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**IVANAH**

# **SAMAY ELECTRIC**

**COMPLETE LIGHTNING PROTECTION SYSTEM**



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## 1. AIR TERMINATION ROD & ACCESSORIES

The length of ATR and No. of ATR to be selected in the lightning protection system. Material is AlMgSi. In Lightning protection system this is mounted vertically on the top most point of the structure.

### General Technical Data

Material of Air Termination Rod	AlMgSi		
Standard	EN62561-2		
Part No.	EL-IV-1111602	EL-IV-1111604	EL-IV-1111606
ATR	1Mtr.	2Mtr.	3Mtr.
O.D.	16mm	16mm	16mm
Total Length	1 Mtr.	2 Mtr.	3 Mtr.
No. of Clamps	1	2	2
Max gust wind speed	186 Km./h	186 Km./h	188 Km./h

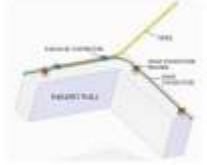


## 2. SPIKE

The length of Spike is 0.5 Mtr. And it has additional fixing length of 0.5 Mtr. It will be fitted at 0.4Mtr. apart at two points in fixing length.

### General Technical Data

Material of Spike	AlMgSi		
Standard	EN62561-2		
Part No.	EL-IV-1110801		
ATR	0.5Mtr.		
O.D.	8mm		
Total Length	0.5 Mtr.		
No. of Clamps	2		
Max gust wind speed	186 Km./h		



## 3. SIDE WALL CLAMP

Side Wall Clamp is a vertical mounting bracket for Air Termination Rod. It maintains 50mm distance from mounted wall surface.

### General Technical Data

Material of Side Wall Clamp	SS		
Standard	EN62561-1		
Part No.	EL-IV-1229001		
Clamping range	15 - 20 mm		
distance from wall	50mm		
Dist. between 2 Fixing Screws	90mm		



## 4. SELF SUPPORTING CONCRETE BASE

Concrete base provided to ATR is a self supporting base. This is used on flat roofs. This support to ATR, either as a single support or in multiples, as the case may be. The ATR will be fixed in the GI bush of Concrete Block with the glue.

### General Technical Data

Material of Concrete Base	Concrete C45/55	
Part No.	EL-IV-1269001	EL-IV-1269002
Weight	18 Kgs	9 Kgs
Base Diameter	340mm	240mm
Supporting Height	90mm	90mm
Compressive strength	28MPa	28MPa



## 5. TRIPOD STAND

To support ATR vertically on Flat roofs, Tripod Stands are used. It is having a SS Tube to hold ATR. ATR is fixed by gluing in the tube. There are three resting points, equally distributed on a circle of 1 Mtr. Dia. It is a rigid support to ATR

### General Technical Data

Material of Tripod Frame	GI/SS	
Standard	EN62561-1	
Part No.	EL-IV-2229001	
Support	Dia.16mm	
Required space	Circle of ø1Mtr.	
Wt.	20 Kgs.	



## 6. Fixture on the Ridge of sloping Metallic Roof

Frame of GI Strip of size 25X6 mm ,is fabricated keeping a moderate clearance over the ridge of sloping metallic roof. A base plate is fastened over the Frame. A GI bush is welded to Base Plate, so that the ATR can be mounted on it vertically. The length of Bush depends upon the length of ATR. The ATR is fixed by gluing in the Bush or can be fastened with 2 Nos of M8 Screws.

### General Technical Data

Material of Fixture	GI	
Standard	EN62561-1	
Part No.	EL-IV-2239001	
GI Strip for Frame	25X6mm	
Restig Length on either side	0.5 Mtr. each side	
No. of fastening on either side	2Nos on each side	
Max Gust Wind Speed	186 Km./h	



## 7. Parallel Connector

The Parallel connector is mainly used to connect two ends of parallelly laid conductors. In the same way it can also be used to clamp Spike rods.

