



Series: **WACSL-900**

## Din-rail Wireless Analog Control System



### FEATURES & BENEFITS

- Wireless Bridge Between Analog Signal & Instrument
- Models with 0-3V DC, 0-5V DC or 4-20mA Input/output
- Built-in Two-way Contact Closure Control Lines
- Sold as Transmitter/Receiver Factory Match Set
- Up To 6 Miles Line-of-site Transmit/Receive Distance
- Adds Wireless Capability to Any Existing Process System
- Powered By 12-24V DC or 120V AC with Optional Modules
- NEMA 4X PCT Plastic Enclosures
- License Free Point-to-point Radio Operation

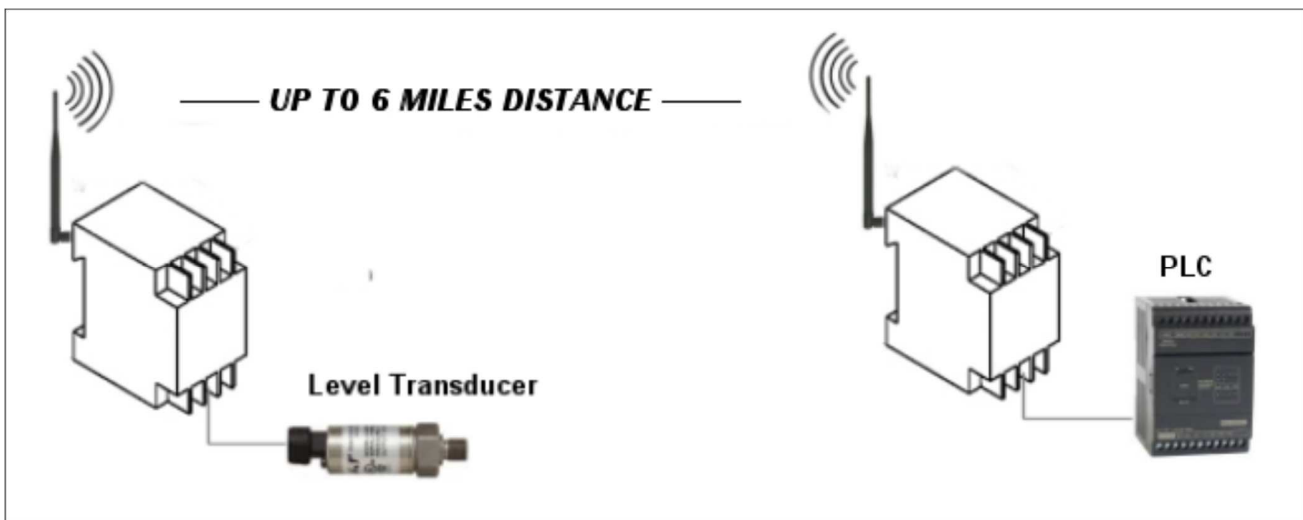
### APPLICATIONS

- Tank Level Monitoring, Valve Positioning
- Process Controls & Instrumentation
- Add Wireless Capability to Existing Process Application

### DESCRIPTION

The WACSL-900 Series Wireless Analog Control System allows for remotely monitoring or controlling equipment from a distance up to 6 miles away using license free wireless 900 MHz communication. Each set features either one or two analog signal inputs and outputs. Both the transmitter and receiver are equipped with one or two contact closure input that is used to control an open-collector output on the opposing unit

SAMPLE APPLICATION SHOWING LEVEL SENSOR SENDING WIRELESS 4-20mA SIGNAL TO REMOTE PLC DEVICE



## General Specifications

**Radio Frequency:** 900MHz  
**RF Input/output Impedance:** 50 Ohm nominal  
**Receive Sensitivity:** -100 dBm  
**Transmitter/Receiver Code Matching:** Factory set  
**RF Power Output:** 100mW  
**RF Data Update Rate:** 10 Kbps  
**Transmit Rate (Factory Set):** Continuous  
**Analog Read/Transmit Accuracy:**  $\pm 0.1\%$  of range  
**Wire Connection:** Terminal Blocks  
**Operating Power:** 12-24V DC @ 200mA  
**Operating Temperature:** -10 to 130 °F (-23 to 54 °C)  
**Enclosure:** Plastic, PCT NEMA 4X  
**Antennas:** Includes 5dBi Antennas  
**Transmit/Receive Distance:** (With Included Antennas)  
 Indoor/Urban 1000ft, Line-of-site 3 Miles  
**Transmit/Receive Distance:** (With Optional 12dbi Antennas)  
 Indoor/Urban 1600ft, Line-of-site 6 Miles

