

INSTRUCTION MANUAL



BATTERY SUPPORT PRODUCTS



BSU2-50/C BSU2-90/C





Safety Guidelines

General Safety Precautions

1. IMPORTANT SAFETY INSTRUCTIONS. IT IS OF UTMOST IMPORTANCE THAT BEFORE USING YOUR BATTERY SUPPORT PRODUCT, YOU READ THIS MANUAL AND FOLLOW THE SAFETY AND OPERATING INSTRUCTIONS EXACTLY. SAVE THESE INSTRUCTIONS.
 - 1.1. Use of an attachment not recommended or sold by the support unit manufacturer may result in a risk of fire, electric shock, or injury to persons.
 - 1.2. To reduce the risk of damage to the electric plug and cord, pull by the plug rather than by the cord when disconnecting the support unit.
 - 1.3. Position the AC and DC leads to avoid tripping over them and to prevent damage by hood, or moving engine parts. Protect from heat, oil, and sharp edges.
 - 1.4. Do not operate the support unit if it has received a sharp blow, been dropped or otherwise damaged in any way. Take it to an approved service centre.
 - 1.5. Do not disassemble the battery support unit. Take it to an approved repair centre when repair is required. Incorrect reassembly may result in a risk of electric shock or fire.

 DANGER	
	No user serviceable parts. Do not disassemble the battery support unit

- 1.6. To reduce risk of electric shock, Unplug the charger from the AC outlet AND disconnect DC output leads.

 DANGER	
	Unplug the charger from the AC outlet AND disconnect DC output leads before attempting any maintenance or cleaning. Turning off the controls will not reduce this risk.



- 1.7. Connect and disconnect the battery leads only when the AC supply cord is disconnected.
- 1.8. Never place articles on or around the battery support unit or locate the battery support unit in a way that will restrict the flow of cooling air through the enclosure.
- 1.9. An extension cord should not be used unless absolutely necessary.
- 1.10. Have a damaged cord or plug replaced immediately.
- 1.11. Do not expose the battery support unit to rain or snow.

2. Personal Precautions

- 2.1. The battery support unit is not intended to supply power to a low voltage electrical system other than applications using rechargeable, flooded, gel, or AGM type batteries. Do not use the battery support unit to supply power to dry-cell batteries as commonly used with home appliances. These batteries may burst and cause personal injury and property damage.

3. Grounding and AC Power cord connection

- 3.1. The battery support unit must be grounded to reduce risk of electric shock. The battery support unit is equipped with an electric cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

 DANGER	
	Hazardous voltage. An improper connection can result in electric shock. To avoid electrical shock or burn, never alter the battery support unit original AC cord and plug.

3.2 An extension cord should not be used unless absolutely necessary. Use of an improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure:

- a. that the pins on plugs of the extension cord are the same number, size, and shape as those of the plug on the support unit.
- b. that the extension cable is properly wired and in good electrical condition.
- c. that the wire size is large enough for the AC ampere rating of the support unit as specified in the following table

Recommended minimum AWG size for extension cords for battery support units				
AC input rating Amperes	AWG size of cord			
	Length of cord, M			
	7.5	15	30	45
8-10	18	14	12	8
10-12	16	14	10	8
12-14	16	12	10	8
14-16	16	12	10	8
16-18	14	12	10	8

4. Overview

4.1. The Traction range of Battery Support Units convert nominally 110-120V ac 8A to 13.8V dc 50A(80A). This enables you to operate a 12V nominal DC load up to the units rated output current as demanded by the attached load.

4.2. Each Battery Support Unit has been designed with high quality components to help ensure years of continuous use. The Support Units are protected by multiple protection features in order to ease of use:

Reverse polarity protection – the centre LED should show green for good or red for incorrect connection.

Over-current protection

Over temperature protection

Short circuit protection

Backward voltage protection – if the voltage at the terminals is higher than the Support Unit supply a relay will be heard cutting in and then cutting out to check voltage level.

