

BAT104-SLA Manual

(includes BAT104-SLA25 & BAT104-SLA45)

Battery Backup Module For HESC and V5SC Series Power Supplies

Manufactured by
TRI-M ENGINEERING

Engineered Solutions for Embedded Applications

Technical Manual

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This manual is for integrators of applications of embedded systems. It contains information on hardware requirements and interconnection to other embedded electronics.

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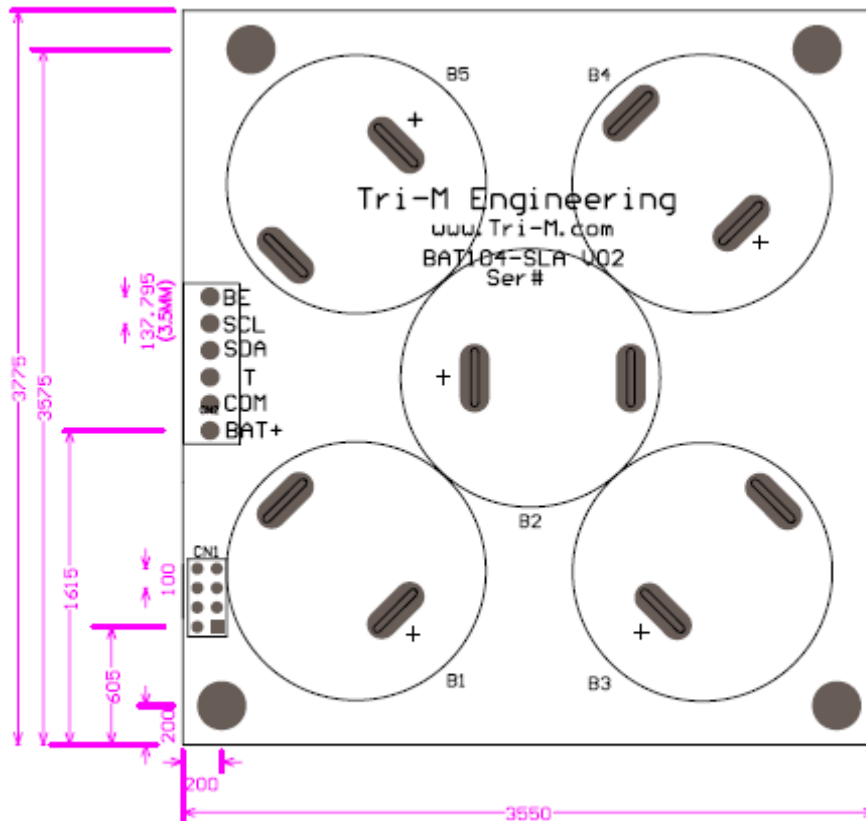
CHAPTER 1: GENERAL DESCRIPTION

The BAT104-SLA series includes the BAT104-SLA25 and the BAT104-SLA45. The BAT104-SLA battery backup units create a complete UPS system by plugging directly into the bottom of the HESC (including the V5SC-SER) Vehicle Power Supplies. Each BAT104-SLA includes five SLA batteries for a nominal backup voltage of 10 volts. The BAT104-SLA25 utilizes 2.5Ahr batteries for a total of 25 watt-hrs backup and the BAT104-SLA45 utilizes 4.5Ahr batteries for a total of 45 watt-hrs of backup power. Therefore a BAT104-SLA45 can supply backup power for up to sixty minutes for a 45 watt load.

The BAT104-SLA includes Mosfet transistors for preventing deep discharge occurrences during extended power outages. The Mosfet transistors electrically isolate the BAT104-SLA from the HESC whenever the BE output of the HESC is de-asserted (pulled to 5V)

The BAT104-SLA has a current activated fuse for protection against shorts on the battery output.

A digital I²C temperature sensor provides temperature feedback for ambient temperature measurement which can be read by the HESC.



Note: All dimensions in Mils (1000 mils = 1 inch)
Unless otherwise stated



Figure 1: BAT-SLA25 Height



Figure 2: BAT-SLA45 Height

CHAPTER 2: CONFIGURATION AND INSTALLATION

2.1 Installing the BAT104-SLA

The BAT104-SLA mounts directly to the bottom of an HESC product by plugging CN1 and J1 into the mating connectors on the bottom of an HESC unit. Four 0.6" standoffs are required (one per corner) to separate the BAT104-SLA and the HESC unit.

CHAPTER 3: BAT104-SLA Schematic

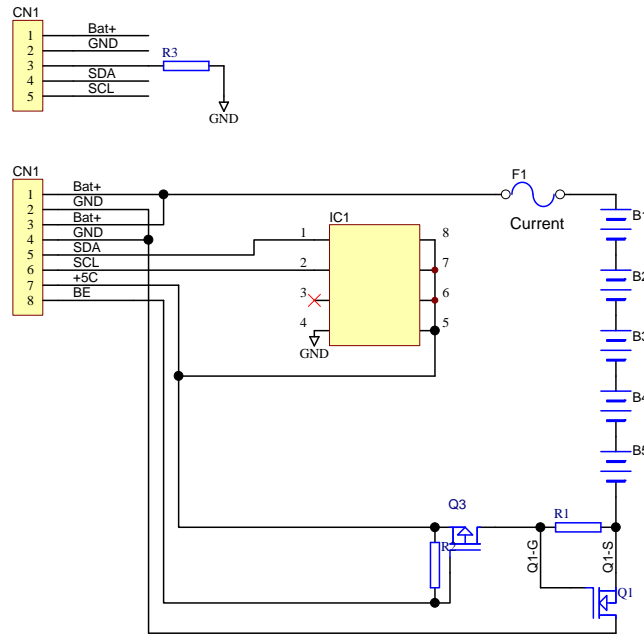


Figure 3: Batteries, Protection Fuse, Mosfets & I²C Temperature Sensor