



Profibus-DP / RS485



PNO
Certified



2
YEAR
WARRANTY

900PB Series Profibus-DP I/O Modules

The 900PB series is a high-performance line of networked I/O modules. These units feature universal input/output ranges and an intelligent microcontroller to provide extreme flexibility and powerful monitoring and control capabilities. Select from a variety of analog and discrete I/O models to meet your application requirements.

Each module provides a direct network interface for your I/O signals. Unlike "block I/O" devices that combine a large and expensive processor block with snap-on I/O terminal blocks, 900PB modules handle the network interface and I/O processing in a single, compact multi-channel module. This space-saving approach is very cost-effective for systems that need to add some I/O channels at an existing control site or network new, remote sites.

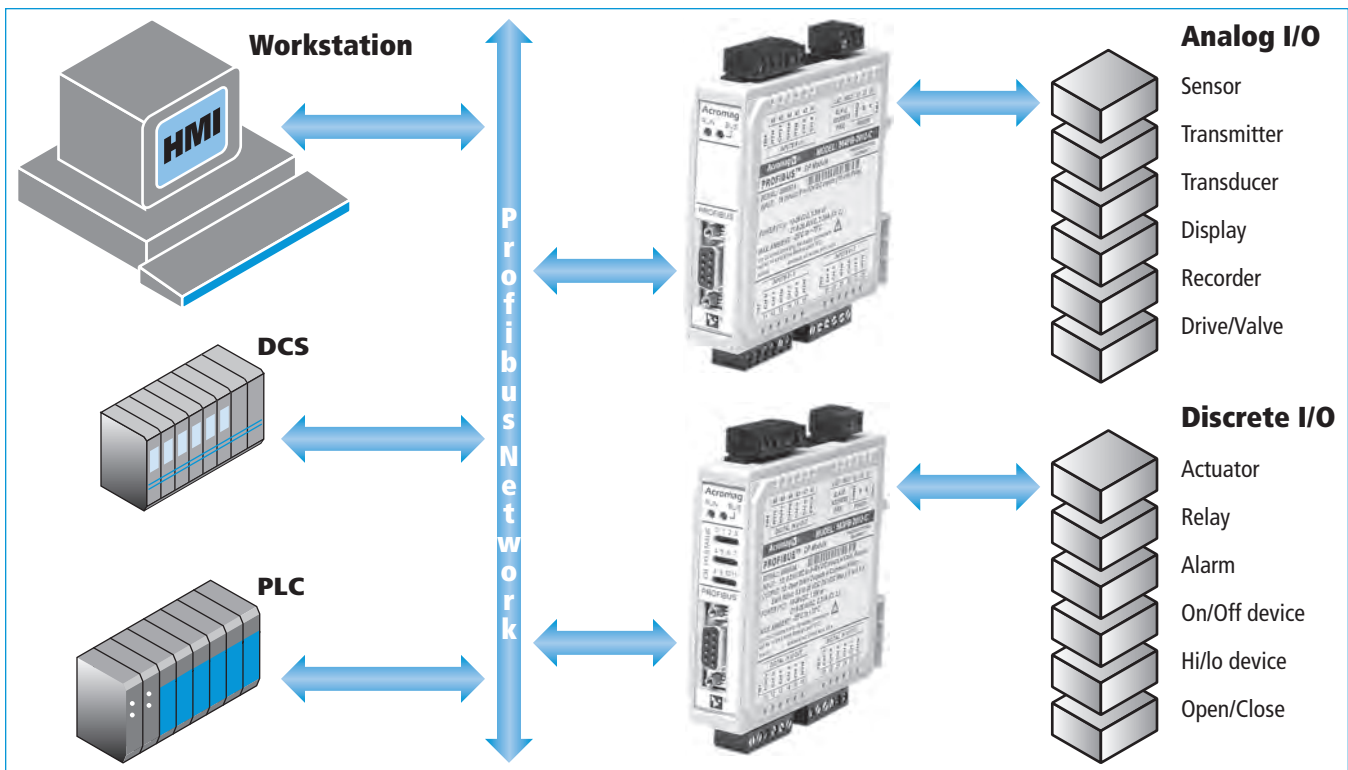
To ensure unsurpassed performance, these I/O modules employ advanced microcontroller technology. Isolated input, output, power, and network circuits increase noise/transient immunity and prevent ground loops. Status LEDs provide diagnostic feedback.

