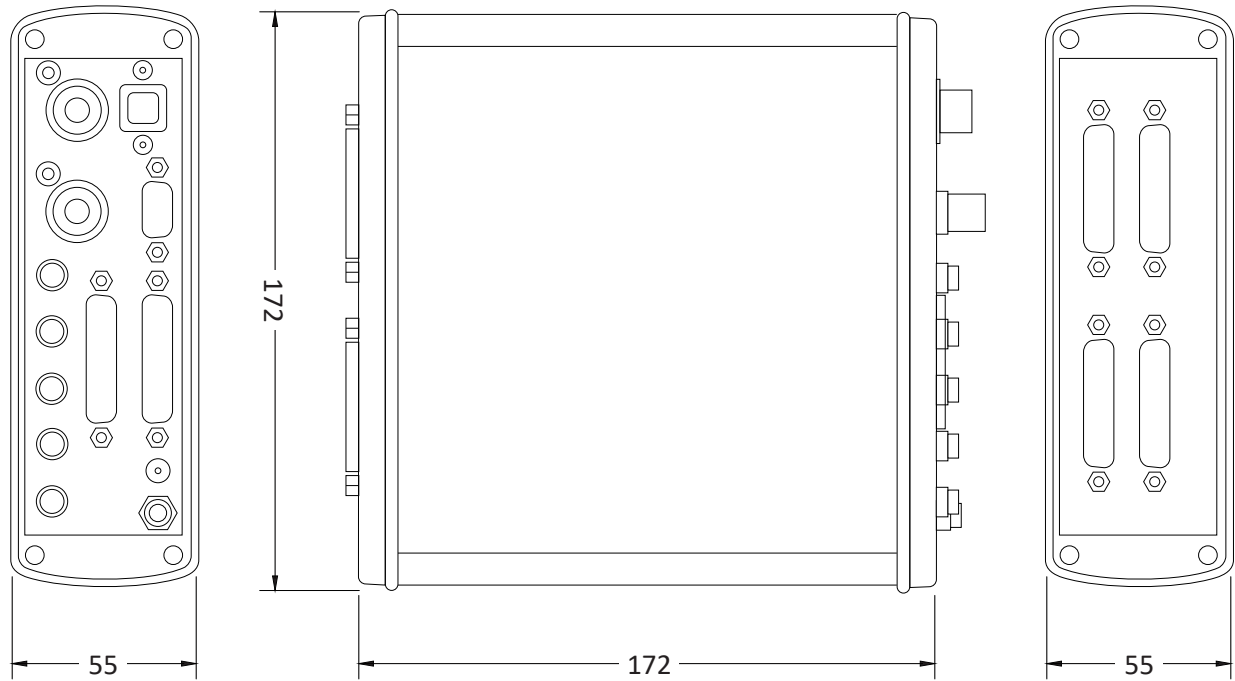
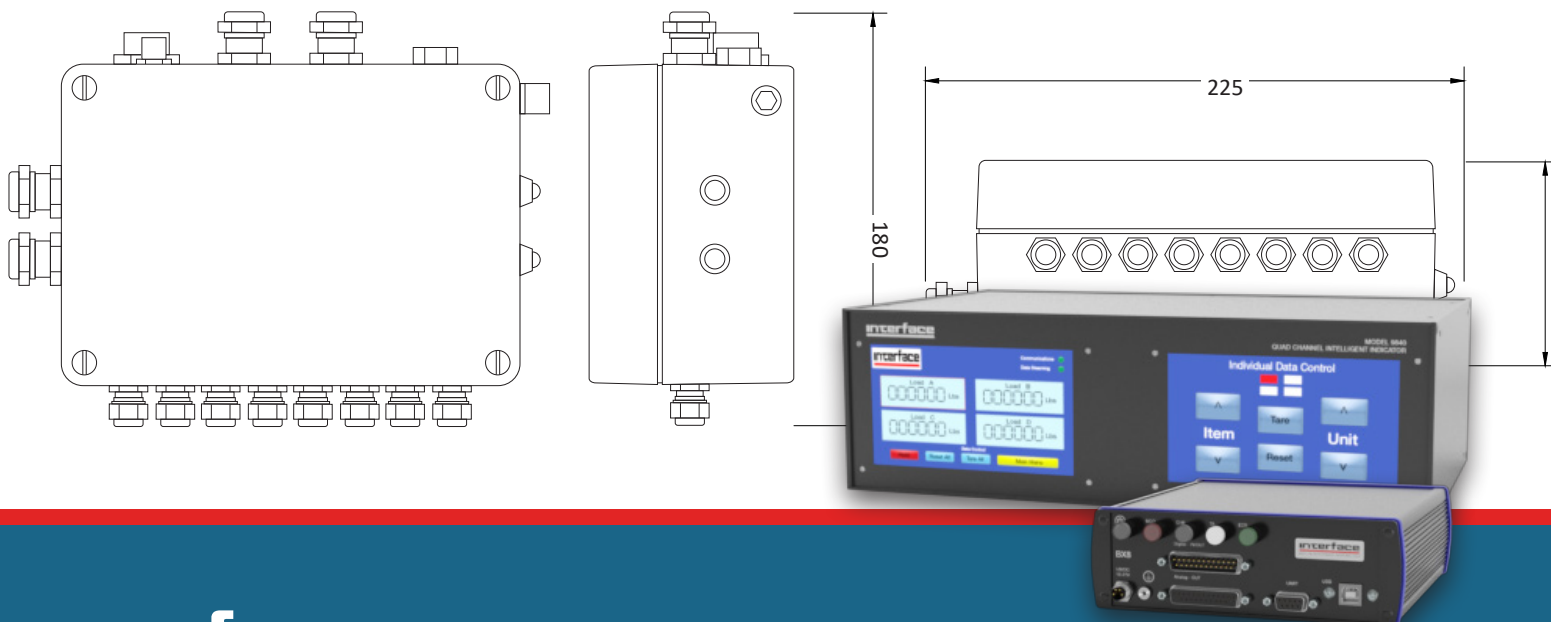


