OleumTech

Product Data Sheet

Analog I/O Expansion Modules

WM3000-001

The OleumTech Analog I/O Expansion Modules are designed to provide reading and writing of 4 analog I/O channels at remote locations. Each Analog Input channel can be configured via jumpers to measure signals from any combination of 0-5V, 0-10V or 4-20mA sensors while also providing powering to 2 wire sensors at 12V . The Analog Output module provides configurable 4-20mA current output or 1-5V signal with 12-bit resolution. This highly flexible offering is ideal for industrial automation and process control applications.

These versatile modules support the Modbus RTU protocol over 2-wire RS485 bus and can interface with any third-party Modbus master device (such as PLC/RTU) providing serial remote I/O. These general purpose Modbus I/O modules are an easy drop-in interface for data acquisition systems for monitoring status or control system. The scalable design also enables 247 expansion modules to be multi-dropped to a single Modbus master device with convenience of RJ45 connector which drastically reduces the wiring installation time.Modules addresses are configurable via the OleumTech intuitive BreeZ® Software program.

WM3000-002

Features

- 4 Analog Inputs or Outputs
- 12 bit ADC or DAC
- Outputs - Optically Isolated from Main Logic Power
- Inputs - 0-5V, 0-10V, 4-20mA Channel Configurable
- MODBUS RTU Protocol
- RS485 Serial Port with RJ45 Connector
- DIN Rail Mounting

Analog Output Module

Technical Specifications

SYSTEM HARDWARE

I/O INTERFACE 4 Analog Outputs (Current Mode)

- Resolution: 12 bit ADC
- Accuracy: 0.05% of full scale, 0.2% of full scale over temperture range.
- Output/Transmitter Type: (2 wire) 4-20mA; (3 wire) 1-5V (jumper selectable)
- Transmitter Operating Voltage: Vmin. = 8 V (4-20mA), 12V (1-5V)
  Vmax. = 24Vdc
- RS 485/Serial Protocol: RS485 (2-wire), 9,600/19,200 Baud, Modbus/RTU Protocol
- Multi-dropped Units: 247 (Max)

ELECTRICAL SPECIFICATIONS

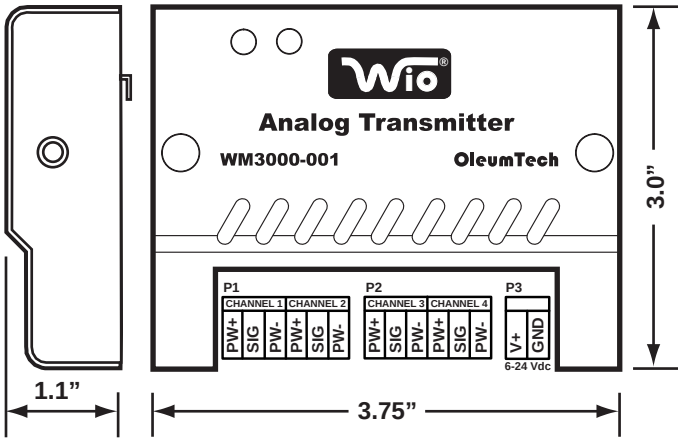
- Power Supply VoLtage: 6-24 Vdc
- Power Consumption: 60 mW

ENVIRONMENTAL CONDITIONS

- Operating Temperature Range: -40 to 85 ºC
- Humidity: 0 to 95%, non-condensing

SAFETY & CERTIFICATIONS

- Over Voltage Rating: Transient Voltage Suppresser on each port
- Class I Division 2: (Pending)



PHYSICAL/MECHANICAL

- Weight: 0.5 LBS
- Dimensions: 3.75” x 3.0” x 1.1”
  (95.2 mm x 77.5 mm x 27.5 mm)
- Packaging: Corrosion resistant black powder coated stainless steel (308 SS)
- Mounting: 0.3” x 1.4” (7.5 mm x 35 mm) DIN rail
- Connectors: Terminal Blocks for I/O & External Power
  RJ45 for Serial Expansion
- Wiring: 18-24 AWG

Analog Input Module

Technical Specifications

SYSTEM HARDWARE

I/O INTERFACE 4 Analog Inputs

- Resolution: 12 bit ADC
- Accuracy: 0.1% of full scale, 0.2% of full scale over temperture range.
- Sensor/ Receiver Voltage: (2 wire) 4-20 mA ; (3 wire)0-5 or 0-10 V (jumper selectable)
- Input Impedance: 250 ohm (4-20mA), 200K (0-5V), 133K (0-10V)
- RS 485/Serial Protocol: RS485 (2-wire), 9,600/19,200 Baud, Modbus/RTU Protocol
- Multi-dropped Units: 247 (Max)

ELECTRICAL SPECIFICATIONS

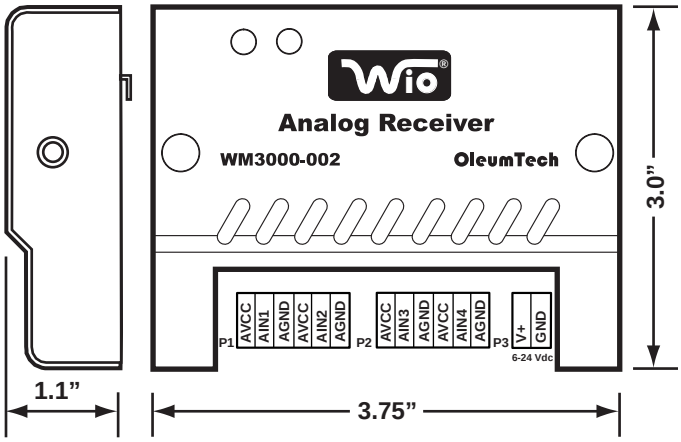
- Power Supply VoLtage: 6-24 Vdc
- Power Consumption: 60 mW @ 12Vdc (does not include sensors)

ENVIRONMENTAL CONDITIONS

- Operating Temperature Range: -40 to 85 ºC
- Humidity: 0 to 95%, non-condensing

SAFETY & CERTIFICATIONS

- Over Voltage Rating: Transient Voltage Suppresser on each port
- Short Circuit Protection: Fuse Protection (375 mA)
- Class I Division 2: (Pending)



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