OPTIONS**

1. Enhanced Performance
2. Standard & Zero Velocity Speed Pickups

*ACCESSORIES**

Interconnect Cables

** Please call for additional information*



DIMENSIONS (INCHES)

See Drawing	CAPACITY [lb-in] 500 to 2K	3K to 12K	12K to 48K	100K to 250K	500K to 1M	1.5M to 2M
①	4.25 ± 0.001 (1)	4.25 ± 0.001 (1)	8 (2)	12 (3)	23 (3)	30 (3)
②	5 3/16	5 15/16	8	15 1/4	31	37
③	2 19/32	2 31/32	4 1/32	8 13/16	15 1/2	18 1/2
④	1 3/32	1 15/32	1 7/16	5 5/8	7 1/8	9 1/8
⑤	2 27/32	2 27/32	4 1/16	5 5/32	7 7/8	9 1/2
⑥	8	8	8	16	32	32
⑦	3/8-24UNF-2B	3/8-24UNF-2B	0.377+0.002/-0.000	0.630+0.002/-0.000	0.755+0.002/-0.000	1.005+0.002/-0.000
⑧	3.625	3.625	7.250	10.375	20.625	27
⑨	90 deg	90 deg	0 deg	0 deg	0 deg	0 deg

(1) (Flange faces are pilotless)
(2) (Flange faces have male and female pilots)
(3) (Flange faces have female pilots)

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15-547
4/99

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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 Capacative 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]
500	56.5	2,000	226	0 to ± 8,000	602,000	0.6	12.5
1,000	113	4,000	452	0 to ± 8,000	1,375,000	0.6	12.5
2,000	226	8,000	904	0 to ± 8,000	2,640,000	0.6	12.5
3,000	339	12,000	1,360	O to ± 8,000	2,430,000	0.9	15.5
5.000	565	20,000	2,260	0 to ± 8,000	2,930,000	0.9	15.5
12,000	1,360	36,000	4,070	0 to ± 8,000	3,530,000	0.9	15.5
12,000	1,360	48,000	5,420	0 to ± 5,500	6,800,000	8.24	51
24,000	2,710	96,000	10,850	0 to ± 5,500	12,200,000	8.27	51.5
48,000	5,420	192,000	21,700	0 to ± 5,500	17,900,000	8.33	52
100,000	11.300	400,000	45,200	0 to ± 3,600	39,200,000	54.5	153
250,000	28,200	750,000	84,800	0 to ± 3,600	53,100,000	54.9	155
500,000	56,500	2,000,000	226,000	0 to ± 1,800	152,000,000	482	979
1,000,000	113,000	4,000,000	452,000	0 to ± 1,800	177,000,000	493	998
1,500,000	170,000	6,000,000	678,000	0 to ± 1,200	282,000,000	1,838	1,502
2,000,000	226,000	7,350,000	830,000	0 to ± 1,200	292,000,000	1,852	1,516

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

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

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