## Transmitter Specifications

**Inputs:** 2 Analog, 1 or 2 Dry-contact Closure  
**Analog Input Signal:** Voltage or Current  
**Analog Outputs:** None  
**Digital Output:** 1 or 2 Open Collector, 24V, 100mA Max

## Receiver Specifications

**Inputs:** 1 or 2 Dry-contact Closure  
**Analog Input Signal:** None  
**Analog Outputs:** Voltage or Current  
**Digital Output:** 1 or 2 Open Collector, 24V, 100mA Max

## Available Options

Model Number	Description
PSS-12V-450MA	12V DC, 450mA Power Module
AT900-12DBI-YD-RP-SMA*	12dbi Long Range Antenna

## Transmitter Operation

The wireless analog signal transmitter reads analog input data from temperature, pressure, strain, flow, level or RH sensors and then sends the measured data over the air to a remote location. The measured 0-3 or 0-5 voltage, or 4-20mA current signals are converted to digital packets and then transmitted via a license free radio transmission to a waiting control receiver. The transmitter includes one or two dry-contact switch inputs that control one or two open collector outputs on the opposing control receiver.

## Receiver Operation

The wireless analog control receiver decodes any incoming radio packets and converts them back into the same voltage or current signal that is being measured by the transmitter in real time. The control receiver includes one or two dry-contact switch inputs that control one or two open collector outputs on the opposing transmitter.

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Includes 9ft Antenna Extension Cables



