DISTRIBUTED I/O AND SIGNAL CONDITIONERS

- Ethernet, Modbus, Profibus I/O
- Transmitters, Isolators, Splitters
- Limit Alarms / Computation
- I/O Modules
Experience counts: especially when you are selecting an I/O partner. And with 60+ years of I/O experience, Acromag can help you to improve reliability, increase productivity and reduce your costs.

Acromag: The I/O Leader
Acromag is a customer-driven manufacturer focused on developing process automation I/O products that provide the best long term value in the industry. Compare and you’ll find that Acromag products offer an unmatched balance of price, performance, and features.

60+ Years of I/O Experience
Acromag has more than 60 years of measurement and control experience. Since 1957, we have delivered nearly a million units to thousands of customers around the globe for manufacturing, power, environmental, transportation, and military applications.

Top Quality and a 2-Year Warranty
We take every measure to guarantee you dependable operation and products that perform at or beyond their specifications. Our state-of-the-art manufacturing and military-grade components add an extra degree of ruggedness. Most products qualify for an extended 2-year warranty. And with ISO 9001/AS9100 certified quality control, you get full confidence.

All trademarks are the property of their respective owners.

Online Ordering
For your convenience, Acromag provides full product documentation and pricing information on our website. You can obtain quotes or even place your order directly on our website.

Fast Delivery from Stock
Most products can be shipped within 24 hours of receiving your order.

Special Services
We are happy to accommodate your special requirements and offer the following services:
- custom product development
- custom calibration
- source inspections, quality audits
- special shipping, documentation
- protective humiseal coating
- plastic and stainless steel tagging

Certification and Approvals
Many Acromag products carry globally recognized agency approvals and safety certifications.
- CE
- UL, cUL
- ATEX
- Profibus certification
- CSA
- Ethernet conformance
- Modbus conformance
- IECEx

Depend on Acromag

Acromag, Incorporated ■ 30765 South Wixom Road ■ Wixom, Michigan 48393 ■ USA
How Acromag I/O Is Used

Acromag I/O is ideal for a broad range of monitoring and control operations where controllers communicate with instrumentation on the plant floor or in the field.

Acromag Advantages
- Wide operating temperature ranges (up to -40 to 85°C).
- High resistance to RFI, EMI, surges, electrical transients.
- High-voltage isolation and built-in surge suppression.
- Easy to use and maintain.
- High channel density to save space.
- Large inventory of stock items for same day shipping.
- Special designs and custom services available.
- 2-year warranty available at no extra cost
- AS9100 and ISO 9001 certified quality management

Operation in All Locations
- Safe zones and hazardous locations (Zone 2).
- Explosion-proof locations (Zone 1).
- Approvals from CE, UL/cUL, FM, CSA, ATEX, IECEx.

Controller Interface
- PLCs, PACs, controllers
- DCS distributed control systems
- PCs, embedded computers, SCADA systems
- Operator interface terminals and remote terminal units

Continuous Sensors
- Temperature
- Flow
- Speed
- Position
- Pressure
- Level
- Weight / load
- Drives

Discrete Sensors and Switches
- Dry contacts
- Solid-state
- Valves
- PNP, NPN
- Proximity
- Lights, horns

Actuators and Analytical Instruments
- Drives, motors
- Heaters, coolers
- Displays, indicators
- Power supplies
- Valves, positioners
- Recorders, analyzers
# Industries Served

## Raw Materials Processing
These industries rely on Acromag process instruments for accurate and repeatable measurements from sensor signals.
- Chemical, petrochemical
- Metal, glass, ceramic
- Pulp, paper, textile

## Factory Automation
Fast response times, high reliability, and proven compatibility with control networks make Acromag I/O popular for use on assembly lines.
- Food, beverage, pharmaceutical
- Automotive, electronic assembly
- Building automation, HVAC

## Oil, Gas, and Mining
Built for operation in extreme environments, Acromag I/O reliably interfaces sensors to actuators and controllers.
- Exploration, extraction
- Production
- Distribution

