

Orion Motor Tech OMT-BTC-S002

Orion Motor Tech 2PC 12V Battery Charger and Maintainer

Model: OMT-BTC-S002

INTRODUCTION

This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your Orion Motor Tech 2PC 12V Battery Charger and Maintainer. This device is designed to charge and maintain various types of 12V lead-acid batteries, including flooded, sealed maintenance-free, AGM, and gel batteries, ensuring optimal performance and longevity for your vehicle's battery.

SETUP

Before connecting the charger, ensure the area is well-ventilated and free from flammable materials. Always wear appropriate personal protective equipment, such as safety glasses and gloves.

- 1. Inspect the Charger:** Before each use, check the charger, cables, and clamps for any signs of damage. Do not use if damaged.
- 2. Connect to Battery:**
 - Connect the red positive (+) clamp to the positive (+) terminal of the battery.
 - Connect the black negative (-) clamp to the negative (-) terminal of the battery.
 - Ensure a secure connection to prevent sparks.
- 3. Connect to Power Outlet:** Once the clamps are securely connected to the battery terminals, plug the charger's power cord into a standard 120V AC electrical outlet.
- 4. Initial Check:** The charging indicator light will illuminate, indicating the charging status.



Image: The Orion Motor Tech 12V Battery Charger, showing its compact design, standard power plug, and robust battery clamps.

STURDY BATTERY CLAMPS

Offer Secure Holding
& Superior Conductivity

PURE COPPER CORE

Ensures Stable
& Efficient Charging

Image: A close-up view of the heavy-duty battery clamps, featuring red and black insulation for positive and negative terminals, designed for secure gripping and superior conductivity.

OPERATING INSTRUCTIONS

The Orion Motor Tech battery charger employs a smart 2-stage charging process to optimize battery health and efficiency.

Charging Process:

- **Stage 1: Bulk Charge**

This initial stage provides a constant high current to the battery, maximizing charging efficiency and quickly bringing the battery to a significant charge level.

- **Stage 2: Float Mode**

Once the battery is nearly full, the charger transitions to Float Mode. In this stage, a safe trickle current is applied to maintain a complete charge without the risk of overcharging, making it ideal for long-term maintenance.

Charging Indicator:

The charging indicator light on the unit provides visual feedback on the charging status:

- **Red Light:** Indicates the battery is currently charging.
- **Green Light:** Indicates the battery is fully charged or in float mode.

Important Note:

- Do not plug in this charger without connecting to a battery first.
- Disconnect the charger immediately if charging is not working as expected.
- If the indicator stays red for 12 hours, check the battery for potential issues.
- For 7-12Ah batteries, stop charging after 8-10 hours to prevent overcharging.
- For car batteries, charging time should not exceed 12 hours for optimal battery health.

Wide Compatibility:

This charger is suitable for a broad range of 12V lead-acid batteries, including flooded, sealed maintenance-free (AGM, Gel) types. It is ideal for charging and maintaining batteries in:

