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Mastervolt 1603 IG Isolator

Mastervolt Battery Mate 1603 IG Isolator User Manual

Model: 1603 IG Isolator

PRODUCT OVERVIEW

The Mastervolt Battery Mate 1603 IG Isolator is an advanced electronic device designed for efficient charging of multiple battery banks from a single alternator or battery charger. Unlike conventional diode isolators, the Battery Mate utilizes MOSFET technology to minimize voltage drop, ensuring fast and complete charging. This unit is compatible with various charging systems and can be easily integrated into both new and existing setups. Its intelligent design compensates for voltage variations, maintaining optimal charging levels across all connected battery banks.

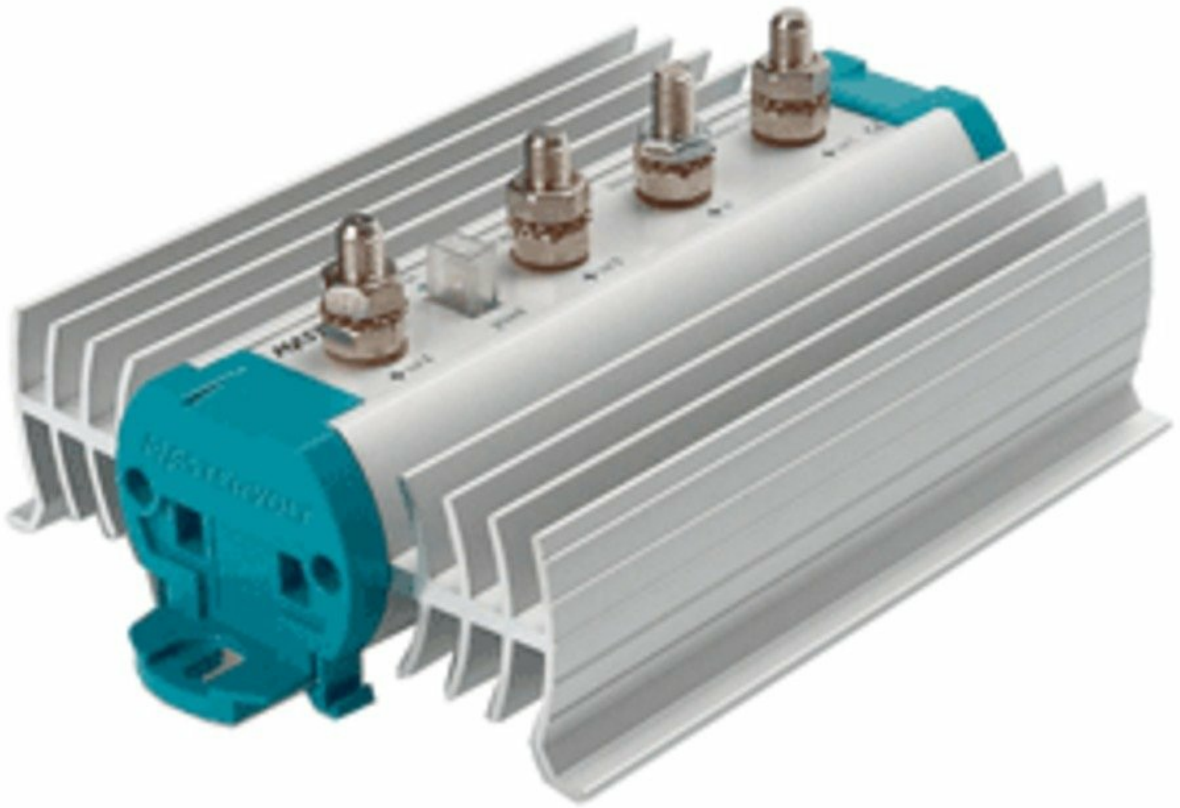


Figure 1: Mastervolt Battery Mate 1603 IG Isolator. This image shows the compact design of the isolator with its heat sink fins and connection terminals on top. The teal-colored end caps are visible, indicating the Mastervolt branding.

SETUP AND INSTALLATION

Proper installation is crucial for the optimal performance and longevity of your Battery Mate. Always ensure the power source is disconnected before beginning installation.

