

# FIRSTLINE<sup>®</sup> BMS

## Proactive Wireless Battery Monitoring System

- Lifecycle management —in real time
- Low cost
- Ease of installation
- Alarm via email & dry contact
- Graphic LCD touch screen
- Battery cycling data collection
- History databases
- Colorful bar/curve diagrams
- Provides ethernet/RS485 for remote monitoring

Full  
Two Year  
Warranty



**STACO  
ENERGY<sup>®</sup>**  
PRODUCTS CO.



## Proactive real-time monitoring

The wireless Staco FirstLine® BMS Battery Monitoring System consists of a Data Collector on which information is displayed through curves and bar graphs on the FirstLine® BMS easy-to-read 6.4" LCD touch screen monitor; a Battery Measurement Kit for each battery cell to measure terminal voltage; a String Measurement Kit to measure total system voltage, current and battery string voltage; and a Power Supply. Also available are optional Hall Current Transformers and Temperature Sensors.

The system continuously monitors UPS batteries and provides real-time information, ensuring that batteries are ready when needed to support mission critical functions.

This easy to install battery monitoring system measures and records critical elements including battery cell voltage, battery string voltage, battery string current, battery room temperature, battery cell impedance, as well as battery terminal temperature.

Armed with this critical battery status information, managers can ensure that capacity conditions are continually met as well as the permanent availability of high quality energy. Because it is wireless, the FirstLine® BMS easily integrates into existing applications and can be installed in half the time with less cost than traditional, wired battery monitoring systems.

Real-time status is compared to battery configuration settings and network parameter settings with deviations recorded in an events log and used to trigger e-mail or dry contact alarms. With a battery monitoring system, you can schedule battery replacement at convenient times and ensure that the system is fully charged and operational for peak or high-demand occasions.

The Staco FirstLine® BMS is ideal for monitoring all UPS batteries, especially those in mission critical areas like data centers, computer rooms, network closets, healthcare environments, assembly lines, life safety systems and more.



## Two Year Warranty

Full **Two Year On-site Warranty** (Continental U.S.)

Extended warranties, customized service plans and preventive maintenance are also available.

*Please refer to our warranty statement for complete details.*

**STACO**  
**ENERGY**  
**PRODUCTS CO.**

Your tailored power solutions provider™

## General Specifications

Operating Temperature	0° to 40°C / 32°F to 104°F
Relative Humidity	95% without condensing
Altitude	Up to 6,600 ft.
Wireless Frequency	2.4GHz
Distance of Wireless	Up to 164 ft. for open site / 98 ft. is recommended

DATA COLLECTOR	
<b>Model</b>	<b>FLU-BMS-DC-LCD</b>
Input Power Supply options	12Vdc/48Vdc
Power Consumption	Maximum 12W
Receiving Interface	RF 2.4G for wireless
Communication Ports	Ethernet x 1 RS 485 x 1 Output Dry Contact Output Port x1 Input Dry Contact Port x 1
Monitoring Nodes	Maximum 256 nodes per system
Display Type	LCD 6.4" Graphic Touch Screen
Storage Media	2 Gigabyte SD/MMC Flash Memory Card
Dimension (H x W x D)	9.83" x 14.9" x 3.2"
Weight	6.6 lbs.

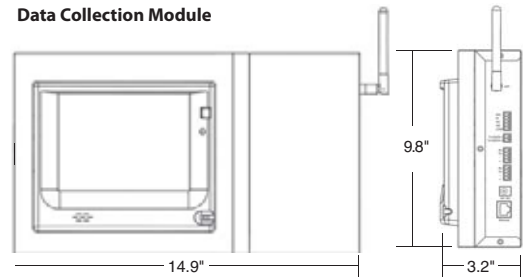
BATTERY MEASUREMENT KIT				
<b>Model</b>	<b>FLU-BMS-BMK-002A</b>	<b>FLU-BMS-BMK-006A</b>	<b>FLU-BMS-BMK-012A</b>	<b>FLU-BMS-BMK-012B</b>
Cell Voltage Options	2V	6V	12V >66Ah	12V <65Ah
Cell Voltage Measurement Range	1.48-4.00V	4.2-8.0V	8.5-16.0V	
Accuracy	±0.1%			
Battery Impedance Resolution	0.01mΩ	0.03mΩ	>66Ah 0.03mΩ	<65Ah 0.10mΩ
Cut Off Voltage	1.48V-1.55V (Default 1.5V)	4.2V-4.5V (Default 4.5V)	8.5V-9.3V (Default 9.0V)	
Start Up Voltage	1.65V	4.8V	9.6V	
Temperature Measurement Range	0 - 100°C / 32 - 212°F			
Accuracy	±1°C / 1.8°F			
Operating Temperature	0 - 50°C / 32 - 122°F			
Humidity	95%			
Power Consumption	≤ 0.5W			
Input Impedance	1MΩ			
Transmitting Interface	RF 2.4G Wireless			
Sampling Rate	1Hz (or 1 sampling interval per second)			
Dimension (H x W x D)	1.07" x 3.94" x 2.75"			
Weight	3.4 oz			