Self-diagnostics and sophisticated watchdog timers simplify maintenance and troubleshooting. The watchdog timer invokes a failsafe condition if host communication is lost. For further security, a second watchdog monitors the microcontroller for failed operations or a "lock-up" condition and automatically resets the unit.

24 HOUR STOCK ITEM Ready to ship within 24-hours from stock. Backed by a 2-year warranty.

Special Features

- **Direct Network Interface:**
Each module has a built-in microcontroller for communication. No bus coupler required.
- **RS485/Profibus Network Communication:**
Highly immune to noise and operates over long distances
- **Industry Standard ASIC:**
Siemens SPC3 intelligent ASIC to talk Profibus
- **High-Speed Data Rates:**
Half-duplex RS485 with rates up to 12M baud
- **Auto-Baud Rate Detection:**
Baud rate is set automatically
- **Fully Isolated:**
I/O, network, and power circuits isolated from each other for safety and noise immunity
- **Nonvolatile Reprogrammable Memory:**
Allows the functionality of this device to be reliably reprogrammed thousands of times
- **Self-Diagnostics & Watchdog Timers:**
Self-test simplifies maintenance. Profibus has defined failsafe mode for lost communication.





Discrete I/O

These modules monitor discrete levels of various devices and/or provide on/off control capabilities depending on the model selected. Each module has up to twelve channels to save space and minimize costs. Models are available with input- or output-only, or bidirectional I/O configurations.

Inputs

- Active-low inputs, 0 to 35V DC

Outputs

- Sinking outputs, 0 to 35V DC, up to 500mA

Functions

- Monitor discrete state or level
- Control on/off, high/low, open/close switching
- Activate audible or visual alarms

Analog Input

These units monitor a wide variety of industrial machinery and equipment. They accept direct sensor inputs or DC process control signals from transducers, transmitters, and other instruments.

Inputs

- DC current
- DC voltage
- DC millivolts
- Thermocouple
- RTD/resistance
- AC current

Functions

- Measure process variables
- Monitor machinery and industrial devices
- Acquire data from non-networked instruments

Analog Output

Analog output modules are ideal for controlling a wide variety of industrial equipment. The host defines the output of voltage or current signals to control speed, flow, temperature, frequency, level, force, torque, intensity, and many other physical properties.

