



KNOW BEFORE IT GOES

Wireless Analog Matched Pairs with Critical Link

PST-CL-A

DESCRIPTION

The *PST* Analog point to point emulation will monitor 1 analog input and emulate its value at the receiver end. A matched pair is made up of a transmitter and a receiver. The transmitter is a battery powered device that reads the analog signal and then transmits its value. The receiver is matched to the transmitter at the factory and will only receive signals from the transmitter with which it has been paired. The receiver requires a 12-30 VDC power supply. 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. On a set schedule, the transmitter will 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.

Transmitter

Temperature Range	-40°F to 176°F
Nominal Current Range	0-24 milliamps
Measurable Current Range	0-21milliamps
Resolution	.025 milliamps
Accuracy	+/- 1%
FCC ID	X85-PST-TX01
Batteries	2 "AA" 1.5 volt cells
Radio Frequency	902 to 928 digitally modulated spread spectrum

RECEIVER

The receiver has 1 analog output that emulates the value of the 0-21 mA input of the remote transmitter and 1 led output to indicate link status. The received signal strength is included in the reply packet 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 the transmitter except the highest bit is set to one.

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

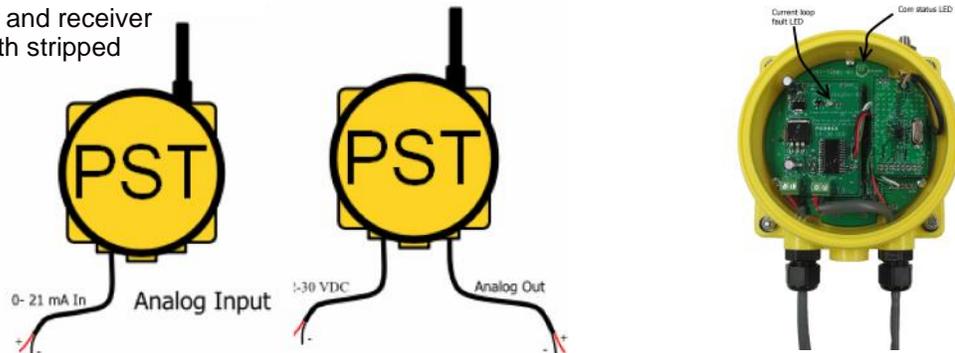
Temperature Range	-40°F to 176°F
Measurable Current Range	0-21 milliamps
Resolution	.025 milliamps
Accuracy	+/- 1%
FCC ID	X85-PST-TX01
Power Supply	12-30 VDC
Radio Frequency	902 to 928 digitally modulated spread spectrum

PARTS LIST

Quantity	Part
1	PST-CL-AT
1	PST-CL-AR

WIRING

The transmitter and receiver are supplied with stripped flying leads.



STATUS

The link status of the transmitter or receiver is indicated by the Com status LED. A slow steady blink indicates a good connection. Rapid blink indicates no connection.

A current loop fault is indicated by the current loop fault LED as shown in the picture above.

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.

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



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