

## Lightning protection

### Early Streamer Emission



#### Active 4D® Early Streamer Emission

In compliance with the NFC 17 102 standard from September 2011



#### Early streamer Emission Use

The principle of the ESE **Active 4D®** is not only to initiate the upward leader, but to provide the energy needed to ensure its propagation until the junction with the downward leader.

A first device, called **impulse device**, stores the electrostatic energy present in the atmosphere at the approach of a stormy cloud

A second device called, **power device**, allows to collect and store the solar energy in power capacitors.

The **Active 4D®** is, thus, permanently pre-loaded of an important energy which enables him to constantly support the propagation of the tracer.

When a stormy cloud approaches, an integrated sensor measures the value of the electrical field and triggers the impulse device. The innovation of this lightning conductor comes from the use of a second integrated sensor which measures the intensity of the electrical discharge current.

When the downward leader enters in the lightning protection zone, the measured current increases highly. As soon as this current exceeds a characteristic threshold (1A), the power capacitors / the power device discharge and release the necessary energy for the propagation of the upward leader.

In the latter device, the head of the lightning conductor acts as a capture organ. It is consequently, electrically insulated from the earth.



ActivøControl

	Active 4D® 30 . AFB10304D				Active 4D® 60 . AFB10604D			
Rp (m)	T = 30 s				T = 60 s			
Height (m)	I	II	III	IV	I	II	III	IV
2	19	21	25	28	31	34	39	43
4	38	43	51	57	63	69	78	85
5	48	55	63	71	79	86	97	107
6	48	55	64	72	79	87	97	107
8	49	56	65	73	79	87	98	108
10	49	57	66	75	79	88	99	109
20	50	59	71	81	80	89	102	113
30	50	60	73	85	80	90	104	116
60	50	60	75	90	80	90	105	120

Franklin Technologie® - A full range of lighting and overvoltage protection.

In the continue framework of its products, **Franklin France** shall be entitled to modify specifications without notice

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### Storm detection operating

The **Active 4D®** has two sensors which measure the values of the electrostatic and electromagnetic fields.  
The value of the alarm threshold is configured from a software installed in a computer.  
The detection radius reaches about 30 kilometers.



### Lightning counter operating

The **Active 4D®** has a built in lightning strike counting device.  
The information on the lightning impact is transferred to the software and shows precised information such as the date of impact, the time of impact and even its current / intensity value (in amperes) of the lightning impact.



### Tests and analyzes operating

From the computer, can be run tests at distance to check the operating system of the **Active 4D®**.  
The test is run immediately, at distance with results.

- Graphic with-values of the tension generated by the solar cells
- Graphic with values of the battery tension
- Graphic and values of the temperature evolution of the lightning conductor in degrees Celsius
- Test and value of the VHV

## FEATURES

Reference :	AFB10304D / AFB10604D
Assembly :	Fitting of the lightning conductor in the mast n°1 (covering of 25cm), installation with a FRANKLIN France fixing device according to the height and resistance to the snow and wind
Use :	Outside protection for buildings / structures
Fixing :	Remote control at distance with its ActiveControl
Material :	Stainless Steel
Dimensions:	1000 mm x Ø max 250 mm
Weight :	5,2 kgs
Standards :	NFC 17 102: September 2011

