PAXTON EARTHING
Save power for better tomorrow



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About Us

We are an Established unit at Bareilly manufacturing the Chemical Earthing, Advance lightning Arrester, Aviation Light, Ceiling Fan, LED Bulb, Street Light & Electronic Balast. The Advance lightning arrester is the modern concept of electrical earthing system and lightning protection. It is now widley accepted and used in the Highbride Buildings, Maals, Industries, Hospitals, Refinries, etc. it is being extensively used in industry, commercial, multi-story apartments, for providing safety wealth from electric shocks and prevention of electrical fires & hazards, It also prevents malfunctioning of electric and Lightning Arrester electrical equipments due to ineffective earthing. Protech System & Solutions is certified with CPRI, ROHS, CE & ISO. The Chemical Earthing Electrodes manufactured by us totally maintenance free and have estimated life span of fifteen years, and specialized in providing protection to people property from a small resistance to large Industrial & Commercial establishment.

We carry out the total consultation from concept to commissioning stage generally defined as under:

FOR NEW PROJECTS:
1- Identification of site for each earth pit
2- Pre-soil Testing
3- The Capacity of the earth electrode (Diamentions)
4- Type of Electrode.
5- Supervising Installation
6- Testing of the installation
7- commissioning/concreting the equipment, report preparation and verification with the standard parameters
8- Handling of the installation
9- Presentation of required documentation in the terms of Designing of earthing, selection of make (with two or more options) model, type, size, calculation for life cycle
10- Complies to IS, IEEE, etc
11- FOR EXISTING PROJECTS: The scope of the auditing will be generally as under :
a- Physical Inspection.
b- Ohmic value test for the earth pit
C- Test for voltage B/W neutral and earth
E- Supply voltage at the equipments in generator or line voltage at the premises after the earthing pits are auditing following actions are suggested
1- The earthing pits will be classified into three categories
a- Acceptable
b- Not acceptable
c- Defective but repairable
2- We shall issue certificate of test for the acceptable earthing pit found ok
3- The reason for not accepting the earthing will be specified clearly as under:
i- Discontinuity at the level of the earth pit
ii- Deterioration of the coopperplate and earthing connecting strips.
iii- the age of the earth pit
iv- Unsual abnormal values of the earth pit
4- The defective Earthing will be identified and repair action will be clearly specified.
5- The disconnected strip will be connected with additional length of strip and it shall be bolted with plane washer and spring washer.
i- In order to make if no failure joint , the joint will be further welded and brazed depending upon the strip (Or or CU)
ii- The loose joint at the termination ends will be corrected with application of or either stainless steel nuts and bolts or brass nut bolts depending on the type of connecting strip used.
iv- Any other minor and apparent rectifications to be carried out. Needed for new earthing will be justified and installed at the location after getting the instructions for new installation
v- Whenever the earthing has been found not acceptable new earthing will be recommended and installed of appropriate size with the prior consent management.
vi- Where the inadequate no. of earthing are installed the new earthing will be installed to complete the short fall with the prior consent of management.
vii- In certain situations the earthing may be of inappropriate size and in that event earthing will be reshuffled with another earth pit is the new will be installed in addition to existing pit

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S.N.	MODEL	ELECTRODE DIA	ELECTRODE LENGTH	CUNDUCTOR SIZE	TERMINAL DIA.	CASPER GCM	PRICE ₹
1-	PROTECH ELWG	40	2000	25*3*150	10	25	1420
2-	PROTECH ELWG	40	3000	25*3*150	10	50	2120
3-	PROTECH ELWG	50	2000	25*4*150	12	25	1820
4-	PROTECH ELWG	50	3000	25*6 *150	12	50	2640
5-	PROTECH ELWG	76	2000	50*6*150	12	25	2430
6-	PROTECH ELWG	76	3000	50*6*150	12	50	3570

S.N.	MODEL	ELECTRODE DIA	ELECTRODE LENGTH	CUNDUCTOR SIZE	TERMINAL DIA.	CASPER GCM	PRICE ₹
1-	PROTECH LWG GOLD	40	2000	25*3*2100	10	25	1920
2-	PROTECH LWG GOLD	40	3000	25*3*3100	10	50	2620
3-	PROTECH LWG GOLD	50	2000	25*4*2100	12	25	2420
4-	PROTECH LWG GOLD	50	3000	25*6*3100	12	50	3240
5-	PROTECH LWG GOLD	76	2000	50*6*2100	12	25	3040
6-	PROTECH LWG GOLD	76	3000	50*6*3100	12	50	4170

