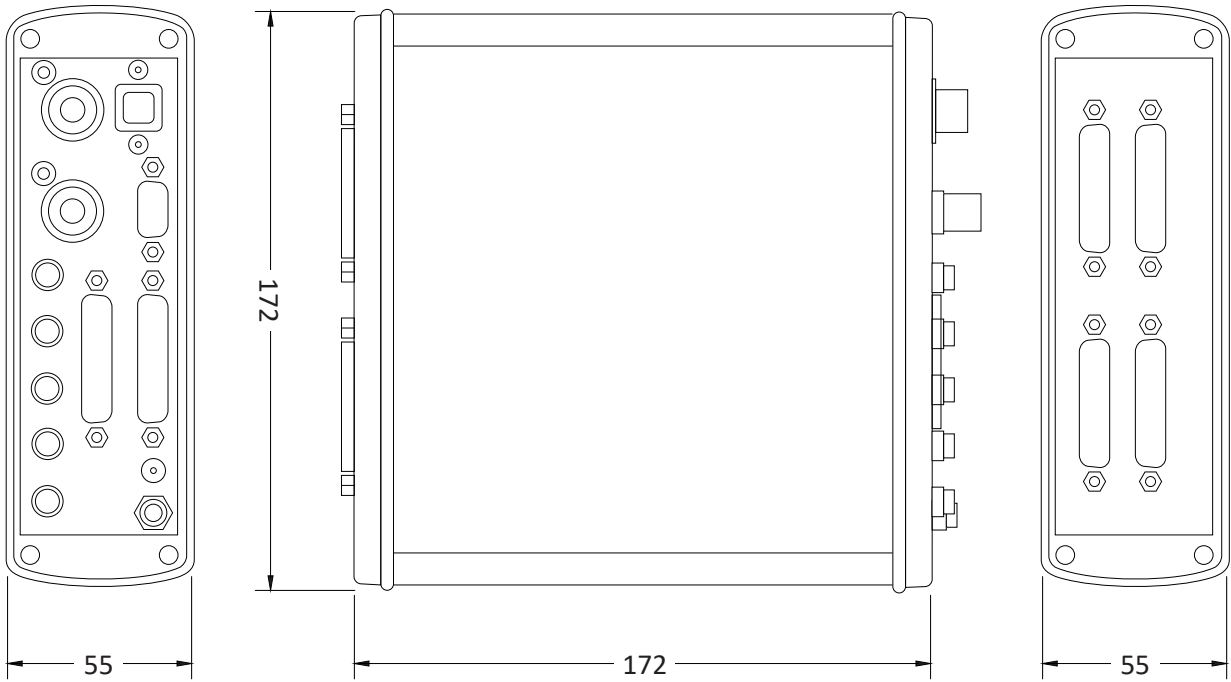
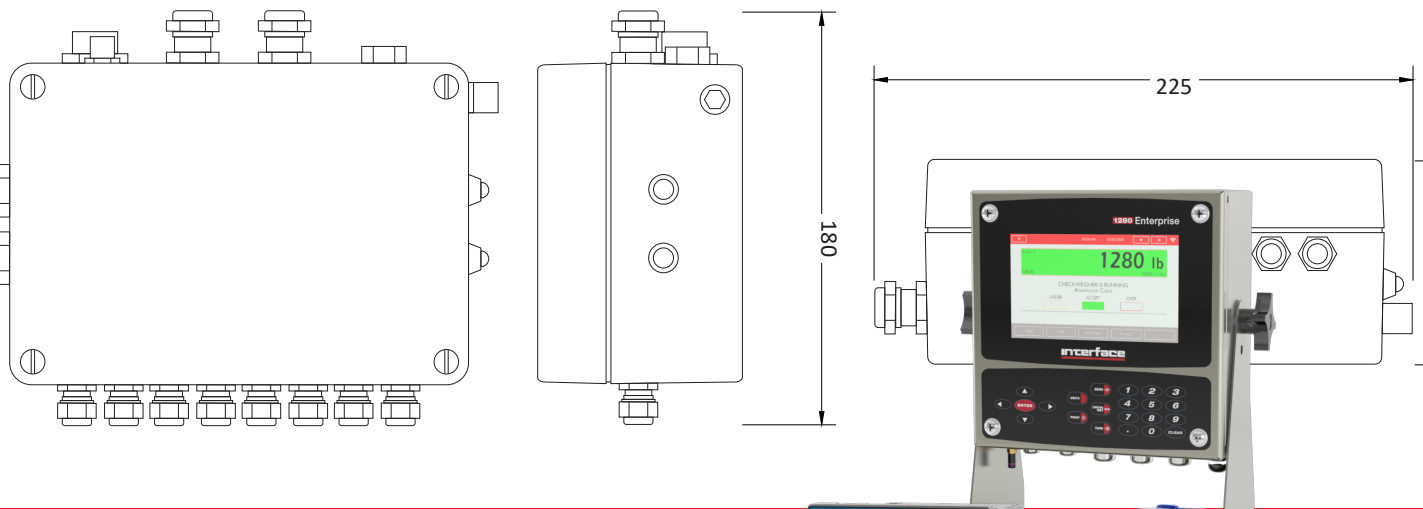


