

# DUVAL MESSIEN

A know how famous since more than one century

# Satelit<sup>®</sup> 3



## Your solution against lightning

The Early Streamer Emission lightning rods (ESE) SATELIT<sup>®</sup>3 of Duval Messien brand consist in a strike point, an excitation device (body) and a support rod (Ø34).

Preferably installed on the highest point of the area they protect, they are characterized by their  $\Delta T$  excitation advance and can be tested at distance with their associated test boxes ref. TESTS3N.

### Operating principle

This new lightning rod is equipped with a double device of polarization.

The first, active, collects and stores the solar energy in the batteries, then charges the power capacitors to maintain the ascending tracer propagation. An integrated sensor of current allows to measure the current during a descending tracer approach in the zone of protection area. When it exceeds 1A, the sensor triggers the capacitors discharge and releases the necessary energy to the ascending tracer propagation, polarizing the point at a voltage between 20 and 30 kV.

The second system called passive, stores the electrostatic energy present in the atmosphere at a stormy cloud approach. The integrated sensor in the SATELIT<sup>®</sup>3 measures the value of the ambient electric field and releases the impulsion device as for the active part of the lightning rod. This one causes a quasi instantaneous inversion of the head polarity of the lightning rod causing a sudden amplification of the electrical field on its point.



Certified ISO 9001 QUALIFOUDRE MASE QALIFELEC

## Operating principle

This new SATELIT<sup>®</sup>3 lightning conductor exists in 3 models: 25 / 45 and 60 microseconds (according to nearby table).

SATELIT<sup>®</sup> 3 advantages

- Replaceable battery : 4,8V / 800mAh
- Low consumption
- Testable at distance, range of 100 m in free field
- Protected antenna of communication
- Double device of passive and active polarization
- Tested in independant laboratory & COFRAC
- Stainless steel with high resistance to corrosion

Type of SATELIT <sup>®</sup> 3	Rod height (in meters)							
	2	4	5	7	10	15	20	30
Protection radius								
<b>LEVEL 1</b>								
SATELIT <sup>®</sup> 3 - 25	17	34	42	43	44	45	45	45
SATELIT <sup>®</sup> 3 - 45	25	51	63	64	64	65	65	65
SATELIT <sup>®</sup> 3 - 60	32	64	79	79	79	80	80	80
<b>LEVEL 2</b>								
SATELIT <sup>®</sup> 3 - 25	20	40	49	50	51	53	54	55
SATELIT <sup>®</sup> 3 - 45	30	60	71	71	72	73	74	75
SATELIT <sup>®</sup> 3 - 60	34	68	86	87	88	89	89	90
<b>LEVEL 3</b>								
SATELIT <sup>®</sup> 3 - 25	23	46	57	59	61	63	65	68
SATELIT <sup>®</sup> 3 - 45	34	64	81	82	83	85	86	89
SATELIT <sup>®</sup> 3 - 60	40	78	97	98	99	101	102	104
<b>LEVEL 4</b>								
SATELIT <sup>®</sup> 3 - 25	26	52	65	66	69	72	75	80
SATELIT <sup>®</sup> 3 - 45	36	72	89	91	92	95	97	101
SATELIT <sup>®</sup> 3 - 60	44	87	107	108	109	111	113	116

<b>Reference :</b>	<b>PDASAT3N25 / 45 / 60</b>
<b>Use :</b>	Capture and excitation devices designed for protecting the structures, buildings and open areas against lightning direct impacts.
<b>Testing mode:</b>	- At distance, by radio communication in 433 MHz / FM - Mechanical until 8m with a test perch
<b>Mode of operating :</b>	Polarization of the point until 30kV
<b>Material :</b>	STAINLESS STEEL + POLYCARBONATE
<b>Color :</b>	Metal and dark grey
<b>Power supply :</b>	- Battery NI-MH 4,8 V / 800 mAh - 6 solar cells (8V total)
<b>Dimensions &amp; weight :</b>	Ø200 x 990 – 5,5 kgs
<b>Models (excitation) :</b>	25 / 45 / 60 microseconds
<b>Standards :</b>	NFC 17-102 (September 2011)
<b>Warranty :</b>	2 years



## Remote tester

This tester has been designed specially to check the operating of **SATELIT<sup>®</sup>3 new generation lightning rods**, functioning with radiofrequency (433 MHz). It is equipped with 4 LEDs system which provides the test result, either positive either negative, with a discrimination of the potential default regarding to the illuminated LED.

<b>Reference :</b>	<b>TESTS3N</b>
<b>Use :</b>	Initial checkings, complete checkings, internal controls... of new generation SATELIT <sup>®</sup> 3 lightning rods.
<b>Mode of operating :</b>	Radio communication in 433 MHz /FM
<b>Dimensions &amp; weight :</b>	L 130 mm X l 65 mm X h 25 mm – 130 g



Visit us on :



Duval Messien Tél:+33 1 60 18 58 70 / Fax :+33 1 60 18 58 71 – Email : [contact@duval-messien.fr](mailto:contact@duval-messien.fr)  
30 rue de la Varenne – 94100 Saint Maur des Fossés – France - Web : [www.duval-messien.fr](http://www.duval-messien.fr)  
Agence Ouest (Nantes) Tél :+33 2 40 54 79 30 - Agence Sud Est (Velaux) Tél :+33 4 42 34 71 00