

FUTEK MODEL TRH605

NON CONTACT HEX DRIVE ROTARY TORQUE SENSOR w/ ENCODER

Drawing Number: FI1031-D

INCH [mm] | R.O.= Rated Output

CONNECTOR CODE (CABLE PACKAGE WIRING CODE)

Torque Connections

| | | | |
|---------------|-----------------|-----------------|-----------------|
| Power | GROUND | SIGNAL OUTPUT | GROUND |
| PIN 'F' (RED) | PIN 'E' (BLACK) | PIN 'C' (GREEN) | PIN 'D' (WHITE) |

Angle Connections

| | | | |
|------------------|-----------------|------------------|------------------|
| Power | GROUND | Signal (Angle 1) | Signal (Angle 2) |
| PIN 'H' (ORANGE) | PIN 'E' (BLACK) | PIN 'B' (BLUE) | PIN 'G' (BROWN) |

Shunt Cal Connections

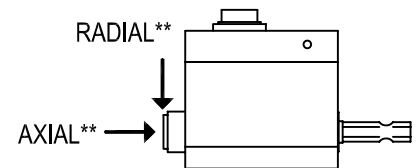
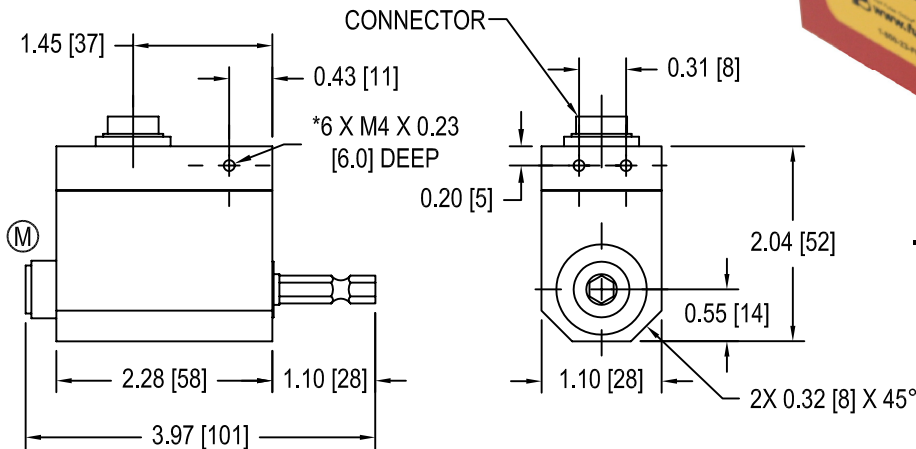
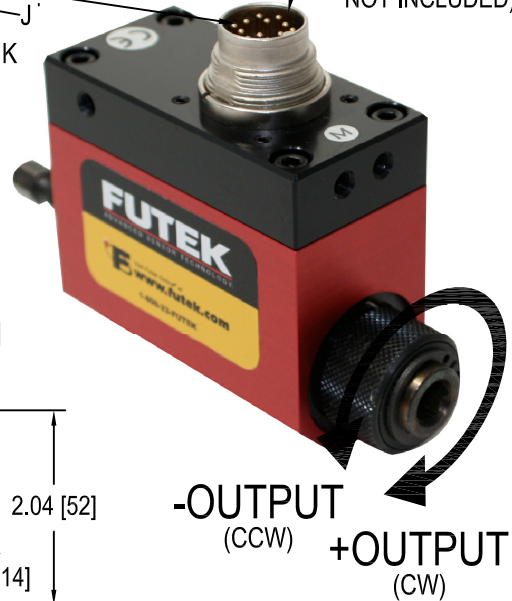
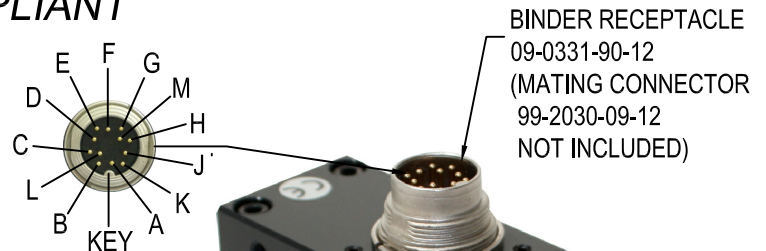
| | |
|------------------|------------------|
| Power | GROUND |
| PIN 'K' (PURPLE) | PIN 'A' (YELLOW) |

Shield Connection

Shield (Floating)

PIN 'M'

CE COMPLIANT



(M) = MEASURING SIDE

TORQUE SENSOR WITH STANDARD 1/4" HEX PER DIN 3126 E & F.

* ANTI-ROTATION HOLES, NOT TO BE USED TO SUPPORT LOAD.

** MAXIMUM LOAD ALLOWED, NOT FOR MEASUREMENT.

TORQUE SPECIFICATIONS:

| | |
|---|--|
| RATED OUTPUT | ±5VDC |
| SAFE OVERLOAD | 150% of R.O. |
| ZERO BALANCE | ±1% of R.O |
| EXCITATION | 11-26 VDC, 1 Watt |
| NONLINEARITY | ±0.2% of R.O. |
| HYSTERESIS | ±0.1% of R.O. |
| NONREPEATABILITY | ±0.2% R.O. |
| TEMP. SHIFT ZERO | ±0.01% of R.O. / °F [±0.02% of R.O. / °C] |
| TEMP. SHIFT SPAN | ±0.01% of Load / °F [±0.02% of Load / °C] |
| OPERATING TEMP. | -13 to 176°F [-25 to +80°C] |
| COMPENSATED TEMP. | 42 to 122°F [+5 to +50°C] |
| ROTATIONAL SPEED | 7000 RPM MAX |
| CONNECTOR: | 12 pin Binder Series #581 (09-0331-90-12) |
| ACCESSORIES AND RELATED INSTRUMENTS AVAILABLE | |
| CALIBRATION (STD) | Certificate of Conformance |
| CALIBRATION (AVAILABLE) | 5pt CW and CCW |
| CALIBRATION TEST EXCITATION | 12 VDC |
| SHUNT CALIBRATION | With sensor fully connected apply 11-26 VDC to Pins A & K to generate 5VDC nom output. |

| ITEM # | Capacity in-lb | N m | **MAX.AXIAL FORCE lb[N] | **MAX.RADIAL FORCE lb[N] | WEIGHT lb[kg] |
|----------|-------------------|-----|----------------------------|-----------------------------|------------------|
| FSH02037 | 4.5 | 0.5 | 4.5 [20] | 1 [5] | 0.8 [0.35] |
| FSH02038 | 9 | 1 | 11.3 [50] | 2 [10] | |
| FSH02039 | 18 | 2 | 11.3 [50] | 4.5 [20] | |
| FSH02040 | 53 | 6 | 33.7 [150] | 9 [40] | |
| FSH02041 | 106 | 12 | 33.7 [150] | 9 [40] | |
| FSH02042 | 159 | 18 | 45 [200] | 9 [40] | |

ENCODER SPECIFICATIONS:

| | |
|-------------------------------|---------------|
| OUTPUT | IMPULSE (TTL) |
| PULSES / REV | 360 |
| EXCITATION | 5 VDC |
| ANGLE 1- LEADING PULSE | |
| ANGLE 2- TRAILING PULSE (90°) | |