1. Mounting

The Battery Mate is designed for easy installation on a DIN rail, which is an industry standard. Ensure the mounting location is dry, well-ventilated, and protected from direct sunlight or excessive heat.

- Select a secure, stable mounting surface.
- Attach the unit firmly to the DIN rail.
- Ensure adequate clearance around the unit for air circulation and heat dissipation.

2. Wiring Connections

The Battery Mate has an input side for the alternator/battery charger and output sides for the battery banks. Refer to the diagram below for typical wiring. (*Note: A wiring diagram is not provided in this manual. Please refer to the full product manual or consult a qualified technician for detailed wiring instructions.*)

- Connect the positive output from your alternator or battery charger to the **INPUT** terminal of the Battery Mate.
- Connect the positive terminals of your battery banks to the respective **OUTPUT 1**, **OUTPUT 2**, and **OUTPUT 3** terminals.
- Ensure all connections are tight and secure to prevent voltage drops and overheating.
- If your standard alternator requires external excitation or voltage sensing, connect the additional **IG** contact as necessary.

Safety Note: *Incorrect wiring can damage the unit or connected equipment. If you are unsure about any step, consult a qualified marine or automotive electrician.*

OPERATING INSTRUCTIONS

The Mastervolt Battery Mate operates automatically once correctly installed and connected to a charging source. It intelligently manages the charging current to multiple battery banks.

Automatic Operation

- When the alternator or battery charger is active, the Battery Mate will automatically distribute the charging current to the connected battery banks.
- The MOSFET technology ensures minimal voltage drop, allowing batteries to charge quickly and completely.
- The unit continuously monitors and compensates for voltage variations to maintain optimal charging levels.

Monitoring

While the Battery Mate operates autonomously, it is good practice to periodically monitor your battery voltage levels to ensure proper charging. This can be done using a separate battery monitor or voltmeter.

MAINTENANCE

The Mastervolt Battery Mate 1603 IG Isolator is designed for maintenance-free operation. However, periodic checks can help ensure its continued reliability.

- **Connection Checks:** Annually inspect all electrical connections for tightness and corrosion. Loose connections can lead to resistance and heat buildup.
- **Cleanliness:** Keep the unit clean and free from dust, dirt, and moisture. Use a dry, soft cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Ventilation:** Ensure that the area around the Battery Mate remains clear to allow for proper airflow and heat dissipation from the heat sink fins.
- **Environmental Conditions:** Verify that the operating environment remains within the recommended temperature and humidity ranges specified in the product's full technical documentation.

TROUBLESHOOTING

If you experience issues with your Mastervolt Battery Mate, consider the following common troubleshooting steps:

Problem	Possible Cause	Solution
Batteries not charging or charging slowly.	<ul style="list-style-type: none"> Loose or corroded connections. Faulty alternator/charger. Overloaded system (too many loads on batteries). Battery Mate incorrectly wired. 	<ul style="list-style-type: none"> Check and tighten all connections. Clean any corrosion. Test alternator/charger output directly. Reduce loads or increase charging capacity. Verify wiring against installation instructions.
Battery Mate feels excessively hot.	<ul style="list-style-type: none"> Insufficient ventilation. Overcurrent condition. Loose connections. 	<ul style="list-style-type: none"> Ensure adequate airflow around the unit. Check total current draw; ensure it does not exceed the unit's rating (120A). Inspect and tighten all connections.
No output to one or more battery banks.	<ul style="list-style-type: none"> Faulty battery bank connection. Internal fault in Battery Mate. 	<ul style="list-style-type: none"> Check wiring to the specific battery bank. Contact Mastervolt support if other troubleshooting steps fail.

If the problem persists after attempting these solutions, please contact Mastervolt customer support or a qualified service technician.

SPECIFICATIONS

Key technical specifications for the Mastervolt Battery Mate 1603 IG Isolator:

- **Model:** 1603 IG Isolator
- **Current Rating:** 120 Amperes
- **Number of Battery Banks:** 3
- **Technology:** Electronic with MOSFETs
- **Dimensions (Product):** 10 x 6 x 4 inches (approximately)
- **Weight (Item):** 2.7 pounds (approximately)
- **Manufacturer:** Mastervolt
- **ASIN:** B00TLF00BO
- **Date First Available:** February 14, 2015

These specifications are subject to change without notice. For the most current and complete specifications, please refer to the official Mastervolt product documentation.

