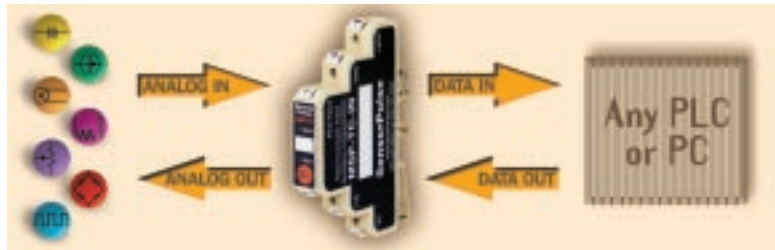


ANALOG I/O MODULES THAT CHANGE HOW WE THINK AND IMPROVE HOW WE WORK

SensorPulse has redefined the way analog signals are converted to digital data using its patented *single wire digital communication*. With SensorPulse palm-size modules, users

can acquire practically any analog signal, including Thermocouple, RTD, Current, Voltage, Frequency, and Potentiometer, and convert it to 12 or 16 bit

digital data for input to virtually any PLC, PC or even a ModBus Network (Universal SensorPulse Module only.) The result for users is complete platform independence! SensorPulse even works with PLCs that don't have analog I/O capabilities, by using



SensorPulse's 16 bit binary-weighted protocol, a single digital I/O point, and a small ladder program loaded on the PLC to capture all the varying signals of analog data. The

SensorPulse Analog I/O Module also accepts digital output from a PLC or PC and converts it to a current or voltage analog signal for output to con-

nected devices. Since the SensorPulse Module can reside near the sensor, and outputs a digital signal, the unit may be safely located a long distance from the PLC using low cost stranded wire without additional signal conditioning or data quality degradation.

Dedicated, Compact Analog I/O Modules

Measuring 88mmH x 12mmW x 68mmD, the feature-rich MSP Analog I/O Smart Modules are engineered with an all-digital design to provide a stable, state-of-the-art and cost effective solution. The MSP modules allow analog input and output for any PLC and are available in six different models: Thermocouple, RTD, Current, Voltage, Frequency, or Potentiometer. Each model is further configurable either at the factory or in the field to meet the user's unique requirements such as sensor ranges and scaling. Using SensorPulse SignalFlex software, run on a familiar Windows®/PC or Windows® CE/

Palmtop HPC, users now have the flexibility to make alterations to the modules without purchasing proprietary hardware or learning a complicated new interface.



Shown with optional DIN rail packaging

The First Universal Analog Open I/O Modules That Work With Any Signal Type And Any PLC

