WTN-PTX-SG-10
WiSense PT-100/1000 Wireless Temperature Sensor
DESCRIPTION

● Low power wireless (Sub-GHz) temperature sensor node.

● Wireless communication between gateway and sensor nodes is bi-directional. This allows node behavior to be reconfigured during installation and at any time after installation.

● Temperature Sensor:
  ○ Supports any 3-wire PT-100/PT-1000 sensor
  ○ Default sensor specs:
    ➢ Usable temperature range: -200°C to +550°C
    ➢ Accuracy: ±0.5°C (0°C to 85°C)
    ➢ 3-wire cable
    ➢ Contact element: Stainless steel tube
      ■ Diameter: 4mm
      ■ Length: 30 mm
    ➢ Cable length: 1m

● Wireless Operating Frequency
  ○ India: 865 to 867 MHz
  ○ EU: 868 MHz
  ○ USA: 900 MHz

● Radio Certification
  ○ Certified (FCC/ETSI) and non-certified radio module options available.

● Radio max transmit power: +13 dBm
  ○ Tx power level configurable in real time
• Radio Antenna:
  ○ Standard
    ■ Half-wave dipole antenna
    ■ Gain: +3 dBi
    ■ Length: 185 mm
  ○ Other antenna options (including PCB) available

• Range: Around 1 KM (line of sight)

• Power:
  ○ 2 x AAA / 2 x AA Batteries
  ○ 1 x Rechargeable LI-Ion (3.7V to 4.2V)

• Very low standby mode current consumption of 2 uA allows for long battery life

• Temperature reporting options:
  1. Report measured temperature periodically with configurable interval - Minimum (1 sec) / Maximum (1 day).

  2. Report measured temperature only when it changes by a configurable percentage value with respect to the prior value reported. Also report measured temperature if no report sent for a configurable period of time.

  3. Report measured temperature only when it crosses configurable high or low threshold value. High and low hysteresis values are also configurable. Also report measured temperature if no report sent for a configurable period of time.

WiSense can implement (on request) any customer specific temperature reporting algorithm.
● External on/off switch

● Enclosure
  ○ Material: ABS
  ○ Dimensions: 103 mm x 116 mm x 33 mm
  Other enclosure options available.

● Each node has a unique IEEE assigned 64 bit address.

● WiSense gateway can support up to 128 simultaneous sensor nodes in a single network.
WiSense Wireless Mesh / Star Network Architecture

Sensor Node (WTN-PTX-SG-10)

Coordinator

Gateway

Router (FFD)

Cloud

WiFi / 2G Backhaul

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For any queries, contact:

rkris@wisense.in
WiSense Technologies Pvt Ltd,
NASSCOM COE-IOT,
Lower Ground Floor, DD3,
Diamond District ISRO Colony,
Domlur, Bengaluru - 560008

Web: https://www.wisense.in
Blog: wisense.wordpress.com