Battery Monitoring Sensor (BATTMON)

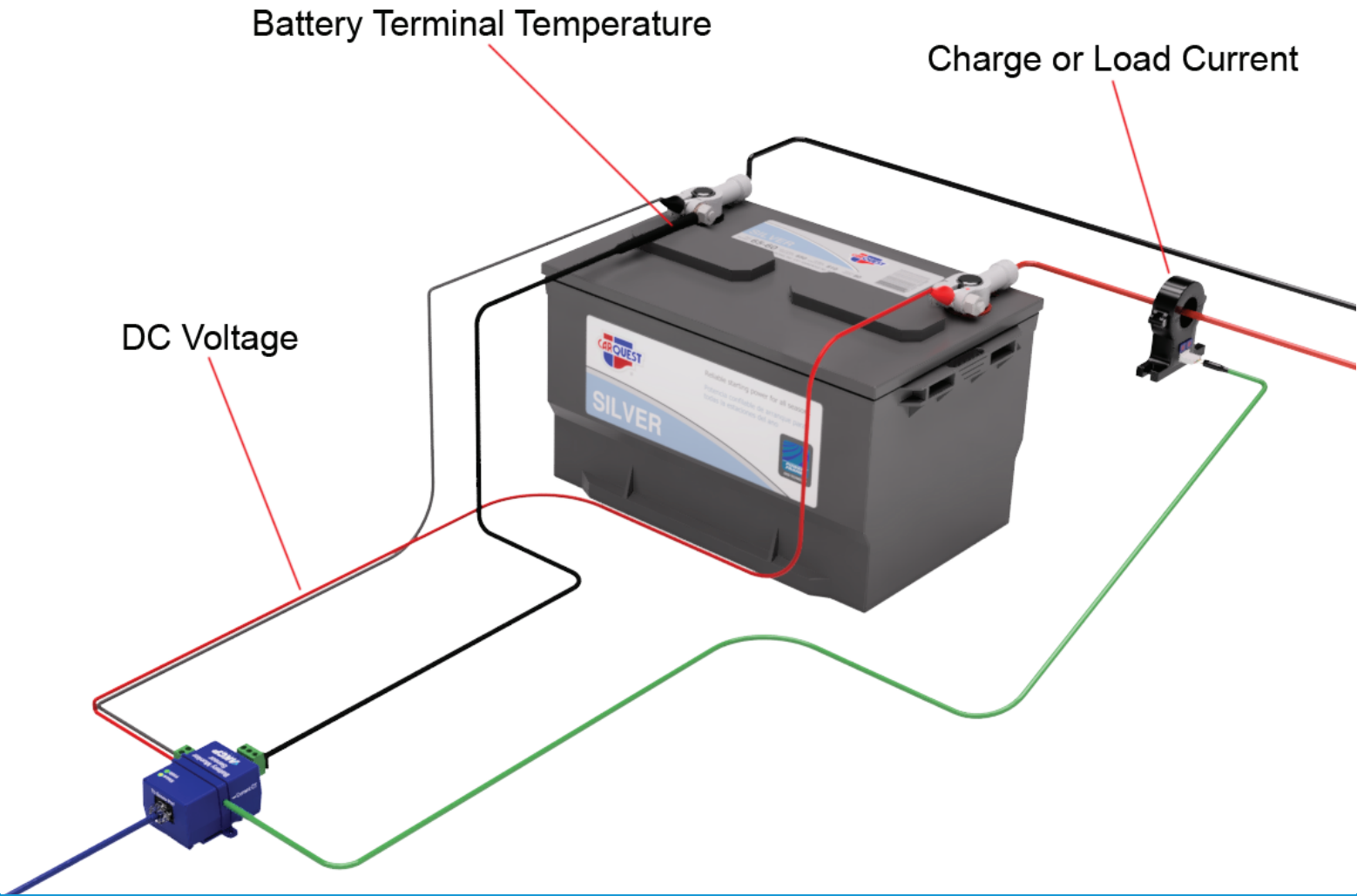
Monitoring of Voltage, Amps and Temperature

The Battery Monitoring Sensor is a simple, yet effective way to monitor a variety of battery types. Lead Acid, LiPoly, individual cells or banks of batteries. The sensor consists of a battery terminal temperature sensor, battery DC Voltage meter and a current transformer.



Check the battery system performance, such as charge/discharge status. This sensor aids in maintaining and monitoring battery health for generators and engines, backup UPS power and solar systems.

Note: Correctly sized CT must be ordered with the BATTMON. CT value is set in production and can't be changed.