## OEM Machine Control
High channel density plus shock and vibration immunity help machine builders add more I/O to monitor and control their equipment.
- Semiconductor, lithography
- Boilers, furnaces, generators
- Test stands, industrial machinery

## Power Generation
Able to resist noise and surges from high-voltage electrical sources, Acromag I/O delivers dependable data to plant control systems.
- Fossil fuels, hydroelectric, nuclear
- Solar, wind, geothermal
- Fuel cells, batteries

## Defense, Security, and Aerospace
Acromag I/O finds a home in many military and security systems due to their ability to operate over wide temperature ranges.
- Simulators and trainers
- Ground / airborne / naval controls
- Surveillance systems

## Factory Automation
Fast response times, high reliability, and proven compatibility with control networks make Acromag I/O popular for use on assembly lines.
- Food, beverage, pharmaceutical
- Automotive, electronic assembly
- Building automation, HVAC

## Research and Development
When high-resolution and high-accuracy measurements are required, Acromag I/O ensures precise data collection.
- Test and measurement systems
- Data acquisition systems
- Scientific research
- Quality control/assurance

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**Contact Information:**
- 877-214-6267
- sales@acromag.com
- www.acromag.com

© Acromag Inc
Peer-to-Peer Communication
Many Acromag I/O modules have i2o technology for “input-to-output” peer-to-peer over Ethernet.
- Automatically transmits analog or discrete I/O information between modules
- Wire-saver, mux/de-mux, splitter tasks

BusWorks® XT Series
- Ethernet/IP, Profinet, Modbus TCP/IP, and i2o peer-to-peer communication
- Easy PC/Windows configuration via USB
- Redundant and bussed DC power

BusWorks® 900 Series
A series of dependable, yet economical, remote analog and discrete I/O modules for Ethernet or RS485 networks.
- Ethernet/IP, Modbus TCP/IP, i2o peer-to-peer, Modbus-RTU, and Profibus-DP communication
- Easy configuration using Internet browser or Windows software

EtherStax® ES2000 Series
High-density I/O blocks designed for high-reliability operation in Ethernet networks.
- Modbus TCP/IP, UDP/IP, and i2o peer-to-peer communication
- Up to 96 channels of discrete or analog I/O in a vertically-stackable unit with a small footprint
- Fast scan rates (below 1 millisecond)
- Redundant power and communication

Peer-to-Peer Communication
Many Acromag I/O modules have i2o technology for “input-to-output” peer-to-peer over Ethernet.
- Automatically transmits analog or discrete I/O information between modules
- Wire-saver, mux/de-mux, splitter tasks

Channel-to-Channel Isolated I/O Modules
Ethernet-enabled panel mounted signal conditioners with BusWorks or EtherStax I/O.
- Connect uB backpanels to Acromag Ethernet I/O with DB25 cable
- Over 170 low-cost, high-isolation models
- Up to 1500V AC isolation per channel

Software Tools
- OPC, .NET, ActiveX, Visual Basic/C++
- Function libraries with C source code
- Compatible with Windows, Linux, VxWorks, QNX, OS-9, and other OSs
DT230/330 Series
A high-performance line of programmable dual-channel transmitters.
- Easy configuration via USB with Windows software or Agility App™ for Android
- Wide variety of input, output, and power configurations

TT230/330 Series
A high-performance line of thin transmitters and isolators offering great flexibility.
- Easy configuration via USB with Windows software or Agility App for Android
- Wide variety of input, output, and power configurations

600T Series
Select from a broad line of isolators, splitters, and transmitters.
- Auto-configuration and self-ranging models for easy setup
- Wide variety of input, output, and power configurations

ST130 Series
Low-cost, miniature head-mount (DIN Form B) transmitters that deliver outstanding accuracy, linearity and stability.
- Easy PC/Windows configuration via USB
- Inputs: temperature, voltage, ohmic
- Output: 4-20mA DC (sink)

