



## Wireless Discrete Matched Pairs with Critical Link ***PST-CL-D***

### DESCRIPTION

The *PST Discrete* point to point emulation will monitor up to 3 dry contacts or voltage points and emulate their state at the receiver end. The *Critical Link* protocol transmits immediately on change of state and verifies reception. A heartbeat transmission occurs 6 times per minute to verify link status and report signal strength, battery voltage and temperature. The transmitter and receiver have a link status LED output and the receiver has a voltage output that allows monitoring of link status with a PLC. These pairs are designed to snap right into any PLC system. All communications can be monitored and recorded with our standard receiver and iStatus software.

### TRANSMITTER

The transmitter uses two AA alkaline batteries with an approximate one-year battery life. These 900 MHz transmitter radios use the license-free 902-928 MHz ISM band. Before each transmission, the radio checks for a clear channel before it sends the sensor data. If the channel is busy, it waits until it finds an opening; then transmits the data. This clear channel assessment approach allows the system to function efficiently in noisy areas or heavy RF traffic areas without disrupting other communications.

Data is typically transmitted 6 times per minute to optimize battery life and minimize RF traffic. Every transmission is verified by the receiver. A change of state of any of the discrete inputs will cause the transmitter to transmit immediately and send continuously until it receives a reply from its paired receiver. An LED indicates the link status. Battery voltage and signal strength are reported with every transmission.

The transmitter range will vary depending on the location. Typical industrial environments are not ideal for RF reception; it is best to evaluate the site with a transmitter and software to find the ideal locations for transmitters and receivers. A range of 600 feet can be expected in most environments and reliable communications have been maintained at more than 1200 feet.

### Receiver

The receiver has 3 normally open contacts that emulate the state of the inputs of the remote transmitter and 1 normally open contact for link status. The received signal strength is included in the reply and can be monitored. The reception verification packet contains that status of the receiver outputs and can be monitored and recorded using a standard iStatus receiver and software. The serial number of the receiver is identical to transmitter except the highest bit is set to one.

Example: Transmitter serial number = 00000071, Receiver SN = 80000071

### PARTS LIST

Quantity	Part
1	PST-CL-DT
1	PST-CL-DR

## APPLICATIONS

- Any situation where contact closure status needs to be reported and monitored by a PLC.
- Door open/close status
- Motor running status
- Line running status
- E-stop status

## SCALING IN ISTATUS SOFTWARE

Inputs from the PST-CL-D1 are easily scaled in software using the Sensor Setup tab.

Open contacts = 0

Closed contacts = 1

Received signal strength is indicated in the CCA field for the paired receiver

**This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:**

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received, including interference that may cause undesired operation.



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**Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.**



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