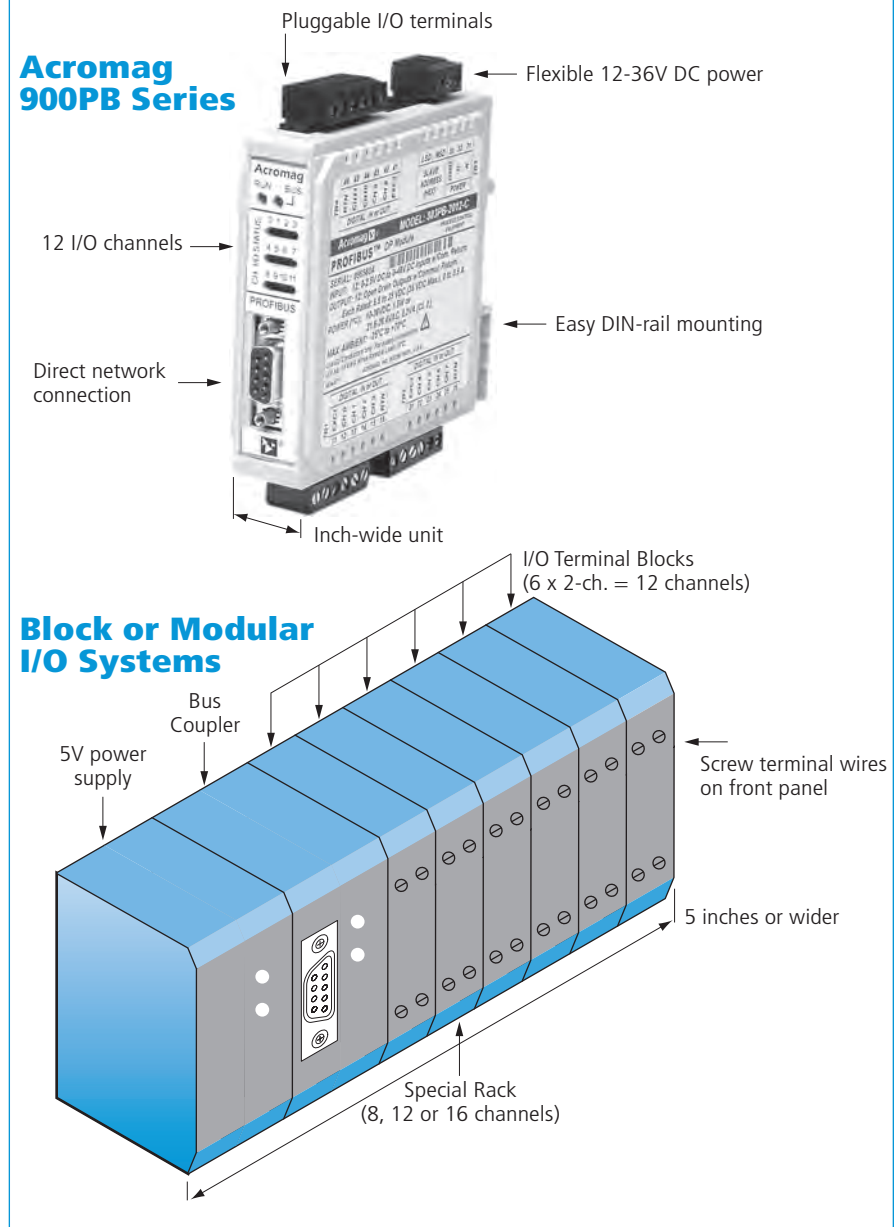
Outputs

- DC voltage
- DC current

Functions

- Write data to local displays or recorders
- Control drives, valves, and positioners

Save 50% compared to "Block I/O"



Acromag 900PB Series I/O	Block and Modular I/O Systems
<i>Stand-alone I/O modules are very economical.</i>	<i>Block I/O systems have high start-up costs.</i>
<ul style="list-style-type: none"> Direct connection to network Up to 12 channels on one module One inch wide for twelve channels Flexible 12-36V DC power requirement Pluggable terminal blocks on top and bottom 	<ul style="list-style-type: none"> Expensive bus coupler required Plug-in I/O modules or terminal blocks required Five inches wide or more for twelve channels May require special 5V power supply Fixed wiring terminals on front of unit

BusWorks® Profibus I/O



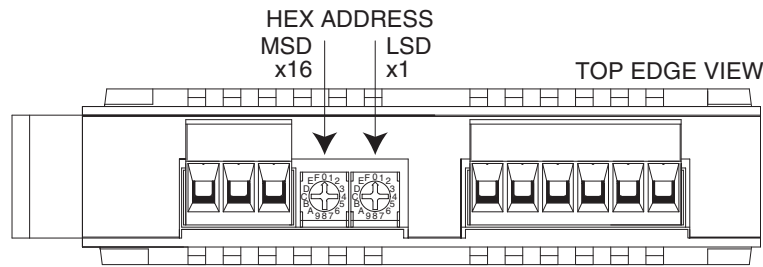
Easy to Use

Profibus-DP networks offer several advantages. They are proven, fast (up to 12Mbps without fiber optic cable), deterministic, and ideal for transmitting analog or discrete data. I/O devices are also easy to install and maintain. More than 1000 organizations worldwide, plus the Profibus Trade Organization (PTO), help nurture a growing user base, introduce new products, and provide technical support for this network technology.

Network devices, including Acromag's 900PB I/O modules, are easily installed and configured using network management software typically provided by the supplier of the host or master controller. The startup process is shown below.