IntelliPack® 800 Series
Intelligent, programmable series of transmitters, math modules, and alarms.
- PC configuration, push-button adjust
- Wide variety of input, output, and power configurations

SP230/330 Series
A high-performance line of signal splitters / duplicators offering precise scaling of I/O ranges.
- Easy configuration via USB with Windows software or Agility App for Android
- Wide variety of input, output, and power configurations

microBlox® Series
High-performance solution for interfacing sensors and field devices with data acquisition systems.
- Bluetooth® wireless technology enabled
- User-configurable I/O ranges
- Alarm and input polling/trending capabilities

Accessories and Services
- Panel meters, power supplies
- Mounting and wiring accessories
- Coatings, tags, certificates, drawings

www.acromag.com/DT
www.acromag.com/TT
www.acromag.com/600T
www.acromag.com/IntelliPacks
www.acromag.com/ST130
www.acromag.com/SP
www.acromag.com/microBlox

NEW!
NEW!
NEW!
New DT230/330 Series Dual-Channel Programmable Transmitters

**New Product Announcement**

Acromag’s new DT Series transmitters are designed to offer a cost-effective space-saving solution to interface a variety of process and sensor signals to your control systems. Each model supports several input ranges and can output a proportional 0/4-20mA, 0-10V, or +/-10V DC signals.

**DT230/330 Advantages**

- USB-programmable (allows easy selection of options that is not possible with pots or jumpers)
- Dual unit saves space and reduces costs
- Signal splitter capability
- Selectable filtering levels
- Configurable output clamp levels (NAMUR)
- Removable, front-facing terminal blocks (simplify your wiring tasks)
- Rail power bus and redundancy
- Supports sink/source wiring
- -40 to 70°C operation
- CE compliant. UL/cUL Class I Division 2 and IECEx ATEX Zone 2 approvals pending.

**2-Wire and 4-Wire Software-configurable Models Available**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DT230 Series</strong> 7-32V DC Loop/Local Power</td>
<td></td>
</tr>
<tr>
<td>DT233</td>
<td>Universal thermocouple or ±100mV input, 4-20mA outputs (sink/source)</td>
</tr>
<tr>
<td>DT235</td>
<td>RTD (Pt, Ni, Cu), 0-4500 ohm input, 4-20mA outputs (sink/source)</td>
</tr>
<tr>
<td>DT236</td>
<td>DC current and low voltage input, 4-20mA outputs (sink/source)</td>
</tr>
<tr>
<td>DT237</td>
<td>Multi-range ±1V, ±5V, or ±10V input, 4-20mA outputs (sink/source)</td>
</tr>
<tr>
<td>DT238</td>
<td>Multi-range ±15V, ±75V, or ±150V input, 4-20mA outputs (sink/source)</td>
</tr>
<tr>
<td><strong>DT330 Series</strong> 6-32V DC External Power</td>
<td></td>
</tr>
<tr>
<td>DT333</td>
<td>Universal thermocouple or ±100mV input, 0-20mA, ±10V or 0-10V outputs</td>
</tr>
<tr>
<td>DT335</td>
<td>RTD (Pt, Ni, Cu), 0-4500 ohm input, 0-20mA, ±10V or 0-10V outputs</td>
</tr>
<tr>
<td>DT336</td>
<td>DC current and low voltage input, 0-20mA, ±10V or 0-10V outputs</td>
</tr>
<tr>
<td>DT337</td>
<td>Multi-range ±1V, ±5V, or ±10V input, 0-20mA, ±10V or 0-10V outputs</td>
</tr>
<tr>
<td>DT338</td>
<td>Multi-range ±15, ±75, or ±150V input, 0-20mA, ±10V or 0-10V outputs</td>
</tr>
</tbody>
</table>

**DT230 Series**

- mA, V, mV, TC, RTD
- mA, V, mV, TC, RTD

**DT330 Series**

- mA, V, mV, TC, RTD
- mA, V, mV, TC, RTD

*877-214-6267 ■ sales@acromag.com ■ www.acromag.com*
New SP230/330 Series Signal Splitters

New Product Announcement
Acromag’s new SP230/330 series of isolated signal splitters/duplicators are designed for easier installation and setup. Eight models, covering a broad range of sensor signals, provide dual 4-20mA outputs proportional to a single current, voltage or temperature input. A USB connection to a Windows® PC or Android® device enables simple, precise configuration of I/O ranges and a variety of operational settings with free software.

