

Proxicast ANT-211-002

Proxicast Coaxial Lightning Arrester (N-Female/N-Female) Instruction Manual

Model: ANT-211-002

1. INTRODUCTION AND OVERVIEW

This manual provides instructions for the installation, operation, and maintenance of the Proxicast Pro-Grade Coaxial Lightning Arrester, model ANT-211-002. This device is designed to protect sensitive electronic equipment from damaging electrical surges caused by lightning strikes or static discharge on coaxial cable lines. It features N-Female/N-Female connectors and is suitable for a wide range of applications including 4G, 5G, LTE, Wi-Fi, 900MHz, Helium, and LoRa antenna systems operating between DC and 6 GHz.

2. KEY FEATURES

- **Wide-Band Performance:** Operates from DC to 6 GHz, providing protection for various cellular and wireless communication systems.
- **Bi-Directional Protection:** Equipped with N-Female/N-Female connectors for versatile installation.
- **Low Insertion Loss:** Designed to minimize signal attenuation, ensuring optimal system performance.
- **230V Gas Discharge Tube (GDT):** Offers enhanced lightning protection compared to standard 90V arresters.
- **Multi-Strike Capability:** Shunts damaging surges and transients to ground, protecting connected equipment.
- **Replaceable GDT:** Allows for easy replacement of the gas discharge tube after a significant surge event.
- **Outdoor/Bulkhead Mountable:** Durable construction suitable for outdoor environments.

3. SETUP AND INSTALLATION

Proper installation of the lightning arrester is critical for effective protection. Follow these steps carefully:

1. **Placement:** Install the lightning arrester as close as possible to the point where the coaxial cable enters the building or enclosure. It should be placed between the outdoor antenna and the indoor modem/router or other sensitive equipment.
2. **Grounding:** Connect the ground wire terminal lug on the arrester directly to a reliable earth ground rod using a minimum #10 AWG (American Wire Gauge) copper wire. The ground connection must be as short and direct as possible to effectively

dissipate surge energy.

3. **Coaxial Connections:** Connect the coaxial cable from the antenna to one N-Female port of the arrester and the coaxial cable leading to your equipment to the other N-Female port. Ensure all connections are tight and secure.
4. **Weatherproofing:** For outdoor installations, weatherproof all coaxial connections using self-fusing silicone tape or other appropriate weatherproofing methods to prevent moisture ingress.