- Boats
- Motorcycles
- ATVs
- Riding Mowers
- Cars
- Trucks
- SUVs
- RVs

MULTIPURPOSE BATTERY CHARGER

Charge All Types of 12V Lead-Acid Batteries

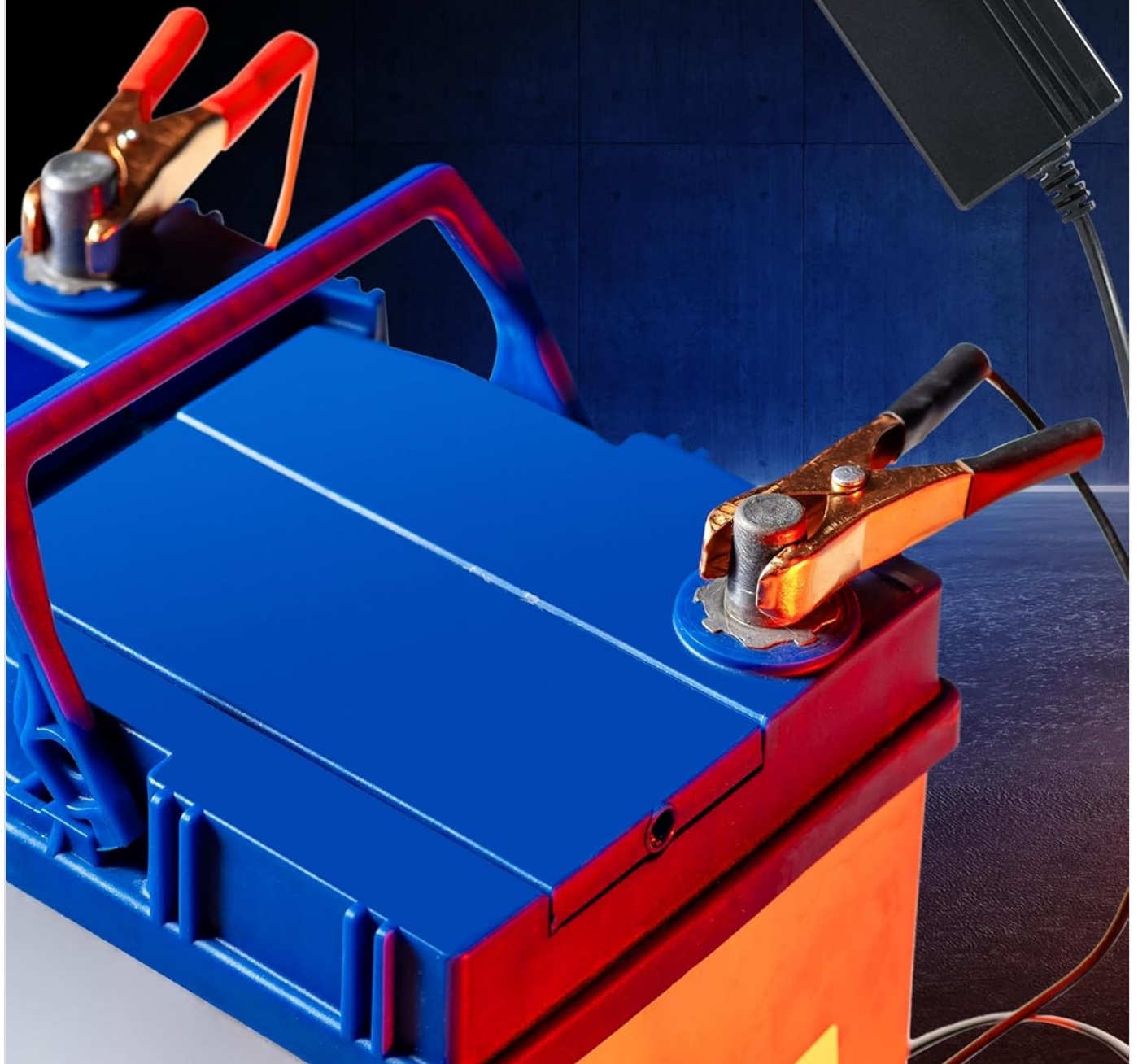


Image: The Orion Motor Tech battery charger connected to a large blue lead-acid battery, demonstrating its multipurpose charging capability.

