AVIDwireless®

Monitoring Generators with M2M

A New Look at Generators in a Connected World

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Overview

Many critical locations have come to rely on back-up generators to supply power when there is a power failure, hospitals, financial institutions, oil and gas sites, large skyscrapers to name a few. Generators can very in size and location and often times they are in remote locations or areas where the traffic is minimum and visual checks are hard to perform. Yet when the back up power is required it must perform at a moments notice. This is a perfect situation for machine-to-machine (M2M) solutions.

Until recently most monitoring of generators was done on a digital basis; the equipment was either off or on and the support staff must visit the location to verify the fuel and battery levels. But now with the cost of wireless data becoming more and more affordable we are able to provide more intuitive information by sending analog readings from the equipment. An analog reading would be any data such as numeric values representing engine temperature, diesel fuel level, battery levels or even detection unusual vibration when the generator is running.

In this White Paper we will show how Machine-to-Machine (M2M) is being used to monitor generators to not only save companies time and money but also add an extra layer of security to current practices.

Remote Generator Monitoring

The monitoring system is typically wired to normally open or closed contacts from various control systems, hardware or sending devices. Upon detecting a change in status of an input, the AVIDdirector controller makes contact with the system server through the cellular data/control channel. AVIDdashboard then sends a specific message for that input to the desired recipients by email and/or text message. All alarms/events and data are stored, date and time stamped and viewable to the customer's dashboard. Remote start and stop capabilities are also available through the web portal interface giving you full control of the remote site. Now you can stop or start the generator remotely from your desk or Smartphone.

One of the biggest problems found in standby emergency generator systems is that the operators do not know something is wrong until they needed the system to perform. Most generators sit behind buildings or at a remote. The number one reason for generator systems not starting is found to be the battery or battery charger not performing when needed. Second to this problem is block heaters not working during cold weather. Now you can monitor every aspect of the generators required parts to operate and control from your desktop. This can significantly improve the operation of the generator when needed.

- **Standby Generator Monitoring Features**:
  - Utility Power Failure Alerts
  - Generator Active Tracking
  - Transfer Switch in Emergency Position
  - Engine Temperature
  - Oil Pressure
  - Coolant Level
  - Battery Charger Status
  - Battery Voltage
  - Fuel Level
  - Remote Start/Stop Capabilities
  - Fault Shutdown Reporting

- **Benefits of Remote Generator Monitoring:**
  - Increased Customer Satisfaction
  - Failure Prevention
  - Minimize Downtime
  - Real-time Alerts Directly to Your desktop or Smartphone
  - Early Detection of Potential Problems
  - Efficient Support Staff Scheduling
  - Remote Control of Equipment

Portable Generator Monitoring

Generators, pumps, compressors and other portable equipment deployed at various locations for construction, or emergency conditions, is often very difficult manage. Owners sometime struggle with where their equipment locate and do not currently monitor the status of this equipment. With this in mind, our remote generator monitoring system not only alerts of critical situations, it has built in GPS for to allow you to pinpoint the location of the equipment.

- Time Savings:
  - Equipment is easy to install comes ready to plug in and turn on
  - No need to constantly send employees to measure the fuel and battery levels
- Money Savings:
  - Utilize your support personnel to perform maintenance when needed instead of daily visual monitoring
  - Maintain the equipment instead of repairing the equipment
- Security Feature:
  - Know that exact location of the equipment
  - Know when the equipment is moving after hours and prevent theft/locate the equipment if stolen

Conclusion

As you can see there are many opportunities to monitor remote generators, which that can improve, your day-to-day operations, protect your investments, and provide your customers with uninterrupted service and at the same time save money simply by adding monitoring to the equipment. AVIDwireless has plug-and-play solutions that can address any of your generator monitoring applications. Our solutions are easy to quickly implement and easy to use. Information in the form of readings collected from the equipment is transmitted directly to the cloud based

server where users can view the information about their machines from any web based PC or Smartphone. To learn more about our solutions visit the website at http://www.avidwireless.com.

Receive a free consultation on your specific application; let us show you how AVIDwireless can help you feel more secure and better monitor your remote generators and other equipment.

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