

FEATURES

- Power Factor Correction
- Efficiency of 83% to 86%
- Lightweight & Small Size
- UART, USB, and Ethernet Connectivity
- Web-Based Monitoring
- Advanced Data Logging
- Rotary Switch or PC App-Based Programming
- Reverse Polarity and Output Transient Protection
- Meets AREMA Standards

DESCRIPTION

The Trilogy 12V, 720W Battery Charger is designed to be extremely efficient (85% typical) and light weight (approximately 20 lbs.). It meets all the AREMA standards for temperature and shock and vibration. Power Factor Correction and high efficiency allow the unit to draw a minimal amount of power from the AC mains (900W max).

The charger output can vary from 10.5V to 18V, allowing for charging of multi-cell batteries. For output voltages of 10.5V to 12V, the output current maximum is 60A, and for outputs greater than 12V, the output power is limited to 720W. At 18V, the current is consequently limited to 40A.

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 such as over-current and over-voltage protection features 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 charger automatically takes over once the transient conditions clears.

The control board contains four Form C relays that can be configured to provide any alarm function required. There are six LED's that provide the status of system on AC, bulk charge, float charge, low battery, fault/trouble, and over-current. Rotary switches manually program the float voltage and A-Hr rating of the battery. This is all that is needed to set up the charger to run in any system.

Three sets of digital displays provide the user with the system voltage and current, and the battery current. The displays are red, seven-segment and are .75" x .5" per digit. All variables are displayed as tens, ones, and tenths (XX.X).

Two analog inputs that are important 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 control board will respond by lowering the system voltage and, subsequently, the battery current. The battery current input allows for precise constant current charging of the battery regardless of system current. This feature allows for the maximum charging current into the battery under any given system load. The charging algorithm can automatically increase or decrease the charging current to the battery based on the current status of the load.

The communication ports (USB, ENET & Serial), along with a MicroSD card and real-time clock, allow for a built-in data logger. Some of the possibilities with the data logger include date and time stamping of power failures, time on AC versus time on battery, charging time once AC mains return, A-Hr performance of the battery when AC fails, etc. The communication ports then provide the user a means of extracting data or viewing data in real time, either on-site or remotely over a network. A PC application that runs on any computer allows the user instant access to the charging system.

ELECTRICAL SPECIFICATIONS

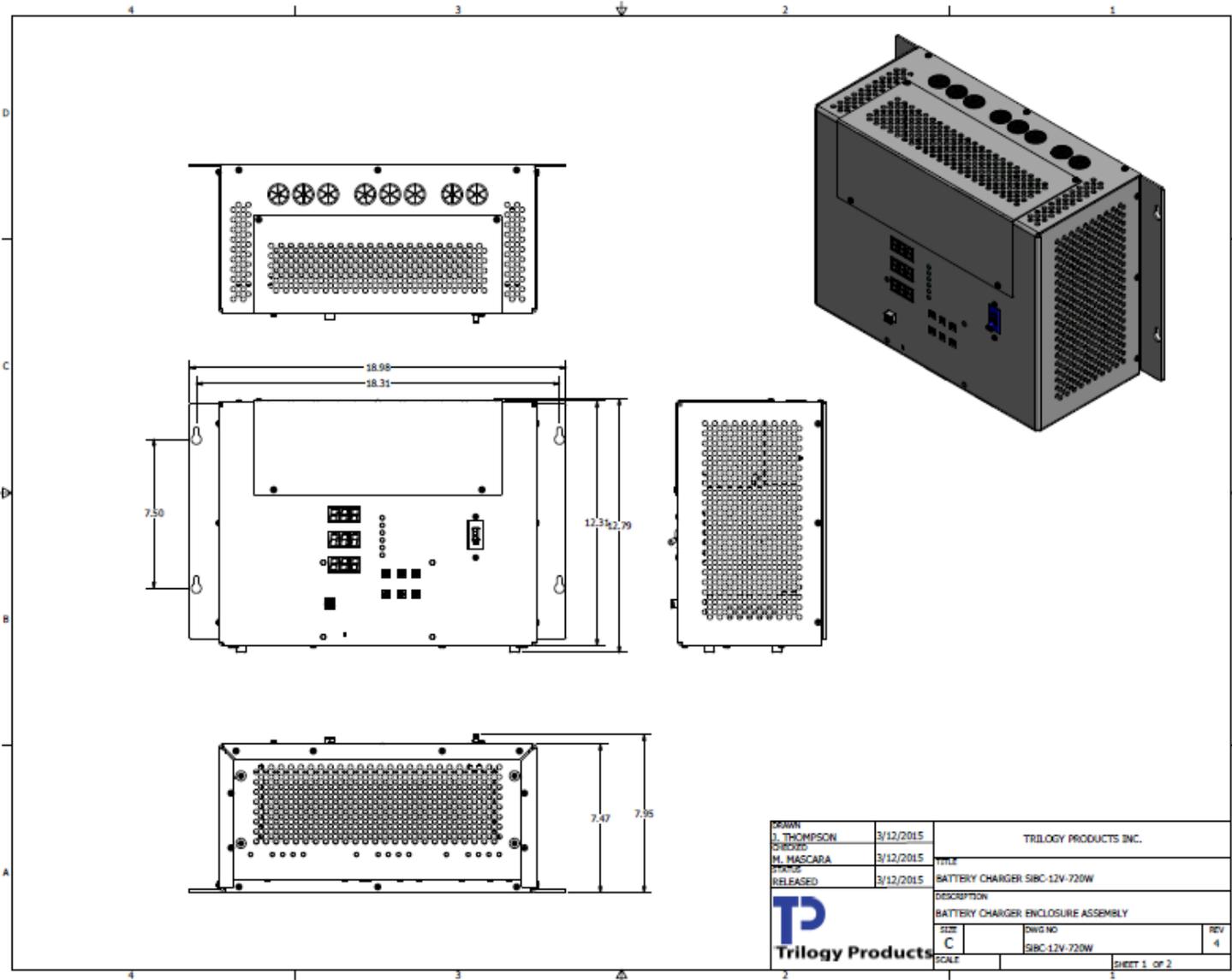
Input Voltage	108V _{AC} to 264V _{AC}
Maximum Input Power.....	900W
Output Voltage.....	10.5V _{DC} to 18V _{DC}
Maximum Output Power.....	720W@12 V _{DC}
Min Operating Temperature	-30°C
Max Operating Temperature	+70°C
Alarm Relay Contact Rating	2A

MECHANICAL SPECIFICATIONS

Height.....	19 in
Width.....	10.5 in
Depth.....	7.5 in
Weight	20 lbs

ORDERING INFORMATION

Item	Catalog Number
12V, 720W Battery Charger	SiBC-12V-720W



DESIGN	J. THOMPSON	3/12/2015	TRILOGY PRODUCTS INC.	
DRAWN	J. THOMPSON	3/12/2015	TITLE	
CHECKED	M. MASCARA	3/12/2015	BATTERY CHARGER SiBC-12V-720W	
STATUS	RELEASED	3/12/2015	DESCRIPTION	
RELEASED			BATTERY CHARGER ENCLOSURE ASSEMBLY	
SIZE		DWG NO		REV
C		SiBC-12V-720W		4
SCALE		SHEET 1 OF 2		