Interface

Instrumentation



Instrumentation v1.1 02-06-2020



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-USB2 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 100 lb, 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.

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.



480 Bidirectional Weight Indicator

Digital and 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



9390 Battery Powered Weight Indicator

Battery Powered



9840 Calibration Grade Multi-Channel Load Cell Indicator

Digital and Intelligent



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

Digital and Intelligent



9850 Torque Transducer and Load Cell Indicator

Digital and Multi-Channel



9860 High Speed Digital Indicator

Software Available for Setup and Logging



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



LCT-1 Load Cell Troubleshooting Instrument

Load Cell Test Instrument



BSC4 Multi-Channel Bridge Amplifier and PC Interface Module

4-Channel Capability



BX8 8-Channel Data Acquisition System and Amplifier

Software Available for Setup, Logging, Graphing, and Matrix Calculations



CSC/LCSC OEM Inline Signal Conditioners

In-line Load Cell Amplifier



VSC Vehicle Powered Signal Conditioner

Vehicle Compatible



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



JB104SS 4-Channel Stainless Steel Junction Box

4-Channel Summing



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



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



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



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



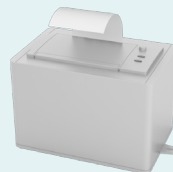
WTS-BS-6 Wireless Telemetry
Dongle Base Station
Includes WTS Toolkit
Software and Log 100 Software



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



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-RDC Wireless
Remote Data Collection
Wireless Input Range of
Up to 2,625 ft (800 m)



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



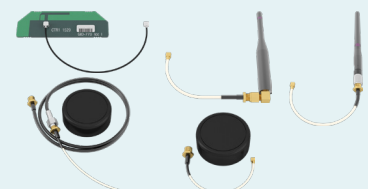
WTS-SO Wireless Interface
with ASCII Serial Output
Serial Output to Printer,
Display, PC or PLC



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



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



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



BTS Bluetooth Telemetry System
Bluetooth Strain Gage Transmitter



DIG-USB USB Output Module
PC Interface Module



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



INF-USB2 Universal Serial Bus Single Channel PC Interface Module



SI-USB Universal Serial Bus Dual Channel PC Interface Module

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 with all Interface force sensors.
- Comes calibrated, tested and ready-to-run.
- Lasts up to 3 months using AA batteries.

Interface Instrumentation Software

- BlueDAQ
- Model 9850
- DIG-USB Toolkit
- DIG-USB-F Toolkit
- INF-USB2-VS
- SI-USB-VS
- MeterView Pro
- T-Software
- Log 100
- WTS Toolkit

Instrumentation Definitions

Instrument	Indicator	Signal Conditioner	PC Interface Module	Graphing
WTS	✓	✓	✓	✓
9860	✓	✓	✓	
9850	✓	✓	✓	
9840	✓	✓		
9894	✓	✓	✓	
9890	✓	✓	✓	
9390	✓			
9320	✓			
480	✓	✓		
INF-USB2			✓	✓
SI-USB			✓	✓
BSC4		✓	✓	✓
DMA		✓		
VCA		✓		
SGA		✓		
ISG		✓		
CSC		✓		
LCSC		✓		

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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.