WARRANTY AND SUPPORT

Mastervolt products are manufactured to high standards and are backed by a manufacturer's warranty. Specific warranty terms and conditions may vary by region and product. Please retain your proof of purchase for warranty claims.

Customer Support

For technical assistance, warranty inquiries, or service, please contact Mastervolt customer support through their official website or authorized distributors. When contacting support, please have your product model number (1603 IG Isolator) and serial number (if applicable) ready.

Mastervolt Official Website: www.mastervolt.com

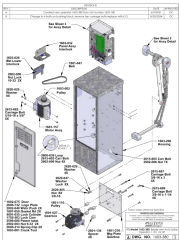

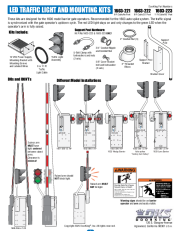
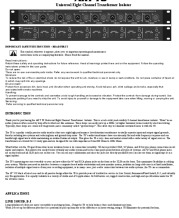
Note: This manual provides general information. For detailed technical specifications, installation diagrams, and the most up-to-date information, always refer to the official Mastervolt documentation provided with your product or available on their website.


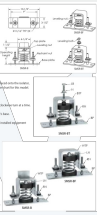


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Related Documents - 1603 IG Isolator

	<p>DOORKING 1603-380 Auto Spike Barrier Arm Operator Assembly and Parts Breakdown</p> <p>Detailed assembly instructions and parts list for the DOORKING 1603-380 Auto Spike Barrier Arm Operator, including component identification and part numbers for the 115V, 1/2 HP unit.</p>
	<p>Mastervolt Charge Mate Pro: Current Limited Electronic Charge Relay - User and Installation Manual</p> <p>Detailed user and installation guide for the Mastervolt Charge Mate Pro, an electronic charge relay for managing power distribution between two battery banks. Includes specifications, wiring diagrams, safety instructions, operational modes, LED indicators, warranty information, and disposal guidelines.</p>
	<p>DoorKing LED Traffic Light and Mounting Kits Installation Guide</p> <p>Comprehensive installation and wiring guide for DoorKing LED Traffic Light and Mounting Kits (1603-221, 1603-222, 1603-223) for 1600 series barrier gate operators.</p>
	<p>ART T8 Universal Eight Channel Transformer Isolator - Product Manual</p> <p>This manual provides comprehensive information on the ART T8 Universal Eight Channel Transformer Isolator, including safety instructions, product introduction, various applications in audio systems, warranty details, service procedures, and technical specifications for eliminating ground loop noise and hum.</p>

<div data-bbox="124 100 300 353"><p>MASTERVOLT THE POWER TO BE INDEPENDENT</p><p>CHARGE MATE PRO 40, 90</p><p>CURRENT LIMITED ELECTRONIC CHARGE RELAY</p><p>CE</p><p>EN USER AND INSTALLATION MANUAL NL NUTRIEREN EN NUTRIEL-PROFESSIE DE NUTRIEREN EN NUTRIEL-PROFESSIE FR NUTRIEREN EN NUTRIEL-PROFESSIE IT NUTRIEREN EN NUTRIEL-PROFESSIE ES NUTRIEREN EN NUTRIEL-PROFESSIE PT NUTRIEREN EN NUTRIEL-PROFESSIE</p></div>	<p>Mastervolt Charge Mate Pro 40, 90 User and Installation Manual</p> <p>Comprehensive user and installation manual for the Mastervolt Charge Mate Pro 40, 90, a current-limited electronic charge relay for distributing charge current between two battery banks. Includes specifications, installation guidelines, safety measures, and LED indicator explanations.</p>
<div data-bbox="124 414 311 667"><p>VibraSystems Inc. SMSR-B/BF/BT</p><p>VibraSystems Inc.</p></div>	<p>VibraSystems SMSR-B/BF/BT Installation Instructions</p> <p>Detailed installation guide for VibraSystems SMSR-B, SMSR-BF, and SMSR-BT vibration isolators, covering securing, leveling, and adjustment procedures for optimal equipment mounting.</p>