### General Technical Data

Material of Parallel Connector	SS	
Standard	EN62561-1	
Part No.	EL-IV-1219003	
Material Sheet Thickness	2.8mm	
Clamping Range round	ø8- ø10mm	
No. of Screws	1	
Size of Screw	M8-20L	



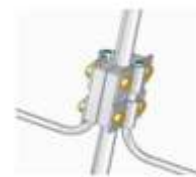


## 8. ATR Clamp cum Connector

ATR Clamp cum connector is clamped on ATR. Maximum two conductors can be held in this connector to connect with ATR.

### General Technical Data

Mat.: ATR Clamp cum connector	Al
Standard	EN62561-1
Part No.	EL-IV-1119001
Material Thickness	30mm
Clamping Range round	ø16mm
Holding Range of conductors	2 X ø8-ø10mm
No. of Screws	4
Size of Bolt,Nut,Thrust Washer	Hex Hd.M8
No.of Cleats	2



## 9. Aluminium Round Conductor

Aluminium Round Conductor of ø8mm is used of Lightning Protection System according to EN62561-2 as Roof and Down conductors.

### General Technical Data

Material of Al.Round Conductor	AlMgSi
Standard	EN62561-2
Part No.	EL-IV-1210801
OD of Conuctor	ø8mm
Cross section	50mm <sup>2</sup>
Material condition	Semi Rigid
Coil Weight	App.21.5 Kgs.



## 10. GI Flat Conductor

GI Flat Conductor of size 25X6mm is used in Lightning Protection System and in Earth Termination system, according to EN62561-2.

### General Technical Data

Material of GI Flat Conductor	low carbon steel
Standard	EN62561-2
Part No.	EL-IV-1232502
Size of Flat Conuctor	25X6mm
Cross section	150mm <sup>2</sup>
GI Coating	80 microns



## 11. SS Round Conductor

SS Round Conductor of ø10mm is used in Lightning Protection System and in Earth Termination system, according to EN62561-2.

### General Technical Data

Material of SS Round Conductor	SS
Standard	EN62561-2
Part No.	EL-IV-1221001
Size of SS Round Conuctor	10mm
Cross section	78.5mm <sup>2</sup>



## 12. Copper Cable Round Conductor

Copper Cable Round Conductor of ø8mm is used in Lightning Protection System and in Earth Termination system, according to EN62561-2.

### General Technical Data

Mat.: Copper Round Conductor	Copper
Standard	EN62561-2
Part No.	EL-IV-1240801
Size of Copper Round Conuctor	8mm
Cross section	50mm <sup>2</sup>
Outer Dia. With PVC Sleeve	13mm
No.of Strands X Wire Dia.	19NosXø1.8 mm



## 13. Steel Roof Conductor Holder with Plastic Base

Roof Conductor Holder with Plastic Base is used in LPS system to hold conductors of size ranging from ø8 to ø10mm. It is used to hold horizontal & vertical conductors.

### General Technical Data

Material of Steel RCH	SS316L
Standard	EN62561-2
Part No.	EL-IV-1209001
Holding Range	ø8 to ø10mm
Height of Conductor	(20 + 20)mm
Holder Fixing Screws	2 X M8 Screw



## 14. "Roof Conductor Holder Press to Fit" type without Plastic Base

"Roof Conductor Holder Press to Fit" type without Plastic Base is used in LPS system to hold conductors of size ranging from ø8 to ø10mm. It is used to hold horizontal & vertical conductors.

### General Technical Data

Material	SS
Standard	EN62561-1
Part No.	EL-IV-1222201
Base Size of RCH	34 X 30 mm
Height of Conductor	22mm
Holding Range	ø8 to ø10mm



## 15. "Roof Conductor Holder Press to Fit" type with Plastic Base

"Roof Conductor Holder Press to Fit" type with Plastic Base is used in LPS system to hold conductors of size ranging from ø8 to ø10mm. It is used to hold horizontal & vertical conductors.