SAFE OPERATION



Short-Circuit
Protection



Overheating
Protection



Overcurrent
Protection

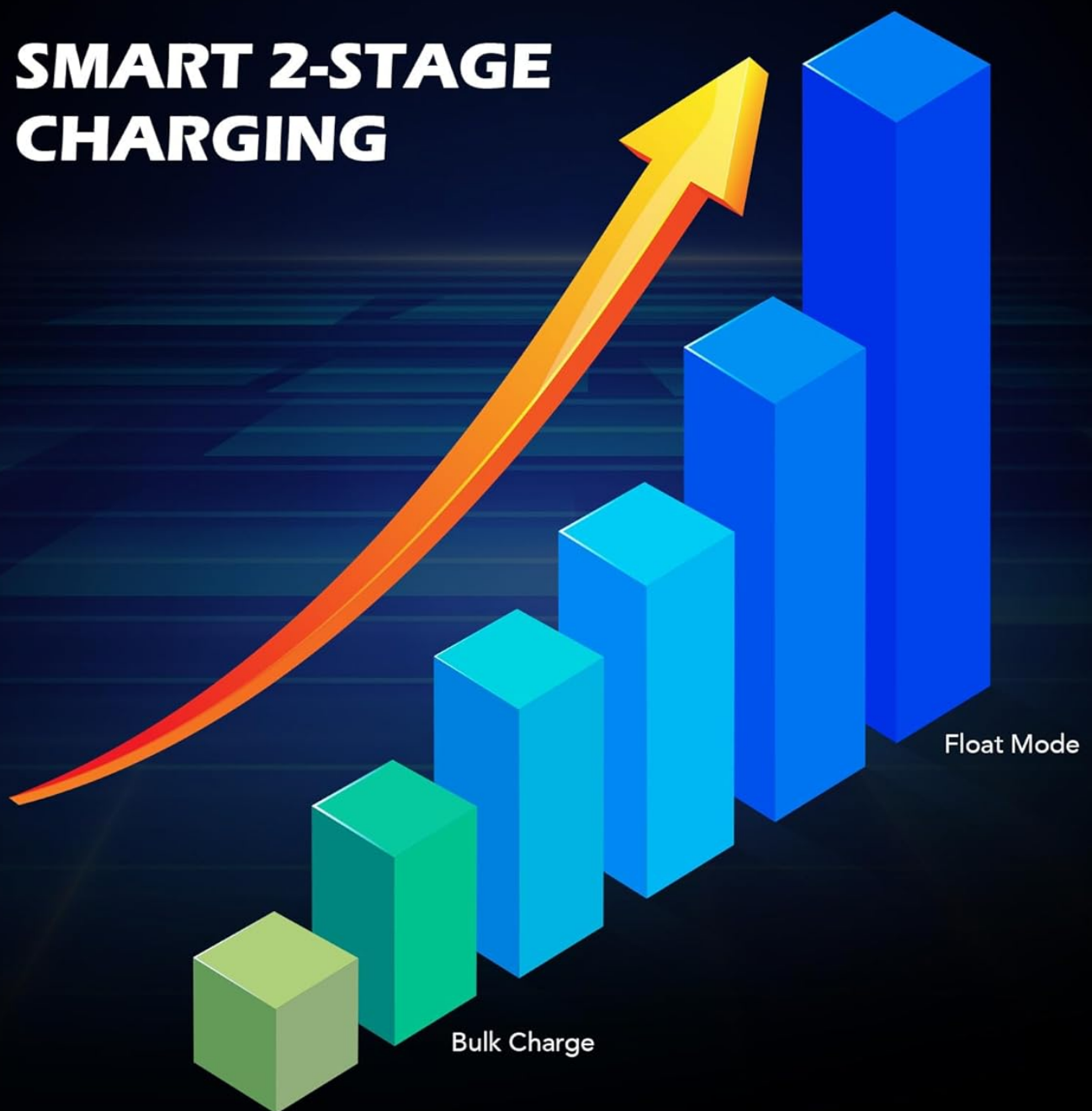


Overvoltage
Protection



Image: An illustration highlighting the wide application of the charger, suitable for charging and maintaining batteries in a variety of vehicles such as boats, motorcycles, ATVs, lawn tractors, cars, trucks, SUVs, and RVs.

SMART 2-STAGE CHARGING



Bulk Charge

High and Constant Current
Maximizes Charging Efficiency

Float Mode

Trickle Current Fully Charges
without the Risk of Overcharging

Image: A graphical representation of the smart 2-stage charging process, showing the transition from "Bulk Charge" (high constant current for efficiency) to "Float Mode" (trickle current for maintaining full charge without overcharging).

MAINTENANCE

Proper maintenance of your battery charger will ensure its longevity and reliable performance.

- **Cleaning:** Disconnect the charger from both the power outlet and the battery before cleaning. Use a dry, soft cloth to

wipe down the unit. Do not use liquid cleaners or solvents.

- **Storage:** Store the charger in a cool, dry place away from direct sunlight and moisture when not in use. Ensure cables are neatly coiled and not kinked.
- **Cable and Clamp Inspection:** Regularly inspect the power cord and battery clamps for any cuts, fraying, or corrosion. Replace the unit if significant damage is found.

