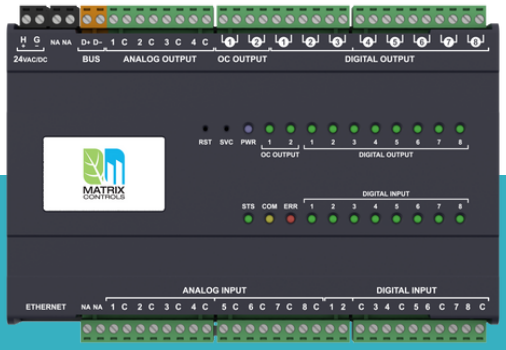
IO-30P



RELIABLE, ECONOMIC, IP CONTROLLER

PRODUCT DEFINATION

The IO-30P Series Controller designed to be the best rugged, network centric, high performance multi-protocols Input/Output controllers to accommodate general and specific applications such as building HVAC, plumbing equipment. It features Sedona, Modbus (RS-485, TCP/IP) and BACnet® (RS-485, IP and Ethernet) protocols plus a built-in Web server for easy configuration. Modbus Server, Modbus Client, Modbus Bridge, Sedona, HTTP, BACnet IP Server and BACnet Ethernet Server

FEATURES

Open Communication Protocols

Multiple open protocols Modbus IP, Sedona and BACnet® IP promote the simplicity and flexible way it can be communicated. Completed with RS-485 port that allows connection of various devices that support BACnet MS/TP, Modbus RTU, or Modbus ASCII.

Various Input and Output Points

Comprising 30 input and output points tailor for different combinations of applications. The controller has eight (8) Digital Inputs, eight (8) Analogue Input for current, voltage, resistance and temperature sensor, eight (8) Digital Outputs (relay), four (4) Analogue Output (current and voltage), and two (2) isolated Open Collector outputs (with PWM control) for high speed switching.

Real-Time Engineering Work

Controller allows real-time program update upon changes of control application. No hassle of stopping equipment's which continues to operate

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.

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.

Built in Web Server

Simplified Built-in Web server (H enables configuration with popular web browsers over an Ethernet connection. I/O status can be monitored over the Internet connection. Live monitoring

Installation Friendly

All input and output points termination are designed via field removable terminal block connectors given separate wiring sockets for quick exchange without rewiring. Controller casing fits standard DIN rail mounting ease to mount and unmount the controller to designated location

Network Security

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

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.

As Bridge Controller

The controller (Modbus Version) can be configured as Bridge Controller providing a network bridge for Ethernet and serial communication (RS-485) via built-in protocol converter

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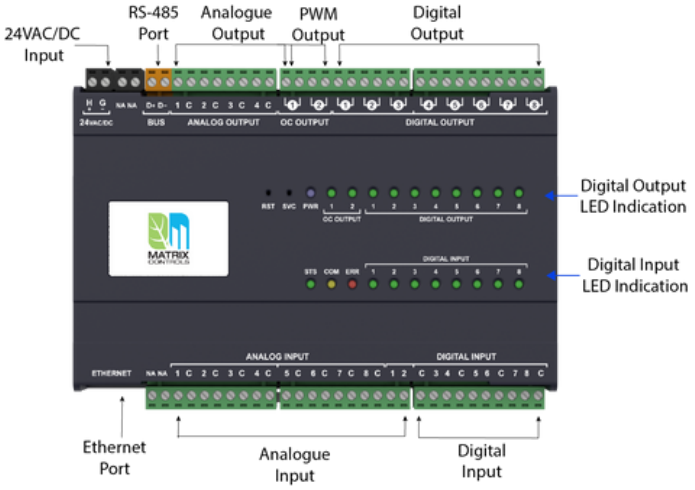
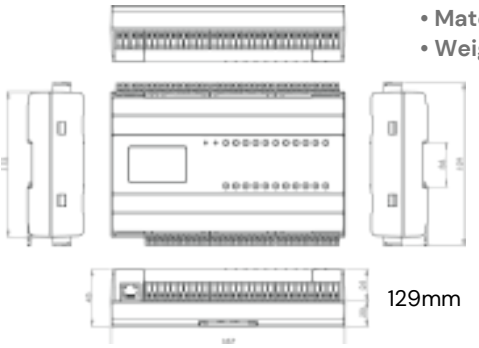
IO-30P

SYSTEM CONTROLLER



DIAMENSION



- **Material: UL94 ABS**
- **Weight: 420g**

ELECTRICAL SPECIFICATION

- Power Supply: 24VAC ± 5% or 24 VDC ± 5%
- Consumption: 3.6VA max or 300mA max
- 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% HR (non-condensed)

HARDWARE SPECIFICATION

- Processor: 32 bit Cortex-M3 @ 96MHz
- Ram: 8MB
- Flash: 2MB

Technical Specification

Universal Input:
- 8 Channels (14 bits Resolution)
  - o Voltage: 0 – 10V (± 0.005V), 0 – 5V (± 0.003V)
  - o Current: 0 – 20mA (± 0.01mA), 4 – 20mA (± 0.01mA)
  - o Resistance: 0 – 30k (± 10Ω), 0 – 10k (± 5Ω), 0 – 1.5k (± 1Ω)
  - o Thermistor: 10k, 10k Shunt, 1k Balco, 1k Platinum (All ± 0.01°C)

Analogue Output:
- 4 Channels (12 bits Resolution)
  - o Voltage: 0 – 10V (± 0.003V)
  - o Current: 0 – 20mA, 4 – 20mA (up to 800Ω load) (± 0.01mA)

Digital Input:
- 8 Channels
  - o Type: Voltage Free
  - o Limit: +5V at 500Ω maximum

Digital Output:
- 8 Channels
  - o Type: Relay Contacts, SPST NO, Pilot Duty
    - Max Rating: 5A, 250VAC/30VDC
    - Life expectancy Electrical: 200,000

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

Communication

Physical Interface 1 (Port 1):
- EIA-485 Standard (Bus A, B) two-wire
- Half Duplex
- Baud Rate Speed: 9.6k, 19.2k, 38.4k, 76.8k, 115.2k bit/s
- Data Bit: 8 bits
- Application Protocol: Modbus, BACnet® MSTP
- Multi-drop Capability: Yes (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 Server, Modbus Client, Modbus Bridge, Sedona, HTTP, BACnet® IP Server/Client

Compliance
- EMC Directive 2004/108/EC
- FCC Part 15:2010, Subpart B, Class A
- UL: PAZX.E323947
- BTL Certified (Revision 14)

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