

[Manuals.plus](#) /

› [Mersen](#) /

› Mersen CP500C3 Copper Standard Duty Cable Protector User Manual

Mersen CP500C3

Mersen CP500C3 Copper Standard Duty Cable Protector User Manual

1. INTRODUCTION

Welcome to the user manual for the Mersen CP500C3 Copper Standard Duty Cable Protector. This document provides essential information for the safe and effective installation, operation, and maintenance of your cable protector. Please read this manual thoroughly before use to ensure proper application and to prevent potential hazards.

2. PRODUCT OVERVIEW

The Mersen CP500C3 is a standard duty cable protector designed to safeguard electrical systems by quickly clearing and isolating faults. It functions as a current-limiting device, enhancing the reliability of service entrance and distribution runs. This device is constructed from copper material and features a robust design for demanding environments.

Key Features:

- Fiberglass bodies for dimensional stability in harsh environments.
- Crimp terminals for aluminum cable include oxide inhibitor.
- Molded rubber boots or heat shrinkable tubing available for insulation and protection.
- Current limiting device.
- Permitted by national electric code.

Approvals: UL listed to File E305297.



Figure 1: Mersen CP500C3 Copper Standard Duty Cable Protector, showing the main body and terminal end.

3. SAFETY INFORMATION

Adherence to safety guidelines is paramount when working with electrical components. Failure to follow these instructions may result in serious injury or death.

- **WARNING: Electrical Shock Hazard.** Installation and maintenance should only be performed by qualified and authorized personnel.
- Always disconnect and lock out all power sources before installing, inspecting, or servicing the cable protector. Verify zero voltage with a suitable testing device.
- Ensure proper grounding of all electrical systems.
- Use appropriate personal protective equipment (PPE), including insulated gloves, safety glasses, and arc-flash protective clothing.
- Adhere to all local and national electrical codes, standards, and regulations (e.g., NEC, OSHA).
- Do not exceed the specified voltage (600VAC) and interrupt ratings (200kA/AC) of the device.
- Never attempt to repair a damaged cable protector; replace it immediately.

4. INSTALLATION

The Mersen CP500C3 cable protector is designed for secure crimping or bolting to cables or terminals. Proper installation is critical for its protective function.

Pre-Installation Checks:

- Confirm the cable protector's ratings (600VAC, 200kA/AC) match the application requirements.
- Ensure the cable size is compatible (500kcmil).
- Verify the device is undamaged and free from defects.

Installation Steps:

1. **De-energize Circuit:** Disconnect all power to the circuit where the cable protector will be installed. Use appropriate

lockout/tagout procedures and verify zero voltage.

2. **Prepare Cable Ends:** Prepare the 500kcmil cable ends according to standard electrical practices for crimping or bolting. Ensure clean, burr-free surfaces.
3. **Connect Cable Protector:** Securely crimp or bolt the cable protector to the cable or terminal. For crimping, use the manufacturer-recommended crimping tool and dies. For bolting, ensure appropriate torque specifications are met for a tight and reliable electrical connection. This device is suitable for cable to offset bus termination.
4. **Insulate Connections (Optional but Recommended):** If using, apply molded rubber boots or heat shrinkable tubing over the connections to provide additional insulation and environmental protection.
5. **Verify Connections:** Double-check all connections for proper installation, security, and absence of loose strands or debris.
6. **Restore Power:** Once installation is complete and verified, safely restore power to the circuit.



Figure 2: Close-up view of the Mersen CP500C3 label, showing model and ratings.

5. OPERATION

The Mersen CP500C3 cable protector functions as a passive protective device. Once correctly installed, it continuously monitors the electrical current within the circuit.

- In the event of an electrical fault, the cable protector is designed to quickly interrupt the circuit, limiting the fault current and isolating the affected section of the electrical system.
- It is capable of carrying low cable overloads, which are typically handled by standard protective devices, while providing rapid fault clearing for higher, more dangerous currents.
- The device operates automatically upon fault detection and does not require manual intervention during a fault event.

Voltage Rating: 600VAC

Interrupt Rating: 200kA/AC

6. MAINTENANCE

Mersen cable protectors are designed for reliability and generally require minimal maintenance. However, periodic

inspection is recommended to ensure continued optimal performance.

Inspection Schedule:

- Conduct visual inspections annually or as required by local regulations and operating conditions.

Maintenance Procedures:

1. **De-energize Circuit:** Always disconnect and lock out all power sources before performing any inspection or maintenance.
2. **Visual Inspection:** Check the cable protector and its connections for any signs of physical damage, such as cracks, discoloration, bulging, or corrosion. Inspect for loose connections.
3. **Cleaning:** Gently clean any accumulated dust or debris from the device and surrounding area using a dry, non-conductive cloth.
4. **Replacement:** If the cable protector has operated due to a fault, it must be replaced. It is a single-use device for fault interruption and cannot be reset or reused. Replace any device showing signs of damage or degradation.
5. **Connection Integrity:** Ensure all crimped or bolted connections remain tight and secure.
6. **Restore Power:** After inspection and any necessary replacements, safely restore power to the circuit.

7. TROUBLESHOOTING

This section provides guidance for common issues related to the Mersen CP500C3 cable protector.

Issue: Device Not Functioning (No Fault Interruption)

- **Possible Cause:** Incorrect rating for the application.
- **Solution:** Verify that the cable protector's voltage, current, and cable size ratings are appropriate for the circuit it is protecting.
- **Possible Cause:** Improper installation or loose connections.
- **Solution:** De-energize the circuit and inspect all connections for tightness and proper installation. Re-secure if necessary.

Issue: Frequent Tripping/Operation

- **Possible Cause:** Recurring fault in the electrical system.
- **Solution:** Frequent operation indicates an underlying issue. Identify and rectify the root cause of the fault (e.g., insulation breakdown, overloaded circuit) before replacing the cable protector. Do not bypass the cable protector.

Issue: Physical Damage to Device

- **Possible Cause:** External impact, environmental stress, or previous fault operation.
- **Solution:** Any physical damage (e.g., cracks, severe discoloration, loose components) indicates the device may be compromised. De-energize the circuit and replace the cable protector immediately.

If issues persist or you are unsure about troubleshooting steps, consult a qualified electrician or contact Mersen technical support.

8. SPECIFICATIONS

Attribute	Specification
Model	CP500C3
Brand	Mersen
Type	Standard Duty Cable Protector
Material	Copper
Voltage Rating	600VAC
Interrupt Rating	200kA/AC
Cable Size Compatibility	500kcmil
Dimensions (Diameter x Length)	1-7/8 inches x 10 inches
Item Weight	2.44 Pounds
Approvals	UL listed to File E305297
Manufacturer	Mersen
ASIN	B00F6DT5K2

9. WARRANTY AND SUPPORT

For detailed warranty information, technical assistance, or customer support regarding your Mersen CP500C3 Copper Standard Duty Cable Protector, please contact Mersen directly.

- **Manufacturer:** Mersen
- Please refer to the official Mersen website or product packaging for the most current contact information and warranty terms.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question

Open the live page

<https://manuals.plus/asin/B00F6DT5K2>

More documents and user manuals: <https://manuals.plus/>