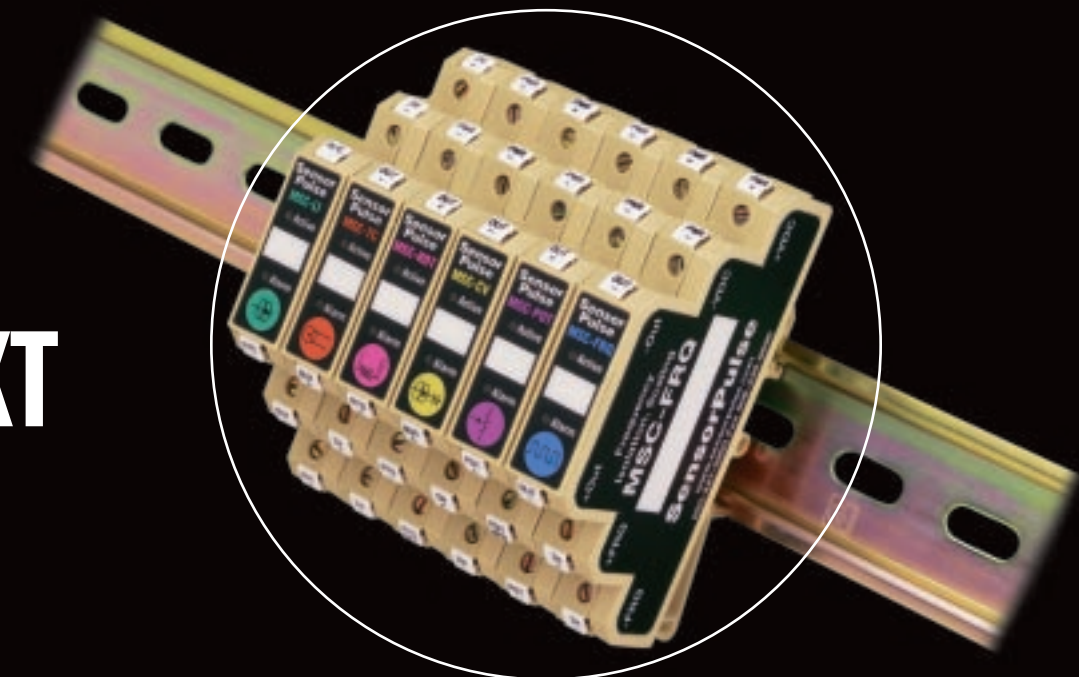
For maximum flexibility and functionality in analog I/O signal processing, SensorPulse Universal SP Analog I/O Modules are unsurpassed. Using intuitive Windows®-based software, Universal Modules are easily and quickly field configurable to work with any input or output signal type. SensorPulse's adaptability reduces costs by eliminating the need to stock

spare parts of multiple I/O module types. With SensorPulse, just one Universal Analog I/O module can meet all your needs. And, for users who require multiple signal processing from different analog sources simultaneously, SensorPulse provides models with up to two input and two output channels.

INTRODUCING

SensorPulse

THE NEXT



REVOLUTION

IN SIGNAL

Signal Conditioners

Isolators

Analog I/O

PROCESSING

**TAKE PART IN A REVOLUTION!
CONTACT US FOR MORE DETAILS.**

Toll Free: 800-447-5900

SensorPulse Corp., 117 Eastman Street, S. Easton, MA 02375
508-230-9000 • Fax: 508-230-9090 • Web Site: www.sensorpulse.com

SensorPulse

THE NEW STANDARD FOR SIGNAL CONDITIONER SIZE, COST, AND PERFORMANCE

SensorPulse® introduces the next revolution in signal processing. Thanks to its cutting-edge patented technology, you can now process a broad range of signals in ways never before available. In addition, you'll improve flexibility, precision, efficiency, and cost effectiveness.

To meet the market's variety of needs, SensorPulse offers four types of signal processing modules:

- Dedicated Signal Conditioners & Isolators
- Universal Signal Conditioners
- Dedicated Analog I/O
- Universal Analog I/O

At the core of SensorPulse's signal processing revolution is its **enabling** technology:

- **enabling** users to save money and space with SensorPulse small profile technology...
- **enabling** users to configure units for a broad range of signal types via Windows®-based software...
- **enabling** analog devices to communicate with any PLC or PC and vice versa through its patented *single wire digital communications* protocol.

The freedom is revolutionary!



All SensorPulse Dedicated Modules are conveniently configurable using a standard palmtop HPC running Windows® CE

HIGH PERFORMANCE SOLUTION

The SensorPulse line of Dedicated (MSC) and Universal (USC) Signal Conditioning Modules represents state-of-the-art 16 bit resolution signal conditioning technology. It is the perfect low cost, high performance front-end interface solution for any Programmable Logic Controller or Data Acquisition System. SensorPulse Modules condition an extensive range of analog signal types, including Thermocouple, RTD, Current, Voltage, Frequency and Potentiometer.

FLEXIBILITY BY DESIGN

Each SensorPulse Module contains a built-in microprocessor, allowing the units to perform "smart" functions including scaling and linearization. The 100% digital design offers unsurpassed flexibility, ease of use, and accuracy. By tapping into SensorPulse's Windows®-based SignalFlex™ software, users gain even more flexibility. The user-friendly software enables users to configure a broad range of parameters on the Module without tedious dip switches or other less precise, vibration prone electro-mechanical methods.