SP220/230 Splitter Advantages
- Easy configuration via USB with Windows® software or Agility™ app for Android®.
- Input scales independently at each output.
- User-selectable filtering (none, low, med, high).
- User-configurable output range clamp levels support NAMUR-compliant operation.
- High accuracy, linearity, stability, and reliability.
- Shock (25g) and vibration (4g) resistant.
- CE compliant. UL/cUL Class I Division 2 and IECEx ATEX Zone 2 approvals.

2-Wire and 4-Wire Software-configurable Models Available

<table>
<thead>
<tr>
<th>SP230 Series 7-32V DC Loop/Local Power</th>
<th>SP330 Series 6-32V DC External Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP233 Universal thermocouple or ±100mV input, 4-20mA outputs (sink/source)</td>
<td>SP333 Universal thermocouple or ±100mV input, 0-20mA, ±10V or 0-10V outputs</td>
</tr>
<tr>
<td>SP236 DC current and low voltage input, 4-20mA outputs (sink/source)</td>
<td>SP336 DC current and low voltage input, 0-20mA, ±10V or 0-10V outputs</td>
</tr>
<tr>
<td>SP237 Multi-range ±1V, ±5V, or ±10V input, 4-20mA outputs (sink/source)</td>
<td>SP337 Multi-range ±1V, ±5V, or ±10V input, 0-20mA, ±10V or 0-10V outputs</td>
</tr>
<tr>
<td>SP238 Multi-range ±15V, ±75V, or ±150V input, 4-20mA outputs (sink/source)</td>
<td>SP338 Multi-range ±15, ±75, or ±150V input, 0-20mA, ±10V or 0-10V outputs</td>
</tr>
</tbody>
</table>

SP230 Series

- mA, V, mV, TC
- IN
- OUT 1
- OUT 2
- 4-20mA

SP330 Series

- mA, V, mV, TC
- IN
- PWR
- POWER
- OUT
- V OR mA
- V OR mA
New Product Announcement
Acromag’s microBlox® uB Series I/O modules offer a compact, high-performance solution for interfacing sensors and field devices with data acquisition systems. uB signal conditioning modules are ideal to isolate, filter, convert and amplify a wide variety of signal types for test, measurement, and control systems. Just plug uB modules into 4, 8, or 16-channel backpanels in any mix for a high-density analog I/O interface. Channel-to-channel isolation provides optimal noise and surge protection from ground loops, spikes, and high common mode voltages.

microBlox I/O Modules Advantages
- Selection of 175 I/O modules with Bluetooth® wireless technology capability, fixed-range, and cost-saving commercial grade versions.
- User-configurable I/O ranges with smartphone or tablet.
- Input polling with trend charts in Android® or iOS® app.
- Alarm output function with setpoint and deadband.
- 1500V AC isolation field-to-host and channel-to-channel.
- Up to 0.05% accuracy and 130db CMR.
- Shock and vibration-resistant without screws.