STRING MEASUREMENT KIT	
<b>Model</b>	<b>FLU-BMS-SMK-0620</b>
Voltage Measurement Range	0 to 620Vdc
Normal Voltage Range	20 to 620Vdc
Accuracy	±0.2% of normal voltage
Current Measurement Range	0 - 3000A
Accuracy	±3%
Temperature Measurement Range	0 to 100°C / 32 to 212°F
Accuracy	±1°C / 1.8°F
Operating Temperature	0 to 50°C / 32 to 122°F
Humidity	95%
Input Power Supply range	35 - 60Vdc
Power Consumption	Maximum 3W
Input Impedance	1MΩ
Transmitting Interface	RF 2.4G Wireless
Sample Rate	1Hz
Dimension (H x W x D)	1.07" x 3.94" x 2.75"
Weight	3.1 oz

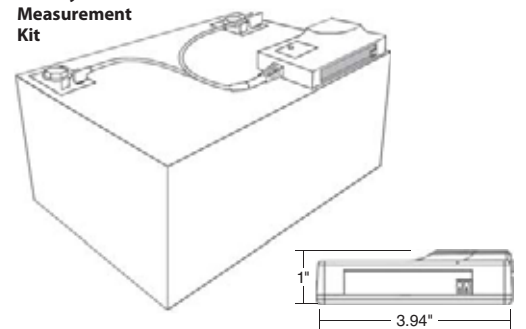
TEMPERATURE SENSOR	
<b>Model</b>	<b>FLU-BMS-TES</b>
Measurement Range	0 - 100°C / 32 - 212°F
Length	118"

Safety	UL, CE, NCC, FCC Part 15
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Data Collection Module



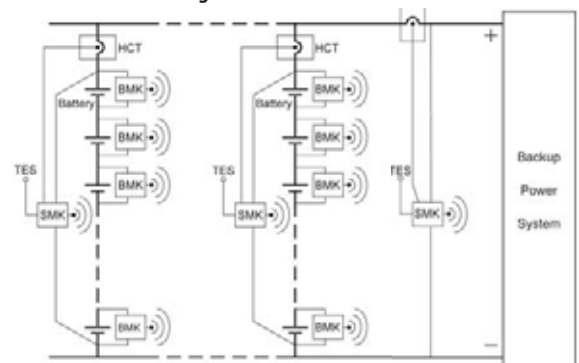
Battery Measurement Kit



String Measurement Kit



FirstLine BMS Configuration



## Service Options

With our ServiStar® program, a wide range of planned maintenance and extended service options are offered to maximize equipment life and reliability of your FirstLine® UPS. Through an extensive network of factory trained professionals you receive:

- Annual Service Plan
- 24/7 Emergency Service
- Preventative Maintenance
- Programs tailored to meet your needs

## About Staco Energy Products

Since 1937, customers worldwide have been relying on Staco Energy Products Company to deliver voltage control and power quality solutions tailored to their needs.

As a leading power quality resource, we offer our customers world-class support; from our thorough applications assessment, to our ability to design and deliver a solution that is tailored to the specific needs of our customers; through delivery and commissioning.

Our professional, factory trained service team is in place to ensure that our customers' revenues are protected, and their investment provides them with many years of trouble free operation.

Staco develops total power solutions for OEM and end user applications.

**Represented locally by:**

**In addition to the FirstLine® BMS we offer a wide array of power quality products, including:**

- **Uninterruptible Power Supplies**
- **Power Conditioners**
- **Voltage Regulators**
- **Power Factor Correction and Harmonic Mitigation**
- **Active Harmonic Filters**
- **Variable Transformers**
- **Custom Engineered Test Sets**



Your tailored power solutions provider™

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