

ESE LIGHTNING ROD

Kim thu sét Schwartz Compact S, Compact M, Core, Cosmos ESE

COSMOS

PRINCIPLE & OPERATING

Cosmos'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.

Advanced Triggering	60 μ s
Height	355 mm
Diameter (body)	96 mm
Diameter (Special top rod)	44 mm
Weight	3.1 Kg



LEVEL OF PROTECTION	I (D=20)	II (D=30)	III(D=45)	IV(D=60)
h(m)				
2	31	34	38	42
3	47	51	58	63
4	63	69	77	85
5	79	86	97	107
6	79	87	97	107
8	79	87	98	108
10	79	88	99	109
15	80	89	101	111
20	80	89	102	113
45	76	89	105	119
50	74	88	105	120
55	72	86	105	120
60	69	85	104	120

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CORE

PRINCIPLE & OPERATING

SCHWÆRTZ CORE is a product which give you and economical choice when you need a more limited protection. We designed it to work under hardest conditions and give the best protection.

Core'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.

Advanced Triggering	45 µs
Height	355 mm
Diameter (body)	96 mm
Diameter (Special top rod)	44 mm
Weight	2.9 Kg



LEVEL OF PROTECTION	LEVEL OF PROTECTION			
	I (D=20)	II (D=30)	III(D=45)	IV(D=60)
h(m)				
2	25	28	32	35
3	38	42	48	53
4	50	56	64	71
5	63	71	81	89
6	63	71	81	90
8	64	72	82	91
10	64	72	83	92
15	65	73	85	95
20	65	74	86	97
45	60	73	90	104
50	58	72	90	105
55	55	71	89	105
60	51	69	89	105

COSMOS & CORE

FEATURES

The device chooses the streamer which has the capacity to become an ascending leader,
It is completely autonomus,
It is a nature friendly product
Cloud polarity consideration,
Head curve radius optimized to reduce the corona effect with the best way.
High resistance to the corrosion thanks to its 100% manufacture in 316L stainless steel and aerospace grade materials,
In compliance with NFC 17 102 September 2011

PROTECTION RADIUS

Protection radius of Schwartz lightning rod is related to its height (h) in proportion to the surface area to protect, its efficient according to selected protection level.

According to NFC 17-102 standard – September 2011, its calculation is made as follows:

Rp (h)(m) shows the protection radius at a indicated height h;
r(m)

- 20m for the protection level I;
- 30m for the protection level II;
- 45m for the protection level III;
- 60m for the protection level IV;

Δh (m) indicates values according the height of the ESE end in a horizontal plane to the highest point of the place to protect.

$$\Delta h = \Delta = \Delta T \times 10^2$$

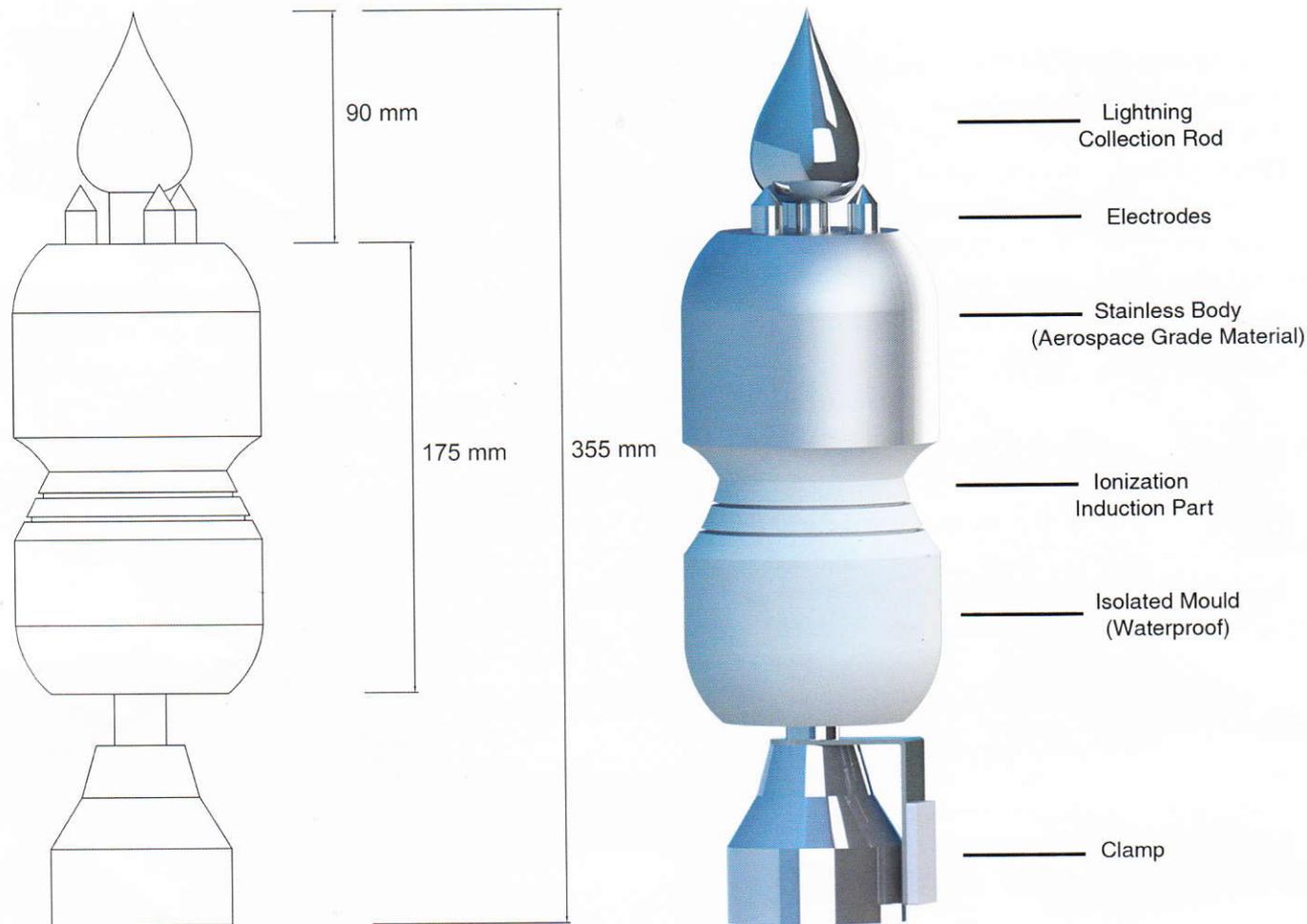
Our tests on the field and laboratories shows that Δ is equal to the efficiency obtained during the ESE evaluation tests.