Interface

Instrumentation

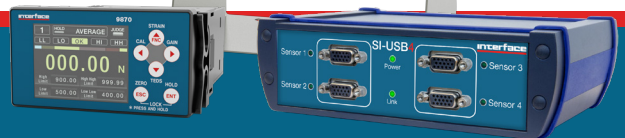


Instrumentation v1.2 04-19-2022



interface
FORCE MEASUREMENT SOLUTIONS

The World Leader in Force Measurement Solutions™



Interface provides instrumentation including signal conditioners, high speed data loggers, portable load cell indicators, weight indicators and junction boxes.

Many instruments are used in force measurement applications. We provide full data acquisition and wireless telemetry systems for load cell and torque transducers. Our multi-channel bridge amplifier has a 4-channel capability, while the INF-USB3 universal serial has a sensor to USB output converter.

Excitation

- A Wheatstone bridge-based sensor, such as a load cell, requires excitation voltage to operate. The excitation voltage is typically 10V; however, many instruments supply lower voltage, an 2.5V, 5V, and others. Since these sensors are ratiometric, our instrumentation is a great match for these types of products.

Signal

- The output signal from a load cell is expressed in terms of mV output per V of excitation, at capacity. For example, a 100 lb capacity load cell rated for 2 mV/V output will have 20mV output at 10V, when excited with 10V. Because the output signal is directly affected by input voltage, it's important to maintain a stable excitation voltage, which our instrumentation does. A signal can also be a voltage or mA signal as well.

Signal Conditioner

- Provides stable excitation voltage to the sensor and amplifies the low-level sensor signal to a high-level output such as +/-5V, +/-10V, 0-20mA, 4-20mA, 0-5V, or 0-10V.
- Many of our products include filtering, which can help reduce noise in the output signal.
- Many data acquisition systems require high-level inputs such as +/-10V and don't work very well with low level mV signals but ours do.
- The DAQ doesn't necessarily supply a stable excitation voltage to the sensor but ours do.
- When selecting, some things to consider are power supply requirements, amount of filtering, fixed or adjustable filtering, input range, scalability and zero adjustment range. Our instrumentation can accommodate these requirements.

PC Interface Modules

- Converts the low-level mV/V sensor signal to a digital format that can be transmitted to a PC.
- Popular interface modules provide USB, wireless USB, or Bluetooth data transmission.
- Software is normally provided and allows data display, logging and/or graphing.
- Commonly used when data needs to be logged to a PC and a the customer doesn't already have an existing data acquisition system.
- Advantages over standard data acquisition is ease of use and they are normally plug-n-play.
- Considerations include bit resolution, number of channels, sample rate, software features and type of output.

Indicators

- Provides stable excitation voltage and converts the sensor signal to a digital display.
- Commonly available features include analog or digital output, selectable digital filtering, peak and valley monitoring and set point outputs.
- Things to consider when selecting an indicator are internal sample rate and update rate of analog output.

