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## Victron Energy BPC120531104R

# Victron Energy Blue Smart IP65 12V 5A Battery Charger User Manual

Model: BPC120531104R

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## 1. INTRODUCTION

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The Victron Energy Blue Smart IP65 12V 5A Battery Charger is a professional-grade, smart battery charger designed for a wide range of vehicles and devices. It features an IP65 rating, making it splash-resistant and suitable for various environments, including workshops, motor vehicles, and marine applications. This charger incorporates advanced technology for efficient and safe battery charging, including a multi-stage charging algorithm and built-in Bluetooth for monitoring and control via the Victron Connect app.

This manual provides essential information for the safe and effective use of your Victron Energy Blue Smart IP65 charger. Please read it thoroughly before operation.

## 2. SAFETY INFORMATION

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- Always ensure proper ventilation when charging batteries to prevent gas accumulation.
- Connect the charger to the battery terminals correctly: positive to positive, negative to negative. Avoid reverse polarity connections.
- Do not attempt to charge frozen or damaged batteries.
- Keep the charger away from water, moisture, and flammable materials. The IP65 rating indicates splash resistance, not full submersion.
- Disconnect the AC power before making or breaking connections to the battery.
- This charger is designed for 12V batteries only. Do not attempt to charge batteries with different voltage ratings.
- Children should be supervised to ensure that they do not play with the appliance.

## 3. PACKAGE CONTENTS

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Upon unpacking, please verify that all items listed below are present and undamaged:

- Victron Energy Blue Smart IP65 12-Volt 5 amp Battery Charger (Bluetooth)

- Alligator clips for temporary connection
- M8 eyelets for permanent connection
- Quick connectors for easy attachment/detachment
- Power cable with NEMA 1-15 Plug

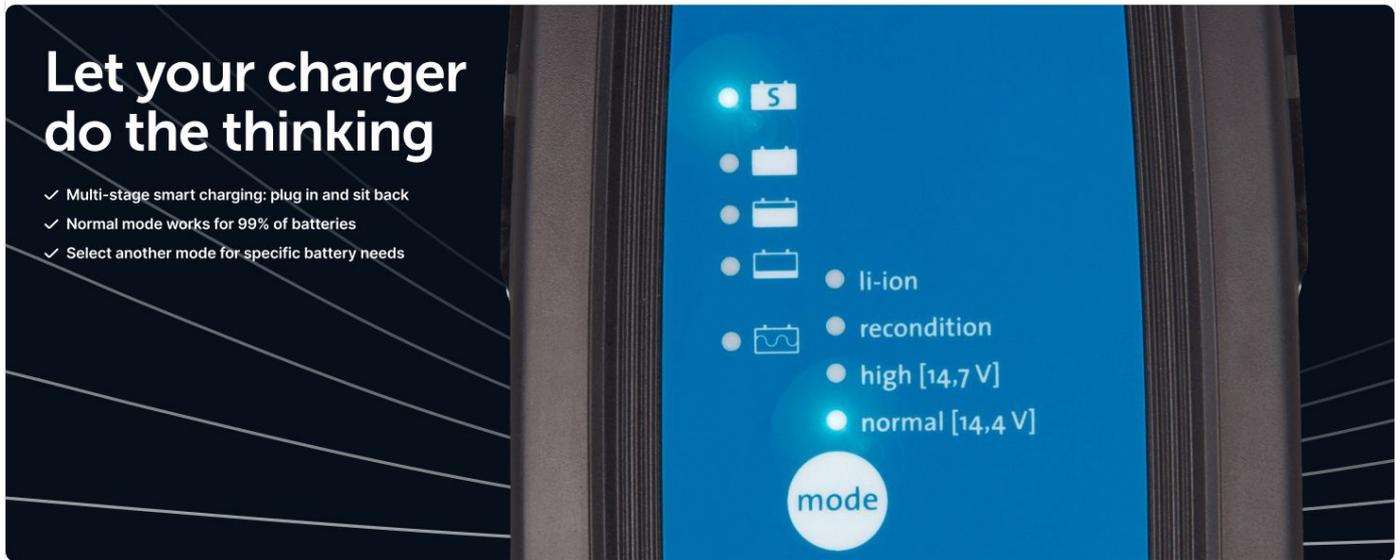


Figure 1: Included Components of the Blue Smart IP65 Charger

## 4. PRODUCT OVERVIEW

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The Blue Smart IP65 charger features a robust, splash-resistant casing and an intuitive interface with LED indicators for charging status and mode selection. Its compact design makes it easy to handle and store.

# The charger your getaway deserves

Smart. Waterproof.  
Professional-grade.



