

Osculati FBNRG0140FR0A00

Osculati Quick SBC Advanced Plus 12A 12V Battery Charger User Manual

Model: FBNRG0140FR0A00

1. INTRODUCTION

This manual provides essential instructions for the safe and efficient use of your Osculati Quick SBC Advanced Plus 12A 12V Battery Charger. This corrosion-resistant charger features a robust casing made of stainless steel, aluminum, and Cyclopol, designed for durability in various environments. It supports both manual and automatic operation, incorporating a 3-step automatic charging process for multiple battery banks. The charger is equipped with a variable speed cooling fan and a control panel, operating effectively across a wide temperature range. It can also function as a power supply even without a connected battery and is compatible with universal AC input and various generator types. The SBC Advanced Plus is suitable for charging both liquid electrolyte and GEL batteries.

Please read this manual thoroughly before installation and operation to ensure proper use and to prevent damage to the unit or connected batteries.

2. KEY FEATURES

- **Corrosion-Resistant Construction:** Casing made of stainless steel, aluminum, and Cyclopol for enhanced durability.
- **Flexible Operation Modes:** Supports both manual and automatic charging.
- **Multi-Stage Charging:** Integrated 3-step automatic charging (IUoU characteristic) for multiple battery banks.
- **Wide Temperature Range:** Designed for operation in diverse ambient temperatures.
- **Efficient Cooling:** Features a variable speed cooling fan.
- **Integrated Control Panel:** For monitoring and adjustments.
- **CAN-BUS Interface:** Allows for data transfer and connection of an optional remote control panel.
- **Power Supply Functionality:** Can operate as a power supply without a connected battery.
- **Universal Compatibility:** Compatible with universal AC input and all types of generators.

- **Battery Type Support:** Suitable for charging both liquid electrolyte and GEL batteries, with a dedicated selector.
- **Advanced Safety Protections:**
 - Integrated fuse for each output.
 - Thermal protection against overload (with optional sensors).
 - Protection against short-circuits.
 - Protection against overheating.
 - Reverse polarity protection (via internal fuse).
- **Multiple Outputs:** Internal charge separator for charging several battery groups simultaneously.

3. PRODUCT OVERVIEW



Figure 1: Various models of the Quick SBC NRG+ Battery Chargers. This image displays three different sizes of the Quick SBC NRG+ series, illustrating the product line's design consistency across different capacities. The model covered by this manual, the SBC 140, is part of this series.

4. SPECIFICATIONS

The following table details the specifications for the Osculati Quick SBC Advanced Plus 12A 12V Battery Charger (Model FBNRG0140FR0A00), corresponding to the SBC 140 in the product line.

Characteristic	Value
----------------	-------

Characteristic	Value
Brand	Osculati
Model Number	FBNRG0140FR0A00 (SBC 140)
Nominal Current	12 A
Output Voltage	12 Volts (DC)
Number of Outputs	2
Input Voltage Range	AC 83 - 264 Volts
Dimensions (L x W x H)	114 x 71 x 187 mm
Item Weight	1.1 kg (approx. 2.42 lbs)
Manufacturer	QUICK

Articolo	SBC	Corrente nominale	Volt	Uscite	Tensione aliment.	Dim. L x P x A	Kg.
3940857	140	12A	12V	2	da 264 a 83 Volt	114 x 71 x 187	1,1
3940858	250	25A	12V	3		114 x 71 x 252	1,6
3940861	300	30A	12V	3		114 x 71 x 252	1,6
3940859	500	40A	12V	3		114 x 71 x 276	1,8

Figure 2: Detailed specifications table for various Quick SBC battery charger models. This table provides technical data including nominal current, voltage, number of outputs, dimensions, and weight for different models in the SBC series. The SBC 140 model, relevant to this manual, is highlighted by its 12A nominal current and 12V output.

5. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your battery charger. If you are unsure about any step, consult a qualified technician.

