



Applications Include:

Pumps, Valves, Relays, Conveyors, Tank Level, Alarm Systems, PLC Activation, Data Monitoring, Automation

Wireless Automation System part #:8022S

The Wireless Automation System is a 900 MHz radio frequency network with integrated I/O that can operate in most environments while eliminating the need for wiring runs. Systems are built around a Gateway, which acts as the wireless network master device, and one or more Nodes.

- Pump Control
- Flow Rate Monitoring
- Conveyor Control
- Tank Level Monitoring
- Light Control
- Alarm Systems
- PLC Activation
- Data Logging
- Wireless Automation

The Wireless Automation System combines Frequency Hopping Spread Spectrum (FHSS) technology and Time Division Multiple Access (TDMA) control architecture to ensure reliable data delivery within the unlicensed Industrial, Scientific, and Medical (ISM) bands. The transceivers provide two-way communication between the Gateway and Node, including fully acknowledged data transmission site survey analyses. Lost RF links are detected, and relevant outputs set to user-defined conditions. Each device comes with two discrete inputs, two discrete (sourcing) outputs, two analog (0–20 mA) inputs, and two analog (0–20 mA) outputs.

Operation

The Wireless Automation System provides reliable monitoring, without the burden of wiring or conduit installation, and can operate independently of or in connection with a PLC and/or PLC Software. Each wireless system consists of one gateway and one or more nodes. The gateway device works as the master within each radio network system. The gateway initiates communication and reporting with the node. Each node can be connected to a sensor or output device and report back the state of the I/O to the master. The gateway and nodes can be arranged to extend the range (3 miles) of the network or to avoid obstacles in the transmissions path. The transceivers provide two-way communication between the gateway and node including fully acknowledged data transmissions.

Wireless Automation System Gateway Specifications

Power Requirements	Supply Power: 24 VDC (15 W power supply included) 100VAC-240VAC Input
Radio	Frequency: 900 MHz distance up to 3 miles (Frequency Hopping Spread Spectrum) FCC Part 15 compliant (License Free)
Operating Environment	Indoor or Outdoor 32° F to 122° F
Discrete Inputs	2 Dry Contact Inputs (Switch)
Analog Input Ratings	Analog Input Rating. 24 mA Analog Input Sample Rate. 62.5 milliseconds Analog Report Rate. 1 second or on Change of State (1% change in value) Accuracy. 0.1% of full scale +0.01% per °C
Output Ratings	Analog Update Rate 125 milliseconds Accuracy 0.1% of full scale +0.01% per °C
Relay Outputs	2 Class C Relays Rated 6A @ 250V

**WAS Gateway
Part #: 8022G**



The range of all radio products is dependent on local conditions and antenna selection/location.

**WAS Node
Part #: 8022N**



The WAS analog output will connect to any controller that reads 4-20 mA data such as a flow meter, data logger, tank level indicator, or process meter.

* Gateway pictures shown with HMI option- not included with standard system.