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- › Victron Energy /
- › Victron Energy Lynx Power In Battery Connector (M10) User Manual

Victron Energy LYN020102010

Victron Energy Lynx Power In Battery Connector (M10) User Manual

Model: LYN020102010

Features Setup Operation Maintenance Introduction Key Troubleshooting Specifications Warranty & Support

1. INTRODUCTION

The Victron Energy Lynx Power In is a modular M10 DC bus bar designed for high-performance energy systems. It provides a robust and efficient solution for seamlessly connecting batteries, loads, or chargers within a DC distribution system. This manual provides essential information for the safe and effective installation, operation, and maintenance of your Lynx Power In unit.

2. KEY FEATURES

- **Modular M10 DC Bus Bar:** Designed for integration into scalable DC distribution systems.
- **4 Dedicated Connections:** Provides four connection points for batteries, chargers, or loads.
- **Integrated Ground Terminal:** Ensures proper grounding for enhanced safety.
- **Dual Bus Bar Design:** Features separate positive and negative bus bars for optimal current flow and efficiency.
- **Rugged, Heavy-Duty Construction:** Built for durability and reliability in demanding environments.
- **Flexible Configuration:** Can be used independently or as part of a larger Lynx Distribution System.

3. SETUP

Proper installation is crucial for the safe and efficient operation of your Lynx Power In. Always ensure all power sources are disconnected before beginning installation.

3.1 Unboxing and Initial Inspection

Upon receiving your Lynx Power In, carefully unbox the unit and inspect it for any signs of damage. Ensure all components listed in the packaging are present.



Figure 1: The Victron Energy Lynx Power In module, ready for integration into your DC distribution system.

3.2 Mounting

The Lynx Power In is designed for secure mounting. Choose a location that is dry, well-ventilated, and protected from direct sunlight or extreme temperatures. Ensure sufficient space around the unit for cable routing and heat dissipation.

Features

Modular DC Busbar. Built for Precision.

- ✓ 4 Dedicated Connections for batteries, chargers, or loads with integrated ground terminal.
- ✓ Dual Busbar Design (positive & negative) ensures optimal current flow and efficiency.
- ✓ Flexible Configuration – Available in M8 or M10 versions to fit your system needs.



Figure 2: Dimensions of the Lynx Power In, showing its compact size for flexible installation.

3.3 Electrical Connections

The Lynx Power In features M10 bolts for connecting your DC cables. It includes both positive and negative bus bars. Ensure all connections are clean, secure, and tightened to the manufacturer's specified torque for M10 bolts. Refer to the official Victron Energy manual for precise torque specifications for M10 connections to prevent overheating and ensure optimal performance.

Without Cover

Lynx Power In



Figure 3: Internal view of the Lynx Power In, revealing the robust bus bars and connection points for secure wiring.

The Lynx Power In does not contain internal fuses. All connected loads, chargers, or batteries must be fused externally to protect the system from overcurrents. Always use fuses with the correct voltage and current rating, matching the fuse rating to the maximum voltages and currents that can occur in the fused circuit.



Lynx Distribution System

Modular Power Made Simple

The Distribution System lets you build a clean, reliable DC setup with Lynx Distributor and Lynx Power In modules. Combine them to create a continuous positive and negative busbar for secure connections and a clean installation. Monitor fuses through the LED indicators, or a GX device. Add a Lynx Shunt VE.Can for battery and fuse monitoring, or a Lynx Smart BMS for monitoring and lithium battery management.

Need a simpler setup? Use the modules without a Smart BMS or Shunt – perfect for systems that don't require monitoring or management.

Scalable, flexible, and easy to configure – power your system your way.

Figure 4: Multiple Lynx modules connected, demonstrating the modularity and clean wiring possible with the system.

3.4 Video Guide: Lynx Product Range Overview

Your browser does not support the video tag.

Video 1: An overview of the Victron Energy Lynx product range, including the Lynx Power In and Lynx Distributor, explaining their features and how they integrate into a DC system. This video is provided by Victron Energy.