User-configurable & Fixed I/O Range Models Available

<table>
<thead>
<tr>
<th>Input Modules</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>uB30/uB40</td>
<td>±10mV to ±100mV input, 0-5V or ±5V output</td>
</tr>
<tr>
<td>uB31/uB41</td>
<td>±1V to ±60V input, 0-5V or ±5V output</td>
</tr>
<tr>
<td>uB32</td>
<td>0-20mA or 4-20mA DC input, 0-5V or ±5V output</td>
</tr>
<tr>
<td>uB34/uB35</td>
<td>RTD input, 0-5V or ±5V output</td>
</tr>
<tr>
<td>uB37/47</td>
<td>Thermocouple input, 0-5V or ±5V output</td>
</tr>
<tr>
<td>uB42</td>
<td>2-wire transmitter (0-20mA) input, 0-5V or ±5V output</td>
</tr>
<tr>
<td>uB45</td>
<td>0-50KHz input, 0-5V or ±5V output</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output Modules</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>uB39</td>
<td>0-20mA or 4-20mA DC field output, ±5V host input</td>
</tr>
<tr>
<td>uB49</td>
<td>0-10V or ±10V field output, ±10V host input</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Backpanels</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>uB04/0B04D</td>
<td>4 channel uB backpanel, surface or DIN-rail mount</td>
</tr>
<tr>
<td>uB08/0B08D</td>
<td>8 channel uB backpanel, panel or DIN-rail mount</td>
</tr>
<tr>
<td>uB16/1B16D</td>
<td>16 channel uB backpanel, panel or DIN-rail mount</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Power Options</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>uBDC1</td>
<td>5V DC power module, 10-32V DC supply input</td>
</tr>
</tbody>
</table>
**New microBlox® Transmitting Alarms**

The uBTA carriers are used with Acromag’s microBlox® signal conditioning modules to create powerful alarms that also provide a voltage/current transmitter output. The plug-in modules offer the convenience of wireless field programming on a smartphone or tablet.

The microBlox uB modules offer a space saving solution for isolating, monitoring, and converting sensor signals to interface with your data acquisition or control system. By inserting a uB input module into a single or dual channel carrier, you get a device with both alarm and transmitter capabilities. With a broad selection of uB input modules, you can monitor many different signal types by simply interchanging modules on the carrier.

**microBlox® Transmitting Alarms Advantages**

- Single/dual alarms with two independent mechanical or solid-state relays, up to 5A switching.
- Transmitter output with 4-20mA and 0-5V signal ranges.
- Interchangeable input modules for measuring a wide variety of signal types.
- Easy configuration using Bluetooth® wireless technology.
- Rugged design for use in harsh environments.

**microBlox® Transmitting Alarms Selection Guide**

### Carriers

<table>
<thead>
<tr>
<th>Carriers</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>uBTA-H-1MR</td>
<td>Single transmitter/alarm in housing; mechanical or solid-state relays.</td>
</tr>
<tr>
<td>uBTA-H-1SR</td>
<td>Single transmitter in housing.</td>
</tr>
<tr>
<td>uBTX-H-1</td>
<td>Single transmitter, panel mount; mechanical or solid-state relays.</td>
</tr>
<tr>
<td>uBTA-P-1MR</td>
<td>Single transmitter/alarm, panel mount; mechanical or solid-state relays.</td>
</tr>
<tr>
<td>uBTA-P-1SR</td>
<td>Single transmitter/alarm, panel mount; mechanical or solid-state relays.</td>
</tr>
<tr>
<td>uBTA-P-2MR</td>
<td>Dual transmitter/alarm, panel mount; mechanical or solid-state relays.</td>
</tr>
<tr>
<td>uBTA-P-2SR</td>
<td>Dual transmitter/alarm, panel mount; mechanical or solid-state relays.</td>
</tr>
<tr>
<td>uBSP</td>
<td>Dual tandem analog current and voltage outputs signal splitter</td>
</tr>
</tbody>
</table>

