Eightwood ZBNC052

Eightwood 10pcs 50 Ohm BNC Crimp Male Connector User Manual

Model: ZBNC052

1. Product Overview

The Eightwood BNC Crimp Male Connectors are designed for reliable termination of coaxial cables. These 50 Ohm connectors are suitable for a variety of RF applications, ensuring stable signal transmission. They are constructed from brass for enhanced mechanical durability and a secure connection.

These connectors are compatible with RG58, RG142, and LMR195 coaxial cables. They are commonly used in applications such as antennas, VHF/UHF/CB amateur radios, radio scanners, security cameras, oscilloscope spectrum analyzers, cable testers, and wireless sensors.



Image: A single Eightwood BNC Crimp Male Connector, showcasing its design and metallic finish.

2. Package Contents

Each package contains the following components:

- 10 x BNC Male Crimp Connectors
- 10 x Heat Shrink Tubes



Image: Ten BNC Crimp Male Connectors, along with their associated center pins and crimp sleeves.



Image: An exploded view of a BNC connector, showing the main body, center pin, and crimp sleeve.

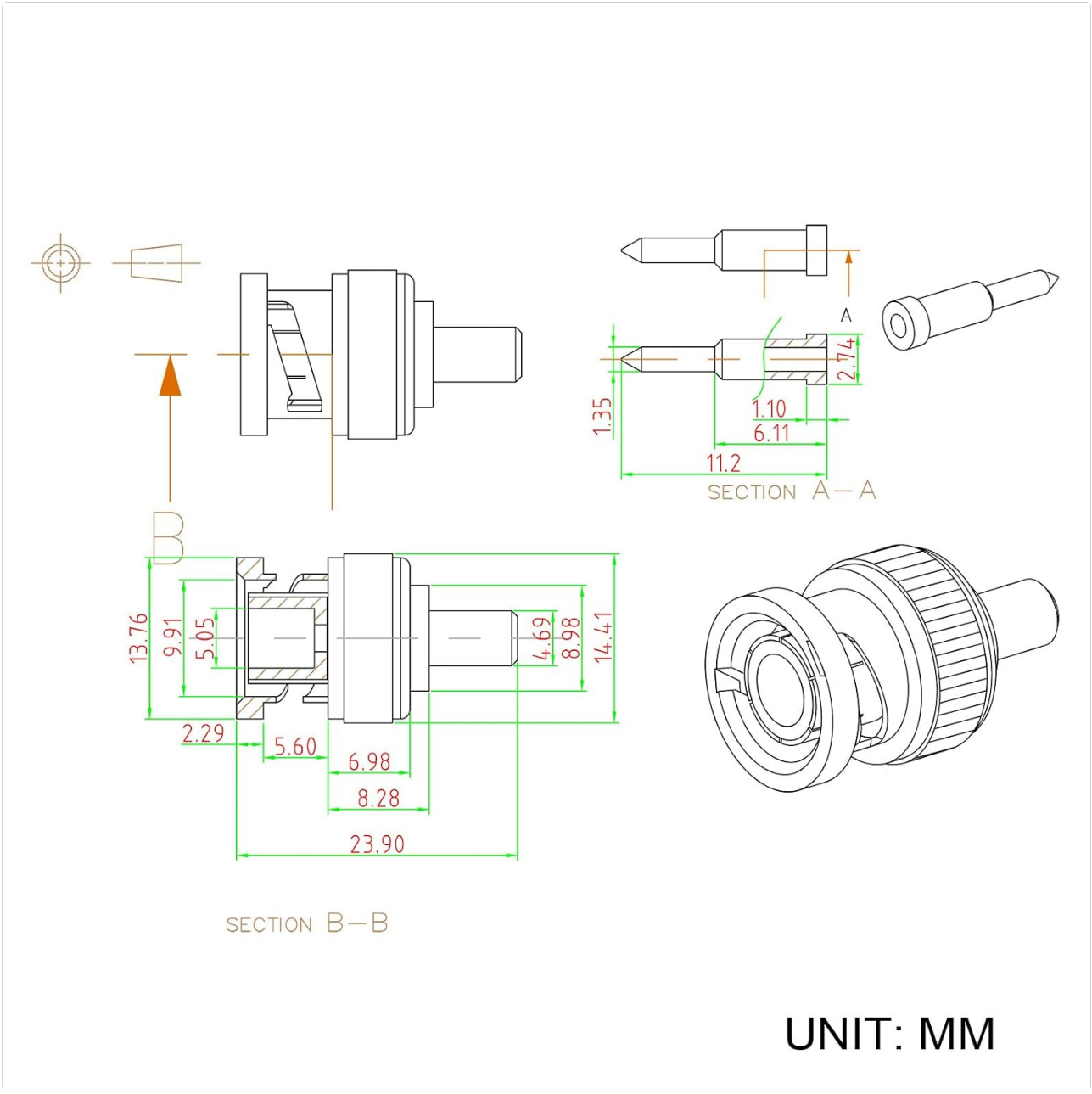


Image: Ten black heat shrink tubes, used for strain relief and insulation after connector assembly.

