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Victron Energy SDTG2400302

Victron Energy Skylla-TG GMDSS Battery Charger User Manual

Model: SDTG2400302

1. INTRODUCTION

This manual provides essential information for the safe installation, operation, and maintenance of the Victron Energy Skylla-TG GMDSS Battery Charger, model SDTG2400302. This 24-Volt, 30 Amp charger is designed for various battery types and includes integrated GMDSS monitoring capabilities. Please read this manual thoroughly before using the product.

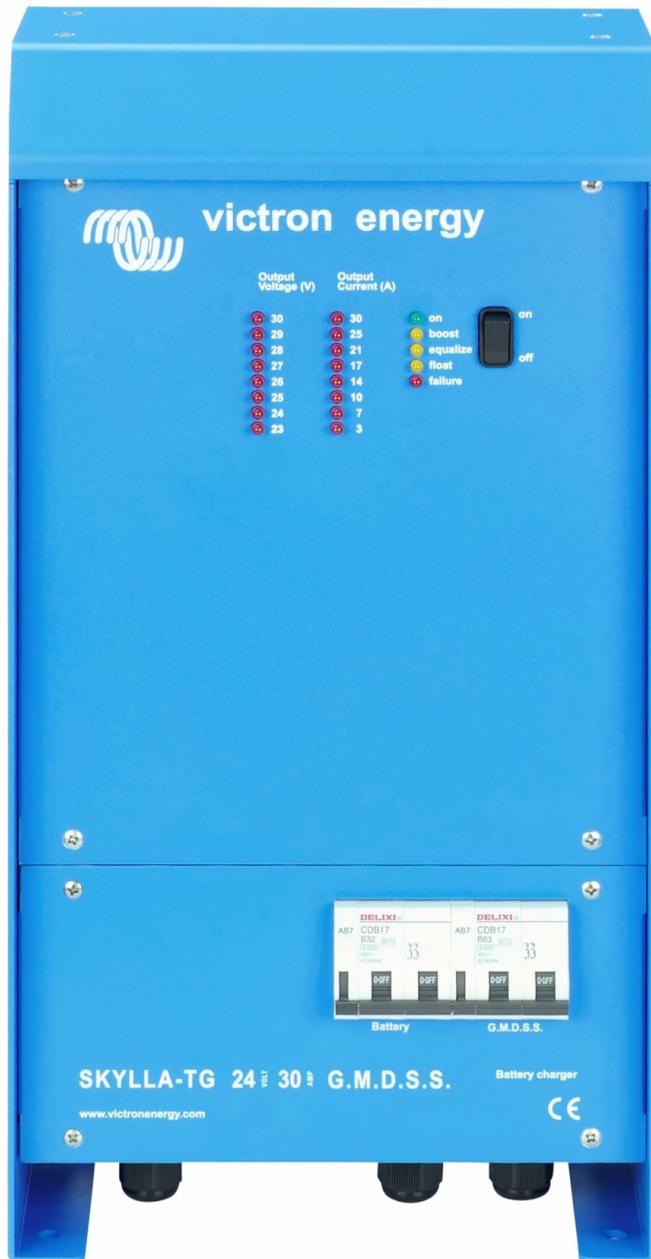


Figure 1: Victron Energy Skylla-TG GMDSS Battery Charger (SDTG2400302)

2. SAFETY INFORMATION

Always observe the following safety precautions to prevent personal injury or damage to the equipment:

- **Electrical Safety:** Installation and maintenance must be performed by qualified personnel. Disconnect AC power before making or breaking electrical connections.
- **Battery Safety:** Batteries can produce explosive gases. Ensure adequate ventilation. Do not smoke or allow open flames near batteries. Wear eye protection.
- **Ventilation:** Ensure the charger is installed in a well-ventilated area to prevent overheating.
- **Water Exposure:** Do not expose the charger to water or excessive moisture.
- **Correct Voltage:** Verify that the input voltage matches the charger's specifications (120-240V AC).
- **Correct Battery Type:** Ensure the charger settings are appropriate for the connected battery type (e.g., open, sealed, gel, AGM).

3. SETUP

3.1 Unpacking

Carefully remove the charger from its packaging. Inspect for any signs of damage during transit. Retain the packaging for future transport or storage.