### General Technical Data

Material	SS
Standard	EN62561-1
Part No.	EL-IV-1202601
Height of Conductor	26mm
Holding Range	ø8 to ø10mm





## 16. Plastic Roof Conductor Holder with Round Base

Plastic Roof Conductor Holder with round base is used in LPS system to hold conductors of size ranging from  $\varnothing 8$  to  $\varnothing 10$ mm. It is used to hold horizontal & vertical conductors.

### General Technical Data

Material of Plastic RCH	Plastic
Standard	EN62561-2
Part No.	EL-IV-1289001
Base Size of RCH	$\varnothing 65$ mm
Height of Conductor	37mm
Holding Range	$\varnothing 8$ to $\varnothing 10$ mm



## 17. Plastic Roof Conductor Holder without Round Base

Plastic Roof Conductor Holder without round base is used in LPS system to hold conductors of size ranging from  $\varnothing 8$  to  $\varnothing 10$ mm. It is used to hold horizontal & vertical conductors.

### General Technical Data

Material of Plastic RCH	Plastic
Standard	EN62561-2
Part No.	EL-IV-1289002
Height of Conductor	37mm
Holding Range	$\varnothing 8$ to $\varnothing 10$ mm



## 18. 1 Kg Concrete Roof Conductor Holder-Snap type

Concrete Roof Conductor Holders are used in LPS system to hold conductors on Flat roof only. The holding range is from  $\varnothing 8$  to  $\varnothing 10$ mm. It is used to hold horizontal conductors.

### General Technical Data

Material of Concrete RCH	C35/55
Part No.	EL-IV-1269001
Holding Material	Plastic
Holding Range	$\varnothing 8$ to $\varnothing 10$ mm
Height of Conductor	70mm



## 19. 1 Kg Concrete Roof Conductor Holder Cleat type

Concrete Roof Conductor Holders are used in LPS system to hold conductors on Flat roof only, by fixing with cleat. The holding range is from  $\varnothing 8$  to  $\varnothing 10$ mm. It is used to hold horizontal conductors.

### General Technical Data

Material of Concrete RCH	C35/55
Part No.	EL-IV-1269002
Holding Material	Plastic
Holding Range	$\varnothing 8$ to $\varnothing 10$ mm
Height of Conductor	60mm



## 20. Standing Seam with Cleat

Standing Seam with Cleat is used in LPS system on sloping metallic roof where this can be clamped to one of the elements on or near the roof sheet. The roof conductor will be held in Cleat.

### General Technical Data

Material	SS / GI
Standard	EN62561-2
Part No.	EL-IV-1227003
Clearance below Conductor	70 mm
Holding range	$\varnothing 8$ - $\varnothing 10$ mm



## 21. Standing Seam with Cross Connector

Standing Seam with Cross Connector is used in LPS system on sloping metallic roof where this can be clamped to one of the elements on or near the roof sheet. The roof conductor as well as Down Conductor will be held in Cross Connector.

### General Technical Data

Material	SS / GI
Standard	EN62561-1
Part No.	EL-IV-1227004
Clearance below Conductor	70 mm
Holding Range	$\varnothing 8$ to $\varnothing 10$ mm



## 22. Standing Seam on vertical Roof JOINT

Standing Seam on vertical Roof Joints is used in LPS system on sloping metallic roof where this can get clamped to the roof sheet vertical joint. With a set of 2 or 4 Nos ATR Base Plate can be mounted on it. It can also be used as a single clamp with cleat to hold roof conductors

### General Technical Data

Material	SS / GI
Standard	EN62561-1
Part No.	EL-IV-1227002
Clearance below Conductor	70 mm
Holding Range	$\varnothing 8$ to $\varnothing 10$ mm



## 23. Girder Clamp - Horizontal Flange with Clamping Shoe

This combination is used in LPS system on sloping metallic roof where this can be clamped to Girder and the roof conductor will be held in Shoe clamp.