3. Specifications

Connector Type	BNC Male Crimp
Impedance	50 Ohms
Cable Compatibility	RG58, RG142, LMR195 (and RG400 with larger crimp tubes)
Material	Brass
Special Feature	Designed for repeated use
Product Dimensions	1.18 x 0.39 x 1.97 inches
Item Model Number	ZBNC052

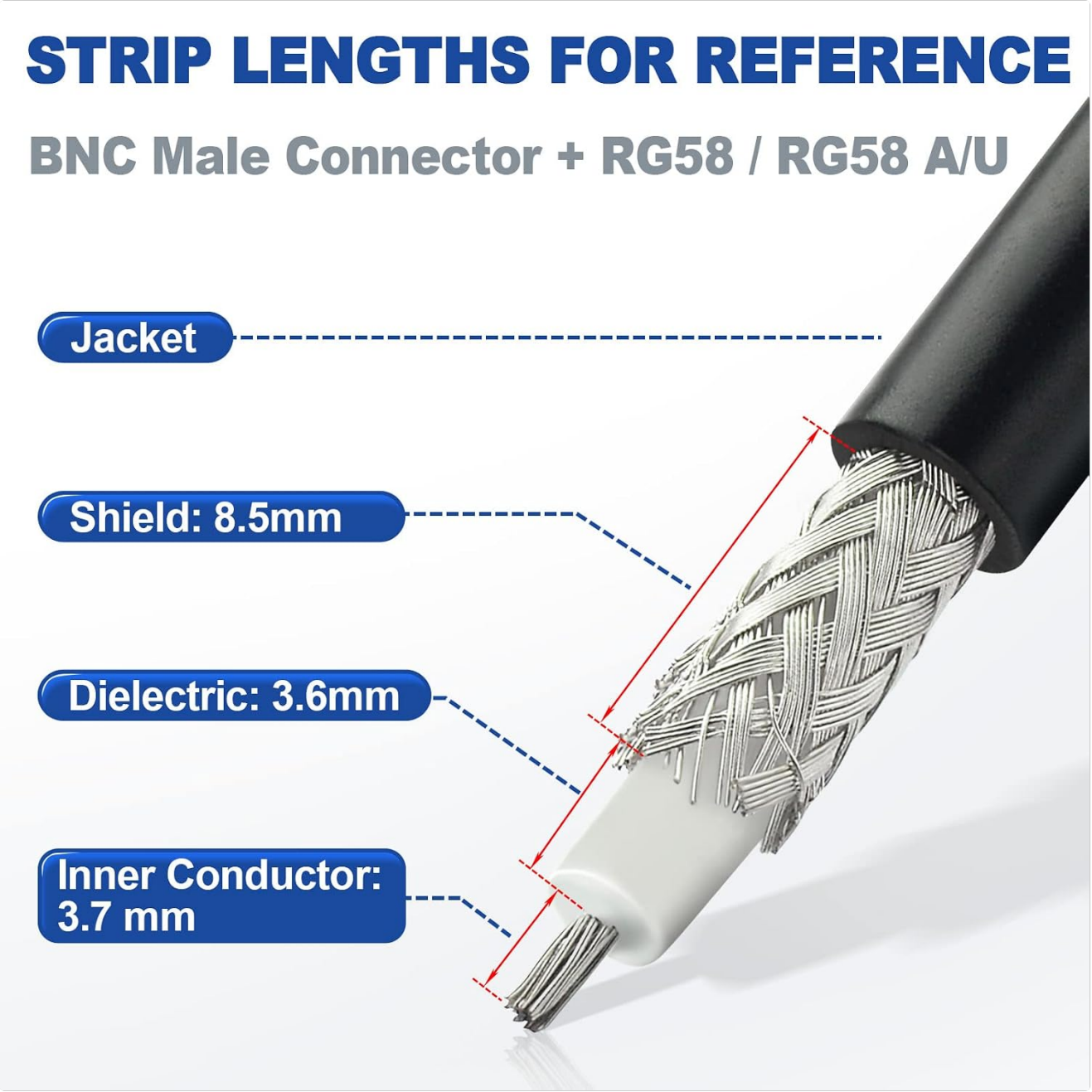


Image: Technical drawing providing detailed dimensions of the BNC connector components in millimeters.

4. Installation Instructions (Crimping)

Proper installation is crucial for optimal performance. This section outlines the steps for crimping the BNC male connector onto compatible coaxial cables.