Monitor via  
smartphone



Easy setup for  
any battery type



High-  
performance  
charging



Protects &  
prolongs battery  
life

Figure 2: Front View of the Charger with LED Indicators

# Let's go pro with optional accessories

Bumper

12V lighter plug

Wall mount

MagCode clip

Case



Figure 3: Back View of the Charger

## LED Indicators

The charger features several LED indicators to display its current status and selected mode:

- **Mode Indicator:** Shows the selected charging mode (e.g., Normal, High, Li-ion, Recondition, Power Supply).
- **Charging Status:** Indicates the current stage of the 7-stage charging algorithm (Test/charge, Bulk, Absorption, Float, Storage).
- **Bluetooth Status:** Indicates active Bluetooth connection.

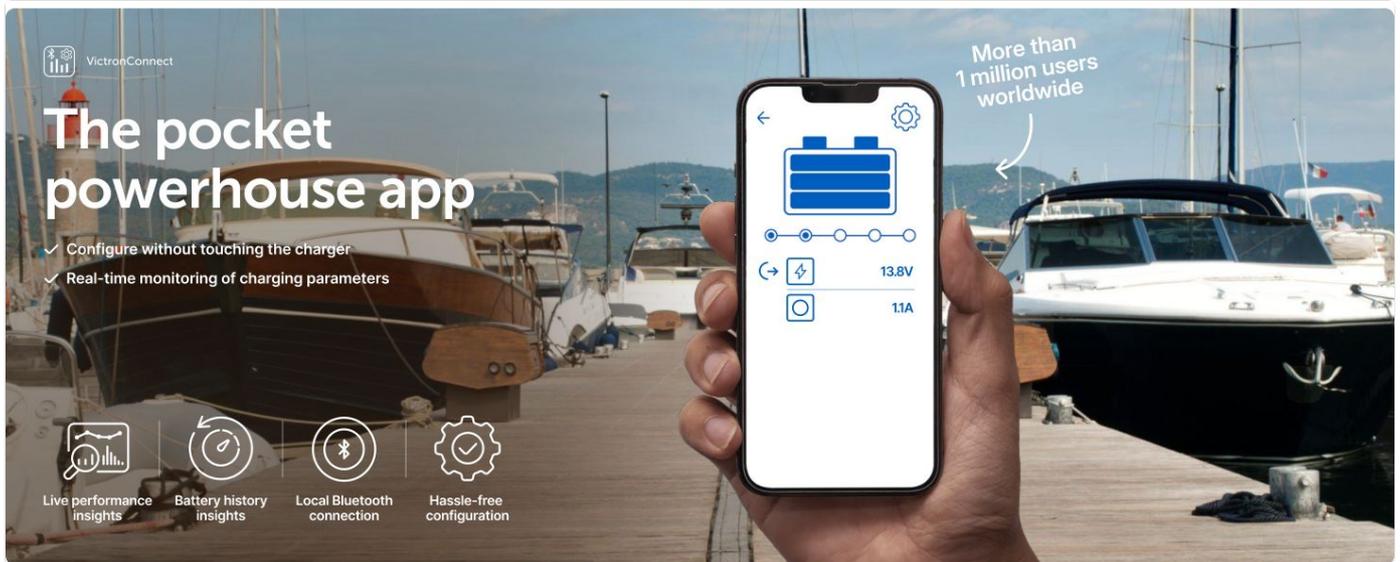


Figure 4: Charger LED Indicators and Mode Selection

## 5. SETUP AND CONNECTION

The Blue Smart IP65 charger is designed for easy 'Plug and Play' operation. It comes with both alligator clips for quick, temporary connections and M8 eyelets for more permanent installations.

### Connecting to a Battery

1. Ensure the charger is disconnected from AC power.
2. Choose your preferred connection method:
  - **Alligator Clips:** Connect the red clip to the positive (+) battery terminal and the black clip to the negative (-) battery terminal.
  - **M8 Eyelets:** If using the M8 eyelets for a permanent connection, securely attach them to the corresponding battery terminals. The quick connector allows for easy detachment of the charger when not in use.
3. Once the battery is connected, plug the charger's AC power cable into a suitable wall outlet.
4. The charger will automatically detect the battery and begin the charging process.

# Advanced 7-stage algorithm technology

Fast Charging

- ✓ Smart, high-performance charging
- ✓ Adapts to all battery conditions
- ✓ Maximizes battery life



Figure 5: Alligator Clips and M8 Eyelets for Battery Connection

# Connect and forget charging

- ✓ Storage mode: safer than trickle charging
- ✓ Works with any 12 V battery type

## Expert tip

Check the label of your battery to see the allowed charge rating.



Figure 6: Charger Connected to a Battery

## Video: Connecting the Charger

Video 1: This official Victron Energy video demonstrates the connection process of the Blue Smart IP65 charger to a motorcycle battery and highlights its smart features and app integration.