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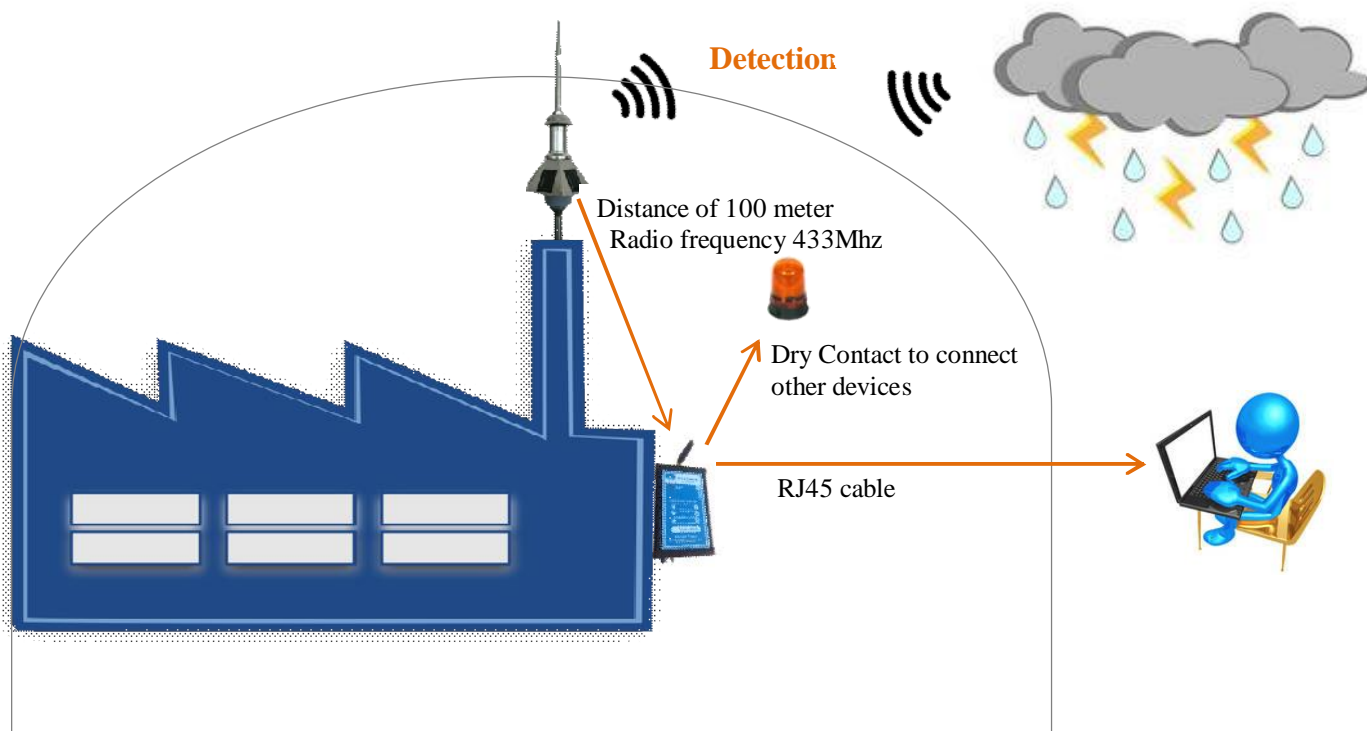
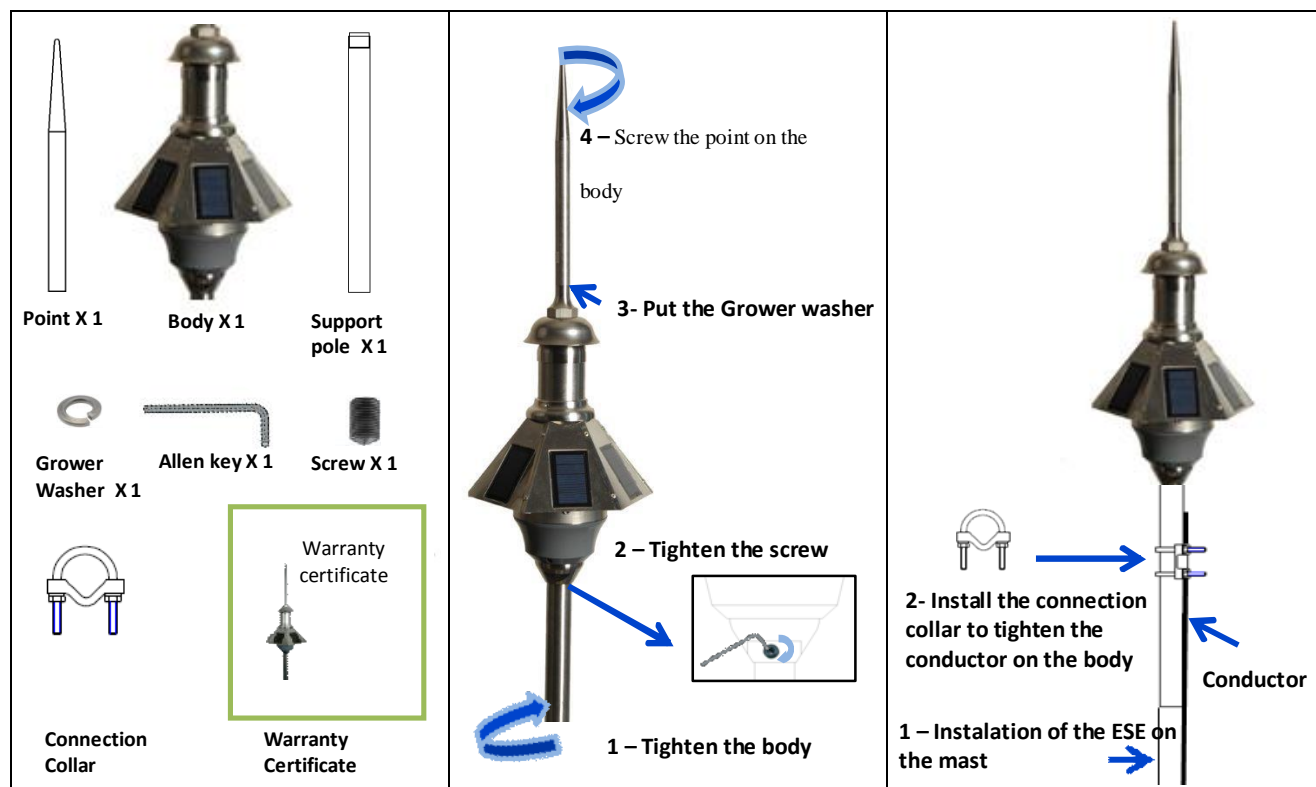
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## ASSEMBLY AND INSTALLATION



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