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Cable Matters 180004

Cable Matters CAT6 RJ45 Modular Plugs (Model 180004)

INSTRUCTION MANUAL

1. Product Overview

The Cable Matters CAT6 RJ45 Modular Plugs are designed for creating custom-length Category 6 Ethernet cables. These 8P8C connectors feature 50 μ gold-plated contacts for reliable signal integrity and enhanced corrosion resistance. They are compatible with both solid and stranded unshielded twisted pair (UTP) cables, suitable for various networking applications.



Figure 1: Cable Matters CAT6 RJ45 Modular Plugs, 100-Pack, in a reusable storage jar.

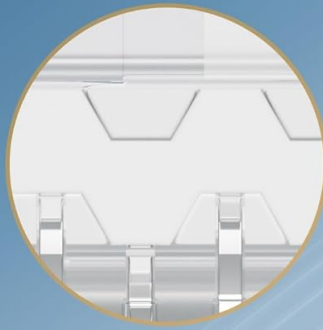
This 100-pack provides a cost-effective solution for small or large-scale network installations, allowing for the creation of custom patch cables for routers, patch panels, switches, and wall jacks.

2. Key Features

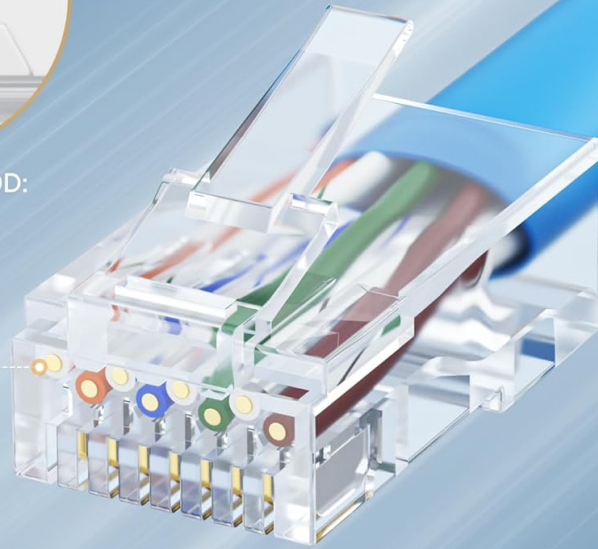
- **Category 6 Performance:** Supports 10 Gigabit Ethernet over compliant channels and is backward compatible with Cat 5e cables.
- **Gold-Plated Contacts:** Features 50 μ gold-plated contacts for superior signal integrity and corrosion resistance.
- **Transparent Housing:** Allows for visual inspection of wire sequence during termination.
- **Three-Point Staggered Contacts:** Ensures solid and stable wire terminations.
- **Wide Compatibility:** Designed for 23 to 28 AWG round or flat UTP solid or stranded cable.

Standard Cat6 Modular Plugs

T568A / T568B Wiring



Maximum Wire OD:
0.99 mm



Cat 6



10 Gbps Ethernet



550 MHz Rating

Figure 2: Standard Cat6 Modular Plugs with T568A/T568B wiring and performance specifications.

