



Unit Shown: MSM-30-24V-U1



Marine High Frequency Battery Charger

The MSM Series is a Smart High Frequency Switch Mode charger specifically developed for Marine applications. MSM series incorporates Power Factor Correction (PFC) Circuitry with a wide input voltage range in order to accommodate many marine charging applications.

The MSM has an Integrated Battery Charge Divider / Isolator which provides connections for charging up to three independent batteries simultaneously with a three-stage charge cycle. MSM's filtered output is suitable to charge different types of batteries for Marine/Industrial applications. This series is equipped with an LCD display for ease of navigation through the configurations menu. The LCD also displays Input AC voltage, Output DC Voltage & Current, and Alarm Status. The front of the unit provides three status LED indicators for the overall status of the system.

The MSM charger is built in a robust, non-corrosive enclosure that addresses harsh Marine environments, meeting stringent safety and regulatory standards. MSM chargers can be used inside engine rooms as this series is ignition protected 33 CFR 183.410 compliant.

Standard Features

- Smart Microprocessor Controlled High Frequency Charging Technology
- Single Phase AC Input 102-264VAC, 45-65Hz
- Complete Isolation from AC to DC
- LCD Digital Voltmeter & Ammeter
- Current Limit Protection
- Filtered Output for VRLA (Gel-Cell & AGM) Batteries
- Battery Isolator (Charge Divider allows for charging up to three Batteries Simultaneously)
- Input & Output Fuses
- On/Off Switch with Disable Option
- AC Voltage Metering
- Conformal Coated Circuit Boards
- Internal or External Temp. Compensation w/Disable Option (24ft Probe Included)

- Audible Charger Failure Alarm with LED Indicator and Form "C" Dry Relay Contacts
- IP22/NEMA Type 2 (with dripshield)
- 33 CFR 183.410 - Ignition Protection
- Corrosion Resistant
- Meets ABS & USCG Requirements
- CE Certified
- 2-Year Warranty

Optional Accessories

- 11Y** External Temperature Probe 100 feet
- 57Y** Modbus (Ethernet) TCP/IP
- 551** VFD Display
- 545** Solar Input w/MPPT Controller
- 57B** 5 Isolated Output Terminals
- Alarm Box: Low/High Voltage and Ground Fault (ordered separately)



Model Number	AC Input 100% (load)		DC Output		Case No.	Net Weight*	
	Volts (Nominal)	Amps	Volts (Nominal)	Amps		lbs	kgs
MSM-10-12V-U1	120	1.5	12	10	201	5	2.3
	240	0.8					
MSM-20-12V-U1	120	3.1	12	20	201	5	2.3
	240	1.6					
MSM-30-12V-U1	120	4.6	12	30	203	11	5.0
	240	2.4					
MSM-40-12V-U1	120	6.0	12	40	203	11	5.0
	240	3.2					
MSM-60-12V-U1	120	9.2	12	60	205	18	8.2
	240	4.8					
MSM-80-12V-U1	120	12.0	12	80	205	18	8.2
	240	6.4					

