

# Model 5400 Solid Flange Reaction Torque Transducer

- Capacities from 1K to 500K lb-in
- Metric capabilities from 110 to 55K Nm
- High torsional stiffness
- Flange mount
- Low deflection
- Metric models have mounting holes sized for metric fasteners



## SPECIFICATIONS

PARAMETERS	MODEL				
	5410	5411	5412	5413	5414
	<b>CAPACITY</b>				
Capacity (lb-in)	1K, 2K, 5K	10K, 20K	50K, 100K	200K	300K, 500K
(Nm)	110, 220, 550	1.1k, 2.2k	5.5k, 11k	22k	33k, 55k
<b>ACCURACY – (MAX ERROR)</b>					
Nonlinearity-% FS	±0.1	±0.1	±0.1	±0.1	±0.1
Combined Error-% FS	±0.1	±0.1	±0.1	±0.1	±0.1
Nonrepeatability-% RO	±0.02	±0.02	±0.02	±0.02	±0.02
<b>TEMPERATURE</b>					
Compensated Range-°F	+70 to +170	+70 to +170	+70 to +170	+70 to +170	+70 to +170
Compensated Range-°C	+21 to +77	+21 to +77	+21 to +77	+21 to +77	+21 to +77
Operating Range-°F	-65 to +200	-65 to +200	-65 to +200	-65 to +200	-65 to +200
Operating Range-°C	-54 to +93	-54 to +93	-54 to +93	-54 to +93	-54 to +93
Effect on Zero-%RO/°F-MAX	±0.002	±0.002	±0.002	±0.002	±0.002
Effect on Zero-%RO/°C-MAX	±0.004	±0.004	±0.004	±0.004	±0.004
Effect on Output-%/°F-MAX	±0.002	±0.002	±0.002	±0.002	±0.002
Effect on Output-%/°C-MAX	±0.004	±0.004	±0.004	±0.004	±0.004
<b>ELECTRICAL</b>					
Rated Output-mV/V (Nominal)	2.0	2.0	2.0	2.0	2.0
Excitation Voltage-VDC MAX	20	20	20	20	20
Bridge Resistance-Ohm (Nominal)	350	350	350	350	350
Electrical Connection	MS3102E-14S-5P	MS3102E-14S-5P	MS3102E-14S-5P	MS3102E-14S-5P	MS3102E-14S-5P
<b>MECHANICAL</b>					
Safe Overload-% CAP	±150	±150	±150	±150	±150
Deflection at Capacity-rad	.005	.004	.006, .005	.006	.005
Overhung Moment-lb-in MAX	500, 1K, 2K	5K, 10K	24K, 50K	90K	150K, 200K
Side load-lbf MAX	1K, 1.5K, 2K	4K, 6.5K	12K, 20K	30K	42K, 55K
Axial load-lbf MAX	1.5K, 2K, 3K	6K, 10K	18K, 30K	40K	60K, 80K

**DIMENSIONS**

Capacity	MODEL									
	5410		5411		5412		5413		5414	
	U.S. (lb-in)	Metric (Nm)	U.S. (lb-in)	Metric (Nm)	U.S. (lb-in)	Metric (Nm)	U.S. (lb-in)	Metric (Nm)	U.S. (lb-in)	Metric (Nm)
	1K, 2K, 5K	110, 220, 550	10K, 20K	1.1k, 2.2k	50K, 100K	5.5k, 11k	200K	22k	300K, 500K	33k, 55k
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
(1)	3.00	76.2	3.50	88.9	7.38	187.5	8.50	215.9	10.50	266.7
(2)	4.00	101.6	5.00	127.0	8.00	203.2	9.75	247.7	14.00	355.6
(3)	3.25	82.6	4.25	108.0	6.50	165.1	8.00	203.2	11.00	279.4
(4)	1.500	38.10	2.000	50.80	3.500	88.90	4.000	101.60	6.000	152.40
(5)	0.13	3.3	0.25	6.4	0.31	7.9	0.31	7.9	0.31	7.9
(6)	0.50	12.7	0.75	19.1	1.50	38.1	1.50	38.1	2.00	50.8
(7)	0.328	8.33	0.390	10.41*	0.650	16.51	0.781*	20.65	1.031	24.64*
Recommended mtg screw size	5/16 - 24	M8 x 1.25	3/8 - 24	M10 x 1.5	5/8 - 18	M16 x 2	3/4 - 16	M20 x 2.5	1 - 12	M24 x 3
Recommended mtg torque (lb-in) (Nm)	300	34	600	68	2400	270	4400	500	9000	1000

\* Metric Model 5411, 5413 & 5414 have larger mounting holes than their U.S. equivalents to accommodate standard metric fasteners