Superior Quality for Enhanced Performance

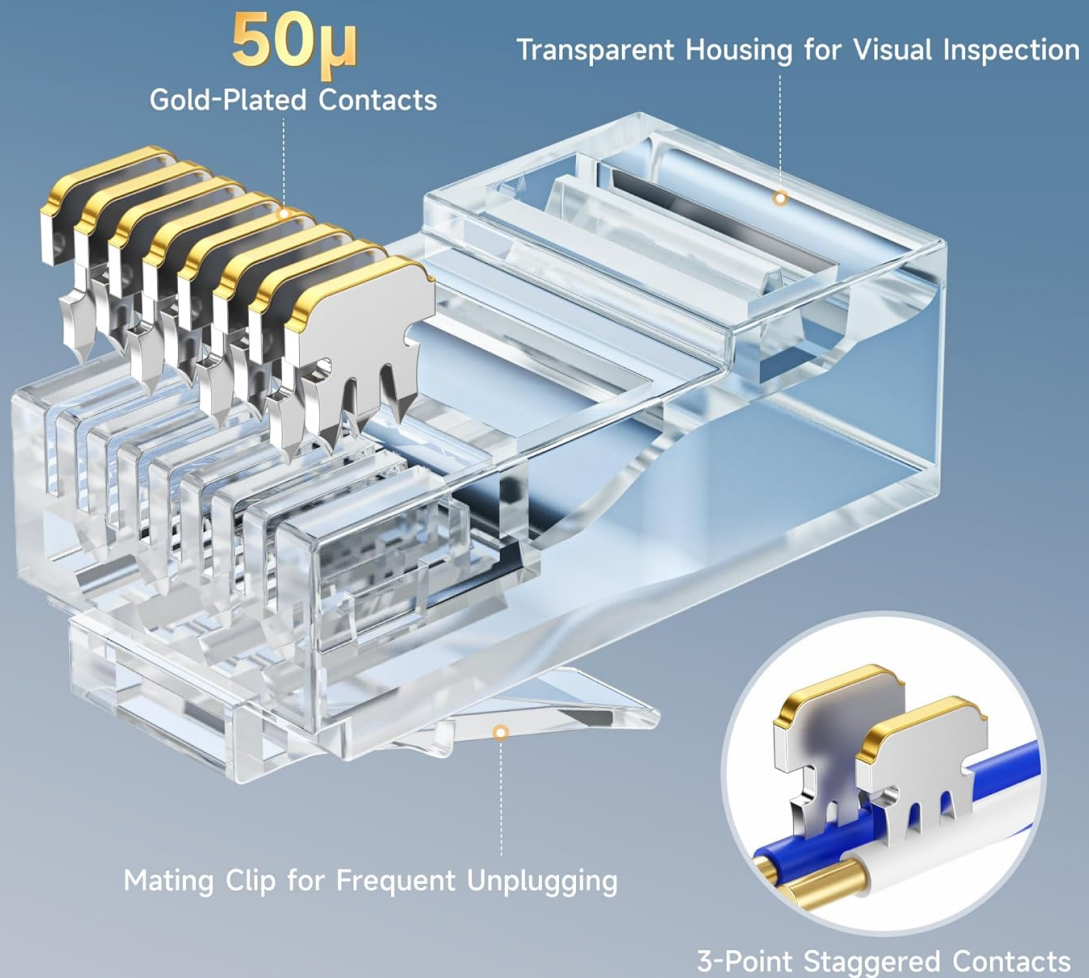


Figure 3: Internal structure highlighting superior quality features like gold-plated contacts and transparent housing.

3. Compatibility and Specifications

These RJ45 modular plugs are specifically designed for Cat 6 unshielded twisted pair (UTP) cables. Ensure your cable meets the following specifications for proper termination:

- **Compatible Wire Gauge:** 23 to 28 AWG (American Wire Gauge)
- **Conductor Insulation Range:** 0.89mm to 0.99mm
- **Maximum Cable Outer Diameter:** 5.7mm

