TECNOLOGÍAS INNOVADORAS
EN PROTECCIÓN CONTRA EL RAYO

AIDITEC SYSTEMS

MD EQUIPOS TECNOLÓGICOS

Empresa Asociada a ITE

Lightning rod Sigma+ESE

ESE Lightning rod made of stainless steel AISI 316L and tested according to UNE 21186, NFC 17102 and NP 4426.

Technical Specifications:

- Double triggering device:
  - Generator anticipation of the upward leader.
  - Circuit for storing electrical charges.
- Operation in any weather condition.
- Guarantee isolation between electrodes.
- Fully autonomous and maintenance-free.
- Testable in situ with our AS Tester device.

Tests and certificates:

Tests performed at the Technological Institute of Energy (ITE) and based on the UNE 21186, NFC 17102 and NP 4426.

- Mechanical.
- Environmental.
- Electrical.
- Advance Time.

Benefits and Guarantees:

- Security Factor of 5 µs as minimun in the radii protection.
- Efficiency at 100% discharge.
- High level of protection.
- Electrical continuity.
- No resistance to the passage of the discharge.
- Maintains its properties to the passage of each download.
- Long-term guarantee.
- Isolation guarantee between electrodes.

Standards and Installation:

- According to the requeriments of the following standards:
  UNE 21186 - UNE EN 62305 - NFC 17102 - NP 4426 - CTE - REBT
- For installation is recommended to follow the guidelines in these standards.

ESE LIGHTNING ROD Sigma

Reference	Model	h	Level 1 D = 20 mt	Level 2 D = 30 mt	Level 3 D = 45 mt	Level 4 D = 60 mt
800 006	Electron-E15	6 mt	37	44	52	59
800 005	SIGMA+ S1	6 mt	45	55	70	85
800 002	SIGMA+ S2	6 mt	65	75	90	107
800 004	SIGMA+ S3	6 mt	80	90	105	120

Radius protection in meters according: CTE SU8, UNE 21186, NFC 17102 y NP 4426.

h = Height of the lightning rod relative to the plane to protect.

Lightning Rod ΔDVANCE+ESE

Tests according PRODUCT CERTIFICATION Regulations for ESE Lightning Rod

Protection Guarantee

The lightning rod ΔDVANCE ESE has successfully passed the tests based on the UNE 21186, NFC 17102 and NP 4426, for Early Streamer Emission lightning rod.

TESTS

* **DIMENSIONAL**
  Ensures that the dimensions are standardized.
* **SALINE MIST AND HUMID SULPHUROUS ATMOSPHERE**
  Certifies resistance in corrosive environments.
* **IMPULSE WITHSTAND CURRENT (200 kA - 10/350 µs)**
  Ensures its functioning after several lightning strokes.
* **ADVANCE TIME**
  Guarantees the protection radii.

Security Factor

Radii protection calculated based on the CTE, UNE 21186, NFC 17102 and NP 4426 standards, applying a minimum Security Factor of 10 microseconds.

Incorporation of New Technologies

As a result of investigations made and the R + D projects, the lightning rod ΔDVANCE ESE incorporates the following new technologies:

• SAT - STABILIZATION OF AVANCE TIME
It achieves a maximum deviation of 5% in the advance time performed according to Product Certification Regulations, which guarantees the stability of the lightning rod.

• FBD - FORCED BLOW DEIONIZATION
Allows quick deionization arc chamber, which ensures that the lightning rod is in perfect condition to capture a new discharge.

• IAW - INSULATION ASSURANCE WATER
Maintains permanently isolated the electrodes of the lightning rod wich have to be at a different potential; ensuring lightning rod operation in extreme wet conditions.

• EOA - EXTENSION OF ARC
Maintains proper tension between the electrodes of the lightning rod that are at different potential, ensuring its perfect running.

RADII PROTECTION CHART

Protection Level	h	ADVANCE+A1	ADVANCE+A2
Level 4 D= 60mt	2	32	44
	4	62	85
	6	80	107
	8	82	120
Level 3 D=45 mt	2	25	39
	4	50	78
	6	70	97
	8	71	98
Level 2 D=30 mt	2	20	34
	4	42	68
	6	55	87
	8	56	87
Level 1 D=20 mt	2	18	32
	4	34	63
	6	40	80
	8	40	80

Protection Radii in meters according: CTE SU8, UNE 21186, NFC 17102 and NP 4426.

h = height of the lightning rod relative to the plane to be protected.

PROTECTORES CONTRA SOBRETENSIONES

Series SPU

SERIE 4D. Sistemas de protección trifásicos en derivación.

SERIE 2D. Sistemas de protección monofásicos en derivación.

SERIE BD. Sistemas de protección trifásicos en serie.

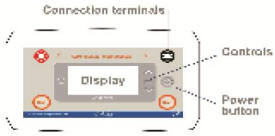
SERIE 2S. Sistemas de protección monofásicos en serie.

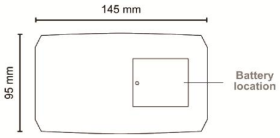
SERIE TD. Sistemas de protección en derivación para alta tensión.

SERIE TC. Sistemas de protección a líneas de datos y comunicación.

Tester for ESE Lightning Rod - AS TESTER

The AS TESTER device is a test portable high-tech equipment, which makes an automatic and complete testing of the operation of the ESE Lightning rod. It is valid for all models of Lightning rods with triggering device manufactured by AIDITEC SYSTEMS, S.L.





Reference	Dimensions	Weight	Max. Output Voltage	Battery	Operating Temperature
600 999	82 x 69 x 45 mm	900 gr	5000 V	1 x 6LR61 - 9V	- 20° C .... 50° C

Lightning Event Counter

Lightning event counter. Counts and records the impacts received by the system protection. Robust, reliable and autonomous.

BENEFITS

* Easy installation - Fixing directly on the conductor, without severing or disconnecting.
* Versatility - Valid for any type of conductor.
* Maximum quality of materials.
* Completely watertight device.

Reference	Material	Dimensions	Itc 8/20	Imcw 10/350	Range	Temperature
600 920	Plastic	82 x 69 x 45 mm	1 kA	100 kA	0 - 9999	- 20° C/+65° C

Meets with EN 62561-6, 50164-6 and UTE C 17-106.

Recommended by standards for Lightning Protection.
It is inserted into the downconductor with less ohmic resistance, or failing in the most straight and short.