Impeller
Data Industrial®

High Density Pulse Module

DESCRIPTION

The A8911-23 High Density Pulse Module provides a convenient way to add multiple pulse-output devices to Modbus systems such as the Data Aquisition Server (DAS). The pulse module accepts up to 23 standard pulse sensors and can function as a slave device with any Modbus master. This data can easily be integrated into a network of critical energy sensors such as Modbus power meters, to provide a comprehensive energy monitoring solution.

The pulse module can be incorporated with cost-effective data acquisition and wireless metering solutions. DAS wireless transceivers, as a properly integrated system, provide high performance and low cost for the following:

• Demand response applications

• Benchmarking building operations performance

• Verification of energy savings and utility costs

• Cost allocation to departments or tenants

• Allows users to bring data from any pulse output device into a new or existing Modbus network:

◊ Electrical, gas and water usage and costs

◊ BTUs and flow

◊ Industry standard pulse inputs

APPLICATIONS

The pulse module is ideal for applications with a high density of pulse output devices, allowing access to meters that would otherwise require multiple modules. The pulse module allows integration with any Modbus master device such as DAS or a PLC. By combining the pulse module with a wireless Modbus module such as the Obvius Modhopper, users gain access to remote groups of meters otherwise unattainable. The pulse module allows users to bring data from any pulse-output device into a new or existing Modbus network.

• Demand response program control and reporting

• Cost allocation to tenants and third parties

• Measurement and verification of energy savings

• Gas, water, steam, and BTU meters

• Monitoring performance of building systems (for example, chillers, boilers, or fans)

• Metering or submetering of consumption and rates for:

