



Series: X24-WRC420

## Wireless 4-20mA Transmitter / Receiver Set



### FEATURES & BENEFITS

- Wireless Bridge Between Sensor & Instrument
- Receiver Output Mirrors Transmitter 4-20mA Input
- Receiver Provides 4-20mA or 1-5V DC Output
- Up To 1 Mile Line-of-site Transmit/Receive Distance
- Powered by any 12V-24V DC Supply
- NEMA 4X Rugged Enclosures
- Pre-configured, Ready-To-Operate
- Sold As Transmitter/Receiver Matched Set
- License Free Radio Operation

### APPLACATIONS

- Process Transmitter Signals, Valve Positioning & Control, Remote Sensor Monitoring

### Description

The X24-WRC420 Wireless Analog 4-20mA Transmitter/Receiver System allows for remotely monitoring or controlling equipment from a distance up to 1 mile away using license free wireless radio communication. Each set features one 4-20mA analog signal input and output. Each system is sold as a factory programmed matched set. That means there is no field settings needed to operate right out of the box.

### Transmitter Operation

The wireless 4-20mA 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 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 also includes one dry-contact switch input that controls one open collector output on the opposing control receiver.

### Receiver Operation

The wireless 4-20mA analog receiver decodes any incoming radio packets and converts them back into the same 4-20mA current signal that is being measured by the transmitter in real time. The control receiver also includes one dry-contact switch input that controls one open collector output on the opposing transmitter.

## General Specifications

Radio Frequency: 2.4 GHz  
Transmitter/Receiver Code Matching: Factory set  
Antenna Connection: RP-SMA  
Wiring Connection: Terminal Blocks  
Transmit/Receive Distance  
(with included antennas):  
Indoor/Urban 100ft, Line-of-site 600ft  
Transmit/Receive Distance  
(with optional antennas):  
Indoor/Urban 300ft, Line-of-site 1 Mile  
Operating Temperature: -22 to 113 °F (-30 to 45 °C)  
Enclosure: PVC, NEMA 4, 4X  
Antennas: 5dbi, Omni-directional (Included)

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Each Set Includes 5dbi Antennas and 9ft Antenna Extension Cables



Optional 1 Mile Distance Antenna Set

## Transmitter Specifications

RF Power Output: 79mW  
RF Output Impedance: 50 Ohm nominal  
RF Data Rate: 10 kbps  
Operating Power 12-24V DC @ 3W max  
Input: 4-20mA

## Receiver Specifications

Receive Sensitivity: -103 dBm  
Operating Power: 12-24V DC @ 3W max  
Output: 4-20mA

## Regulatory Approvals

FCC(USA) - MCQ-XBEE3  
IC (Canada) - 1846A-XBEE3

## Available Models

Model Number	Description	Control Lines
X24-WRC420	2.4 GHz Industrial Wireless 1-Line 4-20mA Transmitter/Receiver Set	1

## Available Options

Model Number	Description
DRWC-24-LRANT	Optional Long Range Directional Antenna (up to 6 Miles line-of-site)

Note: Continued product improvements make specifications subject to change without notice.  
Check [www.imagineinstruments.com](http://www.imagineinstruments.com) for the latest product information and updates

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