4. OPERATION

The Lynx Power In serves as the central connection point for your DC power sources and loads. It is designed to handle high currents up to 1000 Amps, providing a reliable and organized distribution solution.

4.1 System Integration

The modular design of the Lynx Power In allows it to be seamlessly integrated with other Victron Energy Lynx products, such as the Lynx Distributor, Lynx Smart BMS, and Lynx Shunt VE.Can, to create a comprehensive and scalable DC distribution system.



Safety

Fuse Detection

The Lynx Power In does not have spaces for fuses, fusing needs to be done externally. Always use fuses with the correct voltage and current rating. Match the fuse rating to the maximum voltages and currents that potentially can occur in the fused circuit. For more information on fuse ratings and fuse current calculations see the Wiring Unlimited book.

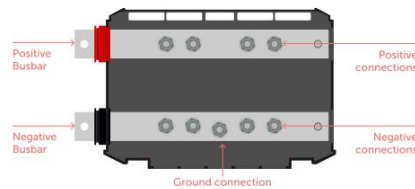


Figure 5: An example of a complete Lynx Distribution System, showcasing the interconnectedness of various modules including the Lynx Power In.

4.2 Remote Monitoring

When integrated with compatible Victron Energy devices and the VRM (Victron Remote Management) system, you can monitor your DC system remotely, gaining insights into power flow and system status.

Figure 6: The Victron Remote Management (VRM) system interface displayed on a phone, tablet, and laptop, offering comprehensive monitoring of your energy system.

5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Lynx Power In.

- **Inspect Connections:** Periodically check all electrical connections for tightness and corrosion. Loose or corroded connections can lead to voltage drop and heat buildup.
- **Clean Contact Surfaces:** Ensure contact surfaces are clean and free of debris. If necessary, gently clean the surfaces to maintain optimal electrical contact.
- **Check for Damage:** Inspect the unit for any physical damage, cracks, or signs of overheating.

6. TROUBLESHOOTING

This section addresses common issues you might encounter with your Lynx Power In.

6.1 Voltage Drop or Overheating Connections

If you experience significant voltage drop across your system or notice connections becoming excessively hot, it often indicates poor contact or undersized cabling. Ensure all connections are tightened to the correct torque and that cable gauges are appropriate for the current draw. Clean all contact surfaces thoroughly.

6.2 Inverter Shutting Off Unexpectedly

An inverter shutting off can be a symptom of underlying issues in the DC distribution, such as excessive voltage drop or poor battery connections. Verify the integrity of all connections to the Lynx Power In and ensure the battery bank is adequately sized and charged.

6.3 Blown Fuses

Since the Lynx Power In requires external fusing, a blown fuse indicates an overcurrent event in the circuit it protects. Identify the cause of the overcurrent (e.g., short circuit, overloaded appliance) before replacing the fuse with one of the correct rating. The Lynx Distributor, a related product, offers LED indicators for blown fuses, which can aid in diagnostics if part of your system.



Figure 7: Diagram illustrating the positive and negative bus bars and ground connection within the Lynx Power In, emphasizing the need for external fuse protection.

7. SPECIFICATIONS

Brand	Victron Energy
Model Number	LYN020102010
Color	Black
Product Dimensions (D x W x H)	7"D x 7"W x 4"H
Item Weight	2.4 Kilograms
Amperage	1000 Amps
Output Voltage	14.4 Volts (DC)
Input Voltage	240 Volts
Connector Type	M10
Number of Ports	4
Certifications	CE, UL, FCC

8. WARRANTY & SUPPORT

8.1 Warranty Information

Victron Energy products typically come with a manufacturer's warranty. For specific details regarding the warranty period and terms for your Lynx Power In, please refer to the warranty card included with your product or visit the official Victron Energy website.

8.2 Technical Support

For technical assistance, troubleshooting, or further information, please contact Victron Energy customer support or visit their official website. You can find detailed documentation, FAQs, and contact information at www.victronenergy.com.