

RT12-2222-ZP-S12

The RT12-2222-ZP-S12 combines traditional Remote analog and discrete I/O functions of a Modbus RTU with built-in wireless connectivity, reducing cost and simplifying installation and support. The Wireless RTU can serve as a "standard" Modbus Slave RTU in a radio based SCADA system or as a Analog to Analog/Peer to Peer, transceiver. The RT12-2222-ZP-S12 is "plug-and-play" compatible with all popular SCADA/DCS Modbus software packages including WonderWare®, FactoryLink®, Labview®, PLCs and process controllers.

Optional configuration features such as polling rates, SLAVE id number, I/O addressing, alarms, discrete Input Mode, etc, may be easily changed.

FEATURES AND BENEFITS

- MODBUS, RTU, Slave. Each Slave can monitor 2 analog inputs, control 2 analog outputs, monitor two discrete inputs, control 2 discrete outputs.
- Selectable Input mode of Discrete or Totalized Count to 99,999,999 or Frequency Counter.
- Modbus Slave RTU, Peer-to-Peer or Peer to Multi-Peer.
- Two channels of Bi-Directional, Full Duplex 12-bit analog INPUTS and OUTPUTS!
- Inputs can be configured as Discrete, Count or Freq, inputs.
- No wiring system to maintain.
- Snaps on industry standard DIN Rail for fast and easy installation
- Event/Alarm Data Recorder-Time Stamp of all alarms and events
- Flexible Transmission/Polling rates.
- Battery Backup and Simple in-circuit charging system.
- Programmable System alarms. Programmable Communications discrete alarm output.
- Power Supply/Battery Monitor with High and Low input voltage alarm limits.
- Communications Detection and failure alarm.
- Programmable discrete, Open Drain, output on communications failure.
- Programmable resting voltages on communication failure.
- Seamless connection between any 0-5vdc, type sensor and a PLC or monitoring station.

**WIRELESS
MODBUS**



APPLICATIONS INCLUDE:

- MODBUS, SLAVE, RTU
- Water well Monitoring and Control
- Tank Level
- Waste Water Monitoring and Control
- Petrochemical
- PLC/RTU Extension, Interface to data loggers, PLC and other recording and controlling equipment.
- Remote Modbus node.
- Voltage, Current, Power Monitoring and Control
- Pump Control
- Sensor Monitoring
- Irrigation Systems
- Interface to data loggers, PLC and other recording and controlling equipment.
- SCADA Equipment
- Monitoring Oil Wells, Power Plants, Industrial Plants, Cement Processing Plants, Gas Plants
- Wireless Water Meter Reading
- Monitoring and control of Water Level, Flow Rates, temperature, high and low level pressure, strain, liquid level, inclinometers, gas detection, accelerometers, etc.



ADVANCED EMBEDDED SYSTEMS, INC.



Description of Operation

The RT12-2222-ZP-S12 hardware architecture for the MASTER and SLAVE are identical, both controllers are equipped with two analog inputs and two analog outputs as well as two discrete inputs and two open drain outputs, allowing for full duplex, Bi-directional analog signal flow. New enhancements now allow for monitor and control flexibility and expansion.

Discrete inputs may be configured to accept devices such as PULSE output water meters. The RT12-2222-ZP-S12 has built in, independent, totalize counter to 99,999,999.

The RT12-2222-ZP-S12 is also equipped with a single frequency input.

Totalize count and Frequency inputs are used while the RT12-2222-ZP-S12 is configured in MODBUS mode.

Advanced Enhancements include MODBUS RTU (Slave) mode, Peer-to-Peer mode and Peer to Multi-Peer mode. Modbus mode allows for up to 255 slave units all have full monitor and control capabilities. Peer to Multi-Peer mode allows users to monitor and control up to four independent locations from one master.

In Peer to Peer Mode, the two analog input signals from the Masters controller are transmitted to the Slave controller. The Slave Controller converts the Master's input signals into an output signal for each of the Slave channels.

The RT12-2222-ZP-S12 supports conventional Modbus, RTU, Slave Mode. Modbus registers include reading incoming power supply, discrete inputs, analog inputs, counter/accumulators, frequency, writing to discrete outputs and analog outputs. Functions 1, 2, 3, 4, 5, 6, 15 and 16, are supported.

Specifications

Voltage	10.0 to 28 vdc, Reverse Polarity Protected, (voltage may depend on your sensor specifications.)
Current	50ma, typical, @ 24vdc
Size	0.890in x 3.220in x 3.818in
Weight	11oz, typical
Mounting	DIN Type, 35mm
Wireless Type	ISM 2.4 GHz, 100mw
Antenna Connector	Varies
Temperature Range	-30c to + 75c
Analog Inputs/Outputs	2 channels, 12-bit, 0-5vdc / 2 channels, 12-bit, 0-5vdc
Discrete Inputs/Outputs	2 Discrete, Dry Contact, Inputs / 2 Discrete, Open Drain, Outputs.
Configurable Input	DI-1 and DI-2. Configurable to Freq Counter or Pulse Accumulator <5Khz
Dedicated Freq Input	Freq Counter <5Khz
LED Indicators	2 LED, Data Transmit, Data Receive
Transmission Distance	Up to 5000 Feet, with modified antennas, line of sight.

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Configuration and Monitoring Software

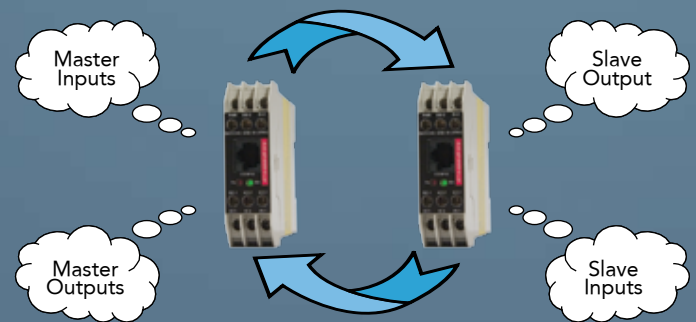
Programmable and monitoring features may be accessed using the optional configuration, monitoring software.

Your data can be displayed in, graphic and numeric form. Data can be formatted using programmable engineering units. Programmable input labels allows you to assign names such as "Voltage", "Current", "Pressure", etc, to each of the INPUTS for the Master and Slave units.

Programmable features such as polling rates, id number, subnets, labels, full scale engineering units, etc, may be easily changed.

Software Features:

- Low Voltage Alarms
- High Voltage Alarms
- Communication Failure Alarms
- Trend Plotter
- Optional Email alarm and support
- Graphical Data Display
- Programmable MODBUS device ID
- Programmable MODBUS register address



Factory Defaults

Radio ID:	0
Radio Network:	0
Retries:	10
Polling Rate:	0sec
Update Rate:	10sec
Comm Alarm:	Off
Voltage Alarm:	Off
Voltage Limit Alarm:	Off
Number Of Channels:	2