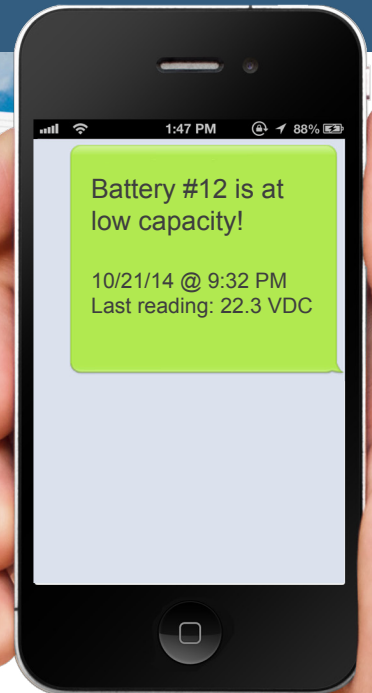




The Leader in Low Cost Monitoring Solutions



Wireless Sensors Use Case: Solar Energy Monitoring

The Problem:



In solar energy systems power is constantly being put into or extracted from a series of batteries. Measuring battery charge levels typically requires accessing the battery terminals on location. This can become a tedious and time consuming task. Just like personal banking, you don't want to drive to bank every time you want to check your account balance, right?

Monnit was contacted by a corporation that had recently installed solar energy systems to help offset their carbon footprint. In the process of setting up the energy storage system (battery bank) they realized that there was no integrated way to remotely monitor the system. This was key to maintaining the system for optimum efficiency.

The Solution:



Monnit provides a reliable remote monitoring solution that includes wireless voltage meters as well as other valuable sensors that can help maintain solar energy systems. The company deployed wireless voltage meters on each battery array to track and monitor battery charge levels. The sensor data is sent wirelessly to a Monnit gateway which uses cellular service to connect to the iMonnit online sensor portal. Through the online system, users can view all of their sensors data and set notification via SMS text, email or voice if a set condition is met or exceeded. Monnit wireless gateways support up to 100 wireless sensors each, so the company also decided to extend their wireless sensor network by deploying temperature, water detection and motion sensors at their solar battery bank to more closely monitor environmental conditions around the system.

Wireless Sensors Used

Wireless sensor used:	How it was used:
Voltage meters	To monitor and track battery charge levels.
Temperature sensors	To monitor temperature of the electrical charging system.
Water detection sensors	To detect immediate presence of water around the electrical systems.
Motion sensors	To detect access to the battery bank area.

The Result (Cost Savings)



Before implementing Monnit wireless sensors this company had no way to remotely monitor their solar energy system. They were manually sending employees to check the system and track battery charge levels. They also had no way of being alerted if there were environmental conditions that could damage the system. For an initial investment ~\$1,500 they deployed a Monnit remote monitoring solution consisting of a Cellular gateway, 14 wireless voltage meters, 4 water detection sensors, 4 temperature sensors and a motion sensor allowing them to track and monitor multiple aspects of their system.

By using Monnit's comprehensive monitoring solution this company is now able to:

- Track and Monitor battery charge levels in their solar energy battery bank.
- Prevent costly damage to their system due to environmental conditions such as water leaks or temperature extremes.
- Track access to the area letting them know how often people are entering, as well as monitoring for unauthorized access.
- Reduce workload for employees having to manually check the system.
- Receive immediate alerts if there is an issue.

"This remote monitoring system is worth its weight in gold! It does exactly what we need and Monnit's prices made it a no-brainer. Prior to using Monnit, we had no way to remotely track and monitor conditions with our solar energy system. Now we are able to detect numerous conditions that could cause problems and my team is notified the instance anything is wrong."

- Gary T., VP Business Operations

It doesn't matter where in the world you are or what time it might be, deploying a Monnit wireless sensor and monitoring solution connects you from anywhere, 24/7 so you'll know immediately when a problem starts.

For information about our products or to place an order, please contact our sales department at 801.561.5555.

Visit us on the web at www.monnit.com.



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