DATA LOGGING SOLUTIONS TO AID IN
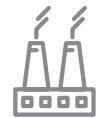# ALTERNATIVE ENERGY STUDIES

Solar

Wind

Hydroelectric

Geothermal

MadgeTech data loggers can be used to monitor and record parameters in alternative energy production and usage studies. The energy product line includes devices for pressure, temperature, pulse, event and shock. They are commonly used in applications such as utility usage studies, energy audits, testing and verification, and in energy production processes.

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The MadgeTech Advantage

Ensure safety, quality and efficiency by measuring and recording crucial data for inconsistencies that directly impact the success of a business. Our customizable data logging solutions provide real-time monitoring for applications where the slightest change in environment could be destructive. Coupled with the accuracy and reliability of our products, we also offer free software and cloud services, making compliance and validation reporting a breeze.

Why Choose MadgeTech?

At MadgeTech we take pride in maintaining meaningful relationships with our customers, going above and beyond to turn their everyday problems into new data logging solutions. To ensure the instrument's accuracy, MadgeTech offers in-house standard and customized calibration services, including ISO/IEC 17025 accredited calibrations for certain products.

Benefits:

- Calibration
- ISO/IEC 17025 Accreditation
- IQ/OQ/PQ On-Site Services
- Free Technical Support
- Free Software
- Cloud Services
- 21 CFR Part 11 Compliance

MadgeTech data loggers are designed, manufactured and serviced in the USA and distributed worldwide.

HEADQUARTERS
Warner, New Hampshire

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Solar Power

Data loggers play an important role in the production of many alternative energy sources including solar power. Measuring and auditing energy consumption is another way that data loggers help support and guide the energy industries. MadgeTech's voltage data loggers are also ideal for use in determining possible locations for solar panels.

Wireless Voltage Data Logger

The **RFVolt2000A** is a wireless data logger designed to measure and record DC voltage signals. The data logger can connect directly to DC voltage sources, making it ideal for solar energy monitoring and other DC voltage monitoring applications. The RFVolt2000A can also be interfaced with a wide range of voltage output sensors, as well as transmitters and other transducers. The RFVolt2000A is available in a 2.5 V, 15 V, 30 V or 160 mV measurement range. Use the **MadgeTech Cloud Services** to access data instantly and securely from anywhere in the world.
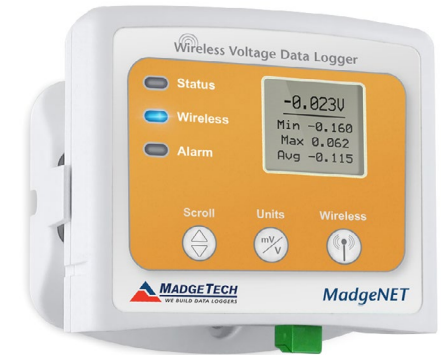
Low-Level Voltage Data Logger

The **Volt101A** is a single channel low level DC voltage data logger that can be used to monitor and record time and date stamped voltage readings. The Volt101 is available in 2.5V, 15V and 30V ranges.

The Volt101A can be interfaced with solar cells to determine voltage output over time. Thin film solar cells are recommended due to their ease of use and portability. By using the Waterbox101A the device is protected from environmental conditions and can be placed in remote locations for long periods of time.

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Wind

Data logging technology is used to continuously monitor and measure the output of wind turbines as well as identifying sites for future wind turbine placement.

Wind Speed Data Logging System

The **Wind101A** is a complete system to accurately measure and record wind speed. The Wind101A data logger can measure and record data for up to 500,000 readings. The device can be started and stopped directly from a computer with the user-friendly MadgeTech software.

This wind speed recording system comes complete with the Wind101A data logger, weatherproof enclosure, a three-cup anemometer and all the necessary cabling to quickly get up-and-running.

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Hydroelectric

MadgeTech's pressure and vibration data loggers are ideal for use in hydroelectric power applications.

Shock300 Data Logger

The **Shock300** is a tri-axial, stand-alone, compact shock data logger with three built-in acceleration ranges. The ranges are implemented on separate low-g and high-g accelerometers for excellent resolution and accuracy. Compact and lightweight, the Shock300 can measure and record up to 4,192,254 readings and is equipped with a rechargeable battery for convenience.

Transient Pressure Data Logger

To monitor pressure events that SCADA systems cannot capture, the **PR1000** is the data logger to use. The device can monitor and record transient pressure through software configuration of user defined trigger thresholds and time periods. The logger can be configured to record measurements at rates as fast as 128 Hz or as slow as once every 24 hours. It can screw directly into a ¼ inch NPT female fitting in pipelines to measure the internal pressure. It is ideal for monitoring penstocks for overpressure in the case of wicket gates suddenly closing. The PR1000's non-volatile memory has a capacity of over 1 million readings.

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Geothermal

Data loggers provide a durable, simple and reliable process for monitoring temperature, pressure and flow rate without the maintenance and data loss risk associated with strip chart recorders. MadgeTech data loggers are rugged enough to survive even the harshest weather conditions and feature long battery lives to allow for long term deployment.

Differential Pressure & Temperature Data Logger

The **PRTemp1000D** is a rugged, submersible data logger that records ambient temperature and differential pressure. The device is designed to record over long periods of time at the user selected reading rate and has a pressure accuracy of ±.25% over the Full Scale Range, making the device extremely accurate. The stainless steel enclosure allows it to withstand harsh environments and the flexible cable is equipped with dual ¼ inch NPT connections for easy installation.



