



**Franklin Electric**  
**GRID SOLUTIONS**



**CELLGUARD**

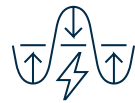
**WIRED BATTERY  
MONITORING SYSTEM**



# WIRED BATTERY MONITORING SYSTEM

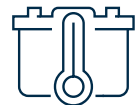
The CELLGUARD™ wired battery monitoring system (BMS) delivers economical, yet highly accurate and reliable remote health analysis of stationary batteries in all stationary power backup applications. Comprised of a control module, battery sensor modules, one or more string sensor modules, and a current transducer, the system provides continuous 24/7 monitoring of key battery performance indicators, to help ensure performance and uninterrupted uptime when it matters the most.

## INTERNAL RESISTANCE TESTING AND PERFORMANCE TRENDING



The BMS tests a given battery's internal resistance at a pre-determined interval. The results are then collected and presented as a trend providing the user with genuine DC power plant performance insight.

## NEGATIVE POLE TEMPERATURE



Rising battery temperature may be an indication of degrading battery performance. The wired BMS delivers 24/7 temperature monitoring for real-time thermal runaway alerts.

## DISCHARGE EVENTS



Battery discharge events are recorded automatically (including battery voltage, string voltage, discharge current and discharge capacity). When operating in a discharge state, BMS data collection rates increase dramatically.

## STATE OF HEALTH



A battery's remaining state of health is routinely and automatically monitored.

## CONTROL MODULE CAPACITY



Max batteries on a single string: 300  
Control module string maximum: 6  
Control module battery maximum: 360

CONTROL MODULE



BATTERY SENSOR MODULE



STRING SENSOR MODULE



## PARAMETER AND ALARM THRESHOLDS

The user can set / modify many measurement parameters and thresholds either locally or remotely. The system invokes a permission hierarchy to manage administrative access.



## DATA STORAGE

The Control Module will record critical performance elements including alarms and discharge events.



## COMMUNICATION PROTOCOLS

The Control Module can communicate via RS485, Ethernet, MODBUS/RTU, MODBUS/TCP, and SNMP protocols. Data derived from the BMS is easily integrated into most third-party systems.



## WEB CONFIGURATION

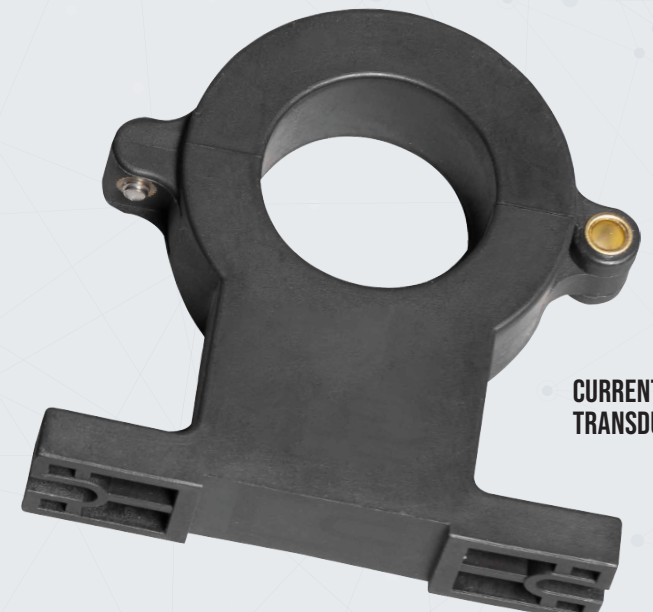
BMS settings and system reports can be remotely managed via the web interface.



## SOFTWARE

Local and network versions of CELLTRAQ enable convenient multi-string and multi-site management.

The wired BMS is ideal for all small and large mission-critical DC power plants including UPS, data center, rail / subway, airport, telco, utility power generation, utility substation, and manufacturing, as well as fire and safety systems.



CURRENT TRANSDUCER