5. Installation

There are no components within the Battery Support Units that, in their normal operation, produce arcs or sparks. All electronic devices

have some potential for generating sparks in the event of failure. **Therefore, never install this device in the same compartment with flammable items such as gasoline or batteries.**

5.1. Installation Location

BSU2-50 and BSU2-125 have been designed to be trolley mounted (Part number JLR-Trolley-US). The trolley comes complete with mounting bracket. Battery support units should not be rested in engine bay due to risk of damage either to vehicle or equipment. Showroom support unit SSU2-50 has been designed to sit under the supported vehicle. Ensure that unit is placed on fitted rubber runners and that there is at least 5cm of clear space on all sides excluding base. Ensure the mains socket is near the equipment and easily accessible at all times.

The unit can be wall mounted in a vertical orientation only with the connections at the bottom.

Fix using No.8 steel screws using suitable wall plugs. Leave 5cm clearance around the enclosure for air flow.

Neither BSU2 or SSU2 should not be positioned so that the label is either upside down or invisible.

5.2. Connecting to a vehicle

Please follow dealer standards guidelines for connection methods. Traction units are supplied with vehicle specific adapters that should be used at all times. Failure to use the adapters in the positions prescribed could result in excessive heat being generated in the lead set leading to premature failure of leads and low voltage output.

Output leads are connected using the polarised connectors on the unit and lead set.

Ensure units is disconnected from AC power before connecting to vehicle. Only when the central "polarity" led lights green should AC power be connected.

5.3. Powering the unit

The primary method for powering the support unit is via the AC power cord. The switch on the unit is primarily designed to cut off the output to DC leads.

The mains plug of the cord set is the disconnection device.

Ensure the mains socket is near the equipment and easily accessible at all times.

6. Status beeps:

BSU beeps repeat every 4 seconds.

Light load detected

2 beeps.

Battery error (high impedance)

3 beeps - Check connections and battery.

Connection Error

4 beeps - Check connections.

Reverse Connection Error

8 beeps - Check connections.

Recovery Mode:

The unit is used to re-enable the battery management unit on the vehicle when the contacts have opened, and the vehicle has shut down.

Ensure output leads are not connected and the unit is disconnected from mains power. Connect output leads to vehicle battery terminals.

Connect output leads to unit via yellow connector.

Power up unit

Ensure the vehicle is safe, then press the "Recovery" switch on the front. This will supply power to the vehicle and should close the battery management contactor.



5.4. Disconnecting from vehicle

Ensure unit is switched off AND AC power is disconnected before disconnecting leads from vehicle.

7. Symbols

The following symbols appear on the battery support units:

O/I

AC Power - Illuminated when supply is reaching unit

8. Warranty and Service

For technical support call 866-628-5508 or email oetech@service-solutions.com

For repair service, go to repairtrack.bosch-automotive.com or call 800-344-4013

9. Manufacturer Information

Traction products are manufactured by:



Polarity - Green when good
Red when reversed



Output - Illuminated when output is active

Traction Chargers
Roundway Hill Business Centre
Devizes
Wiltshire
SN10 2LT UK

+44(0)330 022 7822
admin@tractioncharger.com

10. General



This symbol is used on products that contain a hazardous element and therefore cannot be thrown away in the normal way. It appears on Electrical and Electronic Equipment (EEE) as part of the WEEE (Waste EEE) directive – separate collection facilities will be set up to divert WEEE away from landfill; funded by producers and retailers of EEE

11. Technical Specification

Environmental Information			
Parameter	BSU2-50/C		
Working Temp. °C	+0 to +40		
Working Humidity	20 – 90% non-condensing		
Storage Temp. °C	-40 - +85		
Storage Humidity	10 – 95% RH		
Input Voltage Range	110 – 240VAC		
Input Current (Typ)	8A/120 VAC 4A/240 VAC		
O/P Rated Current	50A		
O/P Rated Power	600W		
Output Voltage (Typ)	13.8V		
Dimensions LxWxH	280 x 190 x 90mm		

Environmental Information			
Parameter	BSU2-90/C		
Working Temp. °C	+0 to +40		
Working Humidity	20 – 90% non-condensing		
Storage Temp. °C	-40 - +85		
Storage Humidity	10 – 95% RH		
Input Voltage Range	110 – 240 VAC.		
Input Current (Typ)	12A/120 VAC 8A/240 VAC		
O/P Rated Current	80A		
O/P Rated Power	1200W		
Output Voltage (Typ)	13.8V		
Dimensions LxWxH	261 x 260 x 129mm		