

IO-30 Data Sheet



Sedona IO-30-S

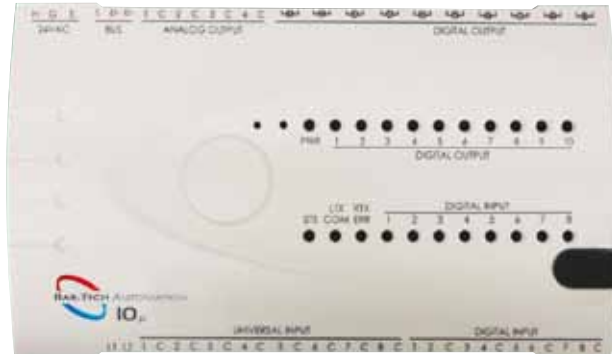
Sedona TCP/IP, BACnet® TCP/IP & RS485,
Modbus TCP/IP & RS485

Modbus IO-30-M

BACnet® & RS485,
Modbus TCP/IP & RS485

Bacnet IO-30-B

BACnet® TCP/IP,
BACnet® Or Modbus RS485



The EasyIO 30P Series Controllers are rugged, network centric, high performance multi-protocols Input/Output controllers to accommodate general and specific applications, featuring Modbus RS485, TCP/IP and BACnet® RS485, IP and Ethernet protocols plus a built-in Web server for easy configuration. EasyIO-30P can be configured to work as Bridge Controller without any compromise on its embedded I/O functionalities.

Features:

» Web Browser Configuration

Built-in Web server enables configuration with popular web browser over an Ethernet connection. I/O status can be monitored over the Internet connection.

» Multi Protocols Support

Modbus and BACnet®* are supported on the same controller which provides flexibility for implementation.

» High-Speed Data Rates

Multiple serial communication (RS485) speed selection from 9.6kbps to 115.2kbps. Supports Ethernet: 10Base-T/100Base-T interface, half or full duplex.

» As Bridge Controller

The controller can be configured as Bridge Controller providing a network bridge for Ethernet and serial communication (RS485) via built-in protocol converter. This will reduce wiring cost, simplify network implementation and significant cost reduction.

» Device ID

Complementing existing standard protocols, EasyIO-30P can be uniquely identified over the network. This facilitating online network device search and simplify reconfiguration.

» Network Security

All configurations changes are protected via password setting, either through standard network protocol access (Modbus or BACnet®) or web browser.

» Multiple Input/Output Type

The controller has eight Digital Inputs, eight Analogue Input for current, voltage, resistance and temperature sensor; eight Digital Outputs (relay), four Analogue Output (current and voltage), and two isolated Open Collector outputs (with PWM control) for high speed switching.

» High Accuracy Analogue Channels

High speed 14-bits A/D converter with programmable gain amplifier yields a high resolution and accuracy reading on analogue input points. 12-bits D/A provides more accurate analogue output control.

» Programmable/Standalone Functionality

The controller can be configured to operate as standalone device. Over 40 types of programmable functions are available, typically thermostat, PID, scheduler, conversion, timer, utilities, totaliser and etc.

» Online Help/Information

All related information/helps are available through the controller web server. Information such as registers details, wiring diagram, device specification and etc are provided to assist the user.

» Status Indicator

Operational activity on each individual channel of DI, DO and Open Collector Outputs (PWM) are conveniently indicated by LED, so as the Power, Operation, Communication and Faults status.

» Reset & Broadcast Switch

A Reset Switch has been provided for system reset without power removal (Warm Start operation). The Broadcast Switch allows the controller to broadcast itself to the network during installation and implementation.

» Online Firmware Upgrade/Configuration

The controller firmware can be upgraded either through RS485 or Ethernet connection. Network communication and operation parameters can be changed via RS485/Ethernet with the built-in boot-loader and terminal program.

» Robust System Operation

The controller has a built-in High accuracy Real Time clock with backup battery. Software and hardware watchdog timer are provided for high reliability operation.

» Ease of Installation

All I/Os are connected via field removable terminal block connectors for easy maintenance. The controller casing fits standard DIN rail mounting.

Specifications

Electrical

Power Supply: 24VAC, 3.6VA max, or 20 ~ 34VDC
Consumption: 150mA max @ 24VDC
Operating Temperature: 32° to 150° F (0° to 65° C)
Storage Temperature: -4° to 150° F (-20° to 65° C)
Operating Humidity: 10% to 95% relative humidity non-condensing

Communication

Physical Interface 1 (Port 1):

EIA-485 (BUS A,B) Two-wire
Half Duplex
Baud Rate Speed: (9.6K, **19.2k**, 38.4K, 115.2K bit/s)
Data Bit: (8 bits)
Parity: (None, Even, Odd)
Application Protocol: Modbus, Bacnet
Multi-drop Capability: Yes, Slave (hardware ID setting)

Physical Interface 2 (Port 2):

Ethernet 10/100 Base-T
Ethernet Support: IP,TCP,UDP,ICMP,IGMP,FTP,HTTP
Application Support: Modbus-TCP, BACnet IP/Ethernet

Input/Output Configuration

Universal Input:

8 Channels
Voltage: 0 - 10V (+/-0.005V) , 0 - 5V (+/- 0.003V)
Current: 4 - 20mA (+/-0.01mA) , 0 - 20mA (+/-0.01mA)
Resistance: 0 - 30K (+/-10 Ohm), 0 - 10K (+/-5 Ohm), 0 - 1.5K (+/-1 Ohm)
Thermistor: 10K, 10K Shunt, 1K Balco, 1K Platinum : All (+/-0.01°C)

Digital Input:

8 Channels
Type: Voltage Free
Limit: +5V at 5000ohm Resistance maximum

Digital Output:

8 Channels
Type: Relay Contacts, SPST NO, 48VA at 24VAC, Pilot Duty

Transistor Output:

2 Channels
Type: Open Collector Output, Isolation 3.75KV
Max Rating: 1A, 60V

Analogue Output

4 Channels (12 bits resolution)
Type: Current: 0 - 20mA, 4 - 20mA (up to 800 Ohm load),
Voltage: 0 - 10V

Mechanical:

Dimension: 187mm x 110mm x 47mm
Material: UL94 ABS
Weight: 400g