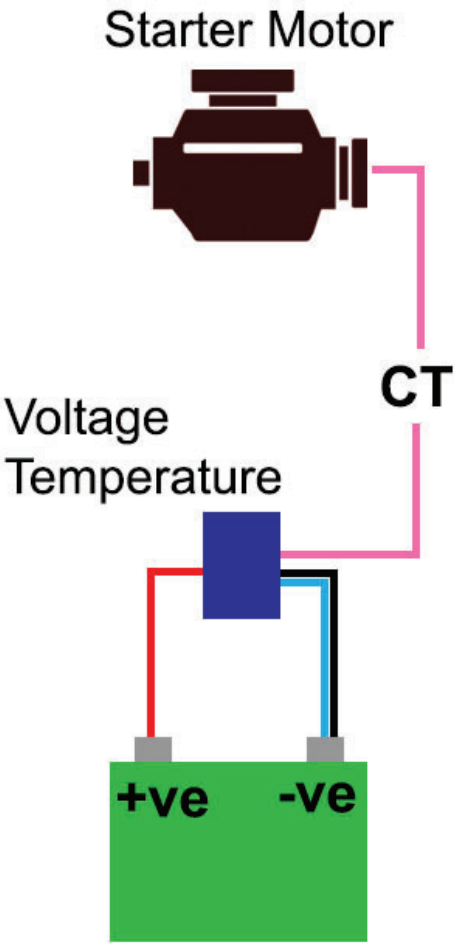
BATTMON - Engines and Generators

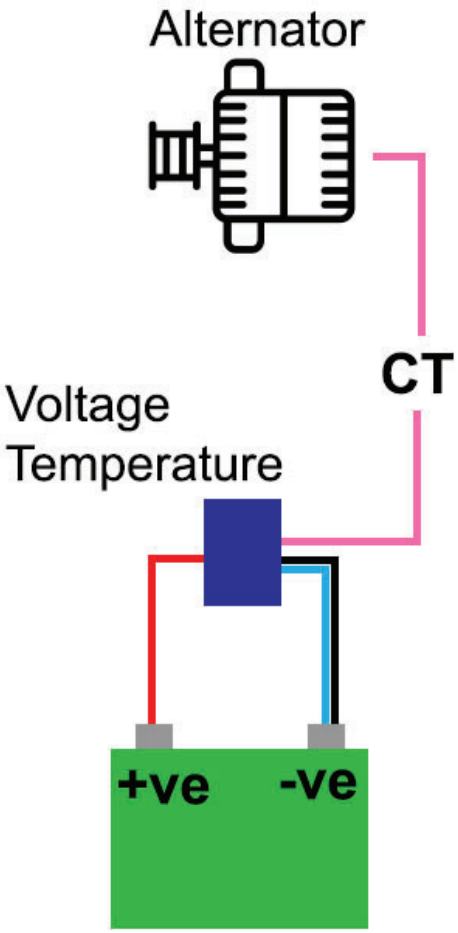
Monitor Starter Motors and Alternators

Connect the BATTMON sensor to your generator/engine battery to monitor the voltage, terminal temperature and either the crank current from the starter motor or the charge current from alternator.

Crank Current
By monitoring the crank current you can identify decrease in battery performance. Decreasing current during crank can be a sign of bad battery health, or problems in the starter motor. This can lead to a failure to start situation.

Charge Current
Place the CT on the Alternator to monitor charge performance and identify early signs of altenrator or electrical system problems.