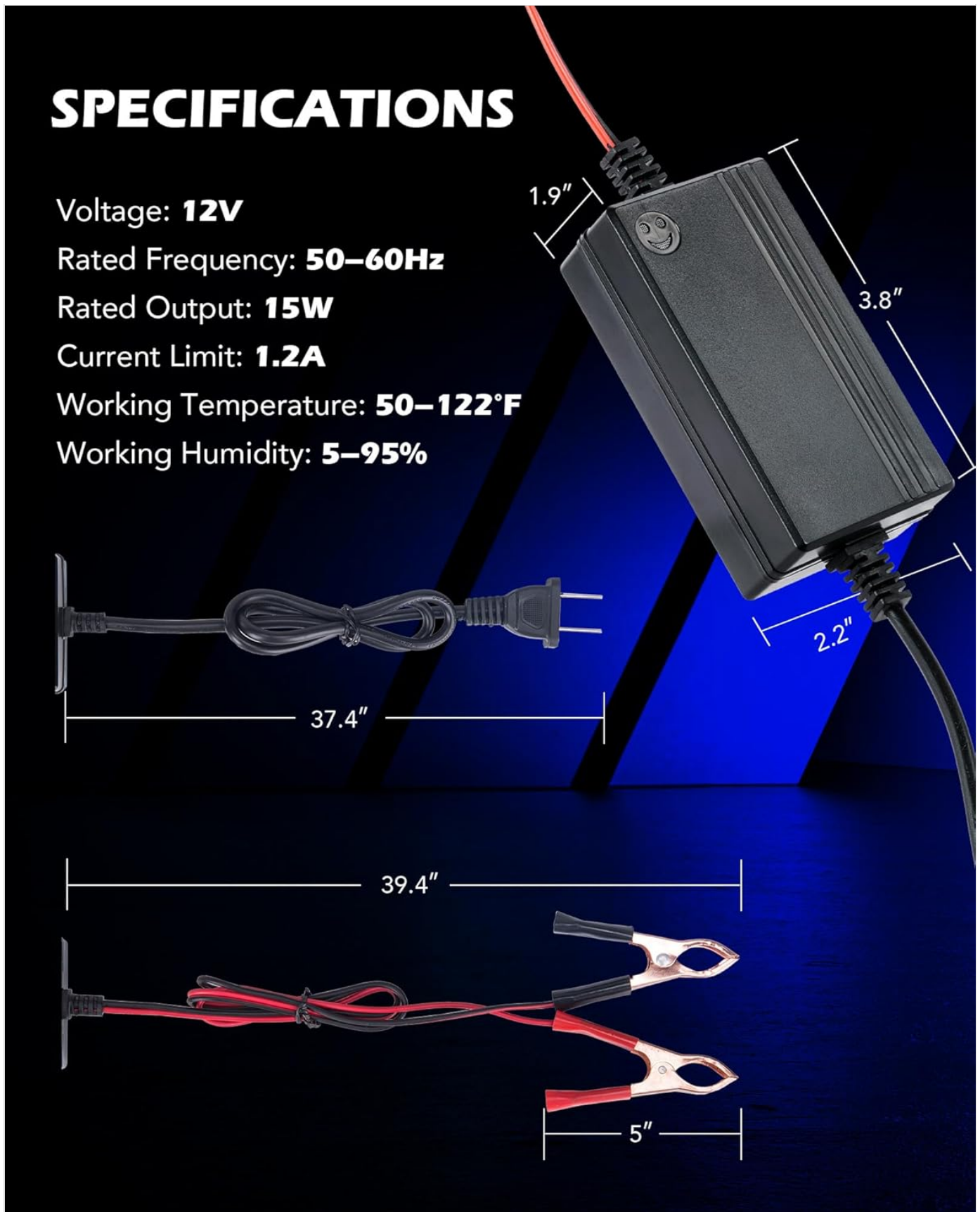


Image: Detail showing the pure copper core of the charger's cables, which ensures stable and efficient charging, alongside the sturdy battery clamps designed for secure holding and superior conductivity.

