IMAGINE Instruments™

Series: WPC2W900-XL

Wireless 2-Way Remote Control Transceiver Set

FEATURES & BENEFITS

- 2-Way Wireless Bridge Between Switches & Relays
- Activation With Any Dry-contact Closure Device
- Up To 6 Mile (LOS) Transmit/Receive Distance
- Use To Control Pump, Valve, Motor or Lighting
- Switch Input & Relay Control on Both Sides
- Can Be Hardwired, Battery or Solar
- NEMA 4X Weatherproof Enclosures
- License Free Point-to-point Radio Operation

APPLACATIONS

Tank Monitoring or Water Level Alarm
Process Controls, Instrumentation
Level & Flow Control & Irrigation Systems
Water Pump & Valve Motor Control

DESCRIPTION

Series WPC2W900-XL Wireless 2-Way Switch/Control System provides a wireless bridge between any type dry-contact switches and control relays. When a switch connected to one of the transceiver units opens or closes signals are sent via a license free radio signal to a corresponding unit up to 6 miles (Line-of-site) away. When the corresponding unit receives the proper signal a control relay inside the panel is energized to operate a pump, valve, motor or alarm.

Application Example: PLC Controlling a Remote Water Pump with Alarm Switch Feedback

Series: WPC2W900-XL

General Specifications

RF Impedance: 50 Ohm nominal
Transmitter/Receiver Code Matching: Factory set
Wire Connections: Terminal Blocks (14 – 24 AWG)
Antennas: 7dBi Antenna (Included with system)
Operating Temperature: -10 to 130 °F (-23 to 54 °C)
Control Distance with Included Antennas:
Up to 2000' Indoor/Urban
Up to 2 Miles (LOS) Line-of-site
Control Distance with Optional Antennas:
Up to 3000' Indoor/Urban
Up to 6 Miles (LOS) Line-of-site
Enclosures: NEMA 4X, PC/PBT Blended Plastic

Transceiver Specifications

Radio Frequency: 900 MHz
Main Control Input: Dry-contact Switch
RF Power Output: 100 mW
Transmit Time: 250 msec
Wiring Connection: Terminal Block
Operating Power (Can be Hardwired, Battery or Solar)
Hardwired: 11 to 13V DC @ 350mA or 120V AC 50/60 Hz
Battery: 12V (See Manual For Life Estimates)
Enclosure: NEMA 4X, PC/PBT Blended Plastic
Control Relay: See model table

Regulatory Approvals & Location Use

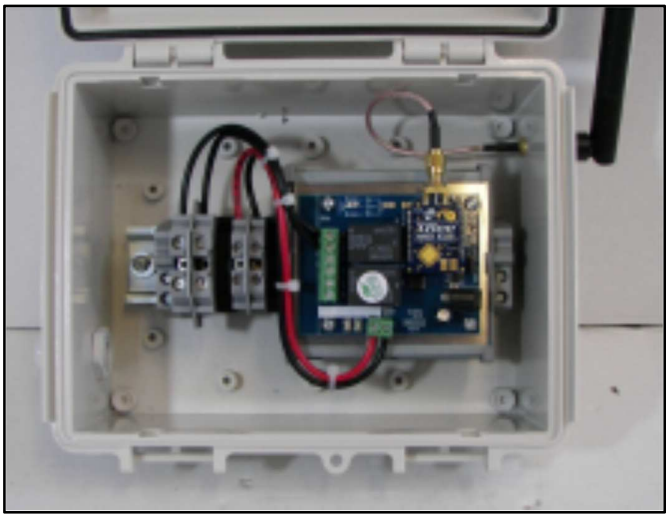
Approved for Use in USA, Canada only
FCC Part 95 (No license required)
FCC(USA) 4214A-XBEE
IC (Canada) 4214A-XBEEPRO

WPC900-XL boards are equipped with built-in firmware that will allows you to connect dry-contact closure inputs to control relay contact closure outputs in a remote location. The transmitter device is equipped with dry-contact closure inputs, used to control relays on the remote receiver board. The Transmitter and Receiver boards are a permanently matched set and are both included when you purchase a system.

Optional Solar Power Kit
Includes Solar Panel, Charge Controller, Deep-cycle Battery, System Enclosure

Communication Between Boards

The boards use 802.15.4 two-way communication to send control commands and also ensure the system is properly functioning. The Status LED is always used to indicate a properly functioning remote device. If you do not see the Status LED flash, then the transmitter is unable to communicate to the remote relay board. A flashing status LED is your verification that communication is functioning properly between boards. If the Status LED does not flash, the remote relay board is out of range.



Relay Status

The transmitter board is also equipped with LEDs that display the status of the remote relay. If communication is lost between the remote relay and the transmitter board, the transmitter will turn off the LED.

Available Models

Model Number	Relay Capacity	Description	Switch Inputs / Relays
WPCW900-XL-1-5A	120/240VAC, 5 Amp, SPDT	Transceiver Set	1/1
WPC2W900-XL-2-5A	120/240VAC, 5 Amp, SPDT	Transceiver Set	2/2
WPC2W900-XL-4-5A	120/240VAC, 5 Amp, SPDT	Transceiver Set	4/4
WPC2W900-XL-8-5A	120/240VAC, 5 Amp, SPDT	Transceiver Set	8/8
WPC2W900-XL-1-10A	120/240VAC, 10 Amp, SPDT	Transceiver Set	1/1
WPC2W900-XL-2-10A	120/240VAC, 10 Amp, SPDT	Transceiver Set	2/2
WPC2W900-XL-4-10A	120/240VAC, 10 Amp, SPDT	Transceiver Set	4/4
WPC2W900-XL-8-10A	120/240VAC, 10 Amp, SPDT	Transceiver Set	8/8
WPC2W900-XL-1-20A	120/240VAC, 20 Amp, SPDT	Transceiver Set	1/1
WPC2W900-XL-2-20A	120/240VAC, 20 Amp, SPDT	Transceiver Set	2/2
WPC2W900-XL-4-20A	120/240VAC, 20 Amp, SPDT	Transceiver Set	4/4
WPC2W900-XL-8-20A	120/240VAC, 20 Amp, SPDT	Transceiver Set	8/8
WPC2W900-XL-1-30A	120/240VAC, 30 Amp, SPST	Transceiver Set	1/1
WPC2W900-XL-2-30A	120/240VAC, 30 Amp, SPST	Transceiver Set	2/2
WPC2W900-XL-4-30A	120/240VAC, 30 Amp, SPST	Transceiver Set	4/4
WPC2W900-XL-8-30A	120/240VAC, 30 Amp, SPST	Transceiver Set	8/8

Note: Transceiver are a permanently matched set. Two boards are included when you purchase a system.

Available Options

Model Number	Description
WCS-24-SPK	Solar Power Kit
WCS-ANT-KIT-900	Long Distance Antenna Kit

© 2015 :: Imagine Instruments LLC :: 4500 Williams Drive, Ste 212-318 :: Georgetown, TX 78633 :: p. (512)778-6850
e-mail: info@imagineinstruments.com :: www.imagineinstruments.com

Note: Continued product improvements make specifications subject to change without notice.
Check www.imagineinstruments.com for the latest product information and updates

Released: 5 December, 2015 :: Rev: A