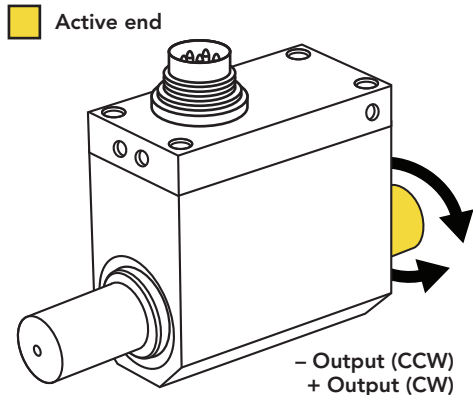




FEATURES

- Utilizes strain gauge technology
- Angle speed feedback
- Compact size
- Can operate up to 7000 RPM



SPECIFICATIONS

PERFORMANCE

| | |
|------------------|-------------|
| Nonlinearity | ±0.2% of RO |
| Hysteresis | ±0.1% of RO |
| Nonrepeatability | ±0.2% of RO |
| Rotational Speed | 7000 Max |

ELECTRICAL

| | |
|-------------------|---|
| Rated Output (RO) | ±5 VDC |
| Excitation | 11–26 VDC, 1 Watt |
| Connector | 12 pin Binder Series #581 (09-0331-90-12) |

MECHANICAL

| | |
|---------------|--|
| Safe Overload | 150% of RO |
| Zero Balance | ±1% of RO |
| Material | Aluminum (Housing), Steel Alloy (Shaft) |
| IP Rating | IP40 |

TEMPERATURE

| | |
|-------------------------|-----------------------------------|
| Operating Temperature | –13 to 176°F (–25 to 80°C) |
| Compensated Temperature | 41 to 122°F (5 to 50°C) |
| Temperature Shift Zero | ±0.01% of RO/°F (±0.02% of RO/°C) |
| Temperature Shift Span | ±0.01% of RO/°F (±0.02% of RO/°C) |

CALIBRATION

| | |
|-----------------------------|--|
| Calibration Test Excitation | 12 VDC |
| Calibration (standard) | Certificate of Conformance |
| Calibration (available) | 5-pt CW & CCW |
| Shunt Calibration Value | With sensor fully connected apply 11–26 VDC to Pins A & K to generate 5 VDC nom output |

ENCODER

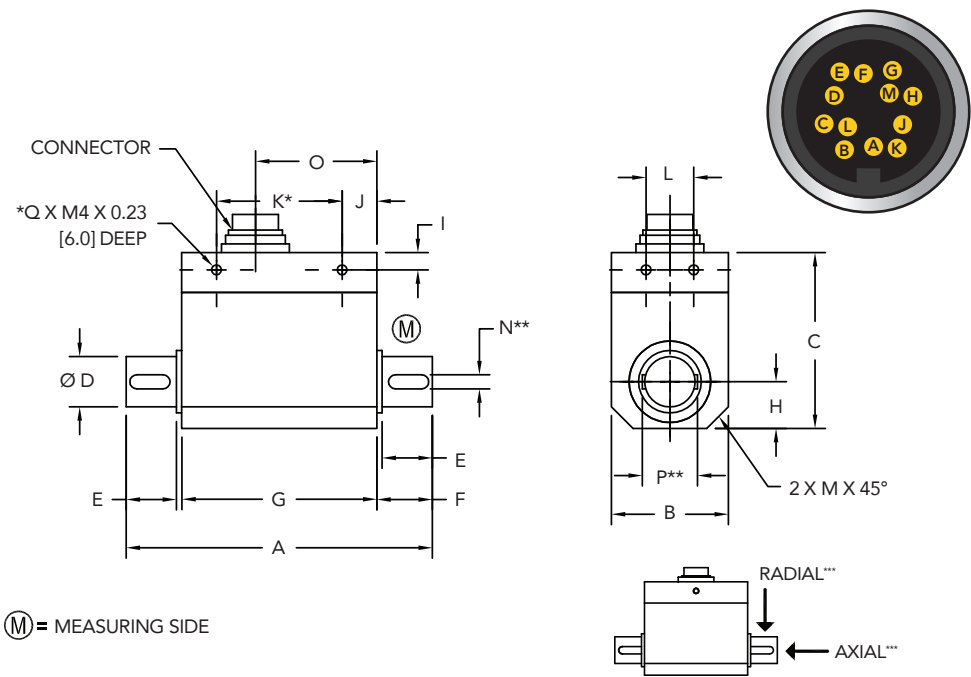
| | |
|-----------------------|----------------------|
| Output | Impulse (TTL) |
| Pulses per Revolution | 2 × 360 |
| Excitation | 5 VDC |
| Angle 1 | Leading Pulse |
| Angle 2 | Trailing Pulse (90°) |