### Modules: Plug-in Analog Field Input Modules

<table>
<thead>
<tr>
<th>Modules</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>uB30-B</td>
<td>DC millivolt input, 5Hz bandwidth (uB30-B) or 1kHz bandwidth (uB40-B); Configurable ±100mV.</td>
</tr>
<tr>
<td>uB40-B</td>
<td>DC millivolt input, 5Hz bandwidth (uB30-B) or 1kHz bandwidth (uB40-B); Configurable ±100mV.</td>
</tr>
<tr>
<td>uB31-B</td>
<td>DC voltage input, 4Hz bandwidth (uB31-B) or 1kHz bandwidth (uB41-B); Configurable ±1- ±60V.</td>
</tr>
<tr>
<td>uB41-B</td>
<td>DC voltage input, 4Hz bandwidth (uB31-B) or 1kHz bandwidth (uB41-B); Configurable ±1- ±60V.</td>
</tr>
<tr>
<td>uB32-B</td>
<td>DC current input (uB32-B); optional 2-wire loop excitation (uB42-B); Configurable 0-20mA.</td>
</tr>
<tr>
<td>uB42-B</td>
<td>DC current input (uB32-B); optional 2-wire loop excitation (uB42-B); Configurable 0-20mA.</td>
</tr>
<tr>
<td>uB34-B</td>
<td>Pt RTD input; 2 or 3-wire (uB34-B) or 4-wire (uB35-B); Configurable 0-600°C.</td>
</tr>
<tr>
<td>uB35-B</td>
<td>Pt RTD input; 2 or 3-wire (uB34-B) or 4-wire (uB35-B); Configurable 0-600°C.</td>
</tr>
<tr>
<td>uB37-B</td>
<td>Thermocouple input, non-linearized (uB37-B) or linearized (uB47B); Configurable Type J,K,T,R,S.</td>
</tr>
<tr>
<td>uB47-B</td>
<td>Thermocouple input, non-linearized (uB37-B) or linearized (uB47B); Configurable Type J,K,T,R,S.</td>
</tr>
</tbody>
</table>
**Key Features & Benefits**

**Flexible Power**
5V power modules enable use of 10-32V supplies.

**Alarm Function**
Wireless (-B) models support alarm setpoint/deadband control to drive 0 or 5V output.

**Wireless Configuration**
Easily set I/O scaling and alarms or poll inputs using Bluetooth® wireless technology with a smartphone or tablet using Acromag’s Android™ or iOS® app.

**Mix-and-Match Modules**
175 modules support a wide variety of input and output signal types.

**Easy, Secure Mounting**
Clip holds module tightly without screws for fast insertion/removal.

**Analog Bus Port**
DB25 cable simplifies connection to DAQ systems.

**Rugged, Over-molded Circuit**
Superior shock, vibration, moisture, and dust protection.

**High-Density Analog I/O**
Up to 16 channels in a compact footprint.

**User-Programmable I/O Ranges**
Models with Bluetooth® wireless technology allow custom input and output ranges.

**High-performance**
High-accuracy / high noise immunity.

**Superior shock, vibration, moisture, and dust protection.**
**Acromag Agility™ Config Tool Mobile Application**

The Agility™ Config tool is a mobile application that allows easy setup and configuration of Acromag SP Series splitters, DT Series and TT Series transmitters and microBlox® Series I/O modules using a mobile phone or tablet.

To run the application in demo mode, without a connection to a device, simply tap the icon with the triangles in the upper left eight times.

**Key Features & Benefits**

- Connects to microBlox® uB Series I/O modules via Bluetooth wireless technology to an Android or iOS device.
- Connects DT & TT Series transmitters and SP Series splitters to Android™ devices via USB on-the-go cable.
- View wiring diagrams, even without an internet connection.
- Perform quick and easy field diagnostics and troubleshooting.
- Ideal for field technicians.
- View, log, and share field data.

With a couple of taps, quickly configure input, output, unit and scaling options.

Quick and easy access to the wiring diagram, even offline without internet access.