The protection level is set and calculated according to numerous parameters including loss of life and economic risks, the average local keraunic striking map, the impact on environment, etc...

Protection is indicated with 4 power levels to help you to make the best choice.



COSMOS & CORE TECHNICAL DETAILS



DESIGN PHILOSOPHY: THE NEED OF ART

Why do you need a better design for anything?

We believe everything in life has to have a reflection in design which is, both easy to use and aesthetic. We design and sell products which you can proudly mount on your home and work places. On the rainy nights they will be your protectors and on the starry nights they will shine for you...

COMPACT SERIES

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.

COMPACT M

Advanced Triggering	35 μ s
Height	335 mm
Diameter (body)	96 mm
Diameter (Special top rod)	20 mm
Weight	2.6 Kg

LEVEL OF PROTECTION	I (D=20)	II (D=30)	III(D=45)	IV(D=60)
h(m)				
2	21	23	27	30
3	31	35	41	46
4	42	48	55	61
5	53	60	69	77
6	53	60	70	78
8	54	61	71	80
10	54	62	72	81
15	55	63	74	84
20	55	64	76	86
45	49	63	80	94
50	46	62	80	94
55	42	60	79	95
60	38	58	79	95



COMPACT SERIES

COMPACT S

Advanced Triggering	25 μ s
Height	335 mm
Diameter (body)	96 mm
Diameter (Special top rod)	20 mm
Weight	2.5 Kg

LEVEL OF PROTECTION	I (D=20)	II (D=30)	III(D=45)	IV(D=60)
h(m)				
2	16	19	22	25
3	25	29	34	38
4	34	39	45	51
5	42	49	57	62
6	43	49	58	63
8	43	50	59	64
10	44	51	61	65
15	45	53	63	66
20	45	54	65	67
45	37	53	70	69
50	34	51	70	72
55	28	49	69	75
60	21	46	68	84



PROTECTION RADIUS

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Rp (h)(m) shows the protection radius at a indicated height h;
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- 60m for the protection level IV;

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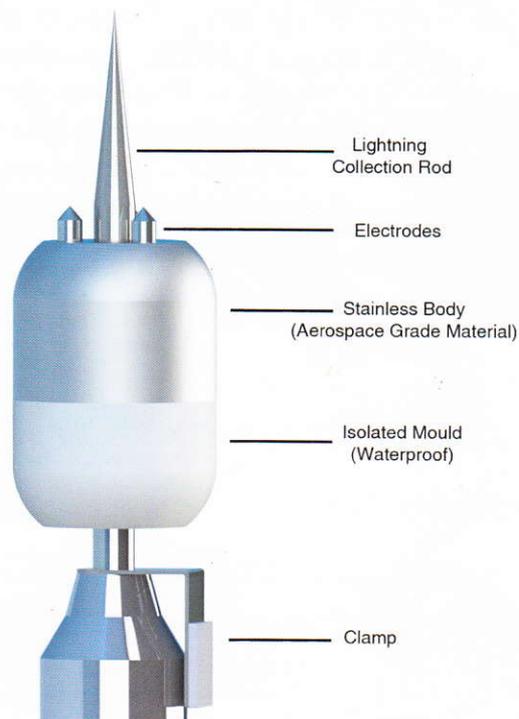
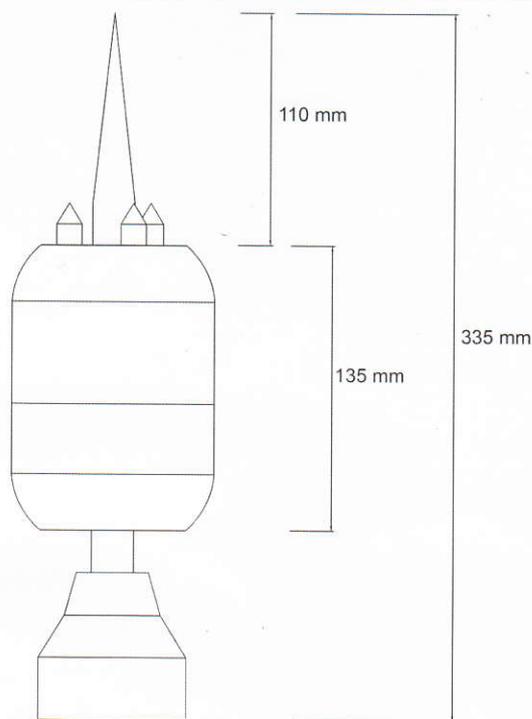
COMPACT SERIES