Optional 12dbi Antenna

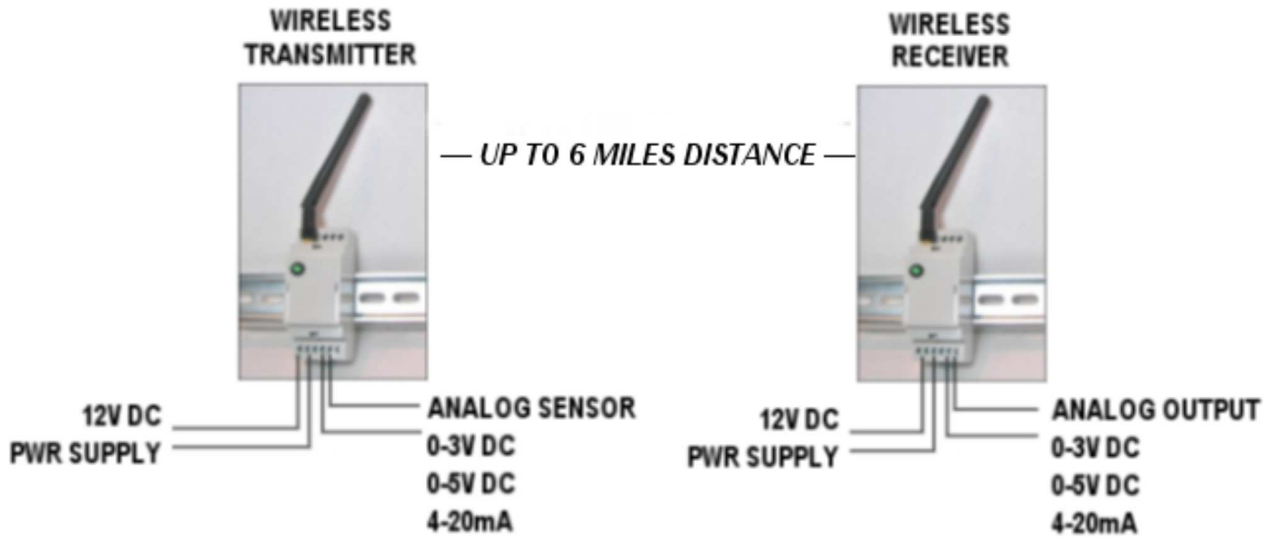


Model AT900-12DBI-YD-RP-SMA Shown

## Regulatory Approvals

**Regulatory:** FCC Part 15 (No license required)  
**FCC(USA):** MCQ-XBEEESC  
**IC (Canada):** 1846A-XBEEESC

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Available Models

Model Number	Transmitter Analog Inputs	Receiver Analog Outputs	Transmitter Dry-Contact Input and Open-Collector Output Lines	Receiver Dry-Contact Input and Open-Collector Output Lines
WACSL-900-1-3V-A	One 0-3V DC	One 0-3V DC	Transmitter with one dry-contact input and one Open-collector Output	Receiver with one dry-contact input and one Open-collector Output
WACSL-900-2-3V-A	Two 0-3V DC	Two 0-3V DC		
WACSL-900-1-5V-A	One 0-5V DC	One 0-5V DC		
WACSL-900-2-5V-A	Two 0-5V DC	Two 0-5V DC		
WACSL-900-1-420-A	One 4-20mA	One 4-20mA		
WACSL-900-2-420-A	Two 4-20mA	Two 4-20mA		
WACSL-900-2-3V-420-A	One 0-3V DC, One 4-20mA	One 0-3V DC, One 4-20mA		
WACSL-900-2-5V-420-A	One 0-5V DC, One 4-20mA	One 0-5V DC, One 4-20mA		
WACSL-900-2-3V-5V-A	One 0-3V DC, One 0-5V DC	One 0-3V DC, One 0-5V DC	Transmitter with two dry-contact inputs and zero Open-collector Outputs	Receiver with zero dry-contact inputs and two Open-collector Outputs
WACSL-900-1-3V-B	One 0-3V DC	One 0-3V DC		
WACSL-900-2-3V-B	Two 0-3V DC	Two 0-3V DC		
WACSL-900-1-5V-B	One 0-5V DC	One 0-5V DC		
WACSL-900-2-5V-B	Two 0-5V DC	Two 0-5V DC		
WACSL-900-1-420-B	One 4-20mA	One 4-20mA		
WACSL-900-2-420-B	Two 4-20mA	Two 4-20mA		
WACSL-900-2-3V-420-B	One 0-3V DC, One 4-20mA	One 0-3V DC, One 4-20mA		
WACSL-900-2-5V-420-B	One 0-5V DC, One 4-20mA	One 0-5V DC, One 4-20mA		
WACSL-900-2-3V-5V-B	One 0-3V DC, One 0-5V DC	One 0-3V DC, One 0-5V DC		

Available Models Cont.

Model Number	Transmitter Analog Inputs	Receiver Analog Outputs	Transmitter Dry-Contact Input / Open-Collector Output Lines	Receiver Dry-Contact Input / Open-Collector Output Lines
WACSL-900-1-3V-C	One 0-3V DC	One 0-3V DC	Transmitter with zero dry-contact inputs and two Open-collector Outputs	Receiver with two dry-contact inputs and zero Open-collector Outputs
WACSL-900-2-3V-C	Two 0-3V DC	Two 0-3V DC		
WACSL-900-1-5V-C	One 0-5V DC	One 0-5V DC		
WACSL-900-2-5V-C	Two 0-5V DC	Two 0-5V DC		
WACSL-900-1-420-C	One 4-20mA	One 4-20mA		
WACSL-900-2-420-C	Two 4-20mA	Two 4-20mA		
WACSL-900-2-3V-420-C	One 0-3V DC, One 4-20mA	One 0-3V DC, One 4-20mA		
WACSL-900-2-5V-420-C	One 0-5V DC, One 4-20mA	One 0-5V DC, One 4-20mA		
WACSL-900-2-3V-5V-C	One 0-3V DC, One 0-5V DC	One 0-3V DC, One 0-5V DC		

\*Optional Antenna. Order 2 each when these antennas are needed.

Each Transmitter/Receiver Set includes 5dBi Antennas, 9' Antenna Extension Cables, Antenna Mounting Brackets and User Manual.

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Note: Continued product improvements make specifications subject to change without notice.  
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