CONFORMITY

| | |
|------|---|
| RoHS | 2014/30/EU |
| CE | Declaration of Conformity |

Model TRS605

DIMENSIONS inches [mm]



TORQUE CONNECTOR CODES

| PIN | COLOR | DESCRIPTION |
|-----|-------|---------------|
| C | Green | Signal Output |
| D | White | Ground |
| E | Black | Ground |
| F | Red | Power |

ANGLE CONNECTOR CODES

| PIN | COLOR | DESCRIPTION |
|-----|--------|------------------|
| B | Blue | Signal (Angle 1) |
| E | Black | Ground |
| G | Brown | Signal (Angle 2) |
| H | Orange | Power |

SHUNT CAL CONNECTOR CODES

| PIN | COLOR | DESCRIPTION |
|-----|--------|-------------|
| A | Yellow | Ground |
| K | Purple | Power |

SHIELD CONNECTOR CODES

| PIN | COLOR | DESCRIPTION |
|-----|----------|-------------|
| M | Floating | Shield |

CAPACITIES

| ITEM # | in-lb | Nm | Ø D | A | B | C | E | F | G | H | I | J | K* | L | M | N** | O | P** | Q* | *** Max Axial Force lb [N] | *** Max Radial Force lb [N] | Weight lb [kg] |
|----------|-------|----|---------------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|----|--|---|-------------------|
| FSH02052 | 9 | 1 | 0.394 [10] g6 | 3.62 [92] | 1.10 [28] | 2.04 [52] | 0.63 [16] | 0.67 [17] | 2.28 [58] | 0.55 [14] | 0.19 [5] | 0.43 [11] | - | 0.31 [8] | 0.31 [8] | N/A | 1.46 [37] | N/A | 6 | 4.5 [20] | 1 [5] | 0.7 [0.30] |
| FSH02053 | 18 | 2 | | | | | | | | | | | | | | | | | | 11 [50] | 1 [5] | |
| FSH02054 | 44 | 5 | | | | | | | | | | | | | | | | | | 11 [50] | 2 [10] | |
| FSH02055 | 89 | 10 | 0.630 [16] g6 | 4.09 [104] | 1.49 [38] | 2.28 [58] | 0.78 [20] | 0.90 [23] | 2.32 [59] | 0.75 [19] | 0.19 [5] | 0.47 [12] | 1.38 [35] | 0.55 [14] | 0.40 [10] | 0.197 [5] | 1.50 [38] | 0.787 [20] | 8 | 34 [150] | 4.5 [20] | 1.3 [0.60] |
| FSH02056 | 177 | 20 | | | | | | | | | | | | | | | | | | 34 [150] | 7 [30] | |
| FSH02057 | 443 | 50 | | | | | | | | | | | | | | | | | | 45 [200] | 11 [50] | |