Required Tools:

- Coaxial Cable Stripper
- Crimping Tool (for center pin and ferrule)
- Soldering Iron and Solder (optional, for center pin)
- Heat Gun (for heat shrink tube)
- Utility Knife or Wire Cutters

Step-by-Step Guide:

1. **Prepare the Cable:**

Carefully strip the coaxial cable according to the dimensions provided for BNC Male Connector + RG58 / RG58 A/U. Typically, this involves stripping the outer jacket, exposing the shield, dielectric, and inner conductor to specific lengths. Refer to the diagram below for precise measurements.



Image: Diagram illustrating the recommended strip lengths for the cable jacket, shield, dielectric, and inner conductor for BNC connectors with RG58/RG58 A/U cable.

2. **Install Heat Shrink Tube and Crimp Tube:**
   Slide the heat shrink tube and then the metal crimp tube (ferrule) over the cable jacket. Ensure they are oriented correctly and pushed back far enough to not interfere with the next steps.
3. **Attach Center Pin:**
   Insert the exposed inner conductor into the center pin. Crimp the center pin securely onto the conductor using a suitable crimping tool. For a more robust connection, you may optionally solder the center pin to the conductor.
4. **Assemble Connector Body:**
   Carefully insert the prepared cable (with the center pin attached) into the main body of the BNC connector. The inner conductor with the pin should slide into the central contact of the connector. Ensure the braided shield is fanned out and makes contact with the connector body's crimp area.
5. **Crimp the Ferrule:**
   Slide the metal crimp tube (ferrule) forward over the braided shield and the rear of the connector body. Use

the crimping tool to firmly crimp the ferrule onto the connector body and the cable shield. This secures the shield and provides strain relief.

6. **Apply Heat Shrink:**
   Slide the heat shrink tube over the crimped area and apply heat with a heat gun until it shrinks tightly around the cable and connector, providing additional strain relief and protection.
7. **Test Connection:**
   After assembly, it is recommended to test the connection for continuity and shorts using a multimeter or cable tester to ensure proper installation.

Installation Video:

Your browser does not support the video tag.

Video: A detailed demonstration of how to crimp Eightwood BNC Male Connectors onto RG58 coaxial cable, including preparation and assembly steps.

5. Operating Guidelines

Once properly installed on a coaxial cable, the BNC connector is ready for use. Follow these guidelines for optimal operation:

- **Connecting:** Align the two bayonet lugs on the male connector with the two slots on the female connector. Push the male connector onto the female connector and twist the coupling nut clockwise until it locks into place.
- **Disconnecting:** Twist the coupling nut counter-clockwise to unlock it, then pull the male connector straight off the female connector.
- **Secure Connection:** Ensure the connector is fully engaged and locked to prevent signal loss or intermittent connections.
- **Avoid Over-tightening:** Do not overtighten the coupling nut, as this can damage the connector or the connected device.

6. Maintenance

These BNC connectors are designed for durability and repeated use. Minimal maintenance is required to ensure long-term performance:

- **Cleaning:** Periodically inspect connectors for dirt, dust, or corrosion. Clean with a soft, dry cloth. For stubborn grime, a small amount of isopropyl alcohol on a cotton swab can be used, ensuring the connector is completely dry before use.
- **Inspection:** Check for any signs of physical damage, such as bent pins, cracked insulation, or loose connections. Replace damaged connectors immediately.
- **Storage:** Store unused connectors in a clean, dry environment to prevent oxidation and damage.

7. Troubleshooting

If you experience issues with your BNC connections, consider the following troubleshooting steps:

- **No Signal or Intermittent Signal:**
  - Check if the connector is fully engaged and locked.
  - Inspect the cable for damage (kinks, cuts, frayed shield).

- Verify the crimp connection. A poor crimp can lead to signal loss.
- Ensure the center pin is making proper contact and is not bent or recessed.
- Test the cable and connector with a continuity tester to check for opens or shorts.

- **Poor Signal Quality (Noise, Distortion):**
  - Ensure the cable type (e.g., RG58) is appropriate for the application and connector.
  - Check for proper shielding. An improperly crimped shield can introduce noise.
  - Verify that all components are 50 Ohm impedance for matching.
- **Connector Not Fitting:**
  - Ensure you are using a BNC male connector with a BNC female receptacle.
  - Check for any debris or damage in either the male or female connector.

8. Warranty and Support

Eightwood specializes in developing and manufacturing RF antennas and connectivity accessories. For product support, technical advice, or after-sales service, please refer to the seller's contact information on the platform where the product was purchased. Eightwood is committed to providing high-quality products and efficient customer service.

For more information about Eightwood products, you may visit the official Eightwood store or contact the manufacturer directly through their provided channels.

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

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

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