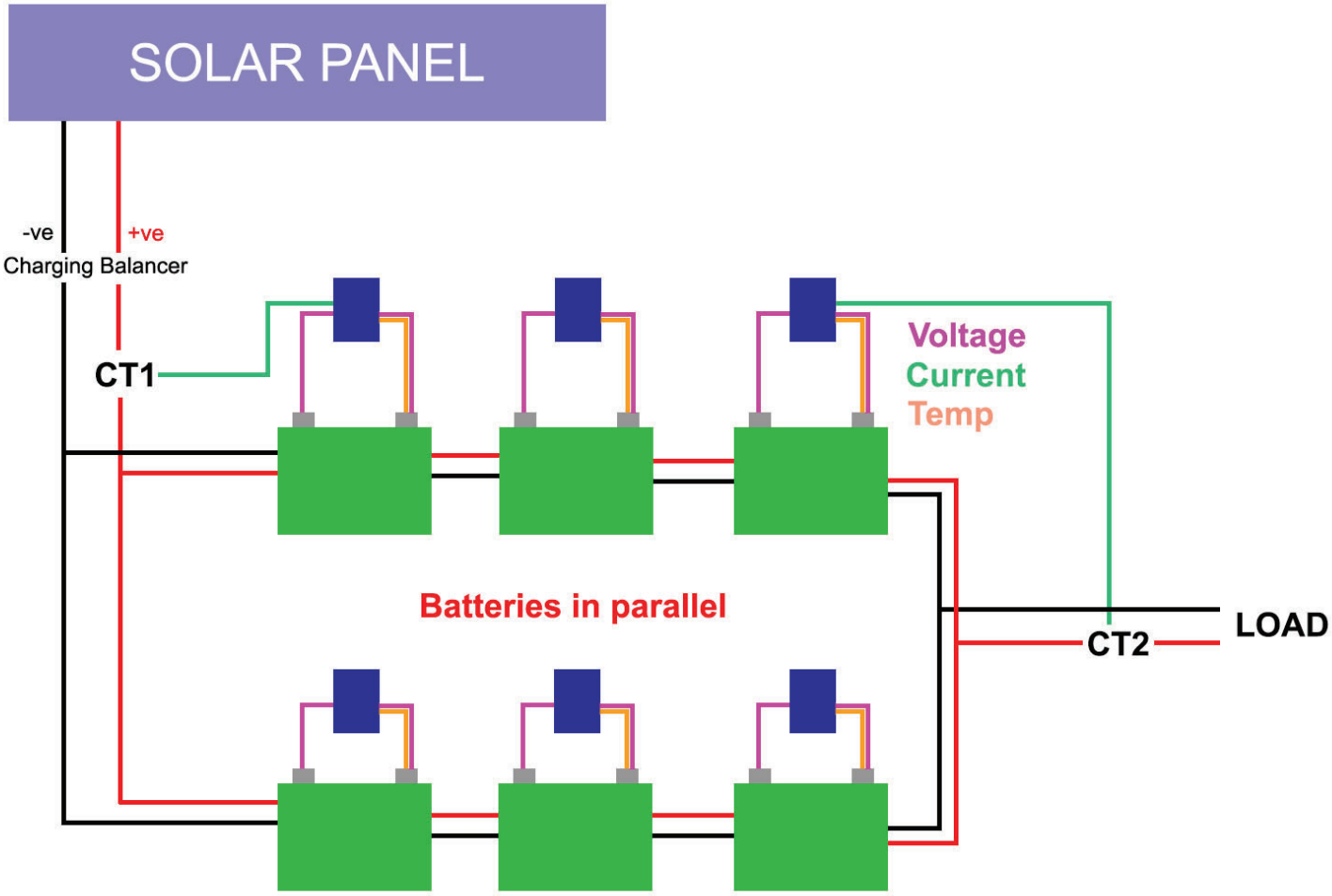


BATTMON - Solar Panels and Battery Stacks

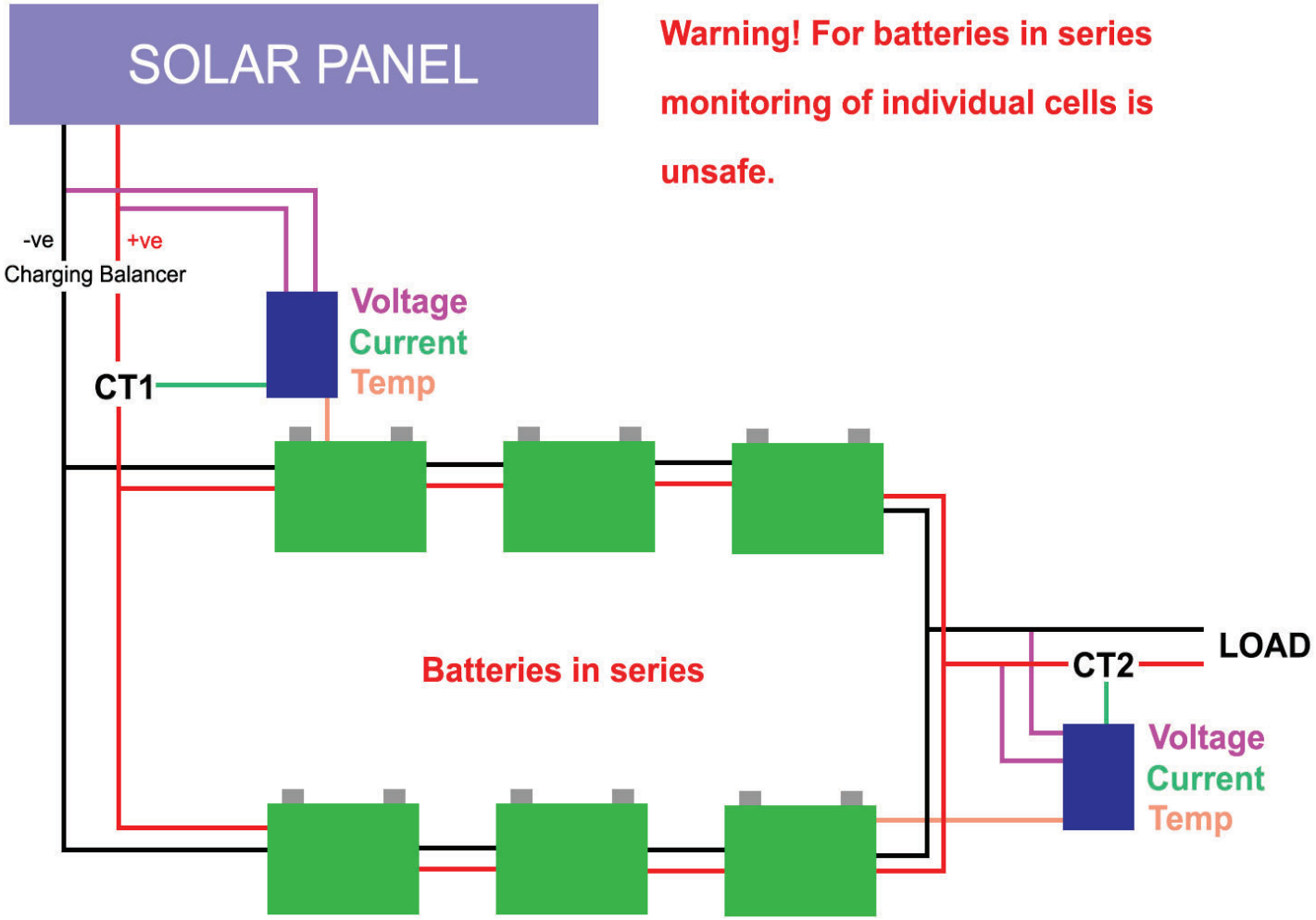
Solar System Monitoring

BATTMON can be installed on a solar panel battery system. Monitor individual cell voltages, temperature and current, or voltage and temperature only. Place a single CT on the battery stack to monitor the load. An additional CT placed on the solar panel output gives a complete end to end monitoring of your charging current, battery load, cell voltages and temperatures.

- Check your solar panel efficiency, voltage and current outputs.
- Monitoring individual cells and complete battery stacks
- Monitoring charge current vs discharge current



BATTMON - Solar Panels and Battery Stacks



BATTMON - Technical Specification

Measurements	
Power Rating	Input Voltage and Current ratings : Voltage: 0~60VDC (3 configurable ranges : 0~15V, 0~30V or 0~60V) Current: DC current via external CT + 50A (standard) + 100A + 200A + 400A + 500A + 600A + 800A + 1000A + 1500A
Power Measurements	- Voltage (V) : +/-0.05% Full-Scale, error +/-0.05% Full-Scale - Current (A) : +/-0.05% Full-Scale, error +/-0.05% Full-Scale, Temperature Drift : +/-0.02%/°C - Power (W) : +/-0.05% resolution
Environment monitoring	- Temperature sensor with 1 meter cable *range -40°C to +75°C
Status Indication	LED indication for power LED indication for input presence
