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> [Marhynchus 1000V IP68 Solar PV Connector \(20A\) User Manual](#)

### Marhynchus MC-F (20A)

# Marhynchus 1000V IP68 Solar PV Connector (20A) User Manual

Model: MC-F (20A)

## 1. PRODUCT OVERVIEW

The Marhynchus Solar PV Connector is designed for reliable and efficient connection of solar panels in photovoltaic systems. This 20A connector features a robust PPO housing, tinned copper conductors, and an IP68 waterproof rating, ensuring durability and stable performance in various environmental conditions. It is compatible with standard solar photovoltaic systems and incorporates a built-in diode for anti-backflow protection.



Image 1.1: Two Marhynchus Solar PV Connectors, showing their general appearance.

### Key Features:

- **PPO Housing:** High temperature resistant, wear resistant, flame retardant, and UV resistant for long-term outdoor use.
- **Tinned Copper Conductor:** Ensures stable electrical conductivity and corrosion resistance.
- **IP68 Waterproof:** Provides excellent protection against dust and water ingress, suitable for extreme weather.
- **Easy to Use:** Features a snap-in self-locking system for simple and secure connection and disconnection.

- **1000V Rated:** Designed for high-voltage solar photovoltaic applications.
- **Built-in Diode:** Offers anti-backflow protection.

## 2. SETUP AND INSTALLATION

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This section outlines the general procedure for connecting the Marhynchus Solar PV Connector. Ensure all power sources are disconnected before beginning installation to prevent electrical hazards.

### 2.1 Safety Precautions

- Always wear appropriate personal protective equipment (PPE), including insulated gloves and eye protection.
- Ensure all solar panels are covered or disconnected from the inverter/charge controller before handling connectors.
- Verify voltage and current ratings of your solar system are compatible with the connector (1000V, 20A).
- Do not attempt to modify the connector.

### 2.2 Connection Procedure

1. **Prepare Cables:** Ensure the solar cables are properly stripped and crimped with the appropriate metal contacts (not included with connector).
2. **Insert Contacts:** Carefully insert the crimped positive and negative contacts into their respective male and female connector housings until they click into place.
3. **Connect PV Modules:** Align the male and female connectors from your solar panels or array strings. Push them together firmly until the self-locking mechanism engages with an audible click.
4. **Verify Connection:** Gently pull on the connected connectors to ensure they are securely locked and cannot be easily separated.



**Easy to plug and unplug,  
providing cyclic usage  
Compatible with solar  
photovoltaic connector**



Image 2.1: A close-up view illustrating the connection point of the solar PV connector, highlighting the ease of plugging and unplugging.

### **3. OPERATING INSTRUCTIONS**

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Once properly installed, the Marhynchus Solar PV Connector operates passively as a secure electrical conduit for your solar energy system. No active user interaction is required during normal operation.

#### **3.1 Disconnection Procedure**

To disconnect the connectors, ensure the solar array is de-energized or isolated from the load to prevent arcing. Then, use your fingers to press both sides of the built-in lock on the connector. While pressing the lock, gently pull the connectors apart.



Image 3.1: Angled view of two Marhynchus Solar PV Connectors, showing the locking tabs.

## 4. MAINTENANCE

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The Marhynchus Solar PV Connector is designed for minimal maintenance due to its durable construction and IP68 waterproof rating. Regular inspections are recommended to ensure optimal performance and safety.

### 4.1 Recommended Maintenance Schedule

- **Annual Visual Inspection:**
  - Check for any visible signs of damage, cracks, or discoloration on the connector housing.
  - Ensure connections are still secure and free from debris.

- Look for any signs of moisture ingress or corrosion around the connection points.
- **Cleaning:** If necessary, gently clean the exterior of the connectors with a damp cloth to remove dirt or dust. Do not use harsh chemicals or abrasive materials.



Image 4.1: The connector demonstrating its IP68 waterproof capability, suitable for outdoor environments.

## 5. TROUBLESHOOTING

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The Marhynchus Solar PV Connector is a passive component. Most issues related to solar panel connections are typically due to improper installation or damage to the cables or other system components. This section addresses common concerns.

### 5.1 Common Issues and Solutions

- **No Power Output from Solar Panel:**
  - **Check Connection:** Ensure the connectors are fully engaged and locked. A loose connection can interrupt power flow.
  - **Inspect for Damage:** Visually inspect the connector for any physical damage, such as cracks or bent pins. Replace damaged connectors immediately.
  - **Verify Polarity:** Ensure positive and negative connections are correctly matched throughout

the system.

- **Difficulty Connecting/Disconnecting:**

- **Alignment:** Ensure the male and female connectors are perfectly aligned before attempting to push them together.
- **Locking Mechanism:** When disconnecting, ensure both sides of the built-in lock are pressed simultaneously and firmly.
- **Debris:** Check for any dirt or debris inside the connector that might obstruct the connection.

If issues persist after troubleshooting, consult a qualified solar technician.

## 6. SPECIFICATIONS

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Parameter	Value
Model	MC-F (New)
Insulation Material	PPO
Conductor Material	Tinned Copper
Rated Voltage	1000V
Rated Current	20A
Feature	Anti Backflow Built-in Diode
Environment Temperature	-40°C to +90°C (-40°F to +194°F)
Product Temperature	-40°C to +135°C (-40°F to +275°F)
Safety Class	DCII
Waterproof Level	IP68
Contact Resistance	≤0.35mΩ
Connection System	Multi Point Connection
Self-Locking System	Snap-in
Withdrawal Force	≥50N
Insertion Force	≤50N
Flame Class	UL94-V0
Scope of Application	Solar Panel Connection
Approximate Weight	45g (1.6oz)
Package Dimensions	4.33 x 1.57 x 1.57 inches

## 7. WARRANTY AND SUPPORT

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Specific warranty information for the Marhynchus Solar PV Connector is not explicitly provided in the product details. For warranty claims or technical support, please refer to the retailer or the official

Marhynchus website where the product was purchased.

For further assistance, you may contact the seller directly through the platform where you made your purchase. Please have your purchase details and product model number (MC-F (20A)) ready when seeking support.

**Manufacturer:** Marhynchus

**Item Model Number:** Marhynchus4e1gampvzd-13