TROUBLESHOOTING

If you encounter issues with your charger, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Charger not turning on / No indicator light	Not connected to power, faulty outlet, or damaged charger.	Ensure charger is properly plugged into a working outlet. Check connections to the battery. If still no power, the unit may be faulty.
Indicator light stays red for extended period (e.g., 12 hours)	Battery deeply discharged, faulty battery, or incorrect battery type.	Check the battery's voltage. If extremely low, it may take longer to initiate charging or the battery might be beyond recovery. Verify battery type is 12V lead-acid.
Charger gets excessively hot	Overload, poor ventilation, or internal fault.	Ensure adequate ventilation around the charger. Disconnect immediately if overheating. This unit has overheating protection, but continuous overheating indicates an issue.
Battery not charging or not holding charge	Poor connection, faulty battery, or charger malfunction.	Verify secure connections to battery terminals. Test the battery with a multimeter to confirm its condition. If the battery is healthy, the charger may be faulty.

Safety Protections:

The Orion Motor Tech charger is equipped with multiple safety features to protect both the user and the battery:

- **Short-Circuit Protection:** Prevents damage from accidental short circuits.
- **Overcurrent Protection:** Safeguards against excessive current flow.
- **Overheating Protection:** Automatically shuts down if the unit gets too hot.
- **Overvoltage Protection:** Protects the battery from being charged at too high a voltage.
- **Low-Voltage Dropout Protection:** Ensures stable operation even with voltage fluctuations.

WIDE APPLICATION

Convenient Charging



Boats



Motorcycles



ATVs



Lawn Tractors

Maintenance Only



Cars



Trucks



SUVs



RVs



Image: An illustration detailing the comprehensive safety features of the charger, including protection against short-circuits, overcurrent, overheating, and overvoltage, ensuring safe operation.

SPECIFICATIONS

Feature	Value
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Feature	Value
Model Number	OMT-BTC-S002
Output Voltage	12 Volts
Rated Frequency	50-60Hz
Rated Output	15W
Current Limit	1.2A
Working Temperature	50-122°F (10-50°C)
Working Humidity	5-95%
Product Dimensions (Charger Unit)	1.9" (Depth) x 2.2" (Width) x 3.8" (Height)
Item Weight	0.71 Pounds (approx. 11.3 ounces)

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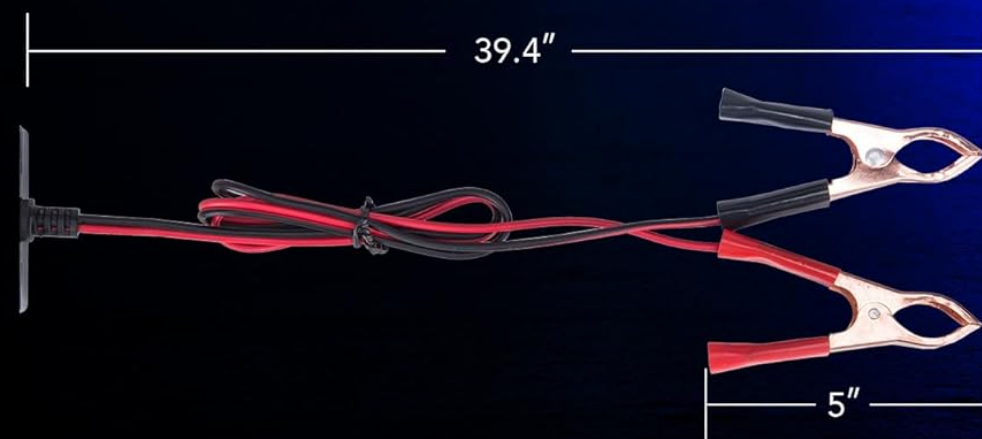
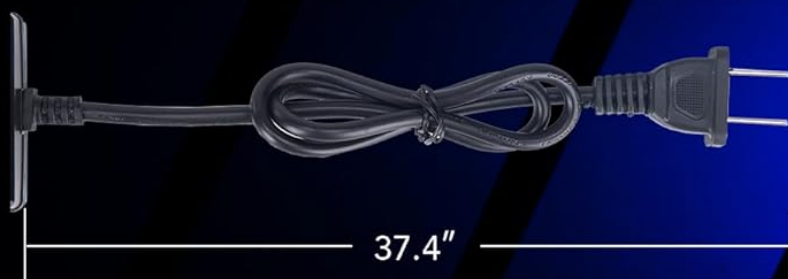





Image: A visual guide to the charger's physical specifications, including the dimensions of the main unit and the lengths of the power and battery cables.