S.N.	MODEL	ELECTRODE DIA	ELECTRODE LENGTH	CUNDUCTOR SIZE	TERMINAL DIA	CASPER GCM	PRICE ₹
1-	PROTECH MWG	40	2000	25*6*150	10	25	2220
2-	PROTECH MWG	40	3000	25*6*150	10	50	2820
3-	PROTECH MWG	50	2000	25*6*150	12	25	2750
4-	PROTECH MWG	50	3000	25*6*150	12	50	3440
5-	PROTECH MWG	76	2000	50*6*150	12	25	3310
6-	PROTECH MWG	76	3000	50*6*150	12	50	4380

S.N.	MODEL	ELECTRODE DIA	ELECTRODE LENGTH	CUNDUCTOR SIZE	TERMINAL DIA	CASPER GCM	PRICE ₹
1-	PROTECH MWG GOLD	40	2000	25*6*2100	10	25	2520
2-	PROTECH MWG GOLD	40	3000	25*6*2100	10	50	3120
3-	PROTECH MWG GOLD	50	2000	25*6*2100	12	25	2940
4-	PROTECH MWG GOLD	50	3000	25*6*3100	12	50	3710
5-	PROTECH MWG GOLD	76	2000	50*6*2100	12	25	3600
6-	PROTECH MWG GOLD	76	3000	50*6*3100	12	50	4800

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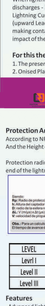

S.N.	MODEL	ELECTRODE DIA	ELECTRODE LENGTH	CUNDUCTOR SIZE	TERMINAL DIA	CASPER GCM	PRICE ₹
1-	PROTECH HWG	40	2000	25*6*150	10	25	2790
2-	PROTECH HWG	40	3000	25*6*150	10	50	3310
3-	PROTECH HWG	50	2000	37*6*150	12	25	3240
4-	PROTECH HWG	50	3000	37*6*150	12	50	4010
5-	PROTECH HWG	76	2000	50*6*150	12	25	3900
6-	PROTECH HWG	76	3000	50*6*150	12	50	5100

S.N.	MODEL	ELECTRODE DIA	ELECTRODE LENGTH	CUNDUCTOR SIZE	TERMINAL DIA	CASPER GCM	PRICE ₹
1-	PROTECH HWG GOLD	40	2000	25*6*2100	10	25	3100
2-	PROTECH HWG GOLD	40	3000	25*6*3100	10	50	3600
3-	PROTECH HWG GOLD	50	2000	37*6*2100	12	25	3540
4-	PROTECH HWG GOLD	50	3000	37*6*3100	12	50	4310
5-	PROTECH HWG GOLD	76	2000	50*6*2100	12	25	4200
6-	PROTECH HWG GOLD	76	3000	50*6*3100	12	50	5300

S.N.	MODEL	ELECTRODE DIA	ELECTRODE LENGTH	CUNDUCTOR SIZE	TERMINAL DIA	CASPER GCM	PRICE ₹
1-	PROTECH ELWC	50	2000	25*5*150	10	25	6100
2-	PROTECH ELWC	50	3000	25*5*150	10	50	8700
3-	PROTECH ELWC	76	2000	40*5*150	12	25	9100
4-	PROTECH ELWC	76	3000	40*5*3100	12	50	12000

S.N.	MODEL	ELECTRODE DIA	ELECTRODE LENGTH	CUNDUCTOR SIZE	TERMINAL DIA	CASPER GCM	PRICE ₹
1-	PROTECH LWC	50	2000	25*5*2100	10	25	7700
2-	PROTECH LWC	50	3000	25*5*3100	10	50	9500
3-	PROTECH LWC	76	2000	40*5*2100	12	25	10800
4-	PROTECH LWC	76	3000	40*5*3100	12	50	14500

S.N.	MODEL	ELECTRODE DIA	ELECTRODE LENGTH	CUNDUCTOR SIZE	TERMINAL DIA	CASPER GCM	PRICE ₹
1-	PROTECH MWC	50	2000	37*6*2100	10	25	8700
2-	PROTECH MWC	50	3000	37*6*3100	10	50	10500
3-	PROTECH MWC	76	2000	50*6*2100	12	25	12800
4-	PROTECH MWC	76	3000	50*6*3100	12	50	17000

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What is Lightning ?.....