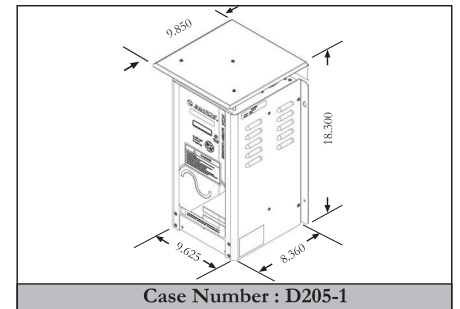
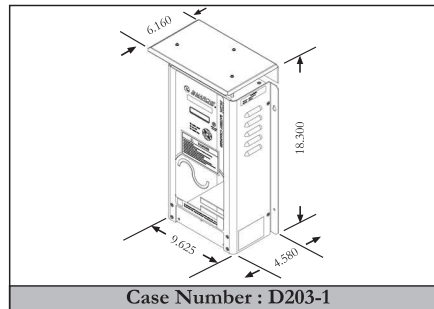
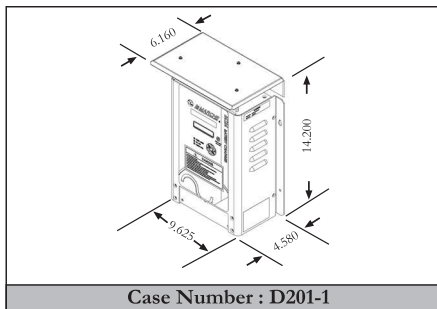
Model Number	AC Input 100% (load)		DC Output		Case No.	Net Weight*	
	Volts (Nominal)	Amps	Volts (Nominal)	Amps		lbs	kgs
MSM-10-24V-U1	120	2.6	24	10	201	5	2.3
	240	1.4					
MSM-20-24V-U1	120	5.2	24	20	203	11	5.0
	240	2.7					
MSM-25-24V-U1	120	6.5	24	25	203	11	5.0
	240	3.1					
MSM-30-24V-U1	120	7.8	24	30	203	11	5.0
	240	3.8					
MSM-35-24V-U1	120	9.1	24	35	203	11	5.0
	240	4.4					
MSM-50-24V-U1	120	13	24	50	205	18	8.2
	240	6.3					
MSM-65-24V-U1	120	16.9	24	65	205	18	8.2
	240	8.2					

*Weight does not include shipping packaging

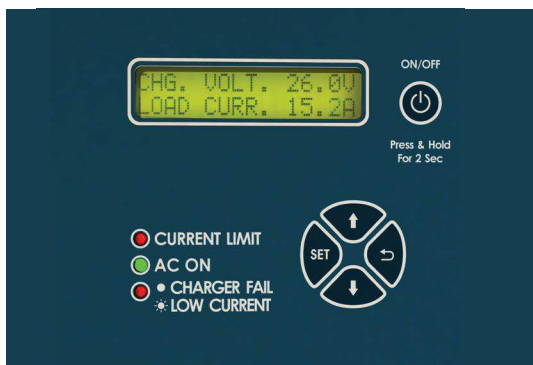
Charger Specifications

- **AC Input**
Wide AC Input Range 102 - 264VAC
Single Phase 45 - 65 Hz
- **DC Output**
10 - 80A / 12V
10 - 65A / 24V
- **Power Factor**
0.99
- **Load Regulation**
$\pm 0.5\%$
- **Input Protection**
Fuse with Surge and Transient Protection
AC Over Voltage Protection
- **Output Protection**
Current Limit Protection
Fuse with Surge Protection
Reverse Current Polarity
Thermal Protection
Short Circuit Protection
- **LED Indicators**
Current Limit
AC ON
Charger Fail
Low Current
- **Alarm Contacts**
Charger Failure

- **LCD Digital Display**
AC Input Voltmeter
DC Output Voltmeter and Ammeter (1%)
- **Environmental**
Operating: -20° to 50°C (-4° to 122°F)
Storage: -40° to 85°C (-40° to 185°F)
Relative Humidity: 0 to 95% non condensing
- **Adjustable Voltage Range**
10.4 to 14.1 (12V)
20.8V to 28.2V (24V)
- **Mounting**
Wall mount
- **Cable Entry**
Bottom
- **Finish**
Powder coated aluminum enclosure (corrosion resistant)
- **Standards**
UL 1236, ABS & USCG Requirements
EN 60335-1 (Electrical Safety)
IEC 60335-2-29 (Electrical Safety)
IEC 60068-2-6 (Sinusoidal Vibration)
EN 55011 (Radiated EMI)
IEC 1000-4-2 (Electrostatic Discharge)
IEC 1000-4-4 (Electrical Fast Transient)
33 CFR 183.410 (Ignition Protection)



LCD Display



Model Number Nomenclature

