

MICRO SENSE EARTHING

Total
Earthing
Solution

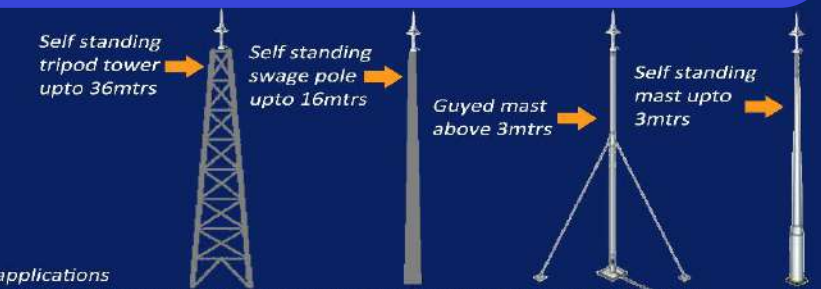


Address : Office no - 205, Vrindavan angan Society, Pokle vast,
Dhayari goan, pune, Maharashtra - 411041

Contact : 9767850951 / 7741922246

Selection of Micro Sense liva lightning pole/mast/towe

- GI (Galvanized Iron) Mast
- AL (Aluminium) Mast
- SS (Stainless Steel) Mast
- FRP (Fibre Reinforce Plastic) Mast
- Tripod Tower
- Swage Pole



NOTE: Based on environmental conditions and applications mast materials and types shall be selected. Consult lightning protection design consultant/supplier for recommendation.

Selection of standard recommended down conductor

According to N FC 17-102 standard recommendation, minimum 50sqmm crosssection area is require for a conductor to be used as a lightning downconductor.

For special purpose low impedance down conductor can be used as lightning downconductor to eliminate lightning induction effect to near by power cable or conducting metals/structures.

The lightning downconductor shall be physically contact to the structure to avoid unnecessary transient flash over.



Complete autonomy with proven efficiency

During a storm the ambient electric field may rise to between 10 to 20 kV/m. As soon as the field exceeds a thresold representing the minimum risk of a lightning strike, the LIVA lightning terminal is activated. It draw its energy from the ambient electric field the energy required to generate high voltage pulses, creating and propagating an upward leader. No other power sources are required, and no radioactive components are used.

LIVA has proven commitment to research and development and continuously sets new benchmarks for the efficiency of lightning conductors.



Ascending discharge on an LIVA during the test procedure in METU.for advance time gain measurement



LIVA CPRI Certificates

Selection of Lightning strike counter for recording



Standard
Lightning
Strike Counter

Lightning strike counter is designed to count and record the lightning strikes captured by lightning protection system such as active lightning rod, franklin rod and faraday cage. The lightning counter is necessary to determine whether the lightning rod recieved any lightning strikes. The record will be display through a 6 digit mechanical display unit. It is enclosed inside IP67 enclosure, so can be install for outdoor application. It works on the principle of induction when a lightning current discharge to ground through down conductor. The device does not need any maintenance within it operation limit. It does not require any additional power supply for its operation.

Email ID : enquiry.mse1@gmail.com / ranjitgurav1988@gmail.com

We are leading manufacturer of Chemical Earthing.
We try to provide best Safety Solution to our valuable customers.

OUR PRODUCTS

G.I.EARTH ELECTRODE - PIPE IN PIPE / STRIP

- Hot Dip galvanization is performed to ensure the longer life of the earth electrodes to protect from corrosion.
- GI earthing electrode is designed for fast fault current dissipation
- Completely maintenance free hence eliminating maintenance cost.
- Best quality Crystalline conductive compound is pressurized filled and ensuring highest conductivity to withstand any leakage current.

Model	Length Mtr.	Terminal Size	Outer Pipe Diameter mm	Inner Pipe
40 MSGI	1,2 & 3	40 x 6	40	---
50 MSGI	1,2 & 3	40 x 6	48	25
80 MSGI	0.5,1,2 & 3	50 x 6	76	48
88 MSGI	1,2 & 3	50 x 6	88	48



PURE COPPER EARTHING ELECTRODE

Solid Copper Earthing Rod OR Pure Copper Earthing Rod is made from 99.9% pure electrolytic copper. Solid copper rods offer greater resistance to corrosion. They are ideally used in applications where soil conditions are very aggressive. Solid copper Earth electrodes are used when better conductivity and corrosion resistance is preferred.

Best quality Crystalline conductive compound is pressurized filled and ensuring highest conductivity to withstand any leakage current .