FEATURES

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COMPACT TECHNICAL DETAILS



TECNICAL INFORMATION

$\Delta h(m)$ indicates values according the height of the ESE end in a horizontal plane to the highest point of the place to protect. $\Delta h = \Delta = \Delta T \times 10^2$

Our tests on the field and laboratories shows that Δ is equal to the efficiency obtained during the ESE evaluation tests.

The protection level is set and calculated according to numerous parameters including loss of life and economic risks, the average local keraunic striking map, the impact on environment, etc...

Protection is indicated with 4 power levels to help you to make the best choice.

LIGHTNING COUNTER

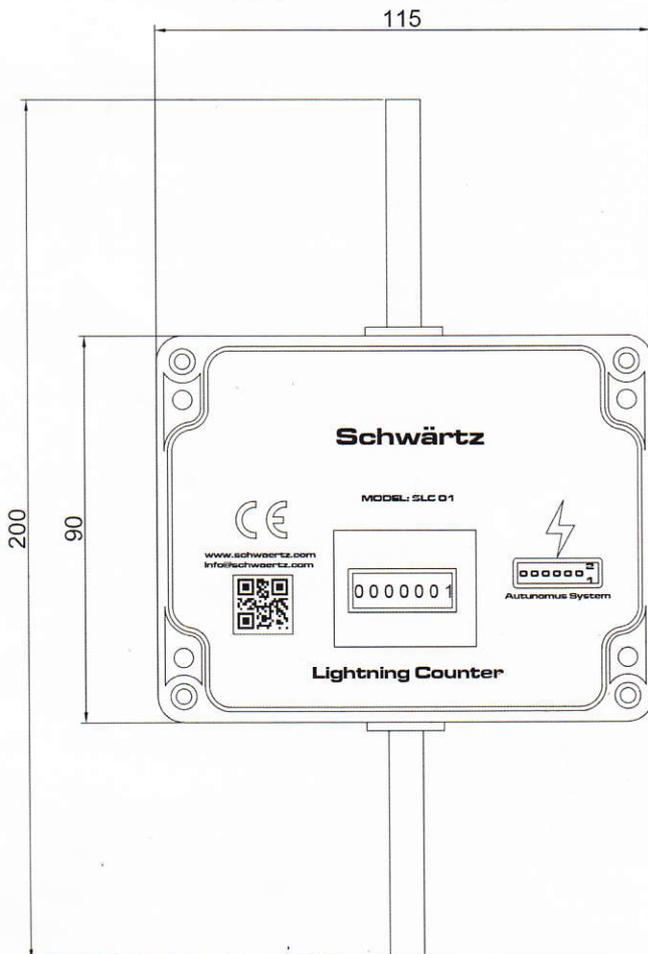
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SLC 01 LIGHTNING COUNTER

PRINCIPLE & OPERATING

Schwartz Lightning counter gives you the chance to learn your risk and lightning density. We designed our counter elegantly and functionally. All control operators can understand easily and it looks good on the outside design of the building.

SLC 01 Lightning counter has been designed for detecting and counting lightning activity on the lightning terminal. It's bounded to the down conductor. The use of such an equipment allows to accurately maintain and to secure lightning protection installations through routine inspections. The controller itself does not need any maintenance within the limit of the counting range and it operates without any internal or external power supply. It is completely autonomus.



Ordering code	SLC 01 Lightning Counter
Counting range	0000000 to 9999999
Counter threshold (Detected minimum discharge current)	1 kA, 8/20 μ s wave
Detected maximum discharge	100 kA, 8/20 μ s wave
Permanent working current	none
Input and output conductors	\varnothing 8 mm (50 mm ²)
Necessity of circuit-breaker	no
Operating temperature range	- 30 °C to + 80 °C
Enclosure's protection index	IP67
Dimensions	115x90x80 mm