

## 5355 SOLID FLANGE REACTION TORQUE TRANSDUCER (U.S. & METRIC)

### FEATURES & BENEFITS

- Threaded mounting holes
- Compact size
- Optional  $\pm 10$  VDC output available on 100 ozf-in (0.71 Nm) and above

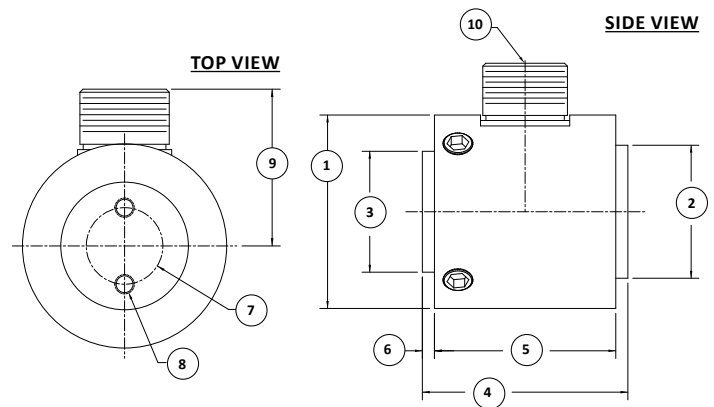
### SPECIFICATIONS

| ACCURACY – (MAX ERROR)                        |                    |                 |
|---|--------------------|-----------------|
| Nonlinearity – %FS                            |                    | $\pm 0.1$       |
| Hysteresis – %FS                              |                    | $\pm 0.1$       |
| Nonrepeatability – %RO                        |                    | $\pm 0.05$      |
| TEMPERATURE                                   |                    |                 |
| Compensated Range                             | $^{\circ}\text{F}$ | +75 to +175     |
|   | $^{\circ}\text{C}$ | +24 to +80      |
| Operating Range                               | $^{\circ}\text{F}$ | -65 to +225     |
|   | $^{\circ}\text{C}$ | -54 to +107     |
| Effect on Output – % / $^{\circ}\text{F}$ MAX |                    | $\pm 0.002$     |
| Effect on Zero – %RO / $^{\circ}\text{F}$ MAX |                    | $\pm 0.002$     |
| ELECTRICAL                                    |                    |                 |
| Rated Output – mV/V (Nominal)                 | 10 ozf-in          | 2.0             |
|   | 0.07 Nm            | 1.3             |
| Bridge Resistance – Ohm (Nominal)             |                    | 350             |
| Excitation Voltage – VDC MAX                  |                    | 10              |
| MECHANICAL                                    |                    |                 |
| Calibration                                   |                    | CW & CCW        |
| Safe Overload – %CAP                          |                    | 200             |
| Material                                      | 10 - 500 lbf-in    | Aluminum        |
|   | 1K - 100K lbf-in   | Stainless steel |

### STANDARD CONFIGURATION



Model 5355 (Shown)



### DIMENSIONS

| See Drawing | CAPACITY                 |                  |                                     |                  |                                     |                   |                                     |                   |                                      |                   |
|-------------|--------------------------|------------------|-------------------------------------|------------------|-------------------------------------|-------------------|-------------------------------------|-------------------|--------------------------------------|-------------------|
|             | U.S. (lbf-in)            | Metric (Nm)      | U.S. (lbf-in)                       | Metric (Nm)      | U.S. (lbf-in)                       | Metric (Nm)       | U.S. (lbf-in)                       | Metric (Nm)       | U.S. (lbf-in)                        | Metric (Nm)       |
|             | 20, 50                   | 2.26, 5.65       | 100, 200, 500                       | 11.3, 22.6, 56.5 | 1K, 2K, 5K                          | 113, 226, 565     | 10K, 20K                            | 1.13K, 2.26K      | 50K, 100K                            | 5.65K, 11.3K      |
|             | in                       | mm               | in                                  | mm               | in                                  | mm                | in                                  | mm                | in                                   | mm                |
| (1)         | 2.00                     | 50.8             | 2.75                                | 69.85            | 4.50                                | 114.3             | 6.00                                | 152.4             | 8.00                                 | 203.2             |
| (2)         | 1.375                    | 34.93            | 2.000                               | 50.8             | 3.875                               | 98.43             | 5.375                               | 136.5             | 7.375                                | 187.3             |
| (3)         | 1.250                    | 31.75            | 1.875                               | 47.63            | 3.750                               | 95.25             | 5.25                                | 133.4             | 7.250                                | 184.2             |
| (4)         | 2.125                    | 53.98            | 2.75                                | 69.85            | 3.50                                | 88.9              | 4.50                                | 114.3             | 5.50                                 | 139.7             |
| (5)         | 1.875                    | 47.63            | 2.375                               | 60.33            | 3.00                                | 76.2              | 3.75                                | 95.25             | 4.75                                 | 120.7             |
| (6)         | 0.125                    | 3.175            | 0.188                               | 4.775            | 0.25                                | 6.35              | 0.375                               | 9.525             | 0.375                                | 9.525             |
| (7)         | 0.750                    | 19.05            | 1.250                               | 31.75            | 2.750                               | 69.85             | 4.000                               | 101.6             | 5.750                                | 146.1             |
| (8)         | #10-32 UNF-2B – 2 places |                  | $\frac{1}{4}$ -20 UNC-2B – 4 places |                  | $\frac{3}{8}$ -24 UNF-2B – 4 places |                   | $\frac{1}{2}$ -20 UNF-2B – 8 places |                   | $\frac{3}{4}$ -18 UNF-2B – 12 places |                   |
|             | $\downarrow$ 0.25        | $\downarrow$ 6.4 | $\downarrow$ 0.38                   | $\downarrow$ 9.7 | $\downarrow$ 0.50                   | $\downarrow$ 12.7 | $\downarrow$ 0.62                   | $\downarrow$ 15.7 | $\downarrow$ 0.75                    | $\downarrow$ 19.1 |
| (9)         | 1.563                    | 39.7             | 1.938                               | 49.2             | 2.813                               | 71.4              | 3.625                               | 92.1              | 4.656                                | 118.3             |
| (10)        | MS3102A-14S-6P           |                  | MS3102A-14S-6P                      |                  | MS3102A-14S-6P                      |                   | MS3102A-14S-6P                      |                   | MS3102A-14S-6P                       |                   |