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877-214-6267  ■  sales@acromag.com  ■  www.acromag.com  ■  Acromag Inc
# Product Series Selection Guide

## Network and Data Acquisition

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Outputs</th>
<th>Network Protocol</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethernet I/O Modules</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BusWorks® XT Series</strong></td>
<td>Up to 16 channels/module; analog (current, voltage), discrete</td>
<td>Analog (current, voltage), discrete</td>
</tr>
<tr>
<td><strong>BusWorks® 900EN Series</strong></td>
<td>Up to 16 channels/module; analog (TC, RTD, current, voltage), microBlox® uB cable interface, discrete</td>
<td>Analog (current, voltage), discrete</td>
</tr>
<tr>
<td><strong>Etherstax® ES2000 Series</strong></td>
<td>Up to 96 channels/module; analog (current, voltage), discrete</td>
<td>Analog (current, voltage), discrete</td>
</tr>
<tr>
<td><strong>RS-485 I/O Modules</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>BusWorks® 900MB Series</strong></td>
<td>Up to 12 channels/module; analog (TC, RTD, current, voltage), discrete</td>
<td>Analog (current, voltage), discrete</td>
</tr>
<tr>
<td><strong>BusWorks® 900PB</strong></td>
<td>Up to 12 channels/module; analog (TC, RTD, current, voltage), discrete</td>
<td>Analog (current, voltage), discrete</td>
</tr>
<tr>
<td><strong>Data Acquisition Modules</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>microBlox® uB Series</strong></td>
<td>Millivolt, voltage, current, RTD, thermocouple, frequency &amp; high-speed/wideband</td>
<td>Voltage, 0-20mA or 4-20mA DC</td>
</tr>
</tbody>
</table>

## Signal Conditioners

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Outputs</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signal Isolators</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TT230 Series (TT236)</strong></td>
<td>Single-channel; 4-20mA</td>
<td>4-20mA universal sink/source</td>
</tr>
<tr>
<td><strong>TT330 Series (TT336)</strong></td>
<td>Single-channel; 4-20mA</td>
<td>4-20mA source</td>
</tr>
<tr>
<td><strong>630T Series (631T, 632T)</strong></td>
<td>Single/dual-channel; 4-20mA</td>
<td>4-20mA source</td>
</tr>
<tr>
<td><strong>650T Series (651T, 652T)</strong></td>
<td>Single/dual-channel; 4-20mA</td>
<td>4-20mA sink</td>
</tr>
<tr>
<td><strong>670T Series</strong></td>
<td>Single/dual/quad-channel; 4-20mA</td>
<td>4-20mA source</td>
</tr>
<tr>
<td><strong>Signal Splitters</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SP230 Series</strong></td>
<td>Thermocouple; millivolt; current; voltage</td>
<td>Dual output; 4-20mA sink/source</td>
</tr>
<tr>
<td><strong>SP330 Series</strong></td>
<td>Thermocouple; millivolt; current; voltage</td>
<td>Dual output; 0-20mA, ±10V or 0-10V</td>
</tr>
<tr>
<td><strong>uBSP Series</strong></td>
<td>Millivolt, voltage, current, RTD, thermocouple</td>
<td>Dual output, 4-20mA, voltage</td>
</tr>
<tr>
<td><strong>630T Series (633T)</strong></td>
<td>Single input; 4-20mA</td>
<td>Dual output; 4-20mA source</td>
</tr>
<tr>
<td><strong>650T Series (653T)</strong></td>
<td>Single input; 4-20mA</td>
<td>Dual output; 4-20mA sink</td>
</tr>
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</table>
### Signal Conditioners