## 6. OPERATION

The Blue Smart IP65 charger utilizes an intelligent 7-stage charging algorithm to optimize battery health and longevity. It also offers Bluetooth connectivity for enhanced control and monitoring.

### 7-Stage Charging Algorithm

The charger automatically progresses through the following stages to ensure optimal charging for various battery types:

1. **Test/Charge:** Initial assessment and gentle charging for deeply discharged batteries.
2. **Bulk:** Charges the battery at maximum current until it reaches approximately 80% capacity.

3. **Absorption:** Charges at a decreasing current to bring the battery to 100% capacity.
4. **Float:** Maintains the battery at a constant voltage, compensating for self-discharge.
5. **Storage:** Reduces voltage to minimize gassing and corrosion for long-term storage.
6. **Refresh:** Periodically increases voltage to prevent stratification and sulfation.
7. **Recondition:** A special mode to recover deeply discharged or sulfated batteries.

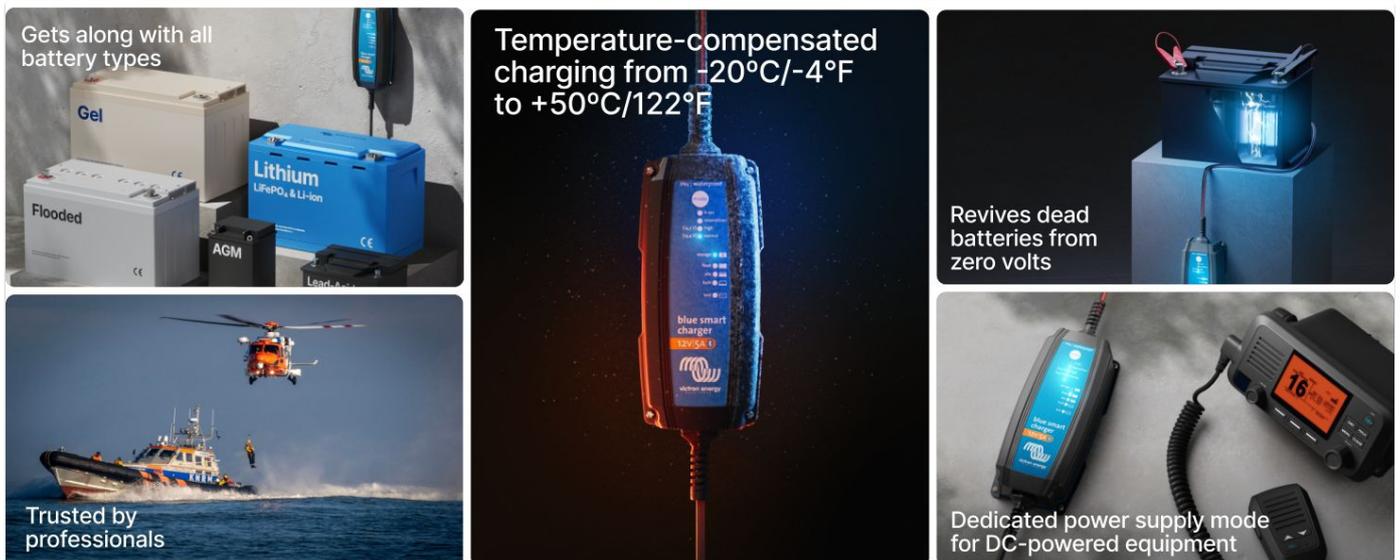


Figure 7: Advanced 7-Stage Charging Algorithm

### Victron Connect App (Bluetooth)

The built-in Bluetooth allows you to connect your charger to the Victron Connect app on your smartphone or tablet. This app provides:

- Real-time monitoring of voltage, current, and charging stage.
- Access to historical data and charging cycles.
- Ability to adjust charging settings and update firmware.
- Switch to power supply mode for powering DC loads without a battery.

