Smart Battery Monitor
Quick Start Guide

inVENTUS™ POWER

SBM-01

Designed & Manufactured by

inVENTUS™ POWER

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PROformance Add-On Device
Quick Start Guide

Applicable Models

Model	Part Number
U1LiFePRO™ Smart Battery Monitor Kit	903-09472-001
PROTRXion™ 48V60-TRX-HD Smart Battery Monitor Kit	903-09472-002
PROTRXion™ Smart Battery Monitor Kit	903-09472-003
PROTRXion™ 12V100 24V60 Smart Battery Monitor Kit	903-09472-004
PROTRXion™ 48V60 (Old Pinout) Smart Battery Monitor Kit	903-09472-005

Release Date	Revision	Scope of Change
2023-08-04	V1.7	Minor edits to V1 release

Document Information

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Technical Support

If you have any technical questions regarding the PROformance Add-On Device, please contact our technical support team at:

Phone: +1.877.423.4242

E-mail: tech_support@inventuspower.com

Safety and Tools

Before working with any electrical products or where electricity is present, the following guidelines are required:
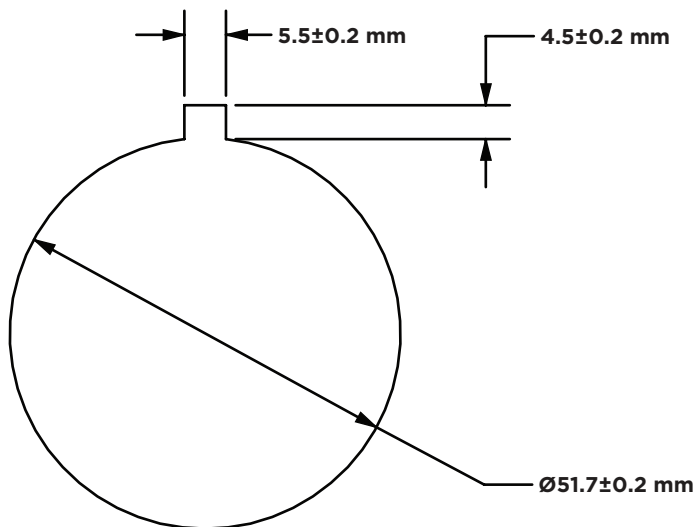
- Turn off system power, disconnect battery, and place battery in ship mode
- Proper PPE (Personal Protective Equipment)
  - Rubber gloves
  - Safety glasses
- Insulated tools
- Removal of any jewelry

Tools Needed

- Drill and 51mm hole cutter
- Hand saw
- Insulated torque wrench
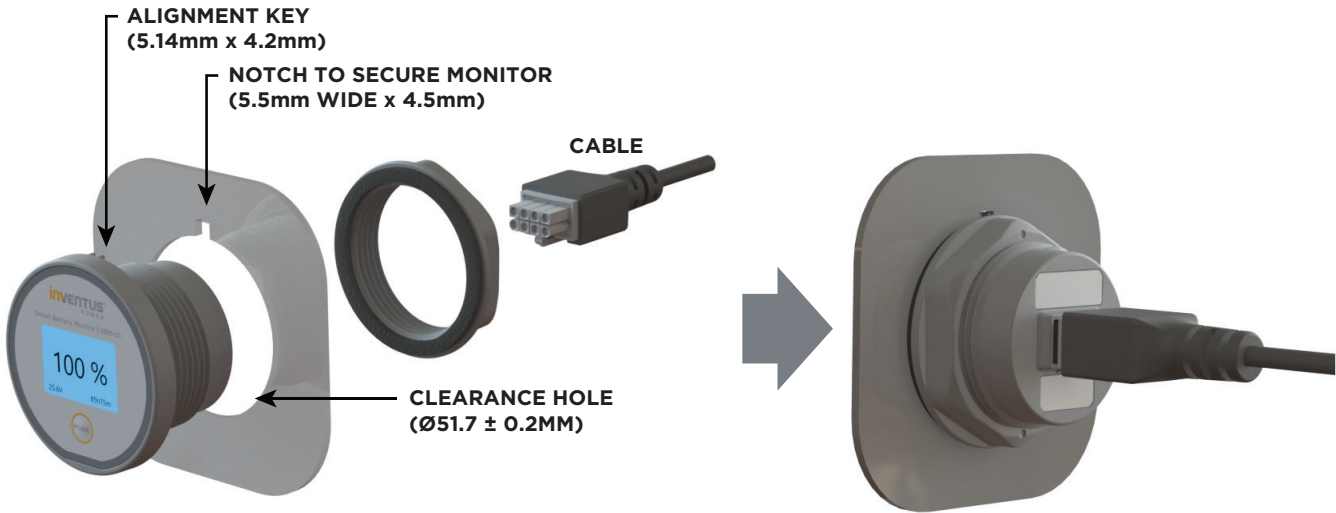- Insulated Philips Screwdriver (optional)
- Sandpaper