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### PERFORMANCE PARAMETERS

| CAPACITY |       | TORQUE OVERLOAD |       | TORSIONAL STIFFNESS (FROM FLANGE FACE-TO-FACE) |        | WEIGHT |     | MAX THRUST LOAD |       | MAX BENDING TORQUE |       | MAX SHEAR LOAD |       |
|----------|-------|-----------------|-------|--|--------|--------|-----|-----------------|-------|--------------------|-------|----------------|-------|
| lbf-in   | Nm    | lbf-in          | Nm    | lbf-in/rad                                     | Nm/rad | lbs    | kg  | lbf             | N     | lbf-in             | Nm    | lbf            | N     |
| 20       | 2.26  | 40              | 4.52  | 1.8K   | 203    | 0.5    | 0.2 | 80              | 356   | 20                 | 2.26  | 20             | 89    |
| 50       | 5.65  | 100             | 11.3  | 7.4K   | 836    |        |     | 200             | 890   | 50                 | 5.65  | 50             | 222   |
| 100      | 11.3  | 200             | 22.6  | 13.4K  | 1,510  | 1.2    | 0.5 | 100             | 445   | 50                 | 5.65  | 50             | 222   |
| 200      | 22.6  | 400             | 45.2  | 37.5K  | 4,240  |        |     | 200             | 890   | 100                | 11.3  | 100            | 445   |
| 500      | 56.5  | 1K              | 113   | 145K   | 16.4K  |        |     | 500             | 2.24K | 250                | 28.2K | 250            | 1.11K |
| 1K       | 113   | 2K              | 226   | 270K   | 30.5K  | 8      | 4   | 1K              | 4.45K | 500                | 56.5  | 500            | 2.24K |
| 2K       | 226   | 4K              | 452   | 775K   | 87.6K  |        |     | 2K              | 8.9K  | 1K                 | 113   | 1K             | 4.45K |
| 5K       | 565   | 10K             | 1.13K | 3000K  | 339K   |        |     | 5K              | 22.2K | 2.5K               | 282   | 2.5K           | 11.1K |
| 10K      | 1.13K | 20K             | 2.26K | 2000K  | 226K   | 20     | 9   | 10K             | 44.5K | 5K                 | 565   | 5K             | 22.2K |
| 20K      | 2.26K | 40K             | 4.52K | 5000K  | 565K   |        |     | 20K             | 89K   | 10K                | 1.13K | 10K            | 44.5K |
| 50K      | 5.65K | 100K            | 11.3K | 13000K   | 1470K  | 41     | 19  | 50K             | 222K  | 25K                | 2.82K | 25K            | 111K  |
| 100K     | 11.3K | 200K            | 22.6K | 33000K   | 3730K  | 42     | 19  | 100K            | 445K  | 50K                | 5.65K | 50K            | 222K  |

\* Metric dimensions and capacities are provided for conversion only. Standard product will be sold in lbf and U.S. dimensions. Metric capacities available upon special request and at an additional cost.