3.2 Mounting

Mount the charger in a dry, well-ventilated location. Ensure sufficient clearance around the unit for airflow. Use appropriate fasteners for the mounting surface.

3.3 Electrical Connections

All electrical connections must comply with local regulations and standards.

3.3.1 AC Input Connection

1. Ensure the AC power source is disconnected.
2. Connect the AC input cable to the designated terminals on the charger.
3. Verify correct polarity (Live, Neutral, Earth).

3.3.2 DC Output Connection (Battery Banks)

The Skylla-TG charger features two isolated DC outputs.

1. Connect the main battery bank to the primary DC output terminals.
2. Connect the starter or auxiliary battery (if applicable) to the secondary DC output terminals. The secondary output is limited to 4 Amps.
3. Ensure correct polarity (positive to positive, negative to negative).

3.3.3 Temperature Sensor Connection

Connect the supplied battery temperature sensor to the charger. Place the sensor on the battery bank to be charged. This allows the charger to automatically adjust charging voltage based on battery temperature, optimizing battery life.

3.3.4 Voltage Sense Connection

Connect the voltage sense wires directly to the battery terminals. This compensates for voltage drop in the main

wiring, ensuring accurate charging voltage at the battery.

4. OPERATING INSTRUCTIONS

4.1 Powering On/Off

Once all connections are secure, connect the AC input power. The charger will initiate its startup sequence. To power off, disconnect the AC input power.

4.2 Charging Stages

The Skylla-TG charger utilizes a 3-stage regulated charging process:

1. **Bulk:** Charges the battery at maximum current until the voltage reaches the absorption level.
2. **Absorption:** Charges at a constant voltage, gradually reducing current, to fully charge the battery. The duration of this stage is adjustable via a switch.
3. **Float:** Maintains the battery at a lower, constant voltage to prevent self-discharge and keep it fully charged.

4.3 Adjustable Absorption Duration

The absorption duration can be adjusted using a switch on the unit to optimize charging for different battery types and conditions.

4.4 Intelligent Startup Function

The charger features an "Intelligent startup" function that prevents initiating a full charge cycle on an already charged battery, thus extending battery life.

4.5 Using as a Power Supply

Thanks to its perfectly stabilized output voltage, the Skylla-TG can be used as a power supply without requiring connected batteries.

4.6 GMDSS Monitoring

The charger offers integrated GMDSS monitoring and alarm functions. All data and alarms can be displayed on a digital panel (VE.Net GMDSS panel, sold separately) for comprehensive system oversight.

5. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your charger:

- **Cleaning:** Periodically clean the exterior of the charger with a dry cloth. Do not use solvents or abrasive cleaners. Ensure ventilation openings are free from dust and debris.
- **Connections:** Annually check all electrical connections for tightness and corrosion. Tighten any loose connections.
- **Battery Inspection:** Regularly inspect batteries for signs of damage, leakage, or corrosion.

6. TROUBLESHOOTING

This section provides solutions to common issues. If the problem persists, contact Victron Energy support.

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Charger not turning on	No AC input power; Blown fuse; Loose connections.	Check AC power supply; Inspect and replace fuse if necessary; Verify all connections are secure.
Battery not charging	Incorrect battery connections; Battery deeply discharged; Faulty battery.	Check DC output connections and polarity; Allow charger time to recover deeply discharged battery (if possible); Test battery condition.
Overheating	Insufficient ventilation; Overload.	Ensure adequate airflow around the charger; Reduce load if used as power supply; Check for obstructions in ventilation openings.
GMDSS alarm	Battery voltage outside limits; System fault.	Consult the VE.Net GMDSS panel for specific alarm details; Check battery status and system connections.

7. TECHNICAL SPECIFICATIONS

Specification	Value
Brand	Victron Energy
Model Number	SDTG2400302
Input Voltage	120-240 Volts AC
Output Voltage	24 Volts DC
Current Rating	30 Amps
Number of Ports	2 (Main + Auxiliary)
Product Dimensions (D x W x H)	5.79"D x 9.84"W x 19.09"H
Item Weight	7.4 Kilograms
Color	Blue

8. WARRANTY AND SUPPORT

Victron Energy products are designed for reliability and performance. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Victron Energy website. For technical support, service, or spare parts, please contact your authorized Victron Energy dealer or distributor.

No official product videos were provided in the source data for embedding in this manual.