Cisco Aironet Lightning Arrestor (AIR-ACC245LA-R)

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This document describes the lightning arrestor kit and provides instructions for mounting the arrestor.

Introduction

Overvoltage transients can be created through lightning static discharges, switch processes, direct contact with power lines, or through earth currents. The Cisco Aironet AIR-ACC245LA-R Lightning Arrestor limits the amplitude and duration of disturbing interference voltages and improves the overvoltage resistance of in-line equipment, systems, and components. A lightning arrestor installed according to these mounting instructions balances the voltage potential, thus preventing inductive interference to parallel signal lines within the protected system.

The Cisco Aironet AIR-ACC245LA-R Lightning Arrestor is designed for use with Cisco Aironet access points and bridges but can be used Cisco Aironet radio device that utilizes an RP-TNC connector.

Warnings

Warning **Disconnect or switch off in-line equipment when installing or inspecting lightning arrestors during an electrical storm.**

Warning **When connecting lightning arrestors, make sure that the succeeding equipment and components are disconnected or turned off.**

Warning **This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents.**

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Warning **Do not work on the system or connect or disconnect cables during periods of lightning activity.**

Installation Considerations

Cisco recommends that you bulkhead mount the lightning arrestor so it can be installed as a wall feed through on the wall of the protected space.

The importance of obtaining a good ground and bonding connection cannot be overstressed. Consider these points when grounding the lightning arrestor:

- Connect the lightning arrestor components directly to the grounding point.
- The contact points of the ground connection must be clean and free of dust and moisture.
- Tighten threaded contacts to the torque specified by the manufacturer.

Installation Notes

This lightning arrestor is designed to be installed between the antenna cable that is attached to an outdoor antenna and the Cisco Aironet wireless device. You can install the lightning arrestor either indoors or outdoors. It can be connected directly to a wireless device having an external RP-TNC connector. It can also be mounted inline or as a feed-through. Feed-through installations require a in. (19 mm) hole to accommodate the lightning arrestor. See Figure 1.

Note This lightning arrestor is part of a lightning arrestor kit. The kit contains a lightning arrestor, a grounding lug, and this instruction sheet.

Note When you install the lightning arrestor, follow the regulations or best practices applicable to lightning protection installation in your local area.

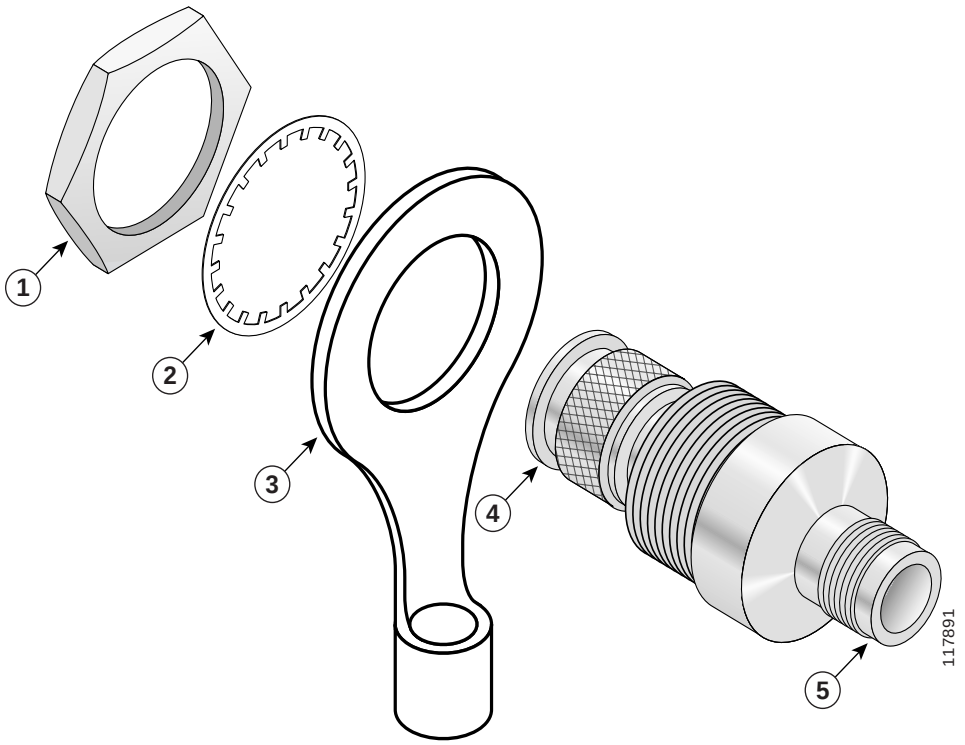
Installing the Lightning Arrestor Outdoors

If you install the lightning arrestor outdoors, use the supplied ground lug and a heavy wire (#6 solid copper) to connect it to a good earth ground, such as a ground rod. The connection should be as short as possible.

Installing the Lightning Arrestor Indoors

If you install the lightning arrestor indoors, place the wireless LAN device near a good source of ground, such as structural steel or the ground on an electrical panel. Ground the lightning arrestor by using a heavy wire (#6 solid copper) and connect the ground wire to a good ground on the structural steel or electrical panel. The connection should be as short as possible.

Figure 1 Lightning Arrestor Details



1	Nut	**4**	Protected side (to wireless device)
2	Lockwasher	**5**	Unprotected side (to antenna)
3	Ground lug		

Suggested Cable

Coaxial cable loses efficiency as the frequency increases, resulting in signal loss. The cable should be kept as short as possible because cable length also determines the amount of signal loss (the longer the run, the greater the loss).

Cisco recommends a high-quality, low-loss cable for use with the lightning arrestor.

Technical Specifications

Main path connectors	Unprotected side: TNC-R jack (female) Protected side: TNC-R plug (male)
Impedance	50Ω
Frequency range	0–5850 MHz
Return loss	≥ 20 dB
Insertion loss	≤ 0.2 dB
RF CW power	<= 60 W
Surge current handling capability	10 single / 5 multiple kA (test pulse 8/20 µs
Residual pulse energy	250 microjoules typically (test pulse 4 kV 1.2/50 µs; 2kA 8/20 microseconds)
Weight	8 oz. (0.2 kg)
Operating temperature range	–40 F to 185 F (–40 C to 85 C)