



SURYA POWER INDUSTRIES

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AN ISO 9001:2015 CERTIFIED COMPANY
suryapowerindustries.com
www.spi.ind.in



ABOUT SURYA POWER INDUSTRIES

SPI is a trusted brand with 8 years of experience. It uses this experience to make its products. Until now, SPI has protected its customers with its lightning protection products, always keeping good quality.

Our main goal is to give you the products you need at a lower price. We also help you choose the right products by checking the material and size carefully. Because of our knowledge and experience, we make sure to offer all the right options. **SPI** has become known in the market with a fresh approach and expert team, even though there are already other lightning rod companies. **We work with knowledge** to give you the best choices for today's tough competition.

Where Do We Get Our Power?

As the **Surya Power Industries** family, we know our power comes from the quality service we give and the happiness of our customers. We believe that trust and customer satisfaction help us meet new customers. We continue our work with this goal. Loving and helping people is an art for us.

We want to share this art with you by offering the most reliable products, the best quality, the lowest prices, and the best service in this industry.

Because; we care about you.



SURYA POWER INDUSTRIES

This is Surya Power Industries. We are proud that our success has grown so much over the years. This success comes from our products, which combine high-quality materials with the latest technology. Keep reading to learn more, and feel free to contact us if you have any questions about our products and services.

We offer: Lightning Protection System Installation, Active Lightning Rod Manufacturing

- Chemical Earthing Electrodes, Grounding Systems
- Earthing Pit Covers, G.I. Earthing Strips, Copper Earthing Strips
- Special Custom Products

01:- SURYA POWER ESE LIGHTNING ARRESTER

→GENERAL DESCRIPTIONS

Surya Power Guard Early Streamer Emission (ESE) lightning terminal can detect and act before any other object within its protection area, based on its protection level. It captures lightning strikes and safely sends them into the ground through a planned and secure system.

The Surya Power Guard ESE Terminal works by creating ions using its special ion generation channels. This system helps the terminal safely carry extremely high voltage lightning strikes — up to 200kA — into the grounding system and then into the earth, in the safest way possible.



Technical Characteristics

Material	Stainless Steel
Weight	4.20 kg
Ext. Diameter	187 mm
Length (h)	63 cm
Box Length	67 cm
Rod Diameter	20 mm
Adapter Diameter	65.5 mm Male
IP Code	IP 67
Working Temperature	-25°C/90°C
Type of Terminal	Electroatmospheric
Internal Insulation	High Density Polyurethane Resin
Standard	NFC 17-102/2011
Grounding Method	Wire/Tape
Max. Current Withstand (10/350µs)/>2.5 MJ/Q	200kA
Advance Time (AT)	60.0 µs

Tested and certified according to NFC 17- 102/2011 Early Streamer Emission Standard including DeltaT (AT) advance time test, current withstanding test to determine **SPIPOWER Guard** protection levels.

> High Salt-mist treatment

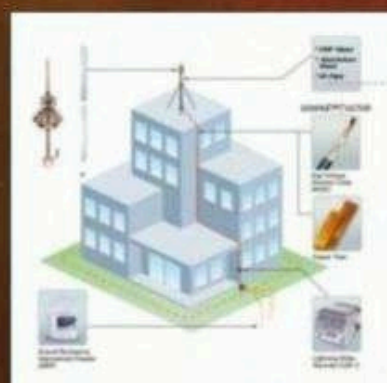
> Humid sulphurous atmosphere treatment

> Current withstanding test: 200kA (10/350µs).

> Advance time DeltaT (ΔT) test

SPIPOWER Guard ESE Lightning Terminal is exclusive-ly suitable to install for high-rise build-ings, airports, naval bases, open areas, critical military zones, stadiums and highways.

