

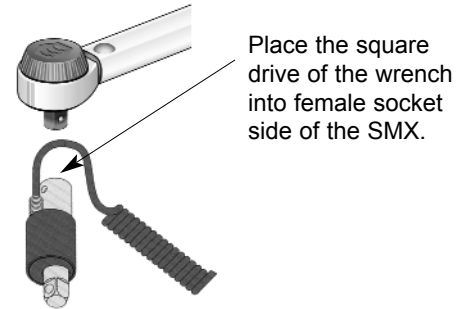
SMX Transducer Operation Instructions

Rev 1.0

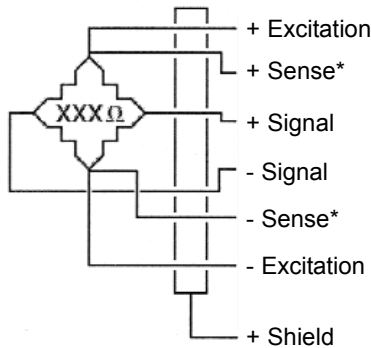
SMX Application Examples

The SMX transducer is a socket wrench sensor for bolt and nut wrenching torques. These sensors are bi-directional and both tightening and break-away torque can be measured. It can also be used to check the calibration of mechanical wrenches.

Place the square drive of the wrench into female socket side of the SMX.



SMX Wiring Diagram



* Used with 6 conductor cable

Wiring Code

+ Excitation:	Red
+ Sense:	Orange
+ Signal:	Green
- Signal:	White
- Sense:	Blue
- Excitation:	Black

Operating SMX

Once the SMX is connected with a Mountz Torque Analyzer, follow the instructions in the Torque Analyzer manual for accessing external transducers.

Using Hand Tools

Make sure the tool is within the torque range of the SMX 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 SMX and damage the transducer. Place the square drive of the wrench into female socket side of the SMX and apply torque. You may require adapters for calibration or tool checks. Always make certain adapters are as short as possible and fit properly, with little "play."

Calibration Procedures

1. Attach the SMX securely to a special fixture device.
2. Connect the SMX to a torque analyzer/display. Review the torque range of the transducer and select the appropriate measurement units.
3. Determine type of calibration to be performed.

<i>Calibration at 3 Pts.</i>	<i>Test at 10%, 50% and 100 of Full Scale.</i>
<i>Calibration at 6 Pts.</i>	<i>Test at 10%, 20%, 40%, 60% 80% and 100 of Full Scale.</i>
<i>Direction</i>	<i>Clockwise and/or Counter Clockwise</i>
4. Select the appropriate Calibration Arm or Wheel and attach it.
5. Gently connect the Hanger to the Calibration Arm or 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 transducer.