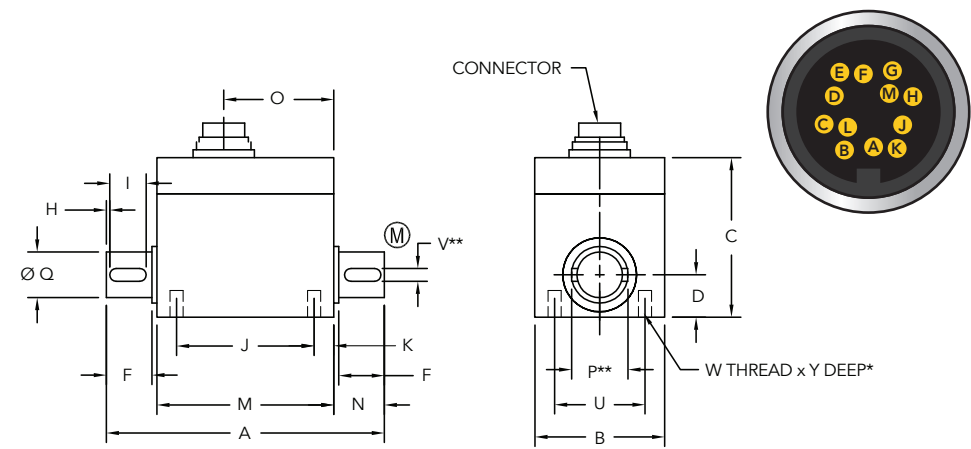
RoHS



U.S. Manufacturer

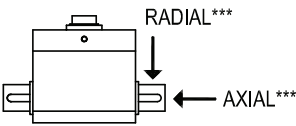
Model TRS605

DIMENSIONS inches [mm]



(M) = MEASURING SIDE

- * ANTI-ROTATION HOLES, NOT TO BE USED TO SUPPORT LOAD.
- ** FEATHER KEYWAYS COME PRE-INSTALLED.
- *** MAXIMUM LOAD ALLOWED. NOT FOR MEASUREMENT.



TORQUE CONNECTOR CODES

| PIN | COLOR | DESCRIPTION |
|-----|-------|---------------|
| C | Green | Signal Output |
| D | White | Ground |
| E | Black | Ground |
| F | Red | Power |

ANGLE CONNECTOR CODES

| PIN | COLOR | DESCRIPTION |
|-----|--------|------------------|
| B | Blue | Signal (Angle 1) |
| E | Black | Ground |
| G | Brown | Signal (Angle 2) |
| H | Orange | Power |

SHUNT CAL CONNECTOR CODES

| PIN | COLOR | DESCRIPTION |
|-----|--------|-------------|
| A | Yellow | Ground |
| K | Purple | Power |

SHIELD CONNECTOR CODES

| PIN | COLOR | DESCRIPTION |
|-----|----------|-------------|
| M | Floating | Shield |

CAPACITIES

| ITEM # | in-lb | Nm | Ø Q | A | B | C | D | F | H | I | J | K | M | N | O | P** | U | V** | W | Y | *** Max Axial Force lb [N] | *** Max Radial Force lb [N] | Weight lb [kg] |
|----------|-------|------|------------------|---------------|--------------|--------------|----------------|--------------|-------------|--------------|--------------|----------------|--------------|----------------|--------------|--------------|--------------|------------------|----|--------------|--|---|-------------------|
| FSH02058 | 885 | 100 | 1.102 [28] g6 | 4.92 [125] | 2.28 [58] | 2.99 [76] | 1.14 [29] | 1.06 [27] | 0.08 [2] | 0.87 [22] | 1.54 [39] | 0.49 [12.5] | 2.52 [64] | 1.20 [30.5] | 1.57 [40] | 1.34 [34] | 1.69 [43] | 0.315 [8] p9 | M5 | 0.31 [8] | 90 [400] | 56 [250] | 2.3 [1.06] |
| FSH02059 | 1770 | 200 | | | | | | | | | | | | | | | | | | | 90 [400] | 67 [300] | |
| FSH02060 | 4425 | 500 | 1.654 [42] g6 | 7.76 [197] | 2.87 [73] | 3.54 [90] | 1.44 [36.5] | 2.28 [58] | 0.12 [3] | 1.97 [50] | 1.46 [37] | 0.71 [18] | 2.87 [73] | 2.44 [62] | 1.73 [44] | 1.89 [48] | 2.05 [52] | 0.551 [14] p9 | M6 | 0.39 [10] | 180 [800] | 90 [400] | 6.4 [2.90] |
| FSH02061 | 8851 | 1000 | | | | | | | | | | | | | | | | | | | 225 [1000] | 90 [400] | |

Drawing Number: FI1410

FUTEK reserves the right to modify its design and specifications without notice.