

Net F/T

Six-Axis Force/Torque Sensor for Ethernet and EtherNet/IP™



Product Description

The Network Force/Torque (Net F/T) sensor system measures six components of force and torque (Fx, Fy, Fz, Tx, Ty, Tz). The Net F/T provides an EtherNet/IP and CAN bus communication interface and is compatible with standard Ethernet. The Net F/T system is available with all of our transducer models.

Product Features

- Fully ODVA™-compliant EtherNet/IP interface.
- Environmental sealing is available. The Net F/T interface (Net Box) is sealed to IP65 (water splash-proof), most Net F/T transducers and cables can be sealed to IP68 (submergibility in fresh water, to a depth of 10 meters).
- Powered by Power over Ethernet (PoE) or by an external power supply (11VDC to 24VDC).
- Multiple transducer calibrations can be permanently stored in the system and can be selected by the user.

Product Advantages

Multiple Interfaces: Ethernet, EtherNet/IP and CAN bus, to support a wide range of automation and research applications.

LAN Connectivity: The Net F/T can be easily connected to your Local Area Network (LAN) allowing for easy remote operation and monitoring.

High-speed output: Output rates up to 7000 Hz for six axes of measurement over Ethernet (using UDP).

Web-based Configuration and Demo: The Net F/T is configurable via a web interface, allowing the user to view and change system settings using a web browser. An easily accessible Java™ demonstration application provides a graphical view of six-axis measurements in real time.

Programmable Thresholding: Allows monitoring of force and torque conditions via a relay output or status bits to allow immediate action in case of critical process conditions.

Built-in Status Indicators: LEDs in the Net Box alert the user to connection and load saturation status.

Overload protection: The F/T transducer is extremely rugged and durable. The transducer's factor of safety can be as high as 4080%, depending on model and calibration.

Tool Transformations: Tool transformations can be used to translate and rotate the F/T point of origin to make measurements relative to the work at hand.

Temperature Compensation: Each F/T transducer features hardware temperature compensation to stabilize its sensitivity over temperature. This compensation method optimizes the transducer's accuracy over a range approximately $\pm 25^{\circ}\text{C}$ from room temperature.

High signal-to-noise ratio: Silicon strain gages provide a signal 75-times stronger than conventional foil gages, reducing the need for noise-increasing gain.

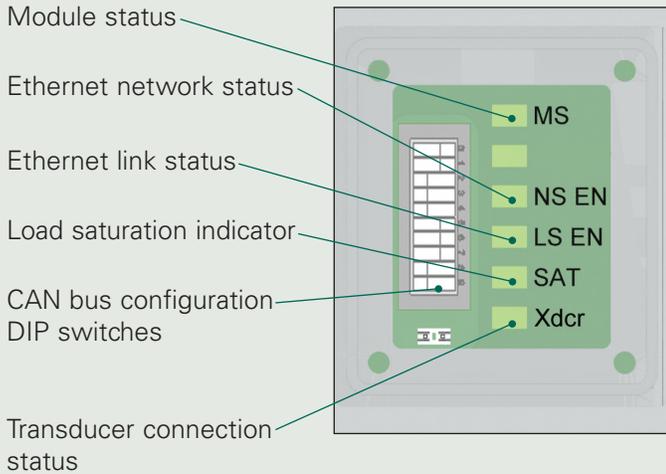


Net F/T System: Net Box, Cable and Transducer

User Interface Overview

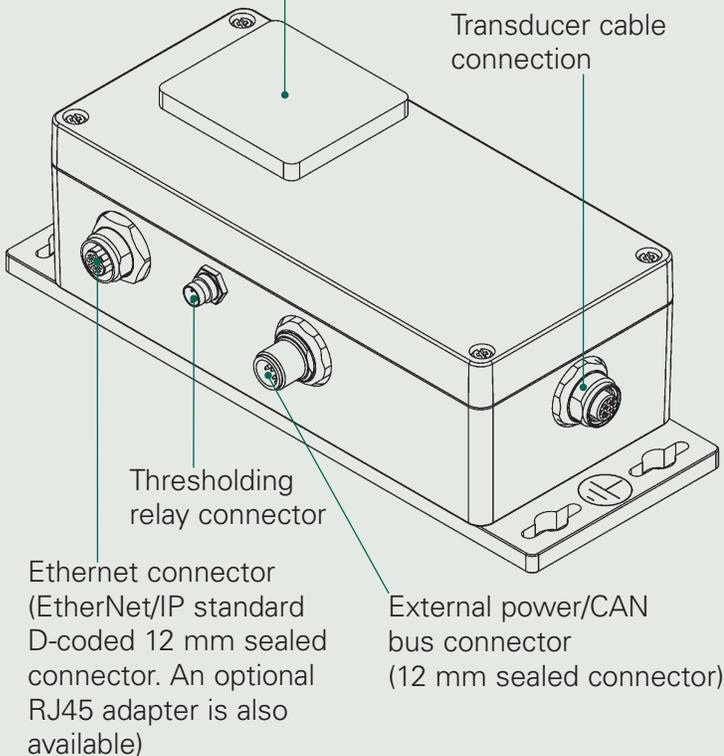
Sensor system setup and status monitoring can be done through the status LEDs and DIP switches or via an Internet browser. Advanced functions and the demonstration application are also available via a browser

Indicator Window Functions

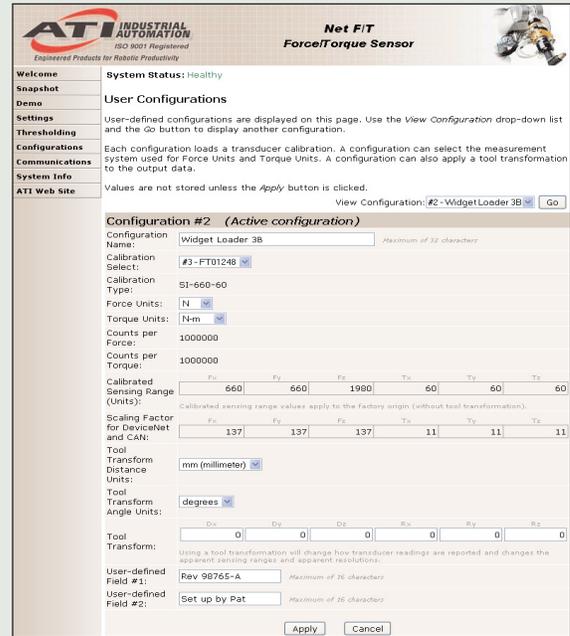


User I/O

DIP switch and status indicator window



Easily-Accessible Configuration Settings



Self-Contained Demonstration Application