High voltage impulse emitter	ION GENERATOR unit	Completely autonomous
Testable with iTorrent Testers	30% more efficient than passive systems	Fully compatible with the standards
Electroatmospheric capacitor-inside	20 years manufacturer warranty	-



Protection Level of "Surya Power Guard"

Height(m)	Protection Radius(m)			
	Level 1	Level 2	Level 3	Level 4
2	31	35	39	43
3	47	52	58	64
5	79	86	97	107
10	79	88	99	109
20	80	89	102	113

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(02) SUSH ESE LIGHTNING ARRESTER



- ➔ 304L (Inox) Stainless Steel Design – Suitable for all weather conditions
- ➔ Mechanical Test – Passed for durability and strength
- ➔ Environmental Test
 - a) Salt Mist Test - 3 Cycles - 72 Hours
 - b) Humid Sulphur Test - 7 Cycles - 168 Hours
- 200 kA (10/350 μ s) Lightning Impulse

- ➔ Current Test
 - AT = 60 μ s - Early Streamer Emission Test
- ➔ Suitable for use with a variety of down conductors - tape / strip, round conductor, isolated/insulated cables / High Voltage Shielded Cables, etc.

SURYA POWER INDUSTRIES SIGMATECH LIGHTNING ARRESTER

➔ (03) SURYA POWER SIGMATECH LIGHTNING ARRESTER

- ➔ The Safe Early Streamer (ESE) Lightning Terminal is perfect for high-rise buildings, airports, naval bases, open areas, military zones, stadiums, and highways.
- ➔ It is tested and certified according to NFC 17-102/2011 Early Streamer Emission Standard. This includes the DeltaT (Δ T) advance time test and the current withstanding test to confirm safe protection levels.

> Current withstanding test 200kA (10/350ms)	> Time Lag, Gain Measurements, DeltaT (AT)
> Salt mist treatment	> Humid sulphurous atmosphere treatment
>5 +ve & 5-ve Current Discharge Test	-

TECHNICAL CHARACTERISTICS

Model	Sigmattech	Ext. Diameter	194 mm
Standard	NFC 17-102/2011 e-3.5	Height	627 cm
Current Impulse Withstand (waveform 10/350 μ s)	200KA	Box Length	81cm
Early Streamer Emission Activity DeltaT (AT)	60 μ s (Micro Second)	Rod Diameter	20 mm
Material	Stainless Steel 316	Adapter Diameter	60mm Male
Weight	2.9 kg	Environmental Protection Level	IP67

>High voltage impulse emitter	> 30% more efficient than passive systems	>ION GENERATOR unit	> Fully compatible with the standards
> Completely autonomous	> Electroatmospheric capacitor-inside	> Testable with ORBITAL Testers	> 20 years manufacturer warranty

The protection radius (Rp) of Safe ESE terminal is calculated using the following formula as defined in NFC 17-102 (September 2011), namely:

$R_p(h)/2rh-h$ and $/2rh-h+(2r+A)$ for $h>5m$

$R_p = h \times R_{p5}/5$ for $2>h<5m$ R_{p5} = value of R_p from EQn.(1) when $h=5m$

$r = 20m$ for protection level I (Very High Protection)

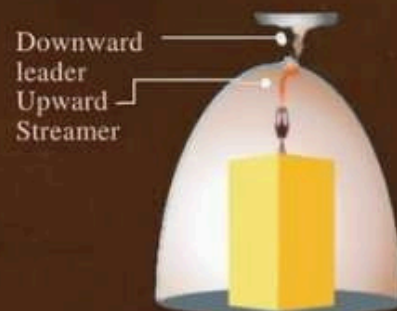
= 30m for protection level II (High Protection)

= 45m for protection level III (Medium Protection)

= 20m for protection level IV (Standard Protection)

= 60m for protection level IV (Standard Protection)

AT Triggering time advantage



Early streamer emission (ESE) Lighting rods

(04) SURYA POWER DIGITAL LIGHTNING STRIKE COUNTER

GENERAL DESCRIPTIONS

Surya Power Digital Lightning Strike Counter is designed to count and record lightning strikes captured by Surya Power Lightning Protection Systems. Its strong and long-lasting parts make Surya Power the perfect addition to any lightning protection system.