Mounting Hole

5.5±0.2 mm   4.5±0.2 mm

Ø51.7±0.2 mm

Note: A hole will need to be cut if the existing panel does not include a 51.7mm diameter hole. See next page for instructions.
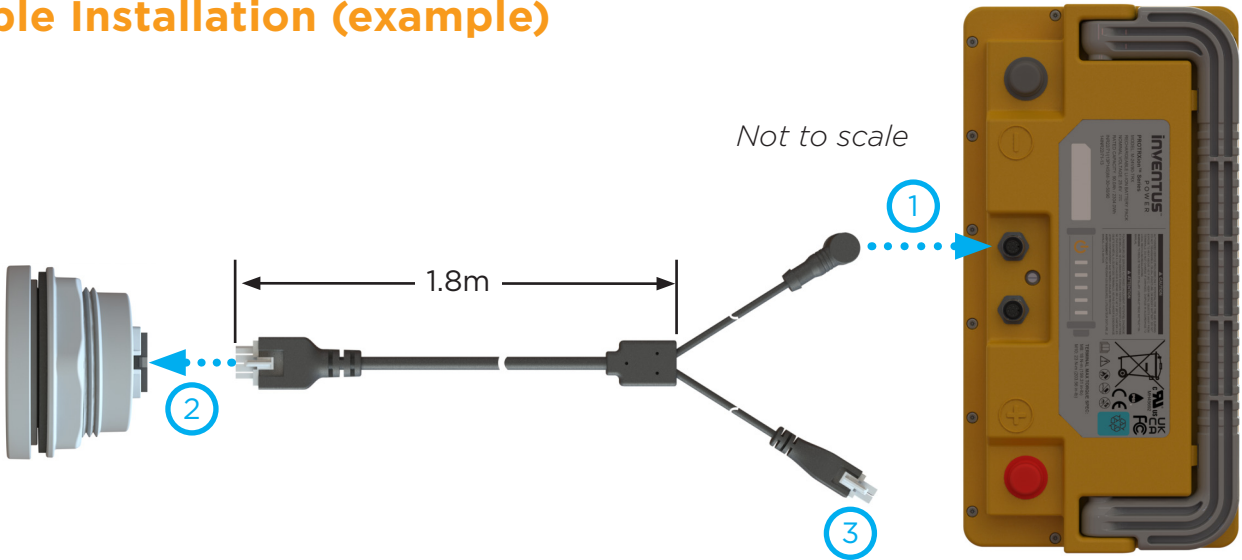
1. Using a drill with a 51mm hole cutter, cut hole (Note: if the SBM-01 cannot be inserted through the clearance hole easily, the hole can be increased using the sandpaper)
2. Locate top of hole, mark desired location to cut alignment notch
3. Using a handsaw, cut a 5.5mm x 4.5mm notch as shown in above figure

Mounting Hole

ALIGNMENT KEY
(5.14mm x 4.2mm)

NOTCH TO SECURE MONITOR
(5.5mm WIDE x 4.5mm)

CABLE

CLEARANCE HOLE
(Ø51.7 ± 0.2MM)

