uxcell a18070600ux0461

Instruction Manual

uxcell SC50-8 1/0AWG Copper Wire Lugs

1. Introduction

The uxcell SC50-8 Copper Wire Lugs are durable, non-insulated crimp terminals designed for secure electrical connections. These tubular ring terminals are made from high electrolytic grade copper and are tin-plated for enhanced durability and performance. They are widely used in various applications including electric and electronic industries, industrial automation, street lighting, power control systems, and more, ensuring reliable and safe wiring.

This manual provides essential information for the proper setup, operation, maintenance, and troubleshooting of your uxcell Copper Wire Lugs.



Figure 1: A single uxcell SC50-8 Copper Wire Lug, showcasing its design and silver-tone finish.

2. Safety Information

Always prioritize safety when working with electrical components. Failure to follow these safety guidelines may result in injury, electric shock, or damage to equipment.

- **Disconnect Power:** Always ensure that power is disconnected from the circuit before working with electrical wires or terminals.
- **Use Proper Tools:** Use only insulated tools and appropriate crimping tools designed for the specific wire gauge and lug type.
- **Wear Personal Protective Equipment (PPE):** Wear safety glasses and insulated gloves to protect against potential hazards.
- **Inspect Components:** Before installation, inspect the lugs and wires for any damage or defects. Do not use damaged components.
- **Proper Ventilation:** Ensure adequate ventilation if any soldering or heat-shrink operations are performed.
- **Proposition 65 Warning:** This product may expose you to chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

3. Setup

Before beginning the installation process, gather the necessary tools and prepare your wires.

3.1 Required Tools

- Wire Strippers (appropriate for 1/0 AWG wire)
- Crimping Tool (suitable for 1/0 AWG non-insulated terminals)
- Wire Cutter (optional, for trimming excess wire)

3.2 Wire Preparation

1. **Select Correct Wire:** Ensure the wire gauge matches the lug's specification (1/0 AWG for SC50-8).
2. **Strip Insulation:** Carefully strip approximately 15-20mm (0.6-0.8 inches) of insulation from the end of the wire. The stripped length should be sufficient to fully insert the conductor into the lug barrel without any insulation entering the barrel.
3. **Twist Strands:** If using stranded wire, gently twist the exposed copper strands together to prevent fraying and ensure all strands enter the lug.

4. Operating (Installation)

Follow these steps to properly crimp the uxcell Copper Wire Lug onto your electrical wire.

1. **Insert Wire into Lug:** Insert the stripped end of the wire fully into the tubular barrel of the lug. Ensure that no stray strands are outside the barrel and that the wire insulation butts up against the entrance of the lug barrel.
2. **Position for Crimping:** Place the lug and wire into the appropriate crimping die of your crimping tool. For non-insulated lugs, ensure the crimp is made securely on the copper barrel.
3. **Perform Crimp:** Apply firm and steady pressure to the crimping tool handles until the crimp cycle is complete. A proper crimp will deform the lug barrel around the wire, creating a strong mechanical and electrical connection.
4. **Inspect Crimp:** After crimping, visually inspect the connection. The crimp should be tight and uniform. Gently pull on the wire to ensure it is securely held within the lug. The wire should not pull out.
5. **Connect to Bolt:** Once crimped, the lug's ring terminal can be connected to a bolt or stud. The bolt hole size is 8.4mm (0.33 inches), suitable for M8 or similar sized bolts. Ensure the connection point is clean and free of corrosion for optimal conductivity.



Figure 2: Dimensions of the uxcell SC50-8 Copper Wire Lug, showing the 8.4mm bolt hole and overall length.



Figure 3: A pack of 10 uxcell SC50-8 Copper Wire Lugs, as supplied.

5. Maintenance

Proper maintenance ensures the longevity and reliability of your electrical connections.

- **Periodic Inspection:** Regularly inspect crimped connections for any signs of corrosion, loosening, or damage.
- **Cleanliness:** Keep the connection points clean and free from dust, dirt, and moisture.
- **Storage:** Store unused lugs in a dry, cool environment to prevent oxidation and maintain their integrity.

6. Troubleshooting

If you encounter issues with your crimped connections, consider the following common problems and solutions:

- **Loose Connection:** If the wire pulls out of the lug, the crimp was insufficient. Ensure you are using the correct crimping tool and applying enough pressure. Re-crimp with a new lug.
- **Damaged Wire Strands:** If wire strands are cut or damaged during stripping, re-strip the wire to a clean section.
- **Incorrect Lug Size:** If the wire does not fit properly into the lug barrel, verify that the lug's AWG rating matches your wire's gauge.
- **Corrosion at Connection Point:** Clean the bolt or stud connection point thoroughly before attaching the lug to ensure good electrical contact.

7. Specifications

Feature	Specification
Model	SC50-8
Bolt Mouth Size	8.4mm / 0.33" (D)
Fit Cable Size	50mm² / 1/0AWG
Material	Tin Plated Copper
Color	Silver Tone
Connector Type	Crimp
Insulation Material	Non-Insulated
Terminal Type	Ring Terminal
Temperature Rating	257°F (125°C)
Product Dimensions	3.94 x 3.15 x 1.97 inches (approximate for packaging)
Item Weight	5.4 ounces (approximate for 10 Pcs)

8. Warranty and Support

For information regarding product warranty, returns, or technical support, please refer to the purchase documentation or contact uxcell customer service directly. You can also visit the official uxcell store on Amazon for more details and contact options: Visit the uxcell Store on Amazon

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