

**FEATURES**

- Efficiency of 85% to 87%
- Lightweight & Small Size
- NiCAD or Sealed lead Acid Charging
- UART, USB, and Ethernet Connectivity
- Web-Based Monitoring
- Advanced Data Logging
- PC App-Based Programming
- Reverse Polarity and Output Transient Protection
- Meets AREMA Standards

**DESCRIPTION**

The Trilogy 12V, 480W Battery Charger is designed to be extremely efficient (86% typical) and light weight (less than 10 lbs.). It meets all the AREMA standards for temperature and shock and vibration. The unit draws a minimal amount of power from the AC mains (580W max).

The charger output can vary from 10.5V to 18V, allowing for charging of various multi-cell batteries. For output voltages of 10.5V to 12V, max current is 40A and for outputs greater than 12V, the output power is limited to 480W. At 18V, the current is consequently limited to 27A.

The unit contains protection features such as a 60A breaker, line fuses, inrush current limiting, AC over-voltage clamping, and EMI filtering of the AC mains. An MOV and custom software algorithms also provide protection of the output against over-current and over-voltage through a fold back mode and a shut down/auto restart mode. These features allow the batteries to temporarily deal with transients rather than the battery charger.

The control board contains a Form C relay that can be configured to provide any alarm function required. There are 6 LED's that provide indication of AC Present, Over Current, Charger Fault, Over Temperature, Battery Current, and Total Current. The Ethernet Port programs the float voltage and the A-Hr rating of the battery and chooses the battery type either NiCAD or Sealed Lead Acid.

Two sets of digital displays provide the user with the System Voltage and Battery & Total current. The lower display toggles between Battery and Total Current. Two amber LED's toggle to indicate which is being displayed.

Two analog inputs used for the control and protection of the battery include the battery temperature and current. The battery temperature lets the control board know that the battery is being charged at too high of a current. The battery current input allows for precise, constant-current charging of the battery regardless of system current.



A USB and ENET Port are provided. These ports, along with a MicroSD card, real-time clock, and super capacitor, allow for a built-in data logger. Algorithms can include date and time stamping of power failures, time on AC vs. battery, charging time once AC returns, etc. A PC application that runs on any computer allows the user access to the charging system parameters and monitors the charger in real time.

This charger also provides a Serial Port for use with the Trilogy Products Battery Management System (BMS). The BMS provides information to the charger about individual cell voltage for easy access to preventative maintenance data.

**PROTECTION FEATURES**

- Under Voltage Lock Out (< 90V<sub>AC</sub>)
- Output Current & Power Limit
- Output Over-Voltage Limit
- Over Temperature Shutdown

**ELECTRICAL SPECIFICATIONS**

Input Voltage (switchable).....	108-132 or 208-264 VAC
Maximum Input Power.....	580W
Output Voltage .....	10.5 to 18V <sub>DC</sub>
Maximum Output Power.....	480W
Min Operating Temperature .....	-30°C
Max Operating Temperature .....	+70°C
Alarm Relay Contact Rating .....	2A

**MECHANICAL SPECIFICATIONS**

Height.....	11 in
Width (exclude's mounting tabs).....	12 in
Depth.....	3.6 in
Weight .....	10 lbs

**ORDERING INFORMATION**

Item	Catalog Number
12V, 480W Battery Charger	SiBC-12V-480W