1. Insert Smart Monitor threaded body through clearance hole (51.7±0.2mm) using alignment key with notch (reference note above for creating clearance hole)
2. Secure monitor with Nut and tighten to 3 Nm torque
3. Attach 8-pin Cable to Rear of Smart Monitor (reference User Manual for specific battery model and wire harness part number)
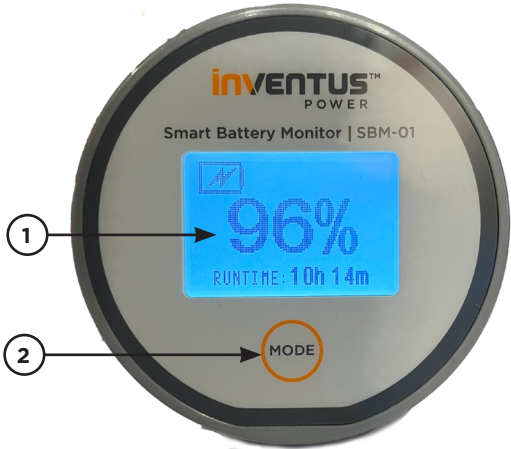
Cable Installation (example)

Not to scale

1.8m

1. Connect battery M12 signal port to cable harness (communication cable may vary per battery model, see SBM-01 User Manual for more information).
2. Connect Smart Battery Monitor to 8-pin connector.
3. Leave 4-pin connector disconnected if battery axillary power can provide >1A continuous current. If the battery cannot, battery terminals must be connected to power the Smart Battery Monitor (see SBM-01 User Manual for more information on matching the correct cable harness with battery model).
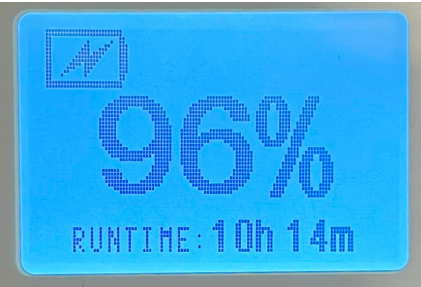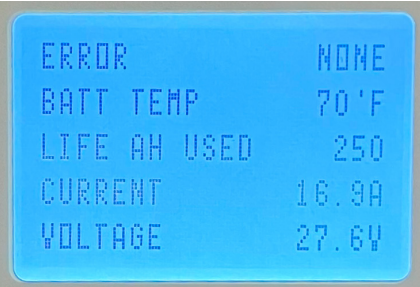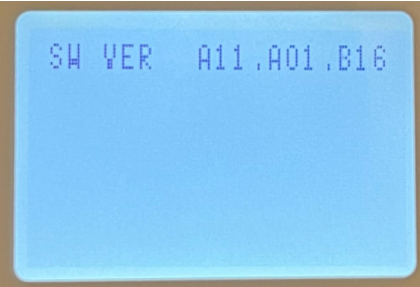
Operating SBM-01

1. Display
2. MODE Button
   - Activates display while in shutdown or sleep mode
   - Shuts down monitor when pressed for 3 secs
   - Toggle between Home Screen and Status Screens

Once the monitor is installed, powered up, and establishes communication with the battery, the Startup Screen will be displayed for 3 seconds, followed by the Home Screen. To shutdown the monitor, hold the MODE button for 3 seconds.

The monitor will go to sleep after 5 minutes of battery inactivity. To activate the display, tap the MODE button.

Get To Know Your Smart Monitor Display Settings

Home Screen	Status Screen 1	Status Screen 2
Toggle to Home Screen by pressing MODE button. • Battery charging icon (only appears in charge mode) • State of Charge (%) • Battery Runtime Remaining • Battery Fault Alert (only appears when there is a fault)	Toggle to Status Screen 1 by pressing MODE button. • ERROR: Battery Fault Code • BATT TEMP: Battery Temperature (°C or °F) • LIFE AH USED: Cumulative lifetime discharge capacity (Ah) • CURRENT: Charge/Discharge Current (A) • VOLTAGE: Voltage (V)	Toggle to Status Screen 2 by waiting for 5 seconds from Status Screen 1. • SW VERSION: Software version of the battery pack and Smart Battery Monior [BQ, ATSAM, SBM-01]

Need More Help?

Contact **Tech_Support@inventuspower.com**
+1.877.423.4242