Wireless Telemetry System (WTS)

- Easy-to-use wireless data communication between a load sensor and a receiving indicator.
- Capable of receiving multiple inputs.
- Fully compatible will all Interface force sensors.
- Comes calibrated, tested and ready-to-run.
- Lasts up to 3 months using AA batteries.

Instrumentation Definitions

Instrument	Indicator	Signal Conditioner	PC Interface Module	Graphing	Logging
480	✓	✓			
482	✓	✓			
920i	✓	✓			
9320	✓				
9330	✓	✓		✓	✓
9825	✓	✓			
9840	✓	✓			
9850	✓	✓			
9870	✓	✓		✓	
9890/9894	✓	✓			✓
1280	✓	✓			
BSC4A		✓			
BSC4D			✓	✓	✓
BTS	✓			✓	
BX6-BT			✓	✓	✓
BX8		✓	✓	✓	✓
CSC/LCSC		✓			
DIG-USB/DIG-USB-F			✓	✓	✓
DMA2		✓			
INF-USB3			✓	✓	✓
INF1	✓	✓			
INF4	✓	✓			
ISG		✓			
SGA		✓			
SI-USB4			✓	✓	✓
VSC		✓			
WTS	✓	✓	✓	✓	✓



480 Bidirectional Weight Indicator

Digital and Environmentally Protected



482 Battery Powered Bidirectional Weight Indicator

Digital, Environmentally Protected



920i Programmable Weight Indicator/Controller

Digital and Programmable



9320 Battery Powered Portable Load Cell Indicator

Digital, Hand Held, Battery Powered, TEDS Ready



9330 Battery Powered High Speed Data Logging Indicator

Portable Display



9825 General Purpose Indicator

Bipolar, High Speed



9840 Calibration Grade Multi-Channel Load Cell Indicator

Digital and Intelligent



9840-400-1-T 4-Channel Intelligent Indicator

Digital and Intelligent



9840TQ mV/V Input Torque Transducer Indicator

Digital and Intelligent



9850 Torque Transducer & Load Cell Indicator

Digital and Multi-Channel



9870 High-speed High Performance Teds Ready Indicator

High Speed, Digital Indicator



9890 Strain Gage, Load Cell, and mV/V Indicator

Software Available for Setup and Logging



9894 Analog Input Process Indicator

Software Available for Setup and Logging



1280 Programmable Weight Indicator & Controller

Programmable Digital Weight Indicator



INF1 Single Sensor Weight Transmitter & Indicator

RS485, Analog, PROFIBUS, Modbus/TCP, Ethernet TCP/IP, Ethernet/IP, & PROFINET IO



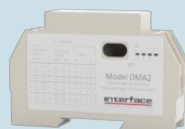
INF4 2, 3, and 4 Sensor Input Weight Transmitter & Indicator

RS485, Analog, PROFIBUS, Modbus/TCP, Ethernet TCP/IP, Ethernet/IP, & PROFINET IO



CSC/LCSC OEM Inline Signal Conditioners

In-line Load Cell Amplifier



DMA2 DIN Rail Mount Signal Conditioner

Strain Gage Transducer Bridge Input Amplifier



ISG Isolated DIN Rail Mount Signal Conditioner

Galvanically Isolated



SGA AC/DC Powered Signal Conditioner

Strain Gage Transducer Amplifier



VSC Vehicle Powered Signal Conditioner
Vehicle Compatible



BX6-BT Portable 6-Channel High Speed Bluetooth Data Logger
6-Channels, 6-Axis Compatible



BX8-AS 8-Channel Data Acquisition System & Amplifier
Software Available for Setup, Logging, Graphing, and Matrix Calculations



BX8-HD15/BX8-HD44 8-Channel Data Acquisition System & Amplifier
Software Available for Setup, Logging, Graphing, and Matrix Calculations



INF-USB3 Universal Serial Bus Single Channel PC Interface Module
PC Interface Module



