



ATevo – Hidden Features, Benefits and Treasures

The ATevo doesn't just charge batteries and support loads, it is a vital tool that will contribute to battery health and system reliability!

The abundance of standard features and programmable capabilities position the HindlePower ATevo in a class by itself. No special software, hardware, or programming knowledge is required. In addition, we will preconfigure your charger parameters for you at the factory for no extra cost.

Here are just a few examples of how the ATevo battery charger provides the user with a comprehensive understanding of their complete DC system, including battery health.

Start with the unique HindleHealth System...

The HindleHealth® System (HHS) provides a simple user-friendly approach to dc system health.

The ATevo records and time stamps all data events for the life of the charger!

ATevo provides complete system status; alarms, events, battery health, and self-diagnostics, with enough memory for the life of most chargers!

What about HMI, Human Machine Interface?

The HMI is interactive and provides all the information via a single backlit LCD screen display.

Programmable and standard alarms!

If you just want basic alarms, great, but if you have special or unique requirements or want to provide alarms for charger conditions that is now possible!

Universal Control Card.

The same control card for all single and three-phase models.



Here are just a few of the available features of the ATevo;

- One digital display that covers everything.
 - Standard LCD Back Lit DC metering and alarm conditions
 - Optional LCD Back Lit AC metering includes voltage, current, and frequency
 - Ground Fault metering LCD Back Lit and included in every charger.
 - All alarms conditions
 - All reports
 - All settings and menus
 - System security
- Programmable alarm relays. (latching or self-clearing)
 - Relay assignments, single-use and multiple uses. Any charger function can be reported as a binary function through the alarm relays.
 - Adjustable time delays
 - Along with Standard alarms such as AC failure, high DCV, low DCV, Charger failure, and ground fault; the following is a partial list of additional alarms and features offered:
 - Battery open alarm - Standard
 - Charger Ripple too high - Standard
 - Charger output at current limit - Standard
 - Charger over temperature and Rectifier temperature sensor failure - Standard
 - End of Discharge - Standard
 - Battery Discharge - Optional
 - AC and DC circuit breaker open - Standard
 - Remote binary shutdown - Standard
- Binary and analog inputs are available to allow for the custom configuration of alarms additional to the battery charger. This allows for the supervision of other equipment that would be part of the dc system, examples include;
 - Electrolyte level
 - Fan controls
 - Separate battery monitoring
 - Battery/load breaker positions
 - Hydrogen detectors
 - Security

Battery Health, DC System Health and Safety & Security

- Along with all the alarms and recording systems available, one of the newest features of a battery charger is it's ability to report on activities that might cause harm to people, battery or safety and reliability of the DC System.
 - Battery Thermal Runaway – This defect causes the battery to overheat and cause the system to generate hydrogen and eventually destroys the battery. There are many situations that can cause thermal runaway, but it



is important to note that the cause in this section is not the issue but rather we are interested in providing a means for mitigation.

- Temperature Compensation Probe, also reports on battery temperature and allows an alarm to be offered either via relay or serial communications.
 - Customer supplied hydrogen sensor that provides a binary signal to the charger. (We will provide an internal 12-15VDC power supply to support the H2 sensor, if desired.)
 - Either the battery over temperature alarm or hydrogen sensor as described herein, may be used to do any or all of the following;
 - Report and add this to the Event log;
 - High Battery Temperature Alarm
 - Flammable Level of Hydrogen Gas Present.
 - Shut down the charger.
 - Trigger an exhaust fan.
 - Disconnect the battery from the load by offering a signal to a customer supplied contactor or shunt trip breaker.
- **Communications and Control**
 - Satisfying your need to control, observe, and report everything dc, we have you covered with the ATevo.
 - Just about every protocol and communication systems is available and at a much lower cost than before!
Examples include;
 - DNP
 - MODBUS
 - IEC61850
 - TCP-IP (Ethernet)
 - RS232
 - RS486
 - Fiber Optics
 - These systems do not require special software or programming. We provide the customer with all the details they need to access our systems with their typical SCADA system.

Along with all the usual features you expect from HindlePower, the ATevo is the product the utility dc industry has been waiting for. We took all the best features already from the traditional AT and added all the extra features needed to enhance reliability, reporting, and operations in a meaningful, effective yet simple way.

For more details about the ATevo, visit us online at www.hindlepowerinc.com, call us at 610-330-9000 or send us an email to sales@hindlepowerinc.com.