



BAKIRAL[®]

ESE LIGHTNING ROD PROTECTION SYSTEMS

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“Reliable”



NFC 17/102
2017



COUNTER



Warranty

- 1- Ese lightning rod conductors made of stainless steel durable material according to corrosion 5 year warranty outside conditions.
- 2- Ese lightning rod manufactured according to appropriate NFC 17 102 France Standard (Appendix C) in laboratory test.
- 3- ΔL & ΔD results can be tested with lightning rod conductor test electronic device after montage.
- 4- Ese lightning rod conductor has a ISO 9001-2008, ISO14001:2004, OHSAS 18001-2007, CE Declaration of community certificates.
- 5- Ese lightning rod conductor is durable against high discharge electric current and lightning.
- 6- Product tested V_{min} :988 kV in NFC 17 102 laboratory.
- 7- Invoice date is valid for starting warranty.
- 8- Periodic maintenance needs after montage by montager technical company (Wholesaler Distributor) every year.

PRODUCTION SYSTEMS

DURABLE AGAINST 100 °C (CELSIUS) HEAT TESTED 100 KA IN NFC 17 102 LABORATORY
NFC 17 102 CERTIFICATE

EARLY STREAMER EMISSION LIGHTNING PROTECTION

LIGHTNING PROTECTION RADIUS: 250 METERS (RP) FOR H:5 METERS

ΔT : 66 EARLY STREAMER EMISSION TIME

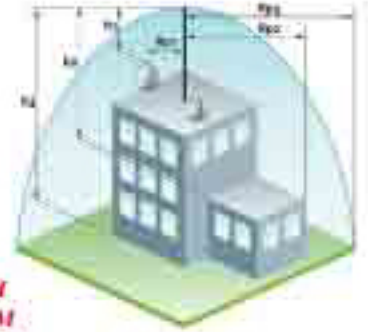
$RP2 = H(2D-H) + \Delta L(2D+\Delta L) H \geq 5 MT$

MOUNTING LEVEL CAN BE 5 METER OR UP

V: THE MOVING VELOCITY OF IONS OCCUR

ARROUND AIR TERMINAL TO LIGHTNING AND

IN STANDART $V=1M/s$



FOR PROTECTION LEVEL I D=20 M

FOR PROTECTION LEVEL II D=30 M

FOR PROTECTION LEVEL III D=45 M

FOR PROTECTION LEVEL IV D=60 M

ΔL (M): CALCULATED FROM $V(M/S) \Delta T(\mu S)$

D: THE ADVANCE STEP OF THE LIGHTNING OR THE JUMPING DISTANCE OF LIGHTNING DURING WAY.

The principal of operation for ESE terminals is to create an upward propagating streamer earlier than conventional air terminals or other objects on the earth by collecting and storing ground charge during the initial phase of a thunderstorm development and emits strong and consistent upwards streamers to intercept leaders.

A rod -type lightning conductor, connected to earth, efficiently works by altering, at its level, the equipotential which match the structures of the building it protects.

The emergence of the lightning conductor is an important factor in increasing the local electric field.

	2	3	4	5	6	10	15	20	30	45	60
LEVEL I	13	19	25	32	32	34	35	35	34	24	
	17	25	34	42	43	44	45	45	44	37	21
	19	29	38	48	48	49	50	50	49	43	30
	25	38	51	63	63	64	65	65	64	60	51
	31	47	63	79	79	79	86	86	79	76	60
LEVEL II	15	22	30	37	38	40	42	44	45	42	34
	20	29	39	49	49	51	53	54	55	53	46
	22	33	44	55	55	57	58	59	60	58	52
	28	42	57	71	71	72	73	74	75	73	69
	35	52	69	86	87	88	89	89	90	89	85
LEVEL III	18	27	36	45	46	49	52	55	58	60	58
	23	34	46	57	58	61	63	65	68	70	68
	25	38	51	63	64	66	69	71	73	75	73
	32	48	64	81	81	83	85	86	89	90	89
	39	58	78	97	97	99	101	102	104	105	104
LEVEL IV	20	31	41	51	52	56	60	63	69	73	75
	26	39	52	65	66	69	72	75	80	84	85
	28	43	57	71	72	75	78	81	85	89	90
	36	54	72	89	90	92	95	97	101	104	105
	43	64	85	107	107	109	111	113	116	119	120

ALFA SJ 60 μ s

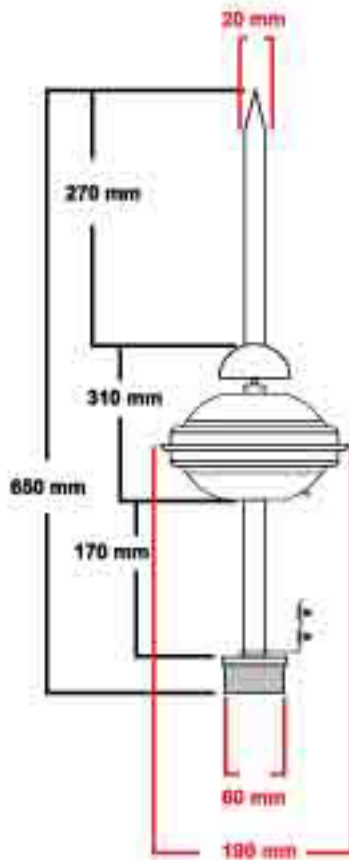
PRINCIPLE & OPERATING

Compact's principle is storing electrostatic energy present in the atmosphere at a stormy cloud approach, to release the ascending discharge excitation in good time.

This device operates at a stormy activity approach by an integrated sensor which measures the surrounding electrical field value.

It provokes then a polarity inversion of the lightning conductor head, creating a sudden amplification of the electrical field on its tip.

- 214 m protection diameter
- 304 l grade chrome high durability
- With convenient testing mechanism
- Remote testing option



Golden Head



CERTIFICATES





Bakiral Lightning Protection Systems Manufacturer is established in 2001 on principle of producing products with highest ratio of price and quality. According to this principle our company has engineered lightning protection systems that serving our clients in the best possible way of their needs. Our purpose is expanding our sectoral client base and production volumes as much as possible while without loosing our main principle of producing our products with highest quality and cheapest price.

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