<table>
<thead>
<tr>
<th>Signal Transmitters and Converters</th>
<th>Inputs</th>
<th>Outputs</th>
<th>Power</th>
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<tbody>
<tr>
<td><strong>DT230 Series</strong></td>
<td>Dual-channel; current, voltage, thermocouple, RTD, resistance</td>
<td>4-20mA universal sink/source</td>
<td>2-Wire, 7-32V DC loop power</td>
</tr>
<tr>
<td><strong>DT330 Series</strong></td>
<td>Dual-channel; current, voltage, thermocouple, RTD, resistance</td>
<td>Scalable ±10V, 0-10V, ±20mA, 0-20mA source</td>
<td>4-Wire, 6-32V DC external power</td>
</tr>
<tr>
<td><strong>ST130 Series</strong></td>
<td>Single-channel; thermocouple, RTD, resistance, millivolt</td>
<td>4-20mA sink</td>
<td>2-wire; 9-32V DC (output loop power)</td>
</tr>
<tr>
<td><strong>TT230 Series</strong></td>
<td>Single-channel; current, voltage, thermocouple, RTD, resistance, potentiometer, frequency</td>
<td>4-20mA universal sink/source</td>
<td>2/3-wire; 12-32V DC (output loop power)</td>
</tr>
<tr>
<td><strong>TT330 Series</strong></td>
<td>Single-channel; current, voltage, thermocouple, RTD, resistance, potentiometer, frequency</td>
<td>Scalable ±10V, 0-10V, ±20mA, 0-20mA source</td>
<td>4-wire; 12-32V DC</td>
</tr>
<tr>
<td><strong>uBTX microBlox® Series</strong></td>
<td>Single-channel; current, voltage, thermocouple, RTD, frequency</td>
<td>0/4-20mA, 0/1-5V</td>
<td>6-32V DC SELV</td>
</tr>
<tr>
<td><strong>610T Series</strong></td>
<td>Single/dual-channel; current, voltage</td>
<td>Scalable 0-10V, 0-20mA source</td>
<td>4-wire; 10-36V DC</td>
</tr>
<tr>
<td><strong>650T Series (654T)</strong></td>
<td>Dual-channel; current, voltage</td>
<td>4-20mA sink</td>
<td>2-wire; 12-50V DC (output loop power)</td>
</tr>
<tr>
<td><strong>650T Series (655T, 656T)</strong></td>
<td>Single/dual-channel; thermocouple, RTD, millivolt</td>
<td>4-20mA sink</td>
<td>2-wire; 12-50V DC (output loop power)</td>
</tr>
<tr>
<td><strong>650T Series (657T, 658T)</strong></td>
<td>Single/dual-channel; RTD, resistance</td>
<td>4-20mA sink</td>
<td>2-wire; 12-50V DC (output loop power)</td>
</tr>
<tr>
<td><strong>800T IntelliPack® Series</strong></td>
<td>Single/dual-channel; current, RTD, thermocouple, resistance, voltage, frequency/pulse, strain gage (bridge), load cell</td>
<td>Scalable 0-10V, 0-20mA source, alarm relay</td>
<td>4-wire; 10-36V DC</td>
</tr>
</tbody>
</table>

### Limit Alarms

<table>
<thead>
<tr>
<th>Limit Alarms</th>
<th>Inputs</th>
<th>Outputs</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>uBTA microBlox® Series</strong></td>
<td>Millivolt, voltage, current, RTD, thermocouple</td>
<td>Single/dual SPST/SPDT 1A/5A relays, 0/4-20mA, 0/1-5V</td>
<td>6-32V DC SELV</td>
</tr>
<tr>
<td><strong>800A IntelliPack® Series</strong></td>
<td>Single/dual-channel; current, voltage, thermocouple, RTD, resistance</td>
<td>Single DPDT or dual SPDT 5A relays</td>
<td>4-wire; 10-36V DC</td>
</tr>
<tr>
<td><strong>260A / 361A / 461A Flat Pack Series</strong></td>
<td>Single-channel; current, voltage</td>
<td>Single/dual SPDT 2A or 5A alarm relays</td>
<td>2/3/4-wire; input loop-powered (4-20mA); 10-36V DC; 115/230V AC</td>
</tr>
</tbody>
</table>

### Computation

<table>
<thead>
<tr>
<th>Computation</th>
<th>Inputs</th>
<th>Outputs</th>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>IntelliPack® (892M, 894M)</strong></td>
<td>Dual/quad input; current, voltage</td>
<td>Single output; 0-20mA source, 0-10V</td>
<td>4-wire; 10-36V DC</td>
</tr>
<tr>
<td><strong>IntelliPack® (895M, 896M)</strong></td>
<td>Single/dual-channel; current, voltage</td>
<td>Frequency, pulse, pwm, alarm relay</td>
<td>4-wire; 10-36V DC</td>
</tr>
</tbody>
</table>
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