- 1. Mounting Location:** Choose a dry, well-ventilated area, protected from direct sunlight, excessive heat, and moisture. Ensure sufficient space around the charger for proper airflow and cooling. The corrosion-resistant casing allows for installation in marine environments, but protection from direct water spray is recommended.
- 2. Mounting the Charger:** Securely mount the charger using appropriate fasteners. Ensure the mounting surface can support the weight of the unit.
- 3. Battery Connection:**
 - Ensure all battery connections are clean and tight.
 - Connect the positive (+) output terminal of the charger to the positive (+) terminal of the battery bank.
 - Connect the negative (-) output terminal of the charger to the negative (-) terminal of the battery bank.
 - The charger has multiple outputs; connect each battery bank to its designated output. Ensure correct polarity for all connections.
- 4. AC Power Connection:**
 - Connect the AC input cable to a suitable power outlet (AC 83-264 Volts).
 - Ensure the power source is properly grounded and protected by a circuit breaker.

5. **Battery Type Selection:** Use the integrated selector switch to choose the correct battery type (liquid electrolyte or GEL) for optimal charging. Refer to your battery manufacturer's specifications.

6. OPERATING INSTRUCTIONS

The Quick SBC Advanced Plus charger offers both automatic and manual operation modes.

6.1 Automatic Charging Mode

1. **Power On:** Once all connections are secure and the battery type is selected, connect the charger to the AC power source. The charger will typically initiate its self-test and then begin the charging process automatically.
2. **3-Step Charging Process:** The charger employs an intelligent 3-step (IUoU) charging algorithm:
 - **Bulk Stage:** Charges the battery at maximum current until it reaches approximately 80% of its capacity.
 - **Absorption Stage:** Charges at a constant voltage, gradually reducing current until the battery is fully charged.
 - **Float Stage:** Maintains the battery at a safe voltage to prevent self-discharge, keeping it fully charged without overcharging.
3. **Monitoring:** The integrated control panel provides status indicators for the charging process. The variable speed cooling fan will adjust its speed as needed to maintain optimal operating temperature.

6.2 Manual Charging Mode (If applicable)

Consult the detailed product manual provided with your unit for specific instructions on engaging and managing manual charging modes, if available. Manual mode typically allows for more direct control over charging parameters, which should only be used by experienced users.

6.3 Power Supply Function

The charger can provide stable DC power even without a battery connected. To use this function, simply connect the charger to the AC power source. Ensure the output terminals are connected to the device requiring power, observing correct polarity.

7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your charger.

- **Cleaning:** Periodically clean the exterior of the charger with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure ventilation openings are free from dust and debris.
- **Connections:** Regularly check all electrical connections (AC input and DC output) for tightness and corrosion. Loose connections can lead to overheating and inefficient charging.
- **Ventilation:** Ensure the cooling fan and ventilation grilles are not obstructed. Proper airflow is essential for preventing overheating.
- **Battery Inspection:** While the charger is designed for various battery types, regularly inspect your batteries for signs of damage, corrosion, or electrolyte levels (for liquid electrolyte batteries).
- **Storage:** If storing the charger for an extended period, disconnect it from both AC power and batteries. Store in a cool, dry place.

8. TROUBLESHOOTING

This section addresses common issues you might encounter with your battery charger.

Problem	Possible Cause	Solution
Charger not turning on	No AC power; Blown fuse; Internal fault.	Check AC power connection and outlet. Inspect and replace internal fuses if necessary (consult a technician). If problem persists, contact support.
Battery not charging	Incorrect battery connection; Battery type selector incorrect; Deeply discharged battery; Faulty battery.	Verify positive and negative connections. Ensure correct battery type is selected. Some chargers may not initiate charging on extremely low voltage batteries; try a different charger or consult battery manufacturer. Test battery condition.
Overheating / Fan running constantly at high speed	Insufficient ventilation; Overload; High ambient temperature.	Ensure charger has adequate airflow and ventilation openings are clear. Reduce load if possible. Move charger to a cooler environment.
Error indicator light on	Short circuit; Reverse polarity; Overload.	Disconnect charger immediately. Check all connections for short circuits or reverse polarity. Reduce load. Refer to the specific error codes in the full product manual if available.

For issues not covered here or if troubleshooting steps do not resolve the problem, please contact customer support.

9. WARRANTY AND SUPPORT

Specific warranty details for the Osculati Quick SBC Advanced Plus 12A 12V Battery Charger are not provided in this document. Please refer to the warranty card included with your purchase or contact your retailer or Osculati customer service for detailed warranty information.

For technical support, spare parts, or service inquiries, please contact your authorized Osculati dealer or visit the official Osculati website for contact information.

Manufacturer: QUICK

Brand: Osculati