

TerraStreamer[®] *EARLY STREAMER EMITTER TERMINALS*

Introduction

ALLTEC Corporation is proud to offer our new line of Early Streamer Emitter terminals for structural lightning protection. The TerraStreamer ESE utilizes advanced electronics to provide structural lightning protection to facilities that would otherwise be difficult or cost prohibitive to protect by conventional means.

TerraStreamer ESE terminals are the preferred protection method for mega-structures such as distribution warehouses, industrial plants, amusement parks, shopping malls, sports arenas, and other large area structures. Laboratory testing of triggering times have verified a protection radius of up to 109 meters from a single terminal.

The TerraStreamer ESE terminal is designed and constructed with the latest advanced electronics circuitry encased in a lightweight and unobtrusive stainless steel housing for durability and long service life. The TerraStreamer models have been independently tested by Laboratorio Central Oficial De Electrotecnia (LCOE) and certified to UNE 21186 and NFC 17102 standards.

Continuing our goal of professional customer service, ALLTEC Corporation offers design assistance for architects and engineers or for commercial or municipal end users.

ESE Function - How They Work

The theory of function for ESE terminals is to create an upward propagating streamer earlier than conventional air terminals or other objects on the earth, thereby offering larger zones of protection. The TerraStreamer does this by collecting and storing ground charge during the building phase of a thunderstorm.

Once a thunderstorm begins developing downward step leaders, the ambient electric field intensity in the area of the ESE terminal begins building. When this electric field intensity reaches a preset level, it triggers the terminal to release the stored ground charge, forming an upward streamer, microseconds earlier than other objects in the immediate area.

This development of an upward streamer earlier in time and space ensures that the TerraStreamer ESE terminal will be the target of the developing lightning strike. The selection of the TerraStreamer model, placement, and mounting height above the protected area all factor into formulas calculating the dimensions of the protected area.