IMAGINE Instruments™

Series: WPC900-XL

Wireless Remote Control Transmitter/Receiver Set

FEATURES & BENEFITS

- 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
- Optional Solar Power Kit for Transmitter
- Transmitter Can Be Hardwired, Battery or Solar
- Receiver Unit Features Control Relay
- 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 WPC900-XL Wireless Switch/Control System provides a wireless bridge between any type dry-contact switch and a control relay. When a switch connected to the transmitting unit opens or closes signals are sent via a license free radio signal to a receiver unit up to 6 mile (Line-of-site) away. When the control box receives the proper wireless signal from the transmitter a control relay inside the panel is energized to operate a pump, valve or motor.

Application Example: Controlling a Water Pump with Two Level Switches

Series: WPC900-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

Transmitter 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 13Vdc @ 350mA or 120VAC 50/60 Hz
Battery: 12V (See Manual For Life Estimates)
Enclosure: NEMA 4X, PC/PBT Blended Plastic

Receiver/ Relay Controller Specifications

Operating Power: 120VAC 50/60 Hz or 11 to 13 Vdc
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.

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.

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

Available Transmitters Board Models

Model Number	Description	Switch Inputs
WPC900-XL-SW1	Wireless Dry-contact Switch Transmitter	1
WPC900-XL-SW2	Wireless Dry-contact Switch Transmitter	2
WPC900-XL-SW4	Wireless Dry-contact Switch Transmitter	4
WPC900-XL-SW8	Wireless Dry-contact Switch Transmitter	8

Available Relay Control Board Models

Model Number	Relay Capacity	Description	Control Relays
WPC900-XL-RC1-5A	120/240VAC, 5 Amp, SPDT	Wireless Relay Control Box	1
WPC900-XL-RC2-5A	120/240VAC, 5 Amp, SPDT	Wireless Relay Control Box	2
WPC900-XL-RC4-5A	120/240VAC, 5 Amp, SPDT	Wireless Relay Control Box	4
WPC900-XL-RC8-5A	120/240VAC, 5 Amp, SPDT	Wireless Relay Control Box	8
WPC900-XL-RC1-10A	120/240VAC, 10 Amp, SPDT	Wireless Relay Control Box	1
WPC900-XL-RC2-10A	120/240VAC, 10 Amp, SPDT	Wireless Relay Control Box	2
WPC900-XL-RC4-10A	120/240VAC, 10 Amp, SPDT	Wireless Relay Control Box	4
WPC900-XL-RC8-10A	120/240VAC, 10 Amp, SPDT	Wireless Relay Control Box	8
WPC900-XL-RC1-20A	120/240VAC, 20 Amp, SPDT	Wireless Relay Control Box	1
WPC900-XL-RC2-20A	120/240VAC, 20 Amp, SPDT	Wireless Relay Control Box	2
WPC900-XL-RC4-20A	120/240VAC, 20 Amp, SPDT	Wireless Relay Control Box	4
WPC900-XL-RC8-20A	120/240VAC, 20 Amp, SPDT	Wireless Relay Control Box	8
WPC900-XL-RC1-30A	120/240VAC, 30 Amp, SPST	Wireless Relay Control Box	1
WPC900-XL-RC2-30A	120/240VAC, 30 Amp, SPST	Wireless Relay Control Box	2
WPC900-XL-RC4-30A	120/240VAC, 30 Amp, SPST	Wireless Relay Control Box	4
WPC900-XL-RC8-30A	120/240VAC, 30 Amp, SPST	Wireless Relay Control Box	8

Note: Transmitter and Receiver boards are a permanently matched set and are both included when you purchase a system. A system model number includes both the transmitter model number and the receiver model number. **SYSTEM MODEL NUMBER EXAMPLE:** WPC900-XL-SW2/WPC900-XL-RC2-10A

Systems are also available where multiple transmitter boards can send control signals to one relay control receiver. Contact us for information.

Available Options

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

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

Released: 11 September, 2015 :: Rev: B