Perfect Fit for 23~28 AWG Stranded Wires

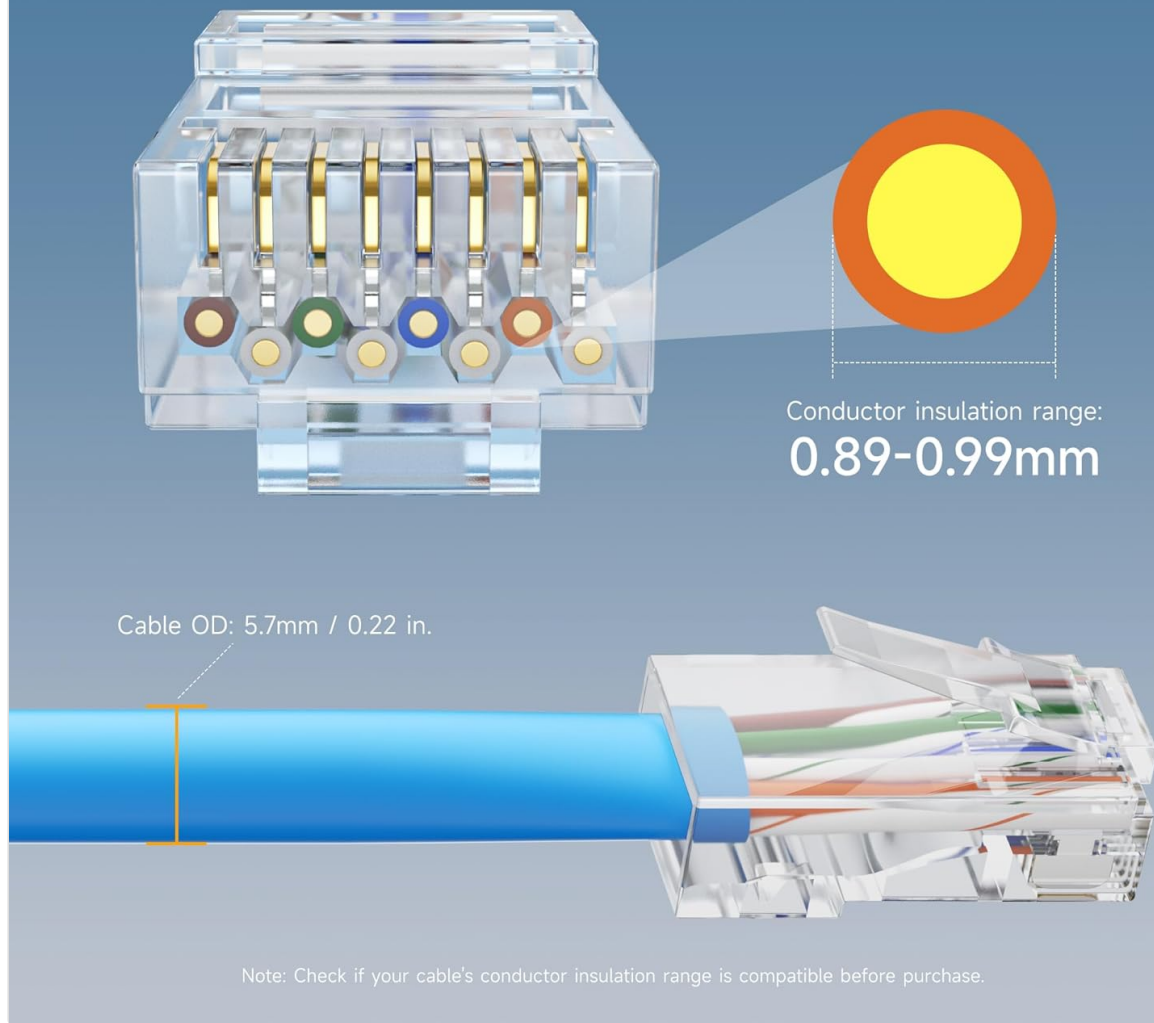
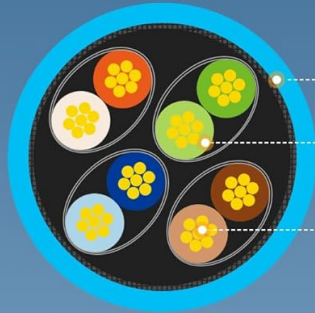


Figure 4: Detailed wire compatibility specifications for the modular plugs.