WARRANTY AND SUPPORT

Information regarding product warranty and customer support is not provided within this manual. For warranty details or technical assistance, please refer to the product packaging, the manufacturer's official website, or contact Orion Motor Tech customer service directly.

Related Documents

<p>Portable Luminous EV Charger User Manual</p>  <p>Orion Motor Tech Image for Public Reference</p>	<p>Orion Motor Tech Portable Luminous EV Charger User Manual - MD-PA-16A & MD-PA-40A</p> <p>User manual for the Orion Motor Tech Portable Luminous EV Charger, models MD-PA-16A and MD-PA-40A. Includes safety guidelines, detailed specifications, operation instructions, maintenance tips, and control box diagram for electric vehicle charging.</p>
<p>Vacuum Pump User Manual</p>  <p>Orion Motor Tech Image for Public Reference</p>	<p>Orion Motor Tech Vacuum Pump User Manual - VPH-E001-00</p> <p>Comprehensive user manual for the Orion Motor Tech VPH-E001-00 vacuum pump. Includes safety information, specifications, operation, maintenance, and troubleshooting guides for HVAC servicing.</p>
<p><small>ORION MOTOR TECH U.S. LIMITED WARRANTY (2024)</small> Effective Date: 01/01/2024</p> <p>WARRANTY COVERAGE This limited warranty covers the original purchaser of the Orion Motor Tech products listed below. It is a non-transferable warranty that applies only to the United States. It is not intended to be a substitute for a full warranty. For more information, please visit www.orionmotortech.com/warranty.</p> <p>1. Covered Products This warranty covers the following Orion Motor Tech products: Portable Luminous EV Charger (MD-PA-16A, MD-PA-40A), Vacuum Pump (VPH-E001-00), and Metric Flex-Head Crows Foot Wrench Set (MT-FHS-001).</p> <p>2. Warranty Period The warranty period for the Orion Motor Tech products listed above is as follows:</p> <ul style="list-style-type: none"> Portable Luminous EV Charger: 24 months or 2,400 miles, whichever comes first. Vacuum Pump: 12 months or 1,200 hours of operation, whichever comes first. Metric Flex-Head Crows Foot Wrench Set: 12 months or 1,200 uses, whichever comes first. <p>3. Exclusions This warranty does not cover the following:</p> <ul style="list-style-type: none"> Products that have been modified or altered in any way. Products that have been used in commercial applications. Products that have been damaged by accident, misuse, or neglect. Products that have been damaged by fire, flood, or other natural disasters. Products that have been damaged by unauthorized repair or maintenance. <p>4. Remedies If a product covered by this warranty is found to be defective, Orion Motor Tech will, at its discretion, either repair the product, replace it with a new or refurbished unit, or refund the purchase price. The remedy is limited to the product and does not include labor, travel, or other incidental costs. The warranty is void if the product is not used in accordance with the instructions provided in the user manual.</p> <p>5. Limitations This warranty is limited to the original purchaser of the product. It is not transferable. The warranty is void if the product is not used in accordance with the instructions provided in the user manual.</p> <p>6. Contact Information For more information, please visit www.orionmotortech.com/warranty or contact our customer support team at support@orionmotortech.com.</p>	<p>Orion Motor Tech U.S. Limited Warranty Terms and Conditions</p> <p>Detailed terms and conditions for the Orion Motor Tech U.S. Limited Warranty, covering product defects, warranty period, exclusions, and consumer responsibilities for products purchased in the United States.</p>
<p>OMT</p> <p>Metric Flex-Head Crows Foot Wrench Set User Manual</p>  <p>Orion Motor Tech Image for Public Reference</p>	<p>Orion Motor Tech Metric Flex-Head Crows Foot Wrench Set User Manual OMT Tools</p> <p>User manual for the Orion Motor Tech Metric Flex-Head Crows Foot Wrench Set. Provides detailed specifications, safe operation instructions, and maintenance guidelines for this automotive tool set.</p>