Lightning is a discharge of atmospheric that is triggered by a build -up differing charges with in a cloud. The Result is a sudden release that causes a distinctive bright flare, followed by a thunderclap.

How does it reached Ground ?...

The bottom of a cloud becomes negatively charged, and it sends out what is known as a leader that seeks a positive charge on the earth. As the leader approaches an area that is positively charged streamer emergens, meeting the leader, sealing the connections and generate a bolt of lightning. That's how the loop is complete. It's Pretty clear that lightning makes every thunderstorm a potential killer, whether the storm is producing bolt or 10000 volt that generates a strong need for an efficient protection system.

PROTECH ADVACNE LIGHTNING ARRESTER

Streamer Emission Terminals Lightning Conductor

A pick-up point of solid electric stainless steel, permanently connected to earth, for discharge of Collected lightning via a down conductor to earth.

1. The upper electrodes sparks emission 2. A waterproof stainless box connected to earth.
3. Trigger circuit inner box. The lower electrodes energy collection.

1. Principle of Operation for this Smart-ce Lightning Conductor Collects Energy form the Atmospheric Electrical Field, which builds up considerable in storm conditions. When Lightning Can occur. when the Potential Electrical Field Gradient increases, this Energy Accumulate in the Electric Device, Is Discharged by Sparking Around the point. this Specific Artificial Ionization, Associated to the Point Effect Phenomenon, Improves the Attraction Power of the Lightning Conductor. And Significantly increases. The Radius of Protection Advantage Self-contained Working, Guaranteed Wider Range of Protection, Simple system, with less expensive installation cost s electronic charge control and distribution in storm condition high Reliability, Maintenance Free. Lightning Conductor..

Product Application:

Lightning Protection for Tower, Building, Gas Station, National Library, Mobile Base Gas Station, Factory, Port, Microwave Sation, Power Station, Houses, Air Force Station and So On.

How Does Protech ESE Lighting Conductor Work?

When lightning Strikes, An Electrical Field is always created at Ground Level and This increase Corona Effect, which Develops Naturally at the top of any high structure, allows discharges - known as upward leaders rise toward the cloud (See Previous Section on the Lighting Phenomenon). The Position of the Ionized Path which will allow the Lightning Current to pass is determined by where the upward leaders comes into contact with the first downward leader from the cloud. The Sooner the rising discharge (upward Leader) Leaves the lightning conductor to move toward the cloud. The Sooner it will move closer to the downward leader and the Greater the chances of the two making contact before other rising discharges from nearby high points. It can be seen, then, that is the start point of the first upward leader where determines the point of impact of the lightning on the ground. Protech Early Streamer Emission Lighting Conductor Designed to Provide Optimal Conditions for the formation of this rising discharge.

For this the following conditions are necessary:

1. The presence of primary electrons at the top of the terminal: These electrons, given off in the form of plasma, encourage the start-up of the rising discharge.
2. Ionized Plasma being formed at the right moment when lightning is about to strike, in other words, in phase with the rising electric field at ground level.

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Protection Area

According to NFC 17 ed.2.0, the Standard Protection Radius (RP) of the ESE is Linked to Delta T (below), The Protection Level I, II, (as Calculated in NFC 17-102 or En 62305-3) And the Height of the ESE Above the Structure to be protected(H, Defined by NFC 17-as a Minimum of 2 M)

Protection radius calculated according to : Norm UNE 21-186 & NFC 17-102 (These radius of protection have been calculated according to an altitude of 20 m. between the end of the lightning rods and the considered horizontal plane)

$$R_p = \sqrt{2Dh - h^2 + \Delta(2D + \Delta L)}$$

Rayon:
Rp: Rayon de protección
h: Altura del captador por encima del plano de referencia de la zona a proteger
D: Distancia de ruptura del trazador descendente (Tabla 1)
ΔL: Y (Tabla 2)
Y: Factor de reducción por altura del pararrayos (Tabla 3)

Obs.: Para un cálculo estándar, se tiene que el pirómetro ha estacionado de tres trazadores (Y= 1/3) es decir, El tiempo de traviesa de estudio del PDCE es de 60 Días



Note: As in the conventional Franklin rod, it includes mounting clamps and a mast, and a down conductor cable connected to the earth system. The ESE air terminal is mounted on the mast, above the conductor cable, at a max. distance of 20 m from the ground.



