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# RainWAN WIRELESS NODE

– LoRa wireless radio,  
Latching solenoid node



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## WIRELESS NODE

– LoRa wireless radio,  
Latching solenoid node

The **RainWAN node** is a LoRa wireless radio device for the operation of latching solenoids and monitoring of digital and analogue sensors. The node is designed to operate latching irrigation solenoids for irrigation purposes, while monitoring a range of field devices, operating from a solar input with a standard SLA 12Vdc battery. With diagnostics for monitoring battery and signal strength, the **RainWAN node** is capable of long-range communications between nodes.



### Features

- Low power
- LoRa wireless radio (4km)
- Solar input
- 12V dc battery input (SLA) with remote voltage monitoring
- Modbus communications
- Two reverse latching solenoid outputs
- Two digital inputs supporting Closed Contacts/ Transistor style inputs / pulse counting
- Analog sensor input
- Can be configured from a modbus master, or RainMATE configuration utility

### Specifications

#### Device

- 12V dc SLA Battery input supply
- Inbuilt solar regulator for a 20W panel at 500mA
- Reset and test mode button operation
- Bi-colour LED for diagnostics and power
- LoRa wireless radio module (RN2483 or RN2903)
- Two 12V dc reverse latching outputs
- One RS232 or one RS485 interface ports
- Two digital inputs
- One 0-2.5V Analog input
- Reverse polarity protection
- RF – Female SMA connector
- Screw terminals for wire sizes 0.2-1.3mm<sup>2</sup> (16-24 AWG)

#### Electrical

- 11-14V dc input (SLA Battery or power adapter)
- 16-22V dc solar input
- Max 2A Solenoid switching outputs (10-500ms pulse width configurable)
- 12V supplied optically isolated digital inputs
- 0-2.5V analog input, 3.3v and 12vdc switch supply

#### Wireless

AU: 915-928MHz,  
25mW max Air time 0.1s to 3.0s per message

#### Operating

- Temperature: 0 to 70°C operation.
- Humidity: 5 to 95% non condensating
- Current Draw:
  - 9-12mA idle
  - 20mA sensor read
  - 85mA transmit
  - 2A latching

#### Dimensions

- Width: 134.95mm
- Height: 76.41mm

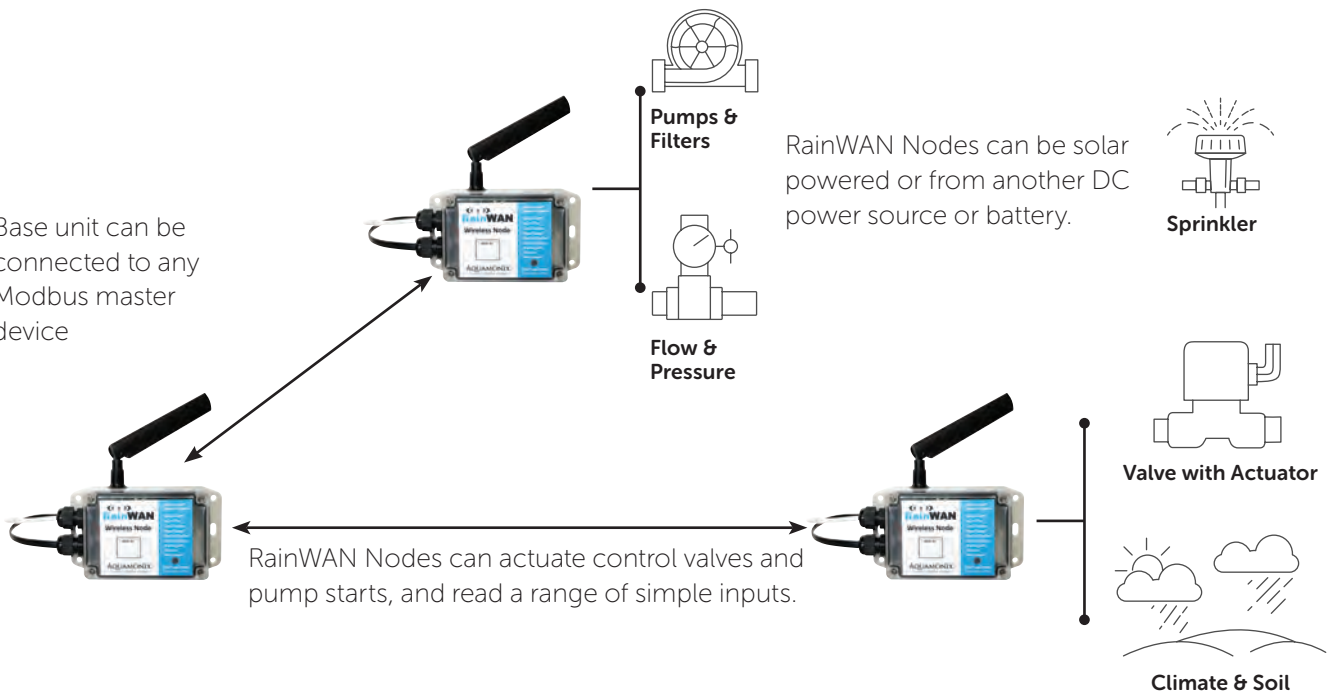
#### Firmware features

- Radio information and diagnostics
- Modbus slave protocol
- Modbus Base address 246
- Modbus Slave addressing 1 to 245
- Battery voltage monitoring every 10 minutes

#### Approvals

Current State - Production - CISPR 24:2010 - EN 61000-4-2:2008 - EN 61000-4-3:2010 - EN 61000-4-4:2004 - EN 61000-4-5:2005 - EN 61000-4-6:2008 - Module RN2903 - FCC ID. T9JRN2903 - Module RN2483 - IEC 60950-1 - ETSI EN301 489-3 V1.6.1 (2013-06) - using common technical requirement of ETSI EN301 48901 V1.9.2:2011 - ETSI EN300 220 V2.4.1 (2012-05) - EN62479

Base unit can be connected to any Modbus master device



## How to order

Simply send us an email at [sales@aquamonix.com.au](mailto:sales@aquamonix.com.au)  
contact your local distributor or phone 1300 797 246.

## About Aquamonix

Aquamonix provides innovative products and services to assist businesses and communities in monitoring critical water resources, managing environmental compliance and mastering remote infrastructure. We are a major supplier of flowmeters, water quality sensors, remote telemetry systems and control solutions for the Australian irrigation market. We are the only Australian manufacturer of full bore flowmeters and have an installed base of more than 40,000 sites and over 40 years of experience in the industry.



Licence ID: 15075

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