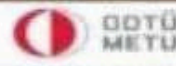
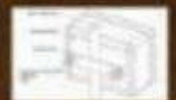
> Fully compatible with standards	> 5 years Warranty under SPI Power experience
> Displaying screen option 8 digits	> Testable with SPI Power Testing Units Easy Application
> High Quality Plastic and Stainless Steel Material	

TECHNICAL CHARACTERISTICS

Current Sensitivity	500 A 8/20 ms impulse	Weight	0.67 kg
Operating Range	1500 A, Max. 200kA 8/20 ms	Water Resistance	IP67
Displaying	Digital 6 Digits	Operating Temperature	-40 ~ +85 °C
Dimensions (mm)	100(D) x 68(H) x 70(W)	Count Number	0-999999 times
Type	Waterproof Lightning Strike Counter	Working Humidity	≤95%
Mounting/Connecting	Double D6-10 UV Plastic Cable or 50x5 mm tape		

CONDUCTING OPTIONS

	Flat Tape: 50 x 5 mm
	Cable & Wire: 6-10 mm Ø



(05) ESE LA INSTALLATION ACCESSORIES



Insulator



U Clamp



U Anchor Bolt



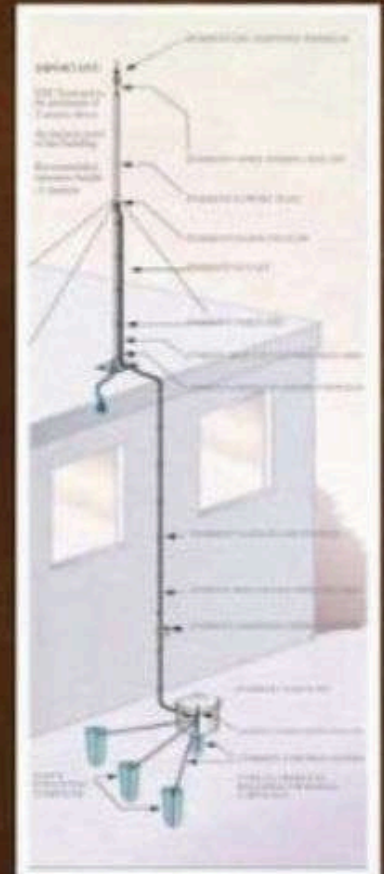
Anchor Bolt



Stray Wire



GI Mast





(06) SURYA POWER EARTHING PIT COVER

> Designed to facilitate handling and storage.

> Resistant to UV rays.

> Good resistance to chemical substances.

> Attached using two individual screws



Reference	Dimensions (mm)	Material	Weight (kg)
SPI MICRO (6")	155 (D) X 230 (H) X 240 (B)	HDPE	0.4
SPI MINI (7")	177 (D) X 230 (H) X 270 (B)	HDPE	0.7
SPI BIG (11")	260 (D) X 265 (H) X 340 (B)	HDPE	1.2
SPI SQUARE	300 (D) X 300 (H) X 275 (B)	HDPE	2.2
SPI PEP-S	245 (D) X 245 (H) X 195 (B)	POLYMER	2.4
SPI PEP	308 (D) X 308 (H) X 215 (B)	POLYMER	2.5
SPI PEP-B 300	500 (D) X 500 (H) X 315 (B)	POLYMER	5.0

Certification: Load Test Report, UV Stability & Other Test
Compatibility: IEC 62561-5(2018) Standard & Other Standard

(07) COPPER BONDED SOLID EARTH ROD



- ➔ Copper coated rod as per standard.
- ➔ 100 to 250 micron thick copper coating.
- ➔ Highly conductive and anti-corrosive.
- ➔ More than 15 years of durability.
- ➔ This conductor is high strength, Excellent elasticity

Model	Rod Diameter (mm)	Length (Meter)	Copper Bonding
SPI-14.2/GBR	14.2 mm	1, 2 & 3 mtr	100 to 250 micron
SPI-17.2/GBR	17.2 mm	1, 2 & 3 mtr	100 to 250 micron
SPI-20/GBR	20 mm	1, 2 & 3 mtr	100 to 250 micron
SPI-25/GBR	25 mm	1, 2 & 3 mtr	100 to 250 micron
SPI-32/GBR	32 mm	1, 2 & 3 mtr	100 to 250 micron

TESTED FROM NABL & CPRI LAB.