LEVEL	PROTECH STREAMER 30	PROTECH STREAMER 40	PROTECH STREAMER 60
Level I	32	38	43
Level II	42	56	81
Level III	56	79	109

Features

. Advanced lightning system based on latest lightning research and technology
. Location of air terminal(s) on structure is determined using PROTECH proprietary lightning strike Counter System Designer package
. Collection Volume design principle used by PROTECH resulting in the most effective lightning protection coverage

Advantages

Lightning discharges counting and saving requires no external power supply. Our Lightning Strike Counter consists of circuitry containing rectifier, capacitor, and Electronic switching system that is connected to mechanical counting relay. The counter includes a high frequency transformer
Economical and easy to install.

Application

The lightning strike Counter can be used wherever there is the possibility of direct lightning strike Counter that may affect valuable equipment
and/or facilities. These include communications towers, television stations, oil/gas platforms, high rise buildings, schools, hospitals, factories, and explosive/volatile fuels

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storage areas. Applications that require area protection or that would benefit from the application of an isolated protection system would benefit in particular using

PROTECH LIGHTNING STRIKE COUNTER

Lightning Strike Counter:

Lightning Strike counter is used for recording times of lightning strike of various kinds of lightning eliminators and lightning rod. It is kind of electro mechanical counter with 6 digit display facility, lightning strakes provides valuable information for the maintenance and safety all structures and its occupants.

This Functional device can show the intact operation of the lightning system, By using an inductive record, the counter is able accurate count all lightning events for a later reference. It works with an inductive effect of the lightning strike counter. The events are monitored by mechanical counter display. the counter has the standard width of two modules. The counter is required to be supplied with power by a 9v zinc-manganese battery, which needs to be replaced when The digital display is not luminous, and is installed in the standard guide Rail

Lightning Arrester Model and acasaries

S.N	Product Discription	Min. Quantity	Price Rs.
1	Protech ESE 60 (for 109 meter radius protection)	01 nos	42600
2	Inline coupling	01 nos	350
3	GI Mast four meter	01 nos	4200
4	Accessories as safety cable, turn buckle, fastener, wire , clamp thimble,	01 nos	1250
5	Lightning Counter	01 nos	14000
6	Avation Light	01 nos	9500
7	70 Sq mm Single core cable /Down Conductor 5 meter	01 nos	3500

1	Protech ESE 60 (for 109 meter radius protection)	01 nos	32600
2	Inline coupling	01 nos	350
3	GI Mast four meter	01 nos	3200
4	Accessories as safety cable, turn buckle, fastener, wire , clamp thimble,	01 nos	1250
5	Lightning Counter	01 nos	14000
6	Avation Light	01 nos	9500
7	70 Sq mm Single core cable /Down Conductor 5 meter	01 nos	3500



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1	Protech ESE30 (for 56 meter radius protection)	01 nos	24600
2	Inline coupling	01 nos	350
3	GI Mast four meter	01 set	4200
4	Accessories as safty cable, turn buckle, phasnec, wire , clamo thimble,	01 set	1250
5	Lightning Counter	01 nos	14000
6	Avation Light (Complete Set)	01 set	9500
7	70 Sq mm Single core cable /Down Conductor 5 meter	01 nos	3500

NOTE :
CABLING OR STRIP WORK IS EXTRA AS PER THE BUILDING HIGHT THE MINIMUM CABLING CHARGES IS 3000. FOR 3RD FLOOR BUILDING, CABLING RATE DESIDE AFTER VISIT THE SITE

EXTRA LIGHT POLYPROPLIN PIT COVER	MEDIUM WT. POLYPROPLIN PIT COVER	HEAVY POLYPROPLIN PIT COVER	CAST IRON PIT COVER	RCC PIT COVER	IRON PIT COVER
PRICE: 520/-	PRICE: 750/-	PRICE: 950/-	PRICE: 430/-	PRICE: 800/-	PRICE: 2100/-

PRICE: 630/- PER BAG

PROTECH SYSTEM AND SOLUTIONS

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