

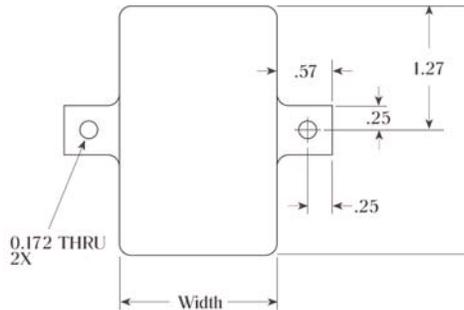
MTX Torque Sensor Operation Instructions

Rev 1.1 (3/22/2017)

Mounting the MTX Torque Sensor

The MTX torque sensor needs to be mounted securely before operating. Immobilizing the sensor is critical for the safety of the operator as well as for the accuracy of torque measurements during operation. A loose MTX sensor during utilization can impact the validity of torque readings.

There are two mounting holes on the side flaps the MTX body.



Mounting Bracket
MTX models

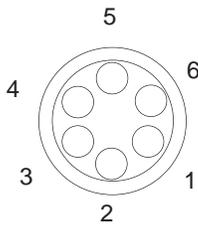
Item #
062109

MTX Cabling/Connecting

Attach the appropriate cable (sold separately) for connecting the MTX with a Mountz torque analyzer. For non-Mountz torque analyzers, please reference Pin Diagram. Mountz can make cables for non-Mountz Torque Analyzers, please contact Customer Service at 408-292-2214.

MTX Pin Connection

<u>Mountz Analyzer</u>	<u>Cable Item #</u>
FTA, LTT & PTT	072003



- 6 Pin Connection**
- 1 = (+ Signal)
 - 2 = (- Signal)
 - 3 = (- Excitation)
 - 4 = (+ Excitation)
 - 5 = (Ground)
 - 6 = (Data)

Operating MTX

Once the MTX is connected with a Mountz Torque Analyzer, follow the instructions in the Torque Analyzer manual for accessing external transducers (torque sensors).

Using Hand Tools

Make sure the tool is within the torque range of the MTX model. If the tool is under the torque range, then the accuracy may not be reliable. If the tool is over the torque range, then you may overtorque the MTX and damage the sensor. Place the wrench or screwdriver's drive into the MTX's F/Square Drive and apply torque. You may require an adapter for torque calibration or testing. Always make certain adapters are as short as possible and fit properly, with little "play."



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Using Power Tools

Make sure the tool is within the torque range of the MTX model. If the tool is under the torque range, then the accuracy may not be reliable. If the tool is over the torque range, then you may overtorque the MTX and damage the sensor.

Place Run Down Adapter into MTX



Always use a quality joint rate simulator (run down adapter) when testing power tools in a simulated application. Place the rundown adapter in the MTX's female square drive. Then place a square drive adapter into the bit socket of the power tool and then slide it into the run down adapter.

Switch the driver into "Forward" mode and apply torque. Once the rundown is complete, switch the driver in "Reverse" and reverse the Run Down Adapter to a consistent "home" position.

Mini-rundown adapters with fasteners are available for the MTX units. The kit includes 5 mini RDA units along with 10 fasteners. The mini-RDAs allow a close simulation of actual joints.

Mini RDA	Screws	Item #
Mini RDA2	PH Phil 2-56 x 1/4 SS	061229-2
Mini RDA4	PH Phil 4-40 x 1/4 SS	061229-4
Mini RDA6	PH Phil 6-32 x 1/4 SS	061229-6
Mini RDA10	PH Phil 10-32 x 1/4 SS	061229-10



Note: Change screws when thread wear occurs. (Recommended - approximately every 25 run downs).

Calibration Procedures

1. Attach the MTX securely to a work surface with the cable connector toward the top so that the axis of tool rotation is parallel to the ground.
2. Connect the MTX to a torque analyzer/display. Review the torque range of the sensor and select the appropriate measurement units.
3. Determine type of calibration to be performed.
Calibration at 3 Pts. - Test at 10%, 50% and 100 of Full Scale.
Calibration at 6 Pts. - Test at 10%, 20%, 40%, 60% 80% and 100 of Full Scale.
Direction Clockwise and/or Counter Clockwise
4. Select the appropriate Calibration Wheel. Attach it to the input drive of the MTX.
5. Gently connect the Hanger to the Calibration Wheel.
6. Load 3 times to minimum 80% FS in direction of operation and reset to zero after loading.
7. Apply series of increasing torques in direction of operation starting from the lowest test point.
8. Record readings from the test device at each test point prior to performing any adjustments.
9. Repeat steps 6-8 in the opposite direction (if required).
10. Perform calibration adjustments. Repeat test as described above until readings at all test points are within tolerances.
11. Repeat test as described above and record 5 readings from test device at each test point. Compile all necessary details to generate test report.
12. Remove old calibration label and place new label on torque sensor.

Mountz Service Locations

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Western Service Center

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