(08) COPPER BONDED CHEMICAL EARTH ELECTRODE

- ➔ Copper coated rod as per standard, Long Service life
- ➔ 100 to 250 micron thick copper coating.
- ➔ Inner flat electrode is copper coated.
- ➔ More than 15 years of durability.
- ➔ Very High conductivity, corrosion resistant.
- ➔ Inner filled Crystalline conductive Compound.

Model	Rod Diameter (mm)	Length (Meter)	Copper Bonding
SPI-48/GBR	48 mm	1, 2 & 3 mtr	100 to 250 micron
SPI-76/GBR	76 mm	1, 2 & 3 mtr	100 to 250 micron

TESTED FROM NABL & CPRI LAB.



(09) GI-EARTH ELECTRODE



Model	Rod Diameter (mm)	Length (Meter)
SPI-48/GIR	48 mm	1, 2 & 3 mtr
SPI-58/GIR	58 mm	1, 2 & 3 mtr
SPI-76/GIR	76 mm	1, 2 & 3 mtr

TESTED FROM NABL & CPRI LAB.

- ➔ Hot dip galvanized for corrosion protection.
- ➔ Moisture booster chemical bags provided for low earth resistance.
- ➔ Designed for fast fault current dissipation.
- ➔ Easy & Fast installation on site.
- ➔ Low maintenance on site.
- ➔ Most suitable for soil condition with pH value 5.0 & 8.0.

(10) PURE COPPER EARTH ELECTRODE & ROD

- ➔ Used 100% copper for long life.
- ➔ Designed for fast fault current dissipation.
- ➔ Low maintenances on site.
- ➔ Easy & Fast installation on site.
- ➔ Most suitable for soil condition with pH value 5.0 & 8.0.
- ➔ Moisture booster chemical bags provided for low earth resistance.

MODEL	Rod Diameter (mm)	Length (Meter)
SPI-48/PCR	48 mm	1, 2 & 3 mtr
SPI-76/PCR	76 mm	1, 2 & 3 mtr

TESTED FROM NABL & CPRI LAB.



(11) "SURYA POWER" BACKFILL COMPOUND



QUANTITY NO. OF BAGS	
25	1
15	1

- ➔ No Need to add water overtime.
- ➔ Resistivity less than 0.2 ohm-meter.
- ➔ The soil moist for a longer period and lowers ground resistance.
- ➔ Graphite based having some more.
- ➔ Non toxic content.
- ➔ Its maintain conductivity without continuous presence of water.
- ➔ Tested from NABL accredited Lab.

(12) "SURYA POWER" ALL TYPES OF G.I. STRIP

HOT DIP GI Earthing Strips covered with a protective coating of zinc that greatly to reduce its tendency to corrode and extends its expectancy.

- ➔ Zinc Coating with minium 86 Microns extends life expectancy upto 15 years
- ➔ All Size GI Strips Available starting from 25x3mm, 25x6mm, 50x3mm, 50x6 mm, 100x6mm, 100x12mm



(13) "SURYA POWER" COPPER EARTHING STRIP

- ➔ Copper Earthing Strips used as HV electrodes for standard earthing arrangements on ground mounted LV MV HV substations.
- ➔ Copper Strip protect against atmospheric corrosion and hence provide longer life under corrosive atmosphere.
- ➔ All Size Available From 25x3mm to 100x10mm With EC-Grade & 99.9% Cu Purity

(14) COPPER / COPPER BONDED / SPIKE LIGHTNING ARRESTER

Spike Lightning Arrestor Is A Metal Rod, Made of Copper And, Used As Part of Lightning Safety To Protect Tall or Isolated Structures (such As The Roof of A Building or The Mast of A Vessel) From Lightning Damage.