Inputs	1x sensor RJ45 Port Hardwired with following plugs : - Phoenix connector for voltage - Phoenix connector for temperature - Phoenix connector for external current transformer
Interface	
Communications cable	RJ-45 jack to sensor using UTP CAT5e/6 cable
Power source	Powered by the sensorProbe+ familiy units. No additional power needed
Power Consumption	
Maximum Cable Length	Run length is 32 feet (10 meters) with approved low capacitance shielded cable or UTP
Dimensions	56 x 55 x 33.3 mm
Mounting	DIN rail mounting Screw mounting
Components	Manufactured using highly integrated, low power surface mount technology to ensure long term reliability.
Operating Environment	Temperature : Min. -35° C – Max.80° C Humidity: Min. 20% – Max. 80% (Non-Condensing)
MTBF	1,400,000 Hours based on field experience with sensorProbe units.
Important Note:	the BattMon sensor is not galvanically isolated, care must be taken regarding possible differential voltage potential issues - The BattMon sensor is only compatible with the sensorProbe+ platform units. - When plugging the first time or after upgrading a sensorProbe+ unit, the sensor's firmware might be upgraded by the unit and not be available right away. - Smart sensor upgrade can only be performed on the main 4 sensor ports of the SP+ - Correctly sized CT must be ordered with the BATTMON. CT size is set in production and can't be changed.
Sensor count	4

BATTMON - Technical Drawing

