



MB SERIES IO MODULE

MODBUS INPUT EXPANSION MODULE

PRODUCT DEFINATION

The MB Series Controller is a Modbus RS-485 controller that provides additional Digital Inputs and Analog Inputs to accommodate long distance general and specific applications. This controller was developed for decentralized switching tasks. It is suitable for detecting potential-free switch states, for example electrical limit switches on vent valves or auxiliary contacts of power contactors. The inputs can be operated by means of potential-free switches or contacts or used as voltage inputs.

FEATURES

High Speed Modbus RTU communication

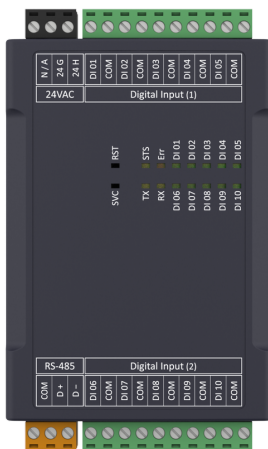
Supports multiple serial communication (RS-485) speed selection from 9.6kbps to 115.2kbps.

Ease Communication

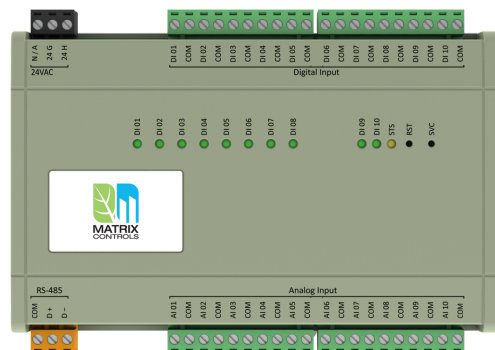
With Modbus RTU standard protocols, These IO modules configure as slaves will be easy to communicate with Modbus master such as SCADA/PLC/HMI.

Varies Input Type

Built-in internal jumpers for selections of voltage, current, resistance and thermistor to cater for multiple types of input sensors.



MB0010



MB0020



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MB SERIES IO MODULE

MBO010 Technical Specification

Digital Input:

- 10 Channels
- o Type: Voltage Free
- o Limit: +24V at 500Ω maximum

Communication:

Physical Interface:

- EIA-485 Standard (Bus A, B) two-wire
- Half Duplex
- Data Bit: 8 bits
- Application Protocol:
 - o Modbus Slave
 - Baud Rate Speed: 9.6k, 19.2k, 38.4k, 57.6k, 115.2k bit/s
- Multi-drop Capability: Yes (Hardware ID Setting)
- Integrated termination resistor, enable through Modbus register

Supply Connection & Environmental Limits

- Power Supply: 24VAC \pm 5% or 24 VDC \pm 5%
- Consumption: 150mA 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)

Mechanical

- Dimension: 132mm (L) x 80mm (W) x 38mm (H)
- Material: ABS

MBO020 Technical Specification

Digital Input:

- 10 Channels
- o Type: Voltage Free
- o Limit: +24V at 500Ω maximum

Analogue Output:

10 Channels (12-bits Resolution)

- o Voltage: 0 – 10V (\pm 1% V)
- o Current: 0 – 20mA (\pm 1% mA)
- o Resistance: 0 – 30k (\pm 1% Ω)
- o Thermistor: 10k, 10k Shunt, 1k Balco, 1k Platinum (All \pm 1% °C)

Communication:

Physical Interface:

- EIA-485 Standard (Bus A, B) two-wire
- Half Duplex
- Data Bit: 8 bits
- Application Protocol:
 - o Modbus Slave
 - Baud Rate Speed: 9.6k, 19.2k, 38.4k, 57.6k, 115.2k bit/s
- Multi-drop Capability: Yes (Hardware ID Setting)
- Integrated termination resistor, enable through Modbus register

Supply Connection & Environmental Limits

- Power Supply: 24VAC \pm 5% or 24 VDC \pm 5%
- Consumption: 150mA 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)

Mechanical

- Dimension: 168mm (L) x 120mm (W) x 45mm (H)
- Material: UL94 ABS



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