

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

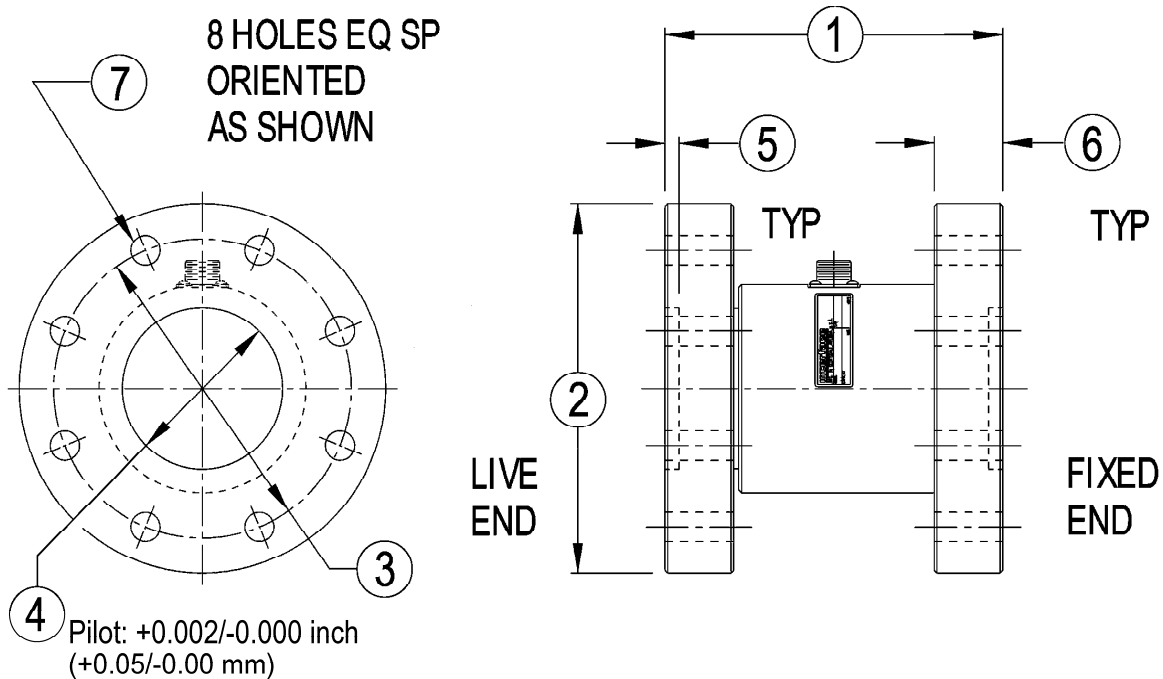
| PARAMETERS | MODEL | | | | |
|---------------------------------|-----------------|----------------|----------------|----------------|----------------|
| | 5410 | 5411 | 5412 | 5413 | 5414 |
| | CAPACITY | | | | |
| Capacity (lb-in) | 1K, 2K, 5K | 10K, 20K | 50K, 100K | 200K | 300K, 500K |
| (Nm) | 110, 220, 550 | 1.1k, 2.2k | 5.5k, 11k | 22k | 33k, 55k |
| ACCURACY – (MAX ERROR) | | | | | |
| 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 |
| TEMPERATURE | | | | | |
| 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 |
| ELECTRICAL | | | | | |
| 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 |
| MECHANICAL | | | | | |
| 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 |

5400
3/2/2012

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



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