Typical Arrester Installation

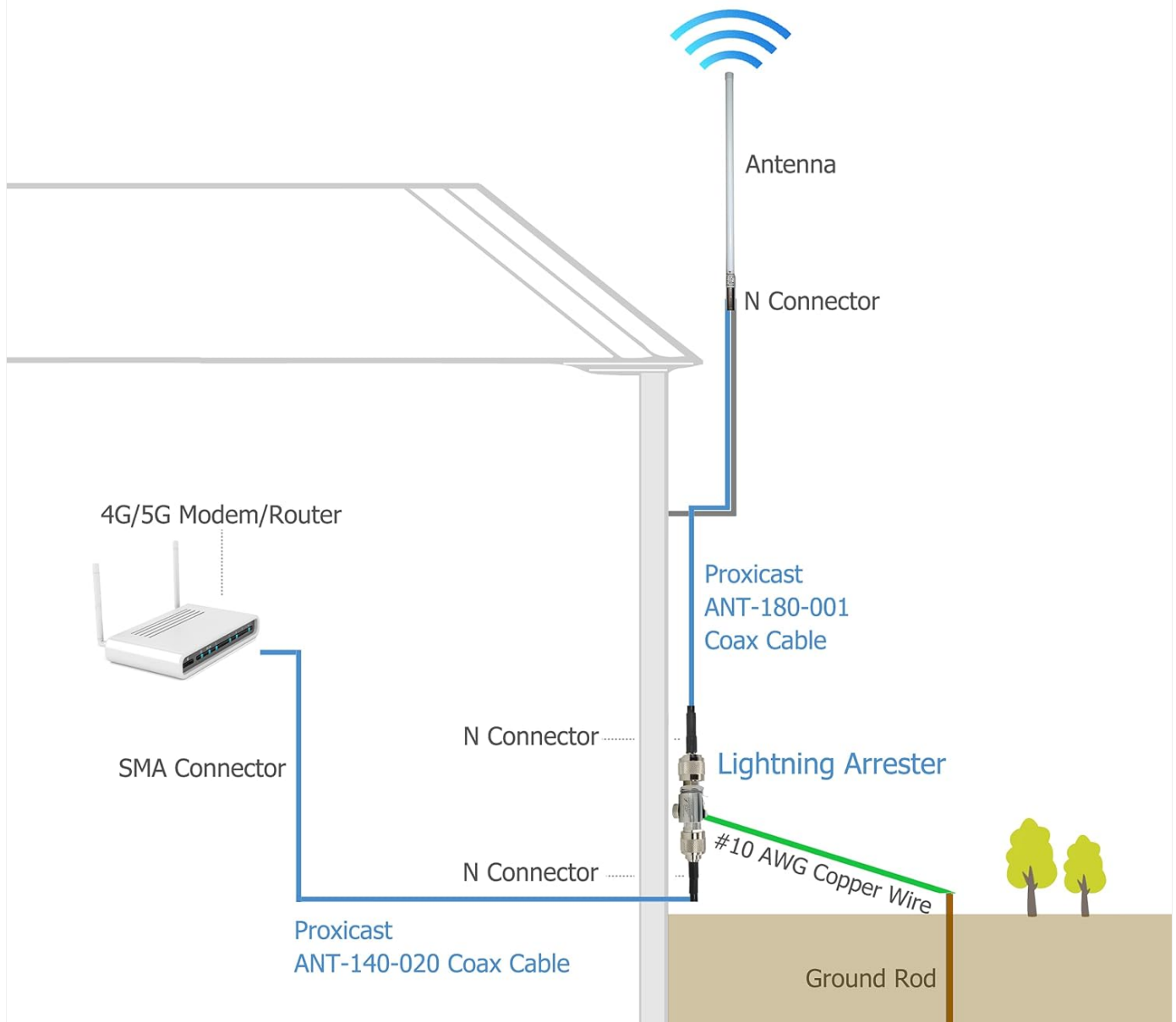


Figure 3.1: Typical installation of the Proxicast coaxial lightning arrester. The arrester is positioned between the outdoor antenna and the indoor modem/router, with a direct ground connection to an earth rod.

In-Line Coax Arrestor Assembled



Figure 3.2: The lightning arrester connected in-line with two coaxial cables. Ensure all connections are secure and the ground wire is properly attached to the terminal lug.

Lightning Arrester Components



Figure 3.3: Individual components of the lightning arrester, including the main body, replaceable gas discharge tube, O-ring, lock washers, and ground wire terminal lug.

4. OPERATING PRINCIPLES

The Proxicast Coaxial Lightning Arrester operates passively. It contains a gas discharge tube (GDT) that acts as a switch. Under normal operating conditions, the GDT presents a very high impedance, allowing RF signals to pass through with minimal loss. When a high voltage surge (such as from a lightning strike or static discharge) occurs, the GDT rapidly conducts, diverting the excess electrical energy safely to the earth ground, thereby protecting the connected equipment. Once the surge passes, the GDT returns to its non-conductive state.

5. MAINTENANCE

The primary maintenance for this lightning arrester involves inspecting and potentially replacing the gas discharge tube (GDT) after a significant surge event. While the arrester is designed for multi-strike capability, a direct or powerful lightning strike may degrade or damage the GDT, reducing its protective capacity.

- **GDT Inspection:** If your equipment experiences issues after a storm, or if you suspect a direct lightning strike, inspect the GDT. A damaged GDT may show visible signs of scorching or cracking.
- **GDT Replacement:** The GDT is replaceable. To access it, carefully unscrew the cap covering the GDT assembly. When removing the GDT, ensure the unit is placed on a flat surface with the GDT port facing upwards to prevent the tube from falling inside the unit. Replace with a genuine Proxicast 230V replacement gas discharge tube. Ensure the O-ring is properly seated for weather sealing before re-tightening the cap.
- **Connection Check:** Periodically inspect all coaxial and ground connections for corrosion or looseness. Ensure weatherproofing remains intact for outdoor installations.

Key Arrester Features



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Figure 5.1: Key features of the arrester, including the ground wire terminal lug, O-ring & lock washers, and the replaceable gas discharge tube assembly.

6. TROUBLESHOOTING

If you encounter issues during or after installation, consider the following:

- **No Signal or Degraded Signal:**

- Check all coaxial cable connections to ensure they are tight and properly seated.
- Verify the integrity of the coaxial cables themselves.
- Inspect the gas discharge tube (GDT) for damage. A failed GDT can cause signal loss. Replace if necessary.

- **Coaxial Cable Center Conductor Not Fitting:**

- Ensure your coaxial cable's center conductor diameter is compatible with N-Female connectors. Some RG-6 cables with solid copper conductors may have a slightly larger diameter than those with copper-clad steel, potentially causing a tight fit. If the conductor is too long, carefully trim it to the appropriate length.

- **Audio Interference with VoIP Landline Phones:**

- In rare cases, the lightning arrester may introduce minor interference in the audio of landline telephones connected to a Wi-Fi router used for VoIP calling. If this occurs, consider alternative grounding strategies or consult with a telecommunications specialist.

- **GDT Falls Inside Unit During Removal:**

- When removing the GDT cap, ensure the unit is positioned with the GDT port facing directly upwards to prevent the small tube from falling into the arrester body. If it does fall, it can often be retrieved with small tweezers or by gently shaking the unit while inverted.

7. SPECIFICATIONS

Specification	Value
Model Number	ANT-211-002
Frequency Range	DC ~ 6 GHz
Connector Type	N-Female / N-Female
Discharge Voltage	230 Volts
Impedance	50 Ohms
Insertion Loss	Very Low (typically 0.2 dB)
Dimensions (LxWxH)	2.4 x 1.22 x 1.22 inches (approx.)
Item Weight	4 ounces
Manufacturer	Proxicast

8. WARRANTY INFORMATION

For specific warranty details regarding your Proxicast Coaxial Lightning Arrester, please refer to the product packaging or contact Proxicast directly. Warranty terms typically cover manufacturing defects but may not cover damage caused by improper installation, misuse, or direct lightning strikes that exceed the device's protective capacity.

9. SUPPORT

For additional support, technical assistance, or to purchase replacement parts, please visit the official Proxicast website or their store on Amazon:

[Visit the Proxicast Store on Amazon](#)

You may also contact Proxicast customer service for further assistance.

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.

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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