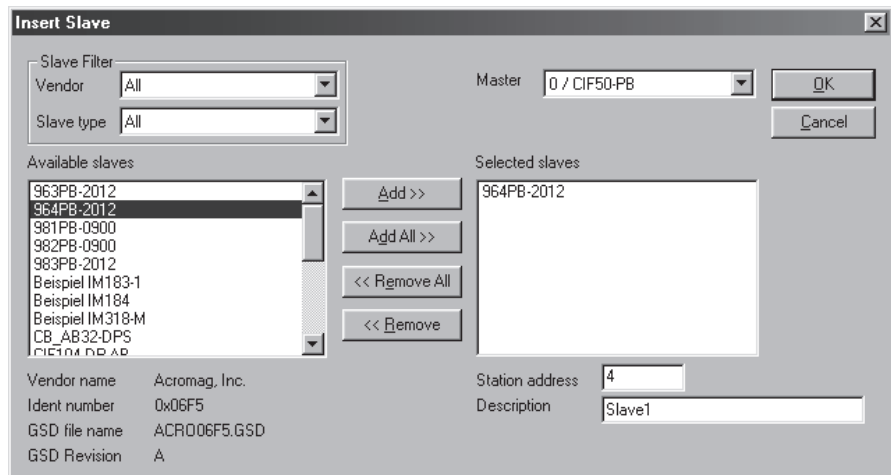
Step 1: Set the slave address

Using two rotary switches, as shown, set the slave address between 0 and 125 (00 to 7D Hex). The factory default setting is 126 (7EH) which allows programming via the network. Once the address is set, the module may be physically connected to the network or master.



Set switches to a valid slave address from 0 to 125 (00H to 7DH)

Step 1: Rotate the switches on top of each 900PB module to set the desired network address.



Step 2: The network management software (SyCon from Lantronix shown above) lists Profibus devices available for configuration after their GSD files are copied to the software's directory using Windows Explorer.

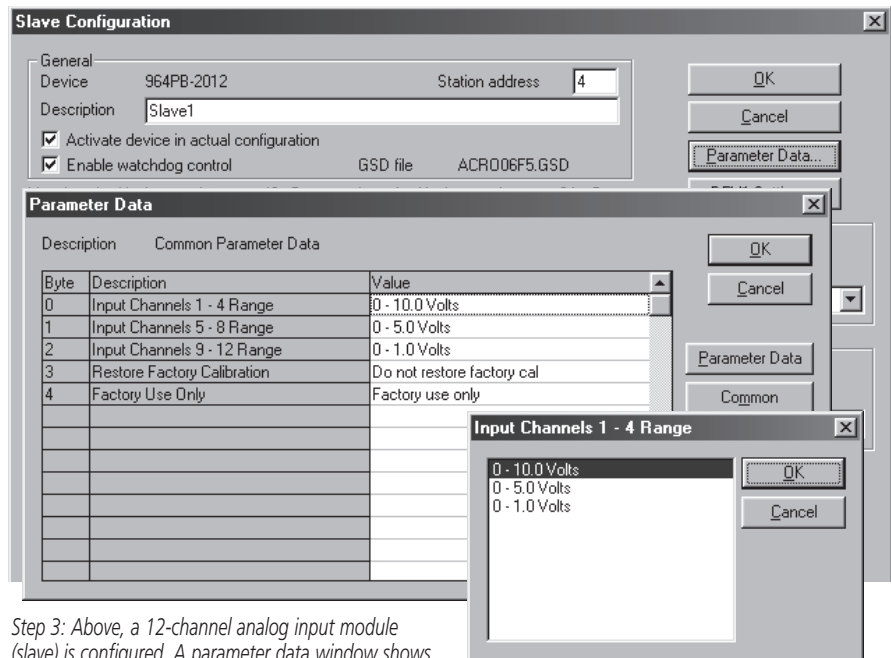
Step 2: Add the I/O module to the network database

Each I/O module, like all slave devices, is defined by a unique software file (*.gsd file). The GSD file for each module is installed (or imported) into a network database for identification by the network management software.

Acromag GSD files are supplied at no-charge with each module. They are also available for download on the Acromag website or from the PTO at www.profibus.com.

Step 3: Configure the module

Using the network management software, you configure each device as desired (address, ranges, sensor break detection, failure modes, etc.). When finished, the software will download the configuration to the master controller for communication.



Step 3: Above, a 12-channel analog input module (slave) is configured. A parameter data window shows the user-selected voltage input ranges.

The menu above lists input range options individually selectable for each 4-channel group.