SI-USB4 4 Channel USB Interface Module
4 Channel PC Interface Module



JB104SS 4-Channel Stainless Steel Junction Box
4-Channel Summing



BTS Bluetooth Telemetry System
Bluetooth Strain Gage Transmitter



WTS-AM-2 Wireless Voltage Sensor Transmitter
For Voltage Input



WTS-AM-3 Wireless 4-20 mA Transmitter Module
For mA Input



WTS-BS-1 Wireless Handheld Display For Unlimited Transmitters
Roams Between Transmitters in Range



WTS-BS-1-HA Wireless Handheld Display for Multiple Transmitters
Provides Summation of Up to 12 Transmitters



WTS-BS-4 Wireless Base Station with USB Interface in Industrial Enclosure
Includes WTS Toolkit Software and Log 100 Software



WTS-BS-5 Wireless Analog Output Receiver Module
Provide Analog Output for WTS Acquisition Modules



WTS-BS-6 Wireless Telemetry Dongle Base Station
Includes WTS Toolkit Software and Log 100 Software



WTS-LD1/ WTS-LD2 Wireless Large LED Display
Large Screen with 4-digit/6-digit 4 in (100/102 mm) LED display



WTS-RM1 Wireless Relay Output Receiver Module
Accepts Up to 16 Devices



WTS-SO Wireless Interface with ASCII Serial Output
Serial Output to Printer, Display, PC or PLC



WTS-WSS Wireless Wind Speed Transmitter Module
Constantly Monitors Average Wind Speed



WTS-AR Wireless Repeater Module
Extends and Enhances Range of WTS Devices



BSC4A/BSC4D Multi-Channel Bridge Amplifier & PC Interface Module
4-Channel Capability



DIG-USB/DIG-USB-F USB Output Module
PC Interface Module
Fast PC Interface Module



WTS-AM-1E Wireless Strain Bridge Transmitter Module
For Strain Bridge Input



WTS-AM-1F Wireless Strain Bridge Transmitter Module
For Fast Measurements



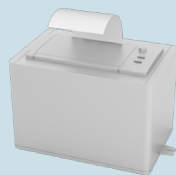
WTS-BS-1-HS Wireless Handheld Display for Single Transmitters
Simple Operation



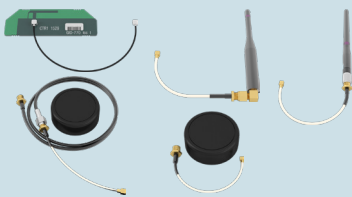
WTS-BS-3E Wireless Base Station with USB Interface
Comes with WTS Toolkit Software and Log 100 Software



WTS-GW1 Wireless Gateway with Modbus and ASCII Serial Output
Capable of Gathering Data from Up to 100 Acquisition Modules



WTS-PR1 Wireless Telemetry Printer
Prints Screen from the Handheld WTS-BS-1-HA



WTS-ANTA/ANTB/ANTC/ANTD/ANTE Telemetry Antenna Options
Compatible WTS Products Only

Instrumentation Software

- BlueDAQ Software
- DIG-USB Toolkit
- DIG-USB-F Toolkit
- Log 24 Software
- Log 100 Software
- INF-USB-VS 3 Software
- MeterView Pro Software
- T-USB-VS Software
- WTS Toolkit
- BTS Toolkit

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Interface Instruments

- Digital Indicators
- Signal Conditioners
- Digital Output Indicators
- Analog Indicators
- USB Interface Modules
- Data Acquisition
- Junction Boxes
- Acquisition Modules
- Wireless
- Repeater Modules
- Modbus
- LED Displays
- Remote Data Collection

Interface force measurement instruments are available in many design configurations for project designs requiring the highest performance.

To learn more about the Interface products or force measurement solutions call 480-948-5555.

Interface is the world's trusted leader in technology, design and manufacturing of force measurement solutions. Our clients include a "who's who" of the aerospace, automotive and vehicle, medical device, energy, industrial manufacturing, test and measurement industries.

Interface engineers around the world are empowered to create high-level tools and solutions that deliver consistent, high quality performance. These products include load cells, torque transducers, multi-axis sensors, wireless telemetry, instrumentation and calibration equipment.

Interface, Inc., was founded in 1968 and is a US-based, woman-owned technology manufacturing company headquartered in Scottsdale, Arizona.



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