Standard : IEC - 62305

Material : Pure Copper / Bonded Copper / Hollow Copper

Technology : Conventional Type



DIAMETER	LENGTH
16mm (Solid Rod)	1 mtr
16mm (Solid Rod)	2 mtr
25mm (Hallow Pipe)	1 mtr
25mm (Hallow Pipe)	2 mtr

(15) CABLE TRAY

Cable tray system is used to support insulated electrical Cables used for power distribution, control & communication. Cable trays are used as an alternative to open wiring or electrical conduit systems & are commonly used for cable management in commercial & industrial construction. They are especially useful in situations where changes to a Wiring system are anticipated, since new cables can be installed by laying them in the tray, Instead of pulling them through a pipe. Being transparent it makes it easier to identify, distribute & Make a visual check of the network.

Material Available

1. Galvanized steel
2. Stainless steel
3. Aluminum.

Surface Finish

1. Pre Galvanized steel
2. Hot Dip Galvanized
3. Powder Coated



(A) PERFORATED TYPE

Perforated type

1. Vertical perforation
2. Horizontal perforation (depth) perforation

(B) LADDER TYPE

→ Cable ladder are preferred for supporting high volume or heavy cabling, especially if there are long spans between support

- a) Bolted ladder cable tray Basically it is send in knocked down condition to be assembled at sites.
- b) Welded ladder cable trays



**(17) APPLICATION INDUSTRIES****TELECOMMUNICATIONS**

Protecting metal and thus conductive structures is essential to prevent loss of service and loss of life.

**GAS & PETROLEUM FACILITIES**

Metal components structures make these facilities more dangerous to lightning strikes and surges. A lightning strike could be hazardous for the general public after such a possible accident.

**WIND-FARMS**

Orbital advance systems help to minimise the risk of lightning surges on wind turbines.

**AIRPORTS**

Lightning protection system installation is essential to protect the safety of thousands passengers and flight safety.

**ELECTRICITY MANUFACTURING COMPANIES**

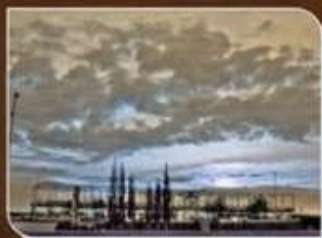
To prevent possible incidents, wide open areas where large numbers of people to gather needs a specific safety systems.

**SOLAR PANELS**

Solar panels are assumed as 100% vulnerable to any Lightning strikes. Investors and governments itself generally decide to protect their full plants under a reliable Lightning protection systems.

**ELECTRICITY MANUFACTURING COMPANIES**

Delicate structures of such facilities endure a vast number of lightning strikes. Reducing the effects is key to maintaining the efficient service.

**INDUSTRIAL AREAS**

Protecting machinery and production equipments is vital for such buildings. Any Lightning accident may cause halt of production for long periods.

**HOTELS & HIGH RISE BUILDINGS**

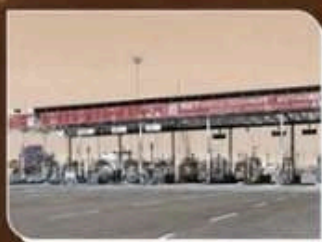
Such buildings and high rise structures must be prepared for the probable effects of lightning strikes and surges and to protect the people in them.

**SPORTS COMPLEXES**

At a time, thousands of people gathering in a stadium needs a serious protection. Such a complex without a Lightning protection system may mean a loss of hundreds of people life.

**NUCLEAR PLANTS**

At high-risk facilities such as nuclear plants, having strict safety standards and rules ewhas to be adhered to prevent severe consequences to the environment and people.



Highway, Toll Plaza, Tunnel On Regular Basis Thousand Of Vehicles And Millions Of People Passes Through Highway And Toll For Their Safety Earthing, Lightning Protection System Becomes Must Installed Things For Safety.

Contact us



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