Refer to the table below for a comparison of different connector types and their compatibility:

Choose the Right Connector for Your Cable



Outside diameter (Calibre)

Conductor insulation range (Calibre)

Conductor wire gauge

Model Number	Type	Category Rating	Conductor insulation range	Conductor wire gauge	Outside diameter
180097	Pass Through	Cat6	0.97~1.07mm	23~24AWG	6.1mm
180004	Regular	Cat6	0.89~0.99mm	23~28AWG	5.7mm
180029	Regular	Cat6A	1.24~1.34mm	21~23AWG	7.15mm
180102	Pass Through	Cat6A	1.09~1.19mm	23~24AWG	5.8mm
180121	Pass Through	Cat8	1.24~1.34mm	23~24AWG	8mm
180129	Regular	Cat8	1.35~1.45mm	23~24AWG	8mm

Figure 5: Connector selection guide based on cable specifications.

General Product Specifications:

Model Number	180004
Connector Type	RJ45
Category Rating	Cat 6
Gold Plating	50μ
Compatible Wire Gauge	23-28 AWG
Conductor Insulation Range	0.89 - 0.99 mm
Max Cable Outer Diameter	5.7 mm
Recommended Use	Ethernet Network Cabling

4. Installation Guide

Follow these steps to properly terminate an Ethernet cable with the Cable Matters CAT6 RJ45 Modular Plugs. A crimping tool designed for RJ45 connectors is required for this process.

1. **Prepare the Cable:** Use a cable stripper to carefully cut and strip the outer jacket of the Ethernet cable, exposing the twisted pairs.
2. **Arrange the Wires:** Untwist the wire pairs and arrange them according to the T568A or T568B wiring standard. Ensure the wires are straight and parallel.
3. **Insert the Wires:** Carefully insert the arranged wires into the RJ45 plug, ensuring each wire slides into its designated channel. Push the wires firmly until they reach the front of the connector and the cable jacket is seated inside the plug for strain relief. The transparent housing allows for visual verification of correct wire placement.
4. **Crimp the Plug:** Place the RJ45 plug into the appropriate slot on your crimping tool. Squeeze the handles of the crimping tool firmly until the connector is fully crimped. This action pushes the gold-plated contacts into the individual wires, establishing electrical connection.
5. **Verify Connection:** Use an Ethernet cable tester to identify any miswires, opens, or shorts, and confirm that the cable functions properly.



Figure 6: Step-by-step visual guide for RJ45 plug installation.

For enhanced cable durability and protection of the locking clip, consider using Cable Matters RJ45 strain

relief boots (sold separately).

5. Maintenance and Storage

The Cable Matters RJ45 Modular Plugs come in a reusable storage jar. To maintain the quality and organization of your connectors:

- Store unused plugs in the provided jar to protect them from dust, moisture, and physical damage.
- Ensure the screw-on lid is securely fastened when not in use.
- Keep the jar in a cool, dry place.



Figure 7: Reusable storage jar for organizing and protecting the RJ45 plugs.

6. Troubleshooting

If you encounter issues during the termination process or with cable performance, consider the following:

- **Cable Not Fitting:** Verify that your Ethernet cable's specifications (wire gauge, conductor insulation diameter, and overall outer diameter) match the requirements for these plugs (23-28 AWG, 0.89-0.99mm conductor insulation, max 5.7mm outer diameter). Cables with larger conductors or thicker insulation may not fit correctly.

- **Poor Connection/No Signal:**

- Ensure wires are fully inserted to the front of the connector before crimping.
- Confirm the correct wiring standard (T568A or T568B) is followed on both ends of the cable.
- Check that the crimping tool has properly seated all 8 gold-plated contacts into the wires.
- Use a cable tester to identify any miswires, opens, or shorts.

- **Damaged Locking Clip:** If the locking clip breaks, the connection may not be secure. Consider using strain relief boots to protect the clip during frequent plugging and unplugging.

7. Support

For further assistance, technical support, or product inquiries, please contact Cable Matters directly:

Email: support@cablematters.com

Website: www.cablematters.com

Note: The product-specific webpage <http://www.cablematters.com/pc-139-62-cable-matters-cat6-rj45-modular-plugs-for-stranded-cables-100-pieces.aspx> provides additional details.