

# Solar / Wind eLearning | Data Acquisition, Operation, Performance, Configuration

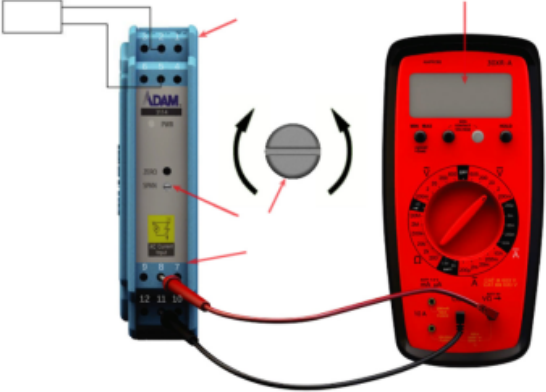
**Data Acquisition Learning System - Solar/Wind - WX20329-AB01AEN-E1**

Objective 11: Describe How to Collect AC Voltage Data in Solar PV and Small Wind Systems

**AC Voltage Signal Conditioning Module Calibration - Step 1**

The first step in calibrating an AC module requires connecting a voltage input source of known value, called a calibration source, to the module's input with power off.

The module is then powered up and the full voltage is applied to the input. If the measured DC voltage output is different than the rated full output, 5 VDC for the module shown, the Span pot is adjusted until the measured value is equal to the rated full-voltage output.



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## eLearning Course: M20329

The Data Acquisition - Solar / Wind eLearning course (M20329) teaches data collection, acquisition systems, DC and AC voltage current operation, system performance and configuration. Learners will study objectives like: the function of a data logger, the basic operation of an analog-to-digital converter, the locations of DC and AC voltage and current in solar PV and small wind systems, and the configuration and display of data using a data acquisition system.

## Teach Alternative Energy

### What are Data Acquisition Systems?

A data acquisition (DAQ) system is a computer-based method used to measure conditions in machines and environmental conditions. Data acquisition systems use a computer to receive data from electronic sensors that measure variables such as temperature, pressure, flow, voltage, and current. The computer then uses software to analyze, display, and store the data it receives.

Data acquisition systems are commonly used to monitor solar and wind conditions to determine if a given site is suitable for the installation of solar panels or wind turbines. To collect wind data, for example, a meteorological evaluation tower (MET) might be installed on the site and allowed to collect data for a period of time to determine the nature of the wind characteristics at that site. Data acquisition systems are also used to monitor operating conditions after installation of the solar PV or wind turbine systems. The DAQ system may be part of the solar and wind system controllers or a separate system. These systems typically monitor the wind or solar system itself as well as the wind or solar conditions, thereby monitoring total system performance.

## Interactive eLearning

### Solar / Wind eLearning Courseware Features Multimedia Curriculum

Amatrol's [unmatched multimedia](#) utilizes text, audio, and stunning 3D animations that engage learners in theoretical knowledge and concepts. This thorough, exceptionally detailed curriculum is built to begin with the basics and steadily advance to more complex concepts. Through partnerships with key industry leaders and

leading edge educators, Amatrol developed the right balance of knowledge needed to train learners to work in their chosen field.

## **Additional Info**

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### **Requires:**

- Computer: [See requirements](#)

### **Options:**

- Data Acquisition Learning System - Solar / Wind (85-ADA1)
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