### General Technical Data

Material	GI
Standard	EN62561-2
Part No.	EL-IV-3233001
out side Size	30 X 25 X 75 mm
Holding range	3 - 18 mm





## 24. Girder Clamp - Vertical Flange with Clamping Shoe

This combination is used in LPS system on sloping metallic roof where this can be clamped to Girder and the roof conductor will be held in Shoe clamp.

### General Technical Data

Material	GI
Standard	EN62561-2
Part No.	EL-IV-3233002
out side Size	30 X 25 X 75 mm
Holding Range	3 - 18 mm



## 25. Splicer / Straight Connector

Splicer / Straight Connector is used in LPS system to connect and clamp two ends of Conductors which are laid in a line. Holding range is from  $\varnothing 8$  to  $\varnothing 10$ mm.

### General Technical Data

Material of Straight Connector	Al
Standard	EN62561-1
Part No.	EL-IV-1219002
Holding Range	$\varnothing 8$ to $\varnothing 10$ mm



## 26. Extension Piece

Extension Piece is used in LPS system to accommodate expansion/ Contraction of conductors, on roof, depending upon the seasons. It is fitted in conductors on roof after every 20 Mtrs. with Splicer / straight connectors

### General Technical Data

Material of Expansion Piece	Al ( AlMgSi)
Standard	EN62561-2
Part No.	EL-IV-1269001
Size	$\varnothing 8$ X 395mm L



## 27. Fixed Earth Terminal

Fixed Earth Terminals are used in LPS system to enable to connect, concealed conductor either in Columns or in walls with the conductors which are laid on the surface of columns and walls.

### General Technical Data

Mat.: Fixed earth terminal	SS
Part No.	EL-IV-1329001
Connecting Thread Size	M10 / M12
Connection Round Plate	$\varnothing 80$ mm



## 28. Strike Pad with Stud

Strike Pads, in LPS system, are used to arrest Flash currents if any exist, above 60 Mtrs. Of Structure. And its Stud connects the flash current to down conductors. They are mounted on a conductor ring laid around outer surface of the structure.

### General Technical Data

Material of Strike Pad	Al
Standard	EN62561-1
Part No.	EL-IV-1329002
Size	Base $\varnothing 80$ X 35 ht
Fixing provision	M8 Tapped Hole



## 29. U-Clamp with Cleat

In Lightning protection system, when the conductors are concealed in columns, U-Clamps will be clamped to reinforcement bars and the conductor will be held in its cleat. Similar application can also be done on Metallic roof.

### General Technical Data

Material of U Clamp	SS / GI
Standard	EN62561-1
Part No.	EL-IV-1329004
Clamping & Holding Range	$\varnothing 32$ MM / $\varnothing 8$ mm



## 30. MV Clamp

To Clamp and connect two conductors in parallel or across, Vertically or Horizontally, this clamp is used in LPS System.

### General Technical Data

Material of MV Clamp	SS
Standard	EN62561-1
Part No.	EL-IV-1229002
Holding Range	$\varnothing 8$ to $\varnothing 10$ mm
Hex Head / Truss Head Screw	M8 -25L



## 31. Saddle Clamp with Pad

This is used in LPS system to hold conductors of cable with PVC Sleeve.

### General Technical Data

Material	SS
Standard	EN62561-1
Part No.	EL-IV-1329005
Holding Range	$\varnothing 10$ - 13 mm





### 32. Shoe Clamp

Shoe Clamps are used in LPS system to hold conductors at various locations.

#### General Technical Data

Mat.: Shoe Clamp	SS
Standard	EN62561-1
Part No.	EL-IV-3222501
Holding Range	ø10mm
Size	25x30 mm



### 33. Epoxy Insulating Holder

These are used in LPS system to hold Flat Conductors Vertically / Horizontally.

