

4NR 4-Channel Analog Transmitter 6000-25-A10



FEATURES

- 4-channel 0-10vdc analog interface
- 12-bit Analog to Digital Conversion
- Transmits unique ID and analog value
- RS485 multi-drop interface
- Sequentially transmits data from each of 4 channels
- Very small (2.5" x 2.0" X 1.0") ABS Enclosure
- CRC-16 checked Status, ID, and thermistor data
- Low Cost
- 2.5" X 2" X 1" ABS enclosures

DESCRIPTION

The Point Sensor 4NR transmitter is a powered 0-10vdc analog interface with RS-485 interface. 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, CRC-16 error check and transmitted in a very short data packet via the RS-485 interface.

The electronics are coated with a conformal material that provides a moisture barrier against condensation. Submersion in water is not recommended. A button on the top of the ABS cover permits a user to activate the service switch. When the service switch is held a data transmission occurs immediately and a special mark is introduced in the ID field of the transmitted data for the selected channel (hold pushbutton to generate service packets for the individual channels with LED feedback). The built-in LED provides feedback for when standard data is transmitted and indication of which channel is producing the service packet.

Transmission rate	10-17 seconds random (alternates channel every 3-4 seconds)
Dimensions (enclosure)	2.5 W X 2.0 H X 1.0 D (inches)
Weight	1.5 oz.
Operating Temperature	-40° to 85° C
Input (0-10vdc)	62 ohms, 0-10vdc, 12-bit resolution, 10vdc = 4095
Humidity	0% to 90% non-condensing

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Packet-Data Specification

“Analog” (41/40) (12-bit unsigned)

IDSSSSSSSSSSSSSSSSSSAAAACCCCKK<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 a “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.

10vdc Version:
 $(\text{Value} / 4095) * 10V = \text{voltage on input.}$

“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.

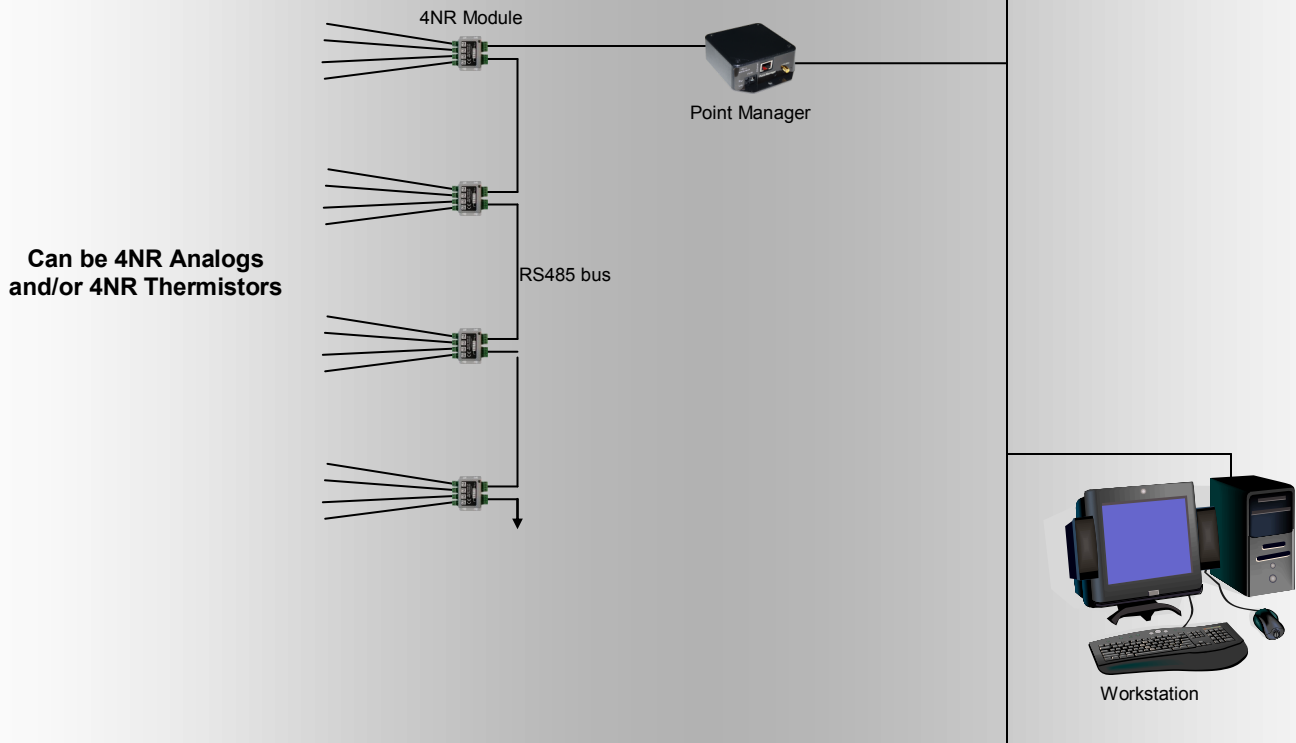
“KK”
This field is the mod 256 sum of all the binary data values as represented by the ASCII hex values in the response but does not include the <CR>.

Example:

402771EE0100000040BC8AABF07
SN=040000001EE7127; Value=0BC8 – 73.6% of full scale; CRC-16=AABF; Checksum=07

4NR Analog Topology Examples

Wired link between 4NR and Point Manager



Wireless Link between 4NR and Point Manager

