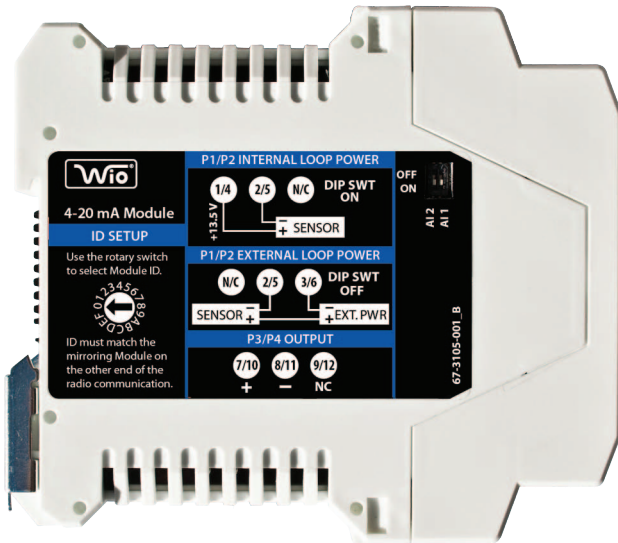


4-20 mA I/O Module



I/O MODULE



HIGHLIGHTS

- Designed for Wireless I/O (WIO®)
- Designed for Modbus I/O (RS485)
- 2x Inputs + 2x Outputs
- Isolated
- 24-bit ADC input resolution
- Scalable and customizable I/O solution
- Other I/O Modules available:
 - 0-10 V I/O Module
 - Digital I/O Module
- Installs in minutes onto 35 mm DIN rail
- Class I, Division 2 (Zone 2)
- -40 °C to 80 °C

Isolated 4-20 mA I/O Solution for Wireless and Modbus Application

WIRELESS I/O - SIGNAL REPLICATION

Using a pair of 4-20 mA I/O Modules with the WIO® System by OleumTech® is one of the easiest and fastest methods for eliminating wiring and enabling reliable, secure point-to-point wireless connectivity to process variables, equipment or other assets within hours rather than days or weeks. The WIO System simply takes the incoming 4-20 mA signals from one end of the system to be mirrored as output signals on the other end of the radio spectrum.

The WIO System requires no software programming, making the installation extremely quick and easy. Up to 16 pairs of I/O Modules can be added to a system, providing high scalability.

FAIL-SAFE PROTECTION (Wireless Only)

The WIO System can be monitored remotely in case there is either an RF or I/O failure with provided NPN discrete outputs on the Radios that can be tied to a third-party monitoring system. In the event of a failure, all outputs will automatically turn over to user's predetermined FailSafe output settings.

ADVANCED USER INTERFACE (Wireless Only)

Although the WIO System does not require any programming, users still can take advantage of its Advanced UI designed for PC when commissioning and troubleshooting the system. By connecting a PC to the Radio Module's mini-USB port, users can view and optimize RF strength, view input and output status, and locally force outputs for diagnostic testing. Users can also set the predetermined Fail-Safe values for analog outputs.

MODBUS I/O EXPANSION

The 4-20 mA I/O Module can also be integrated with the OleumTech RS485 I/O Expansion System. This hardwired I/O option simply enables I/O extension to any RS485 Modbus Master device. Up to 16 I/O Modules can be added to a System providing high I/O density.

For more details, please see WIO System and RS485 I/O Expansion System datasheets.

US Patent # 8,811,459 B1



GENERAL: HARDWARE & SYSTEM

DIN Rail Mounting Compatibility	35 mm x 7.5 mm DIN Rail
DataRail®	6.1" / 156 mm - Supports Up to Five (5) I/O Modules
(2x Included with Radio Kit)	Other Lengths Also Available
I/O Module Slave ID Selection	16-Position Rotary Switch
DataRail Mounting Hardware	4-Claw Attachment to 35 mm DIN Rail with End Terminal Bracket
Built-In Mounting Hardware	Spring-Loaded Clip-On System
Wire Gauge	Solid / Stranded (AWG) 28-12 Gauge
Wire Rating	UL: 300 V RMS, 80 °C and 300 V, 105 °C CSA: 300 V RMS, 105 °C
Warranty	2-Year Limited

ANALOG 4-20 mA I/O MODULE

Number of Inputs	2 (24-bit Resolution)
Number of Outputs	2 (16-bit Resolution)
Signal Range	4 mA to 20 mA
Isolation Voltage	2500 V r.m.s.
Accuracy	< 0.2 % of Full Scale
Internal Loop Power	+13.5 VDC
Maximum Current	84 mA @ 12 VDC
Fail-Safe Output Modes	Last Known Value (Def.) or Any Value on Scale*
AI Input Impedance (Loop)	128 Ohm
AO Terminal Voltage Range	10 VDC Min. / 31.5 VDC Max.
Power Consumption	Typical: 50 mA / Max: 75 mA @12 VDC
Packaging Dimensions	(WxHxD) 4.8 x 5.1 x 2.8-in / 123 x 129 x 72 mm
Net Dimensions	0.7 x 3.9 x 4.5-in / 17.5 x 99 x 114 mm
Packaging Weight	Single: 0.5 lbs / 227 g; Double: 0.8 lbs / 363 g
Net Weight (Single)	0.3 lbs / 136 g



*Fail-Safe Output modes only available when used with the WIO System and requires WIO System Advance User Interface.

WIO® SYSTEM

Unique System Features	Bi-Directional, Paired, Wireless I/O Communication System No Software or Programming Required
Maximum Network Capacity	Max Capacity Depends on I/O Combination Impacting Power
When Using More Than 5 Modules	Use Power Budget Calculator http://goo.gl/t67r3k

Refer to WIO System Datasheet for more information.

WIO SYSTEM ORDERING INFORMATION

WIO System Radio Kit	900 MHz: BM-0900-RM1K 2.4 GHz: BM-2400-RM1K
0-10 V I/O	2-Pack: BM-A010-122D
4-20 mA I/O	2-Pack: BM-A420-122D
Digital I/O	2-Pack: BM-D100-144D

RS485 I/O EXPANSION SYSTEM

Unique System Features	Modbus RS485 Local I/O Expansion Solution No Software or Programming Required
Maximum Network Capacity	Max Capacity Depends on I/O Combination Impacting Power
When Using More Than 5 Modules	Use Power Budget Calculator http://goo.gl/Z7xC5M

Refer to RS485 I/O Expansion System Datasheet for more information.

RS485 ORDERING INFORMATION

RS485 I/O Expansion Kit	BM-1000-PM1K
0-10 V I/O	1-Pack: BM-A010-122S
4-20 mA I/O	1-Pack: BM-A420-122S
Digital I/O	1-Pack: BM-D100-144S

SAFETY & COMPLIANCE

Operational Temperature	-40 °C to 80 °C / -40 °F to 176 °F
Ambient Temperature	-20 °C to 80 °C / -4 °F to 176 °F
Humidity	0 to 99 %, Non-condensing
Degree of Protection	IP20 / Plastic
Hazardous Locations Classifications	Class I; Division 2 (Zone 2): CSA, ATEX, IECEx
RF Emissions	FCC Part 15/IC

