
MS3000 – Sine Wave Inverter/ Charger for Marine Applications

RS3000 Variant

976-0143-01-01 Rev A

This addendum is for use with the MS3000 – a 3000W Sine Wave Inverter which is a variant of the reliable RS3000 Series.

The MS3000 has additional features, enabling it to be used in marine applications. It meets CSA 107.1 and UL 458 , including the Marine Requirements.



WARNING: Shock hazard

MS3000 meets the marine drip test requirements only when it is mounted with its drip shield installed, in the orientation described in this addendum. Installation in other orientations does not meet the drip test requirements, and may be hazardous if there is water present

Modifications to Standard Product

Changes have been made to installation of the standard RS3000 product so it can be safely used in marine applications in the orientation specified in this addendum. The MS3000 has an enclosed drip shield, which requires installation, that enables it to meet the UL drip test requirements. All other safety, features, installation, operation, troubleshooting and specification information is as described in the standard RS3000 Sine Wave Inverter/Charger Installation Manual (Part number: 975-0171-01-01) and the RS3000 Sine Wave Inverter/Charger Operation Manual (Part number: 975-0170-01-01).

Materials List

- MS3000
- Drip Shield(located in the packing box, beneath the unit)
- #8 screws(for installation the shield)

Equipment Grounding

As specified in the ABYC E-11, the MS3000 must be provided with equipment grounding conductors connected to the AC input ground and chassis ground terminals.

In order to comply with ABYC E-11, the MS3000 DC (chassis) ground terminal needs to be connected to the boat's DC grounding bus by a minimum No. 3/0 AWG copper conductor, which is either rated 90 °C or is bare copper.¹

1.Per ABYC E-11, which requires No. 4/0 AWG min. DC supply conductors for the MS3000, but allows a DC grounding conductor of one size smaller than the DC supply conductors.

The Chassis Ground point on the MS3000 is used to connect the chassis of the MS3000 to your system's DC grounding point, as required by regulations for some installations. Use copper wire that is either bare, identified, or provided with green insulation. This guide assumes you are using the code-compliant DC supply cable size and fuse size indicated in Table 3, on page 14 in the RS3000 Sine Wave Inverter/Charger Installation Manual (Part number: 975-0171-01-01). If you are using different sizes, refer to your applicable code for DC grounding detail.

To connect the chassis ground:

1. Using the appropriate wrench, loosen the bolt on the chassis ground point shown in [Figure 1](#).
2. Connect the DC grounding cable (No. 3/0 AWG or larger copper cable) between the chassis ground point and the DC grounding point for your system, usually the boat's DC grounding bus.
3. Tighten the +bolt to a torque of 3.5–3.8 ft-lbs (4.5–5.2 Nm).

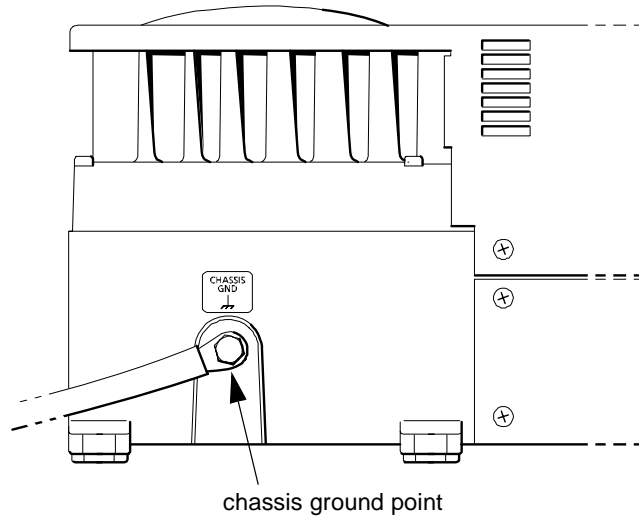


Figure 1 Completed DC Wiring and DC Grounding

Installation

To install the MS3000:

1. Mount the unit in the orientation shown in [Figure 2](#). See the RS3000 Sine Wave Inverter/Charger Installation Manual (Part number: 975-0171-01-01) for additional AC and DC wiring considerations.
Ensure that you leave enough clearance above the unit to screw the drip shield on top after the unit is mounted to the wall in the correct orientation.
2. Follow all of the instructions in RS3000 Sine Wave Inverter/Charger Installation Manual (Part number: 975-0171-01-01) for connecting the AC input and AC output wires and the DC cables. Follow the instructions for mounting the BTS and connecting to the network, then perform the recommended checks.
3. Screw the drip shield to the top of the unit as shown in [Figure 2](#).
4. Continue with testing the installation as described in RS3000 Sine Wave Inverter/Charger Installation Manual (Part number: 975-0171-01-01).

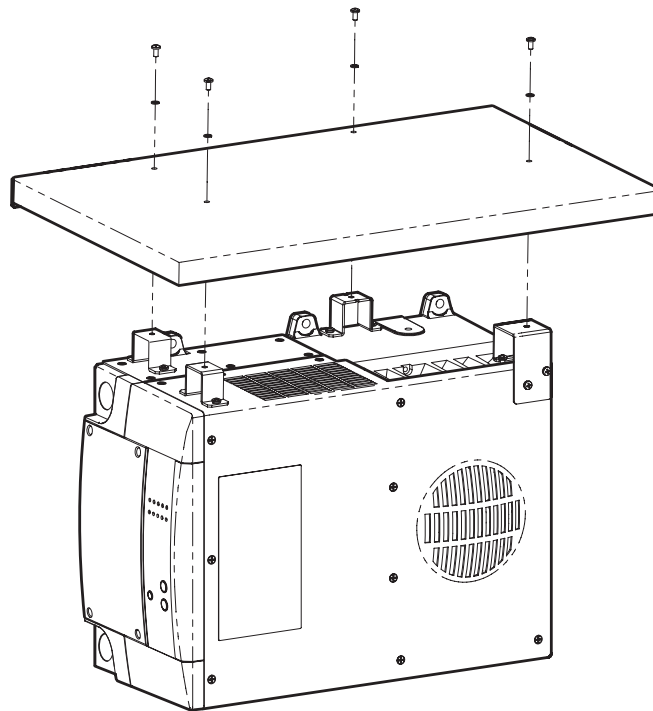


Figure 2 MS3000 Installation

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