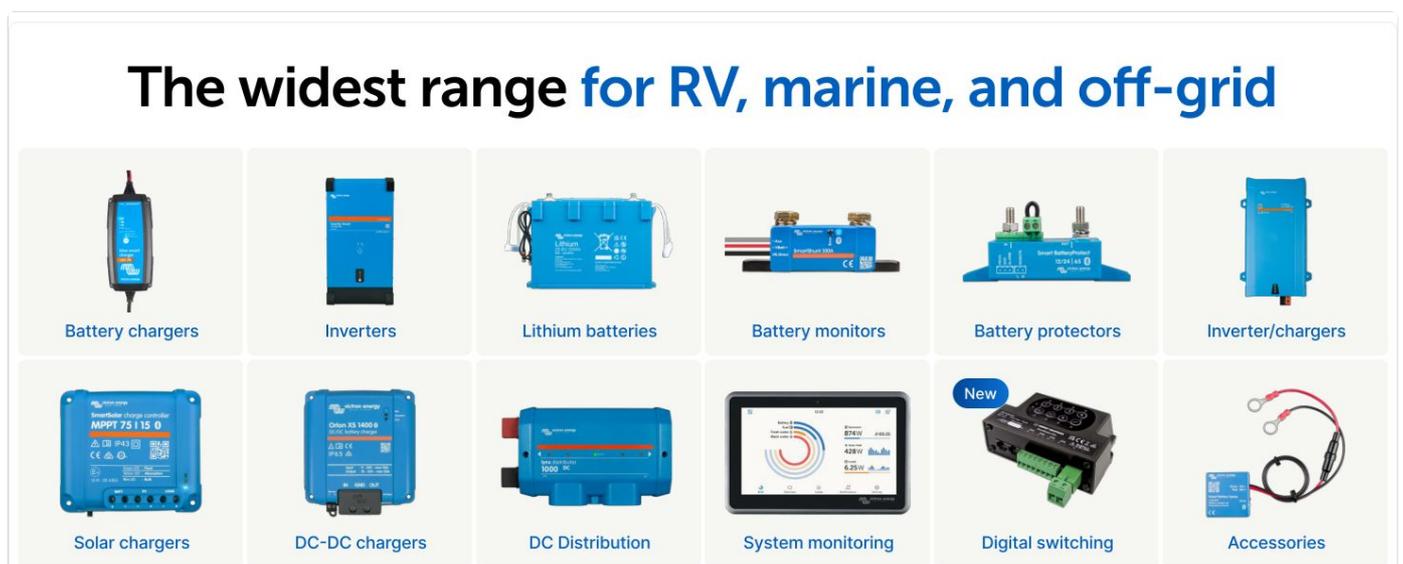


Figure 8: Victron Connect App Interface

### Battery Compatibility

The Blue Smart IP65 charger is compatible with various 12V battery types, including:

- Lithium (LiFePO4 & Li-ion)
- AGM
- Gel
- Flooded (Lead-Acid)



Figure 9: Charger Compatibility with Various Battery Types

## 7. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Victron Energy Blue Smart IP65 charger and your batteries.

- **Cleaning:** Periodically wipe the charger's exterior with a dry cloth to remove dust and dirt. Do not use harsh chemicals or abrasive cleaners.
- **Connection Inspection:** Regularly check battery connections for corrosion or loose contacts. Clean terminals as needed.
- **Cable Integrity:** Inspect the AC and DC cables for any signs of damage, fraying, or cuts. Replace damaged cables immediately.
- **Battery Health:** Utilize the charger's float and trickle charging capabilities for long-term battery maintenance. The desulfation mode can help recover sulfated batteries.

## 8. TROUBLESHOOTING

If you encounter issues with your Blue Smart IP65 charger, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Charger not starting/no LEDs	No AC power; Incorrect battery connection; Battery voltage too low.	Check AC power supply; Verify correct positive/negative battery connections; If battery is deeply discharged, the charger may take time to initiate.

Problem	Possible Cause	Solution
Charger stuck in a specific stage	Battery fault; Incorrect mode selected for battery type.	Check battery health; Ensure the correct charging mode is selected via the mode button or Victron Connect app.
Bluetooth connection issues	Out of range; App not updated; Interference.	Move closer to the charger; Update Victron Connect app; Restart phone/tablet and charger.
Charger feels warm	Normal operation; Overheating (less common due to high efficiency).	Some warmth is normal during charging. The charger has built-in overheating protection. If it feels excessively hot, ensure adequate ventilation.

If the problem persists after attempting these solutions, please contact Victron Energy support.

## 9. SPECIFICATIONS

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Key technical specifications for the Victron Energy Blue Smart IP65 12V 5A Battery Charger:

Feature	Detail
Model Name	Victron Energy Blue Smart IP65 12-Volt 5 amp Battery Charger (Bluetooth)
Part Number	BPC120531104R
Output Voltage	12 Volts (DC)
Charging Current	5 Amps
Efficiency	Up to 94%
Protection	IP65 (splash, dust, chemical resistant), Over temperature, Short-circuit, Reverse polarity
Connectivity	Built-in Bluetooth (Victron Connect app)
Dimensions (LxWxH)	7.5 x 3.7 x 1.8 inches
Item Weight	0.9 Kilograms
Material	Plastic
Color	Blue

## 10. WARRANTY AND SUPPORT

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### Warranty

The Victron Energy Blue Smart IP65 12V 5A Battery Charger comes with a manufacturer's warranty. Please refer to the warranty documentation included with your product for specific terms and conditions. Keep your proof of purchase for warranty claims.

### Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact Victron Energy

customer support. You can find contact information and additional resources on the official Victron Energy website:  
[www.victronenergy.com](http://www.victronenergy.com)

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