

## Model RT12F Series Flange Mount Rotary Transformer Torque Cells



Why Interface RT12F Series Torque Sensors are the best in class:

- 2X overload rating
- Accuracy to 0.1%
- Bidirectional operation including stall
- Ferrite-free rotary transformer coupling
- Unexcelled immunity to machinery magnetic fields
- 15-5 PH stainless shaft, splashproof & corrosion resistant
- mV/V output compatible with carrier amplifiers



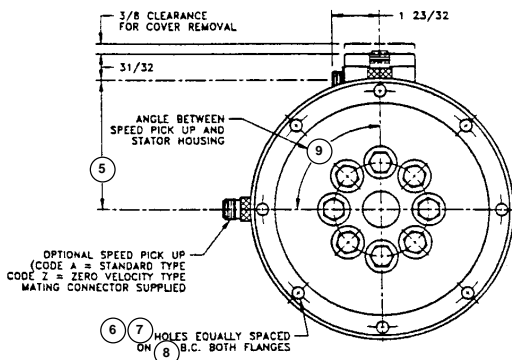
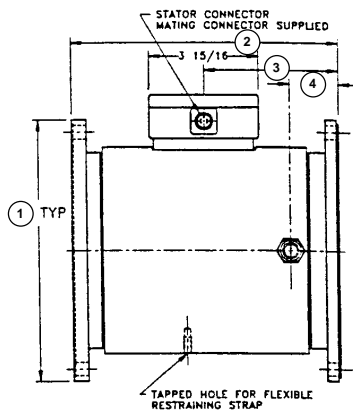
### OPTIONS\*

- Enhanced Performance
- Shaft Style Mount
- Standard & zero velocity speed pickups
- Noise Hardening
- On-Board Signal Conditioning —  $\pm 5$  or  $\pm 10$  VDC

### ACCESSORIES\*

- Interconnect Cables
- Digital Readout (9850) Catalog Page 79

\* Please call for additional information



### DIMENSIONS (INCHES)

See Drawing	CAPACITY [lb-in]					
	1K to 4K	6K to 18K	24K to 96K	200K to 375K	750K to 1M	3M to 4M
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)

# Model RT12F Series

## SPECIFICATIONS

PARAMETERS	MODEL	
	STANDARD	ENHANCED
<b>ACCURACY – (MAX ERROR)</b>		
Combined Error % F.S.	≤± 0.1	≤± 0.07
Nonlinearity % F.S.	≤± 0.1	≤± 0.05
Hysteresis % F.S.	≤± 0.1	≤± 0.05
Nonrepeatability % F.S.	≤± 0.05	≤± 0.02
Stability, 6 MTHS % F.S.	≤± 0.15	≤± 0.10
Rotational Effect on Zero % F.S.	≤± 0.05	≤± 0.02
<b>TEMPERATURE</b>		
Zero % of F.S./deg. F.	≤± 0.002	≤± 0.001
Span % of RDG./deg.F.	≤± 0.002	≤± 0.001
Compensated Range	+75 to + 175 deg F	
Minimum Usable Range	-25 to + 185 deg F	
Storage Range	-65 to + 225 deg F	
<b>ELECTRICAL</b>		
Fully bi-directional, dual output with common characteristics, as follows		
Clockwise (CW) Torque <sup>1</sup>	+1.5 mV/V	
Counterclockwise (CCW) Torque <sup>1</sup>	-1.5 mV/V	
Zero Balance	±1% of F.S., nominal	
Excitation (MAX)	6 V rms, 3 kHz ±10% sine wave only	
Readout	strain gage carrier amplifier	

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 <sup>2</sup> ]	[lbs]
1K	113	2,000	226	0 to ± 8,000	602,000	0.6	121/2
2K	226	4,000	452	0 to ± 8,000	1,375,000	0.6	121/2
4K	452	8,000	904	0 to ± 8,000	2,640,000	0.6	121/2
6K	678	12,000	1,360	0 to ± 8,000	2,430,000	0.9	151/2
10K	1,130	20,000	2,260	0 to ± 8,000	2,930,000	0.9	151/2
18K	2,030	36,000	4,070	0 to ± 8,000	3,530,000	0.9	151/2
24K	2,710	48,000	5,420	0 to ± 5,500	6,800,000	8.24	51
48K	5,420	96,000	10,000	0 to ± 5,500	12,200,000	8.27	511/2
96K	10,800	192,000	21,700	0 to ± 5,500	17,900,000	8.33	52
200K	22,600	400,000	45,200	0 to ± 3,600	39,200,000	54.5	153
375K	42,400	750,000	84,800	0 to ± 3,600	53,100,000	54.9	155
750K	84,700	1,500,000	169,000	0 to ± 1,800	137,000,000	480	976
1.5M	169,000	3,000,000	339,000	0 to ± 1,800	164,000,000	487	991
3M	339,000	6,000,000	678,000	0 to ± 1,200	282,000,000	1,838	1,540
4M	452,000	7,350,000	830,000	0 to ± 1,200	292,000,000	1,852	1,518

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

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