#### General Technical Data

Mat.:Epoxy Insulating Holder	Red Epoxy
Part No.	EL-IV-1389001
Clamping Screws	2 X M8-12 L
Flat Size to Accommodate	25X3 / 25X6
Dist. from surface	10mm

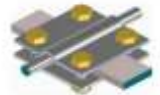


### 34. Cross Connector round to Flat

To Clamp and connect two conductors round & Flat across, this clamp is being used.

#### General Technical Data

Material of cross connector	SS
Standard	EN62561-1
Part No.	EL-IV-1329012
Holding Range	ø8-ø10mm/30mm
Screw Size	4XHex Hd M8 Sc.



### 35. Cross Connector round to round

To Clamp and connect two conductors round & round across, this clamp is being used.

#### General Technical Data

Material of cross connector	SS
Standard	EN62561-1
Part No.	EL-IV-1329011
Holding Range	ø8-ø10mm
Screw Size	4XHex Hd M8 Sc.

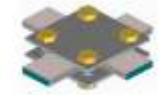


### 36. Cross Connector Flat to Flat

To Clamp and connect two conductors Flat & Flat across, this clamp is being used.

#### General Technical Data

Material of cross connector	SS
Standard	EN62561-1
Part No.	EL-IV-1329013
Holding Range	30 / 30 mm
Screw Size	4XHex Hd M8 Sc.



### 37. Disconnecting Clamp Round to Flat

This is used to connect/diconnect down conductors with the link leadig to earth grid ring

#### General Technical Data

Material of disconnecting clamp	SS
Standard	EN62561-1
Part No.	EL-IV-1329006
Holding Range	ø10mm / 30mm

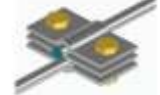


### 38. Disconnecting Clamp Round to Round

This is used to connect/diconnect down conductors with the link leadig to earth grid ring

#### General Technical Data

Material of disconnecting clamp	SS
Standard	EN62561-1
Part No.	EL-IV-1329008
Holding Range	ø8 - ø10mm

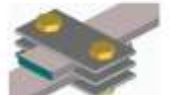


### 39. Test Clamp / Disconnecting Clamp Flat to Flat

This is used to connect/diconnect down conductors with the link leadig to earth grid ring

#### General Technical Data

Material of disconnecting clamp	SS
Standard	EN62561-1
Part No.	EL-IV-1329007
Holding Range	30mm



### 40. Lightning Strike Counter

This is used to count the impulse current occurred between equipotential bonding busbar and earths termination system.

#### General Technical Data

Material of LSC	Plastic Body
Part No.	EL-IV-1309001
Digits displayed in counter	6 Digits
Size of Counter	45X60X55HT.







Incorporated in the year 2021 our companies involved in following activities -

Sale & servicing of Electricals safety - Mainly Design, Supply, Installation, Testing & Commissioning of Lightning Protection System, Maintenance Free Earthing Systems, Surge Protection Devices , Under the name of "IVANAH".

We have register Head office in Mumbai, a branch office at Pune. Serving Area all Over India & supply of the materials throughout India.



## **Balkrishna Bapu Chavan** *B.E. (Mech ), MDBA*

Certified profession by Siemens for 3D Modeling in Solid Edge Software. 30 Years experience in manufacturing field in various industries like Automobile, Foundry and Compressor for Railways & Ships, Sugar Plant Equipment Manufacturing etc. 18 Years experience in Design & Drafting

## **Mr. Pradeep Lahot** *Electrical Engineer*

Pradeep Lahot is an Electrical Engineer. He has work experience with French multinationals for 10 years before entering in to own business. He has traveled all over the country & to leading countries abroad on occasions & his exposed to the global developments & technologies. From the beginning of his career he dedicatedly involve only in the field of Lightning. He has vast knowledge in the field of Lightning Protection System Globally.



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