◊ Electricity

◊ Gas

◊ Steam
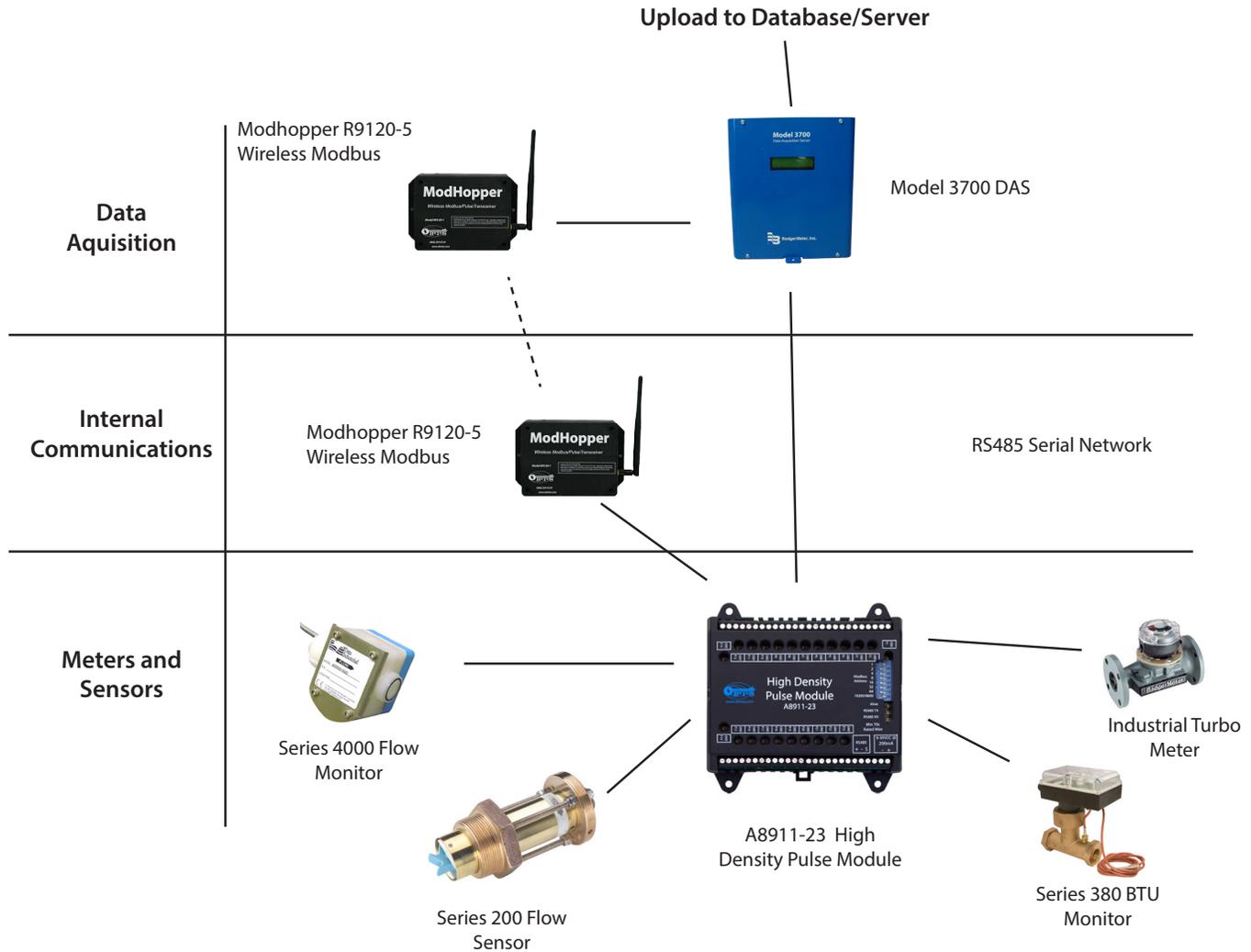
◊ Chilled and hot water

◊ Domestic water

◊ BTUs

FEATURES

• External communications handled via shielded twisted pair 18…22 gauge wire allowing communication up to 4000 feet

• Pulse input communications up to 200 feet (consult factory for longer runs) using 18…24 gauge control wire

• DIN rail mounting makes installations quick and easy

• The onboard dipswitch sets the Modbus address

• Industry standard pulse inputs connect to most pulse output meters

• LED verification of RS485 Modbus TX/RX communications

• Check device status at a glance. LED indicators for each pulse input allow for fast indication and verification of pulses

• Nonvolatile memory retains configuration and pulse count totals during power failures

SPECIFICATIONS

Mounting Processor	Arm7, field-upgradeable firmware		
LED	23 input status LEDs (red), two Modbus TX/RX (yellow), one power/alive status (green)		
Protocols	Modbus/RTU		
Power Supply	9…30V DC, 200 mA, Required (not included)		
Serial Port	RS-485 Two Wire, 19200 or 9600 baud. N81		
23 independent pulse count inputs	Intended for use with isolated dry contact outputs		
	Pulse rate/width user selectable to 10 Hz, 50 Hz or 100 Hz		
	Pulse rate option	10 Hz, min. pulse width 50 ms	
		50 Hz, min. pulse width 10 ms	
		100 Hz, min.pulse width 5 ms	
	Contact closure threshold 100…2500 Ω, user selectable		
	Pulse count values are stored in non-volatile memory		
	32-bit pulse counter	Rollover at 4.295 billion per channel	
Isolation	Pulse inputs, power inputs and RS485 are non-isolated		
Environmental North America	Indoor, temperature –58…32° F (–50…0° C), 0…95% humidity, non-condensing		
Europe	Indoor, temperature –40…41° F (–40…5° C), 0…90% humidity, non-condensing		
EMC	FCC CFR 47 Part 15, Class A		
Size	4.13 in. × 3.39 in. × 1.18 in. high (105 mm × 86 mm × 30 mm)		
Mass	3.7 ounces (105 grams)		
Mounting	DIN rail mountable		

Badger Meter

Product Data Sheet

SETUP DIAGRAM

Upload to Database/Server

Modhopper R9120-5
Wireless Modbus

Model 3700 DAS

**Data
Aquisition**

**Internal
Communications**

Modhopper R9120-5
Wireless Modbus

RS485 Serial Network

**Meters and
Sensors**

Series 4000 Flow
Monitor

A8911-23 High
Density Pulse Module

Industrial Turbo
Meter

Series 200 Flow
Sensor

Series 380 BTU
Monitor

Control. Manage. Optimize.

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