



IntelliSensor™ Series Datasheet

Intelligent Monitoring At Your Fingertips

General Description

The IntelliSensor™ is a low cost battery operated wireless sensor using the Zigbee/IEEE 802.15.4 standard for wireless communications. Employing a 2.4 GHz standards based wireless transmitter, the IntelliSensor™ is FCC, IC, and CE approved for use in the United States, Canada and Europe. The IntelliSensor™ can reach wireless distances of up to 1 mile and as part of a meshed network the wireless distances can be further increased.

The IntelliSensor™ unit incorporates a 12-bit A/D Converter for accurate measurements of a wide variety of sensors. The IntelliSensor™ unit can be ordered with up to 4 different sensors such as: temperature, magnetic door, 0-5V analog input, and digital input counter. Allowing multiple sensors to be connected to one IntelliSensor™ unit further reduces the overall system cost.

The IntelliSensor™ uses 128-bit AES encryption to transmit sensor data periodically based on time or a change in the value of a sensor reading (ΔT). These parameters are configurable to allow realistic acquisition of different types of sensor data.

IntelliSensor™ Series Wireless Acquisition Module



IntelliSensor™ Model TempNTC-40 Shown



Applications

The inputs to the IntelliSensor™ are user selectable allowing you to configure the IntelliSensor™ to your specific application. Applications include, but are not limited to: food service (where the IntelliSensor™ units can assist in monitoring and preventing HACCP violations), heating, cooling, refrigeration, HVAC, medical, and industrial.

Multiple IntelliSensor™ units can communicate to an IntelliGate™ Wireless Receiver for local data and alarm storage. Data and alarms can then be encoded into an XML file and transferred to an Enterprise Web Server using https post. Using https post and an XML file allows for an extremely secure communications method for transferring data to a central server like Raptor Web Software™, without having to make any changes to firewalls or internet security devices. Using IntelliSensors™, IntelliGates™, and Raptor Web Software allows you to have a full and complete data acquisition system.

Features

- Small Size 3.290" x 2.420" x 1.000"
- Integrated 2.4 GHz Zigbee/802.15.4 DSSS Radio
- Up to 1 mile wireless range
- 128-bit AES Encryption (optional)
- Supports meshed network for increased range
- Replaceable Battery lasts up to 10 years in quiescent mode
- Configurable Transmission Rate
- On-board Temperature Sensor (optional)
- 10K Thermistor Temperature Sensor (optional)
- 0-5 VDC Analog Input (optional)
- Magnetic Door Sensor (optional)
- Digital Input Counter (optional)
- Flame retardant ABS plastic enclosure with mounting flanges
- Small Size
- FCC, IC, and CE agency certified for worldwide operation
- Conformal Coated board for moisture rich operating environments
- Internal or External Whip Antenna
- Industrial Temperature Rating (-40° C to 85° C)
- CRC error checking on all data packets for reliable connection
- NAFEM Data Protocol Compliant