



APPLICATION STUDY



SENSERT™ FOR AGRICULTURE

Remote monitoring reaches beyond industrial applications to protect barns, out buildings, and livestock

ATC Diversified Electronics, a trusted name for decades in plant automation, motor protection, electrical safety, and power quality, is the maker of SENSERT™, a scalable technology that makes it possible to remotely monitor critical processes for a wide range of conditions including level, temperature, pressure, flow, and current—as well as vibration, presence of voltage, and others. SENSERT™ is a diverse whole-plant remote monitoring and alert system that sets up easily, is affordable, and uses your existing sensors.

But SENSERT isn't just for industrial environments. It is finding success as a condition monitoring tool for agricultural applications.

PROTECTING MILLIONS IN ASSETS

Agriculture operations are multi-million dollar businesses that need protection like any other commercial enterprise. Their many moving parts control everything from irrigation to ventilation to livestock corraling, as well as the need to monitor building conditions such as temperature, moisture, and air quality.

SENSERT has the ability to monitor for normal parameters and send alerts and notifications when conditions fall outside acceptable levels. This can be critical to long-term success. As an affordable solution that monitors a wide variety of conditions, SENSERT makes sense in agriculture and is effective in various farm configurations including multiple barns and multiple rooms within buildings.

SENSERT can monitor diverse applications including ventilation fans, ammonia levels, curtains and lights, egg incubators, and critical functions like carbon dioxide levels, heat, and humidity.

SENSERT HELPS AVOID CATASTROPHIC LOSS

As an example, consider livestock enclosures in the southern U.S., full of animals in the hot summer. Now imagine the ventilation system goes out. Power goes out, fans quit working, and the backup generator never kicks on.

Heat and CO2 builds up quickly. Livestock is in imminent danger, but the main control package won't be sending alerts because the power is out. It is here where SENSERT helps avoid catastrophic loss.

SENSERT isn't part of the main system control package. Being its own system, if power is lost, SENSERT will send operators a notification of the critical malfunctions within about 60 seconds before powering down. If the SENSERT keeps power but the sensors it monitors go down, SENSERT will send an alarm instantly.

FLEXIBILITY OF CONFIGURATIONS

Because SENSERT works with any commercially available 0-20 milliamp, 4-20 milliamp, 0-5 volt or 0-10 volt sensors, it has significant flexibility in matching monitoring redundancies to operator need. A variety of sensors can be hardwired directly to the SENSERT base unit or wirelessly connected via the SENSERT remote I/O for true wireless, remote, online capability. Sensor data is monitored in real time and alerts are triggered based on customizable thresholds, easily configurable through the SENSERT mobile app or web portal. Each channel can be configured for a high and low threshold value as well as custom alerts.

HOLY COW SENSERT as part of 'cow breathalyzer' package

Analyzing a cow's breath may seem novel, but within agriculture it's widely accepted as a method of predicting future illness. Today's bovine breathalyzers can detect sickness up to two days before the animal begins showing recognizable symptoms.

Dairy farmers use breath analyzer readings to determine which cows are healthy enough to give milk on a given day. If the breath analyzer determines a cow isn't healthy enough for milking, the gate to the milking operation locks and the cow is diverted through a different gate.

SENSERT can be part of this packaged solution. The breathalyzer is sensitive to extreme temperatures, either too hot or too cold. SENSERT can monitor the temperature of the device. If a dairy farmer gets a SENSERT reading outside acceptable parameters, they know to check the breath analyzer's results for accuracy.

SENSERT can also monitor the breathalyzer's battery backup system so users always know if there's adequate power to run the system.