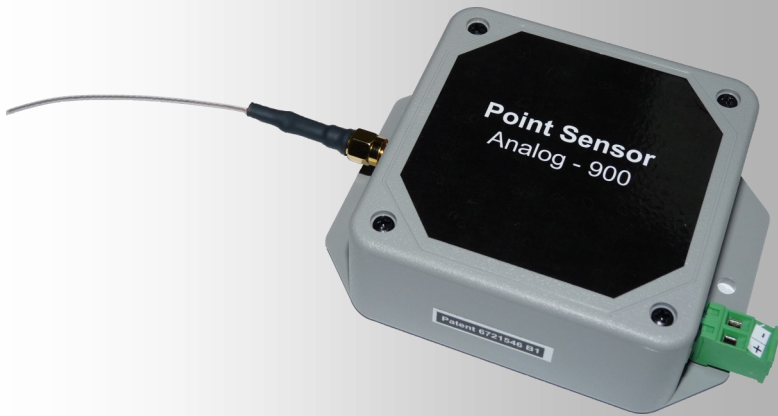


Point Sensor Analog-900 (5vdc Input) 3005-119



FEATURES

- 0-5vdc Analog input module
- 12-bit Analog to Digital Conversion
- Integrated 100mw, 900 MHz SSFH radio for long range performance
- Range Indoor: Up to 1300 feet
- Range Outdoor: Up to 1 mile with standard antenna
- Battery lasts up to 2 years at 5 minute transmit intervals
- Very small (3.25" X 2.5" X 1.125") ABS Enclosure
- Complies with part 15 of the FCC rules
- CRC-16 error checked Status, Counts, ID and Analog Value
- External ¼ wave antenna
- Conformal coated

DESCRIPTION

The Point Sensor Analog 900 wireless transmitter is a battery operated 12-bit analog-to-digital converter with a micro-processor controlled 900 MHz. FCC certified radio transmitter. The Point Sensor Analog 900 has an on board time of day clock that allows it to spend most of the time in a low power quiescent state. At predetermined time intervals the clock will wake up the onboard microprocessor and analog data is read from a 12-bit analog-to-digital converter. This information is combined with a unique serial ID number, a CRC-16 error check and transmitted in a very short data packet that results in a very short transmitter on time. This architecture allows the Point Sensor Analog 900 to consume very little energy and a battery life of up to 2 years.

The Point Sensor Analog 900 electronics are coated with a conformal material that provides a moisture barrier against condensation. Submersion in water is not recommended. An internal reed switch permits a user to activate the service switch with a magnet. A quick swipe of a magnet across the "Service" label will activate the service switch. When you perform this operation, a data transmission occurs immediately and a special mark is introduced in the ID field of the transmitted data packet to indicate which sensor is in service or installation. The Sensor is shipped with the transmitter turned off (anytime the Sensor is to be shipped the transmitter should be turned off or must be placed in a shielded container to prevent interference that might cause shipping problems). The sensor is started by sliding the On/Off Switch away from the SMA antenna connection. The Point Sensor Analog-900 sensor can be turned off by sliding the On/Off switch towards the SMA antenna connection.

Transmission rate	Preprogrammed at factory (5 minutes default)
Shelf life with battery installed	10 Years in quiescent mode
Dimensions (enclosure)	3.25 W X 3.25 H X 1.375 D (inches)
Weight	4.7 oz.
Operating Temperature	-40° to 85° C
Input (0-5vdc)	100k ohms, 0-5 volt, 12-bit resolution, 5v=4095
Battery life with transmissions	Up to 2 years
Battery	(2) 3.6 volt Lithium Thionyl Chloride
FCC Certified	FCC ID: OUR9XSTREAM

Point Six Wireless
Unique, High Value Wireless Solutions

Installation and Operation Instructions

Point Sensor Analog 900

The Point Sensor Analog wireless temperature sensor transmits a 12-bit analog value and a unique serial number to a 900 MHz receiver. The Point Sensor Analog is enclosed in a high impact ABS enclosure for direct surface mounting in the environment to be measured. Point Sensor Analog is battery operated. Transmission times are preprogrammed at the factory (default rate is every 5 minutes).

Application: Apply the sensor to the surface to be monitored with double-sided adhesive tape or with screws through the flanges.

Start/Stop Function: The sensor is started when the On/Off switch is moved away from the SMA antenna connector. The Sensor has an internal reed switch (indicated as "Service" on product label). Momentarily placing a magnet next to this switch will cause the device to transmit a special installation status mark in the data packet immediately after the magnet is removed. The immediate transmission of analog value, ID and installation status mark will occur anytime the reed switch is activated. The Point Sensor Analog 900 may be placed in a quiescent state (no transmission) by sliding the On/Off switch towards the SMA antenna connector.

Battery: Two 3.6 Volt lithium batteries powers the wireless analog sensor. The device will transmit data for as long as 2 years at a transmission rate of once every 5 minutes. The electronic components are completely covered with a water resistant coating to protect from condensation. The user can replace the batteries.



FCC ID: OUR9XSTREAM
MADE IN USA

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 UNDESERED OPERATION

Wireless Transmitter Packet-Data Specification

Analog Sensor Data Format

“Analog” (41/40) (12-bit unsigned)

IDSSSSSSSSSSSSSSSSSSSSAAAACCCCKK<CR>

Note: All fields are in ASCII Hex

“ID”
This field is the device type and mode indicator, the 41 or 40 indicates that this is an “Analog” transmitter; 40 indicates the transmitter is in service mode.

“SSSSSSSSSSSSSSSSSS”
This field is the 64 bit unique serial number of the sensor.

“AAAA”
This is the analog data field. This field is 16 bits stored MSB first (bits 15-8) and LSB last (bits 7-0) from left to right. The MSBits (bit 15-12) will always be zero, this is a value of 0-4095 for 0-fullscale.

5V version:
 $(\text{Value} / 4096) * 5V = \text{voltage on input.}$

“CCCC”
This field is the CRC-16 error check as was originally received and checked. This CRC is over the first 11 bytes of the packet starting with the device type and ending with but not including CRC-16.

“KK”
This field is the mod 256 sum of all the binary data values as represented by the ASCII hex values in the response but does not include the <CR>.

Example:
402771EE01000000040BC8AABF07
SN=0400000001EE7127; Value=0BC8 – 73.6% of full scale; CRC-16=AABF; Checksum=07