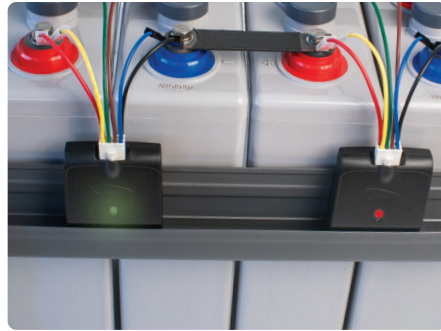


*PowerShield's smart mSensors measure individual block voltage, ripple voltage, impedance (Ohmic value) and temperature in a highly accurate way.*

mSensors contain advanced circuitry for fast, accurate, repeatable battery data sampling and are self-calibrating for impedance, the key indicator for remaining useful battery life.



### **Custom battery monitoring solutions**

Like all PowerShield systems, mSensor solutions are designed on a project-by-project basis to ensure an exact fit to each client's requirements. PowerShield has considerable experience designing, manufacturing, installing, and operating battery monitoring and management systems worldwide. We support a range of industries requiring continuous power supply for their mission-critical services, such as data centers, telecommunications, transport, hospitals, and power utilities.

### **ABOUT POWERSHIELD**

For over 25 years, PowerShield has designed, manufactured, installed, and operated Advanced Battery Monitoring and Management systems in facilities that rely on continuous power supply for their mission-critical services. PowerShield's sales and support network includes all the major UPS companies. Today, over one million batteries are being monitored using PowerShield systems.

[www.powershield.com](http://www.powershield.com)

 **PowerShield**  
mSensor Solution



*Battery monitoring for small and remote sites*

# mSensors make every connected battery smarter

## Smart and Cost Effective

In smaller battery installations and use cases where continuous monitoring of individual battery data will suffice and where third-party software already exists to view the battery data, a mSensor solution may provide a cost-effective way to achieve this across one or more battery installations.

## Easy Integration

mSensors communicate via Modbus, ensuring seamless integration with other third-party devices and systems.

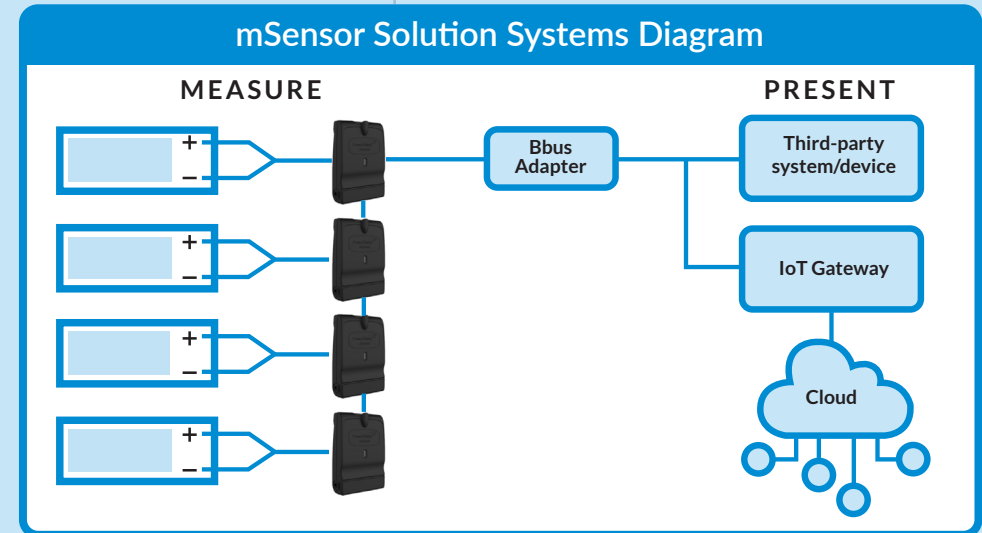
This feature allows for the expansion of remote battery monitoring without the need for additional infrastructure.

## Accurate Battery measurement

LED indicators show when mSensors are online and operating correctly, assisting fault finding and installation efficiency.

With a specific model for each battery voltage for best accuracy, self-calibration for accurate impedance and measuring battery temperature at the negative terminal as per IEEE guidelines, mSensors set the standard.

Today there are over a million mSensors making batteries smarter.



mSensor		Dual & Single Input		
Nominal voltage <sup>5</sup>	12V	6V	2V	
Operating range	9.6V - 15.6V	4.8V - 7.8V	1.6V - 2.6V	
Maximum input voltage	± 65V	± 25V	± 6V	
DC resolution / accuracy	1mV / ±0.3%	1mV / ±0.3%	5mV / ±0.2%	
AC resolution	All mSensors 1mV			
Ohmic range	1.00 - 40.0mΩ	0.5 - 20mΩ	0.10 - 5mΩ	
Resolution / accuracy	1uΩ / ± 2.5% + ± 25mΩ	1uΩ / ± 2.5% + ± 25mΩ	1uΩ / ± 2.5% + ± 15mΩ	
Temperature measurement range <sup>7</sup>	All mSensors -10° - 80° C / 14° - 176° F			
Resolution / accuracy	All mSensors 0.1° C / ± 1° C			
Power supply current <sup>8</sup>	20mA	20mA	30mA	
Voltage isolation	All mSensors Design rated to 750VDC. UL certified to 600VDC			
Dimensions	All mSensors 76mm x 26mm x 106mm (W x D x H)			
Weight	All mSensors 110g / 0.24 lb			