Dedicated, Compact Signal Conditioning Modules

Unlike other signal conditioners, MSC Signal Conditioning Modules are built on an all-digital design, making them one of the smallest, most affordable and highest performing dedicated signal conditioners available. Their miniature size — an industry first — allows up to 24 individual SensorPulse Dedicated Modules to be installed per linear foot — saving valuable panel space, decreasing power supply requirements, and lowering the overall cost of installation.

SAVINGS NOW, SAVINGS LATER

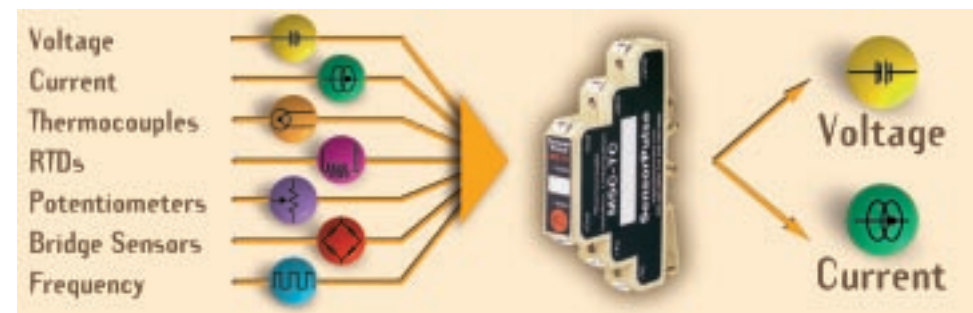
The compact digital design also helps reduce ongoing operating and maintenance cost. Consuming less than half the typical power, SensorPulse Modules use smaller, less expensive power supplies and are not susceptible to heat build-up that can reduce reliability and long-term product longevity. Furthermore, in an industrial environment where modules may be subject to extreme conditions, SensorPulse's single board design eliminates wire and daughter board connections that, if loose, could possibly create costly service problems.

In addition to condensed size, the all-digital technology found in SensorPulse



MSC Dedicated Signal Conditioning Modules offers many other benefits. For example, SensorPulse has replaced on-board potentiometers with highly accurate digital calibration circuitry providing tolerances twice as precise as the competition. The Thermocouple model also performs extremely accurate digital cold junction compensation — another industry first. All models provide two- and three-way optical and transformer isolation to eliminate the concern of ground loops and noise. Short circuit, surge and reverse power protection, and a broad operating temperature range of -40°C to 75°C are standard features of all Dedicated Modules.

Just as important is SensorPulse's compact open architecture, with its ability to reduce the cost of configuring, calibrating and maintaining system instrumentation. You are no longer required to buy proprietary hardware devices. Users may now employ any Windows®-based PC or HPC palmtop running Windows® CE — yet another industry first!



Universal Signal Conditioning Modules That Work With Any Signal Type

No other signal conditioner in its price range is more flexible than the SensorPulse USC Universal Module. This Module can be quickly field configured to accept, through its two independent channels, virtually any analog signal type. Think of it as a signal conditioner with multiple personalities — one day it's a thermocouple conditioner, the next day it's a frequency conditioner or whatever you need it to be!

Other valuable features include strain gauge/load cell excitation and a digital output which may be used to activate an alarm or visual device.

NETWORK ACCESS

SensorPulse makes communicating with the Module easy, too. It can be connected directly to a PC or via a built-in RS232/RS422/RS485 port to a Multi-drop ModBus™ network. This

enhanced network capability allows Universal Modules to interface with HMI/SCADA packages such as Wonderware, Intellution, RSView, LabView, Iconics and other popular software packages.



Shown with optional DIN rail packaging