

AVIDSmartSensors™



AVIDSmartSensors are the perfect addition to the AVIDdirector® for remote control and monitoring. These small, wireless industrial sensors can help reduce your operating expenses by handling those processes that require costly resources to manually monitor and control. They can be used virtually anywhere to monitor various processes, applications, or machinery. The sensors are placed in strategic locations and then transmit the information in real-time, if the criteria are met it is then sent to the AVIDdirector, where it is analyzed and then transmitted over a data network (cellular/satellite/other) to a back-end system or database. Each device has a unique ID and an internal 5-10 year battery.

Features

Each AVIDSmartSensor has the following features:

- § Broad operating temperature range
- § Up to 600-foot range
- § Up to 100 transmitters can co-exist
- § 30-bit unique ID with 24-bit digital counter and radio transmitter
- § Battery lasts from 5 to 10 years
- § Very small (1.3" x 2.1" x .6")

AVIDSmartSensors not only reduce operating costs, they help your organization go green! By adding the new wireless, self-contained Power Monitoring AVIDSmartSensors to the AVIDdirector, you can monitor the power (current) used by your industrial devices in real-time. The AVIDdirector has the intelligence to calculate daily and peak usage and use that information to adjust the operation to reduce overall electricity usage. We can apply this same infrastructure to buildings, wind turbines, or any desired location. Up to 100 transmitters can co-exist in up to a 600-foot radius and you do not have to run wires for monitoring.

Types of Sensors

The following types of sensors are available:

- § **Analog to Digital Converters** – 0-5 V, 0-10 V, 0-20 mA. Input analog-to-digital converters available.
- § **Counter/Temperature** – Digital counter and temperature monitor
- § **IR Sensor** – Infrared beam interruption
- § **Magnetic Door Sensor** – Digital magnetic counter
- § **Motion Sensor** – Digital motion sensor
- § **Power Monitor** – 15 and 40 Amp power usage
- § **Pulse Counter** – Wireless digital counter, counts up to 60,000 pulses per minute
- § **Temperature** – Digital temperature
- § **Temperature/Humidity** – Digital temperature and relative humidity
- § **Thermistor** – 10K thermistor (thermistor not supplied)
- § **Vibration Sensor** – Digital vibration

How AVIDSmartSensors Work



1. AVIDSmartSensors are placed in strategic locations or connected to various machinery that users wish to monitor. In our example below, temperature sensors can be utilized in scenarios such as monitoring the temperature of fluids during transportation, for building automation, or for refrigeration units.
2. The wireless sensors transmit information to the AVIDSmartSensor receiver inside the AVIDdirector. The sensor information gathered is reviewed and determination is made as to what information should be sent to the back-end monitoring system or whatever action the AVIDdirector needs to take.
3. The AVIDdirector is configured with the appropriate radio based on the AVIDdirector's location and distance to the back-end systems.
4. The information gathered from the sensors, which has been securely configured specifically for the back-end system, is carried over a data network, through the Internet, and is accepted by the back-end system and stored in a database.
5. The back-end system provides various reports configured specifically for the monitoring application chosen. These reports are available to authorized users. The example above displays the information as it would be shown from the AVIDdashboard™ application. AVIDdashboard system also provides easy to use remote control capabilities. Process may be managed by sending commands back to the AVIDdirector from the back-end system to control machinery or sensors managed by the AVIDdirector.
6. If the data is outside specific parameters, alerts are sent from the back-end system to the appropriate personnel via email and/or SMS.

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