

## Flex I/O Module

### Analog/Digital to Modbus Converter



#### FLEX I/O A8332-8F2D

Our Flex I/O is a cost-effective way to collect data from meters or sensors and bring that information into a Modbus network or energy monitoring system. As a stand-alone or bundled package, the Obvius Flex I/O can be incorporated with data acquisition and wireless metering devices to provide a cost-effective energy monitoring solution.

#### WHY USE THE OBVIUS FLEX I/O

- Designed specifically for metering applications
- Easily add meters and sensor to a Modbus network
- 8x user selectable inputs
- 2x output relays
- 2x pulse replicator
- Non-volatile memory
- Industrial temperature range -30 to 70C
- LEDs for visual verification / status
- Din or wall mount for easy installation
- Field upgradable firmware

#### COMPATIBILITY

The Flex I/O is compatible with virtually any PLC or Modbus Master, allowing customers the flexibility to use it in existing Modbus networks. Use with the Obvius AcquiSuite and take advantage of plug-and-play communication or use with the Obvius ModHopper for wireless communication. Ask about the Obvius Commissioning Console, a free commissioning software.

#### PARTNERS

Obvius' outstanding integration and software partners supplement our products and services to ensure you receive the very best energy monitoring solution.

#### APPLICATIONS

- Converting analog, resistive and pulse inputs to Modbus
- Utility submetering (electric, gas, water, etc.)
- Cost Allocation
- Measurement and Verification
- Benchmark building energy usage
- Relay outputs for demand control
- Environmental monitoring
- Track energy use and peak demand for Demand Response
- DC current monitoring for Renewable Energy

#### ABOUT OBVIUS

Obvius manufactures data acquisition and wireless connectivity products specifically for energy management. We deliver cost-effective, reliable hardware designed to speed up installation. Our products are based on an open architecture allowing our customers to collect and log energy information from virtually any meter or sensor. The ability to support multiple communication options provides remote access to all your energy information. Founded in 2003, Obvius is located in Tualatin, Oregon. We serve a global clientele and continue to drive innovation by simplifying data collection.

#### SOLUTIONS

- Data Acquisition
- Wireless Communication
- Meters & Sensors
- Custom Packaged Solutions
- Integration & Software Partners

#### HEADQUARTERS

Tualatin, Oregon

#### CONTACT US

sales@obvius.com

## Flex IO – A8332-8F2D

Obvius helps customers collect and distribute energy information. Users can begin with one best-of-breed product that satisfies a requirement, or incorporate several products and services for a complete energy management solution.

### Specifications

Processor	ARM7, field upgradable firmware
LEDs	8x input status LEDs (red), 2x Modbus TX/RX (yellow), 1 power/alive status (green)
Memory	Pulse count and runtime values are stored in non-volatile memory

### Power

Power Supply	24VDC, 200mA but not to exceed 8A, Required (not included)
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### Communication

Protocols	Modbus/RTU
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### Inputs

Voltage Mode	0-10VDC (min/max/average/instantaneous data) Accuracy: +/- 0.25% of full scale at 20C
Current Mode	4/20mA (min/max/average/instantaneous data) Accuracy +/- 0.25% of full scale at 20C
Resistance Mode	100 ohms to 100k (see installation for accuracy specification)
Pulse Mode	<ul style="list-style-type: none"><li>Intended for use with dry contact outputs (consumption/rate/runtime/status)</li><li>Standard and KYZ modes for form A and C relay outputs</li><li>Input terminals supplies 5V at 5mA sense voltage to detect contact closures</li><li>Maximum rate: 10Hz, minimum pulse width 50ms</li><li>Adjustable contact closure threshold: 100Ω to 5kΩ, broken wire sense above 10kΩ optional</li></ul>
Serial Port	RS-485 two wire, 19200 or 9600 baud, 8N1
I/O	8 Flex IO inputs with user selectable modes: voltage, current, resistance, pulse and status
Isolation	Pulse outputs and RS-485 port are isolated to 1500VDC; Power input, RS-232 and analog/pulse inputs are non-isolated

### Outputs

Relays	2x, dry contact (opto-fet) 30 VDC, 150 mA max
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### Physical

Weight	3.7oz (105g)
Size	4.13" x 3.39" x 1.18" (105mm x 86mm x 30mm)

### Environment

North America	-30 to 70C, 0-95% RH, non-condensing
Altitude	2000M max
Pollution	Degree 2

### Codes and Standards

Emissions	FCC CFR 47 Part 15, Class A, EN 61000, EN 61326
Safety	UL61010 Recognized, EN61010

### Additional Notes

NEMA enclosures available upon request.

For use with any Modbus RTU device / server

Manufactured in the USA