Model	Length Mtr.	Terminal Size	Outer Pipe Diameter mm
40 MSC	1, 2 & 3	40 x 6	40
50 MSC	1, 2 & 3	40 x 6	48
80 MSC	1, 2 & 3	50 x 6	76



COPPER BONDED EARTHING ELECTRODE

It is made from low carbon steel with a high tensile strength of at least 600 N/mm². Low carbon steel core are molecularly tended with 99.9% pure electrolytic copper. It helps in dissipating the fault current to help your assets being damaged from the hazards of fault current. The copper layer is bonded to steel core through an electrolytic process that ensures a perfect and tough bonding between the steel and the copper the earthing rods are fully covered with copper without any cracks, holes, cavities etc. and prevent exposure of the steel core to soil and moisture. Therefore it can resist corrosion better and has capacity of being driven to great depths.

Model	Length Mtr.	Terminal Size	Outer Pipe Diameter mm
50 MSCB	1, 2 & 3	40 x 6	48
80 MSCB	1, 2 & 3	50 x 6	76



SOLID COPPER BONDED EARTHING ROD

Copper coated steel grounding rods are made from low carbon Steel & are molecularly coated with 99.9% pure electrolytic copper. This conductor is high strength, excellent elasticity as steel but also good conductivity and corrosion resistance like copper. In Grounding rods, pure copper atom through molecular structure plated to the steel core.

Copper Bonded Rods help in dissipating the leakage current to help any assets being damaged from hazards of the same.

These rods are manufactured according to international standards.

copper layer is very helpful in extreme soil conditions such as excessive salt / moisture content, where the copper provides superior corrosion resistance and extra ordinary long life.

Model	Length Mtr.	Terminal Size
17.2mm MSCBR	1, 2 & 3	40 x 6
25 mm MSCBR	1, 2 & 3	40 x 6
32 mm MSCBR	1, 2 & 3	50 x 6

BACKFILL COMPOUND

- MS (Safe Ground) Ground Enhancing Compound – MS PLUS - is a Superior conductive material that caters to toughest grounding problems.
- It makes a conductive layer around the electrode tightly.
- MS Back Fill compound is hygroscopic in nature and have best moisture retaining qualities.
- No need to add water over time
- Hence makes whole system a maintenance free.
- Keeps the soil moist for a longer period and lowers ground resistance.
- MS -PLUS is environment friendly. Compatible with all type of Sands
- Packed in 25kg & 10 kg



MICRO SENSE LIVA LIGHTNING PROTECTION SYSTEM

Advance LIVA lightning terminal references



Calculation of protected areas or zones

	LEVEL - I					LEVEL - II					LEVEL - III					LEVEL - IV								
MODEL NO -	LAP-DX 250	LAP-AX 210	LAP-BX 175	LAP-BX 125	LAP-CX 070	LAP-CX 040	LAP-DX 250	LAP-AX 210	LAP-BX 175	LAP-BX 125	LAP-CX 070	LAP-CX 040	LAP-DX 250	LAP-AX 210	LAP-BX 175	LAP-BX 125	LAP-CX 070	LAP-CX 040	LAP-DX 250	LAP-AX 210	LAP-BX 175	LAP-BX 125	LAP-CX 070	LAP-CX 040
2	48	40	31	23	16	16	58	44	35	26	19	19	51	48	40	30	22	22	58	53	44	34	25	25
3	69	60	49	35	23	23	74	66	54	39	28	28	81	73	60	45	39	33	88	79	66	50	43	37
4	82	80	68	58	38	31	88	87	72	52	40	37	100	97	80	60	52	44	117	109	88	67	58	49
5	115	100	82	58	49	39	123	109	90	65	56	46	135	121	100	75	65	54	146	131	110	84	72	61
6	115	101	81	58	48	40	133	109	88	66	56	46	143	121	101	76	66	54	156	131	111	84	71	62

The radius of protection R_p of a LIVA is given by the French standard NF C 17-102 of Seo 2011. It depends on the initiation advance ΔT of the LIVA measured in the high voltage laboratory, on the levels of protections I, II, III & IV calculated according to the lightning risk assessment guide (Appendix-B of the french standard NF C 17-102) and the height h of the lightning conductor over the area to be protected (minimum height = 2m)

R_p = Radius of protection in a horizontal plane located at a vertical distance h from the LIVA tip
 h = height of the LIVA tip above the surface(s) to be protected

D = standardized striking distance

ΔL = initiation advance

$R_p = \sqrt{\{h(2D-h) + \Delta L(2D+\Delta L)\}}$ for $h \geq 5$

ΔT = initiation advance measure during efficiency test according to Appendix-C of the French standard NF C 17-102.