Real-Time Pressure Data Logger

The **PR2000** is a pressure data logger equipped with an LCD screen. This rugged, splash-proof (IP65) device has one of the largest memory capacities of any similar data recorder on the market, logging up to 262,143 readings. The non-volatile memory will retain recorded data, even when battery power is lost. The PR2000 is ideal for applications requiring precise displayed pressure readings, such as the real-time monitoring of outdoor geothermal pipelines.

Rugged Pressure & Temperature Data Logger

The **PR1000** is also a pressure and temperature data logger that accurately records data at user programmable reading rates, over long periods of time. The device can be deployed in the field to record data for weeks or even months based on the user selected reading rate. The rugged stainless steel design allows it to be placed in harsh environments which makes it well suited for steam pressure systems. The PR1000 comes standard with a ¼ inch NPT fitting, which allows it to be connected to almost any pressure adapter.

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MadgeTech Cloud Services
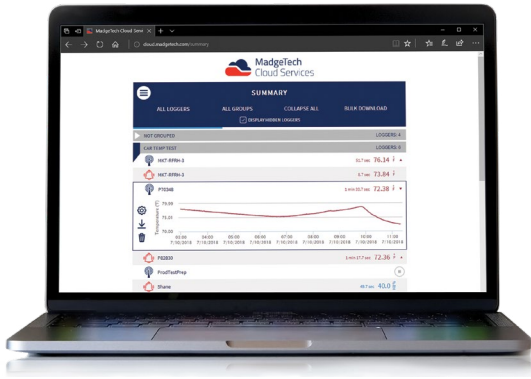
Access Data Instantly and Securely from Anywhere in the World

The **MadgeTech Cloud** is compatible with all MadgeTech wireless data loggers, providing users with instant access to real-time data from any location. With the MadgeTech Cloud, data loggers can securely transmit data to be viewed on any Internet enabled device such as a computer, tablet or smartphone.

Quick and Easy Setup

View Data From Anywhere

Access Data Instantly

Email and Text Notifications

Scalable Solution

The MadgeTech Cloud is designed to support organizations of any size. From a single data logger to a network consisting of hundreds of loggers, the MadgeTech Cloud provides facilities with on-demand data supervision, attainable results, and flexibility like never before. The MadgeTech Cloud gives users the power to have control of all their critical data right in the palm of their hand.

Cloud Capabilities

All wireless MadgeTech data loggers can transmit data to the MadgeTech Cloud to be saved, viewed and controlled. The data is available for viewing from any Internet enabled device anywhere in the world. Equipped with many features, the MadgeTech Cloud is flexible enough to adapt to any data logging needs.

New Logger Groups

Assembling data loggers is easier than ever thanks to the MadgeTech Cloud's Logger Groups. Users have the ability to organize data loggers into groups and subgroups, making all data easily accessible from one central location.

Email & Text Message Alerts

The MadgeTech Cloud allows users to configure alarms to alert for no readings, channel thresholds or battery level. When an alarm is triggered, text message or email notifications are instantly sent, giving users the ability to view the data and assess the situation immediately.

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MadgeTech 4 Software

The simple, easy-to-use, Windows-based software enables the user to effortlessly collect, display and analyze data. A variety of powerful tools can be used to examine, export, and print professional quality reports with just a click of the mouse. This software can be downloaded for free from the MadgeTech website.

Software Features

- Multiple Graph Overlay
- Statistics
- Digital Calibration
- Zoom In / Zoom Out
- Cooling Flags
- Lethality Equations (F0, PU)
- Mean Kinetic Temperature
- Full Time Zone Support
- Data Annotation
- User Friendly File Management
- Min. / Max. / Average Lines
- Timeslice
- Data Table View
- Automatic Report Generation
- Summary View
- Workflows / Automation

MadgeTech 4 Software Customizable Features and Options

MadgeTech 4 Software can communicate with multiple loggers through multiple interface cables. Capable of simultaneous start, stop and download of over 100 devices, this software serves as your virtual command center for large scale facilities and small. Display your data in graphs, with tabbed views and multi-monitor support. Utilize the infinite graphing flexibility by combining channels and datasets as desired. All graphing makes use of accelerated graphics hardware for real-time updating and high performance visuals.

MadgeTech 4 Software is designed with a built-in database for automatic storage of downloaded data. The look and feel is organized much like standard email programs to aid in user friendliness and ease of use. MadgeTech 4 Software also offers extensive alarming options across multiple devices, wireless and non-wireless. Alarm output options include email, on-screen, text message and run-a-program alerts.

MadgeTech 4 Software has a powerful and comprehensive statistics system that allows the user to customize and view statistics as desired. Another feature is customizable engineering units. This enables users to support and program devices with many different unit types as well as the ability to display them as an alternate unit if desired.
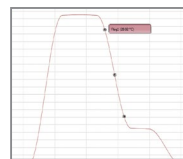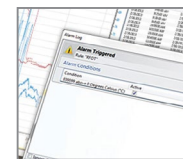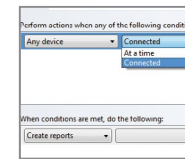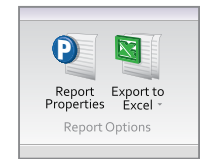
| Cooling Flags | Graph View | Tabular Data View | Alarm Notifications | Automation | Export to Excel |

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