



CMCE-120 LIGHTNING SUPPRESSOR

TECHNICAL DATASHEET

Electromagnetic Field Balancer

CMCE-120 LIGHTNING SUPPRESSOR

The CMCE Lightning Suppressor is a revolutionary electro-atmospheric protection system that combines innovative electric field compensation technology with intelligent adaptive capability.

DEFINITION

The CMCE Lightning Suppressor (Multiple Electric Field Compensator) is a lightning protection system that prevents the formation of lightning. It is defined as a passive continuous collector of electrostatic currents, which directs them to the ground. Its principle of operation is based on balancing or compensating the variable electric field present in its environment, preventing the conditions for the formation of the upward leader in the CMCE and the protected structure within its coverage radius.

OPERATING PRINCIPLE

Each capacitor has one of its electrodes referenced to ground, which is charged with the same polarity as the ground. The free electrode induces atmospheric charges of opposite polarity to that of the ground, achieving internal balance between its electrodes, which are absorbed from the atmosphere, preventing lightning formation within its coverage radius.

CERTIFICATIONS AND COMPLIANCE

- Complies with IEC, EN, UNE-EN, and BS-EN 62305 Part 1,2,3,4.
- Complies with UL-96 (For a specific device).
- Complies with RoHS regulations.
- It has CE marking.
- It has UCKA Marking.
- ISO 9001:2015
- ISO 14001:2015
- Compliance with the community of Independent States
- Approved by the TESLA Institute based on:
 - IEC 60060-1:2010 High voltage test techniques - Part 1: General definitions and test requirements
 - IEC 60060-2:2010 High voltage test techniques - Part 2: Measurement systems
- Approved within the NATO Cataloging System (NOC) with the NCAGE code SFKU3.
- DUNS Registration Number 955067967
- ITE Laboratory Studies under UNE 21186:2011 NFC 17102:2011 standards: (Laboratories with ENAC-ILAC and ISO 17025 Accreditation):
 - High voltage electrical impulse and ignition tests up to a record voltage of 840KV at one meter without tracer formation.
 - Mechanical, Environmental Tests of Salt Fog, in sulfurous atmosphere, current, priming advance.
- Laboratory studies in the GCC-LAB laboratory in Saudi Arabia under IEC 62305 standards.



PROTECTION EFFECTIVENESS

99% reduction in direct lightning strikes on protected structures. In the event of a lightning strike (1%), the CMCE Lightning Suppressor acts as a thermal fuse, absorbing some of the lightning energy as heat by melting its components, minimizing electromagnetic effects. In this case, the manufacturer and distributor covers only the replacement and technical assistance of the equipment under warranty (not labor costs).

MECHANICAL CONNECTION TO THE MAST

It incorporates in its axis the mast connection system. The CMCE requires a mast with an inner diameter of 42 mm and an outer diameter of 49 mm, with a through-hole of 8 mm in diameter located 50 mm from the edge of the mast.

COVERAGE RADIUS

120 meters (393 feet) of radius according to each lightning protection needs assessment.

APPLICATIONS

With greater deionizing power, for use, large complexes, mining, electrical substations, sports fields, airports, telecommunication towers, and structures that can be covered by its protection radius.

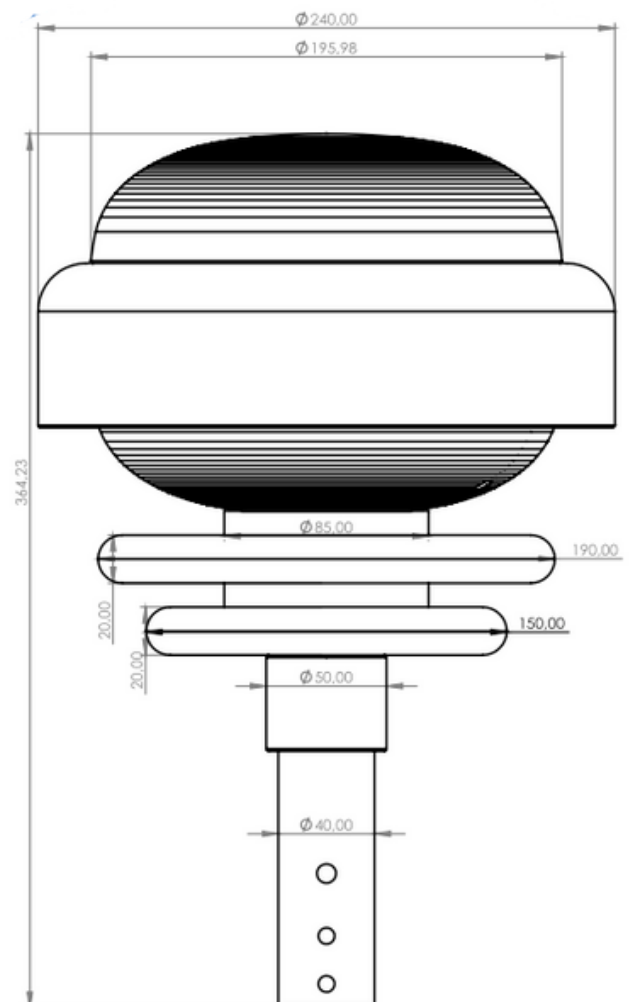
PRODUCT WARRANTY

10 years warranty, subject to annual maintenance. Coverage in case of direct lightning strike on the product. Effects resulting from external induced overvoltages or non-compliance with manufacturer's requirements, such as grounding, installation, materials, and correct technical practices (as specified in the installation manual) are excluded from this coverage.

WEIGHT & DIMENSIONS OF THE CMCE

Weight: 17.6 lbs

Measurements: 14.9 x 9.5 in



TECHNICAL SUMMARY

DIMENSIONS	CMCE-120
Size	Ø 14.9 x 9.5 in.
Net Weight	16.5 lbs
Total Weight	20.8 lbs
Packaging Dimensions	12.2 x 16 x 12.5 in
Space to Connect Down Conductor	Ø 2 cm (up to 0.07 cm ² section cross)

MATERIALS AND TEST	CMCE-120
Aluminum	95.5% purity
Polyacetal	POM
Inox Connector	ANSI 316
Salt Mist Test	According to UNE-EN 60068-2-52
Humid Sulphurous Atmosphere Test	According to UNE-EN ISO 6988 with 7 cycles and SO2 concentration of 667 ppm (for volume)
Max Temperature without Deformation	-85 °F to 284 °F

TECHNICAL SUMMARY

ELECTRICAL CHARACTERISTICS	CMCE-120
Coverage Radius	120 meters (393 feet)
Maximum Voltage (No Lightning Formation)	840KV to 1 meter (3.2 feet)
Impulse Current	100KA (10/350 μ s)
Draining Current Work	0.01 mA to 20A
Voltage Work AC/DC	0.01 mV to 20V
Range of Frequency Lab Test	-85 °F to 284 °F
Power Supply	No power required
Ambiental Temperature Range	-58 °F to 140 °F

MOUNTING DESIGN	CMCE-120
Built-in on its axis to mount to external galvanized pipe	Ø 3.95 to Ø 4.9 cm
Side to side transverse perforation in axis for the thru-screw	8 mm / 10 mm
Customizable base fixing for special support	If is necessary
Down conductor connection	Built-in space for connection with two M8 screws