

## TRSB-Lightning rod

Lightning Rod is used for protecting the buildings to avoid lightning strike. Lightning rod grounding plays an important part of the air termination network of a lightning protection system.

Building Lightning Rod, alternate named lightning protection devices, used for protecting the building when raining and lightning. The lightning rod installed on the building and transfer the electric to earthing metal to protect the building. Our lightning rod comply with UNE 21.186 NFC 17. 102 or EN 50.164/1 EN 62.305 standard. Customized lightning rod available.



### Working Principles:

During thunderstorm conditions when the lightning down-leader is approaching ground level, an upward leader may be created by any conductive surface. In the case of a passive lightning rod, the upward leader propagates only after a long period of charge reorganization. In the case of PDC series, the initiation time of an upward leader is greatly reduced. The PDC series generates controlled magnitude and frequency pulses at the tip of the terminal during high static fields characteristic prior to a lightning discharge. This enables the creation of an upward leader from the terminal that propagates towards the downward leader coming from the thundercloud.

### Part I: Protection range of direct lightning arrester

#### Rolling ball radius(R):

Class I lightning protection building	30m(National buildings, arsenal, etc.)
Class II lightning protection building	45m (Government institutional units, etc.)
Class III lightning protection building	60m(civil buildings, etc.)

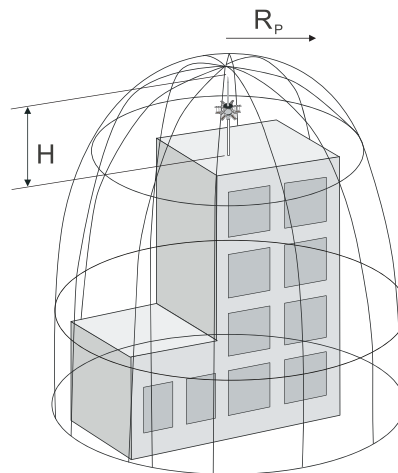
### Part II : Selection of lightning protection type

Type	R	Lightning Rod height (h)/ protecting range (x)		
		h	x	h/x
Class I	30m	30/30	15/25	10/22.3
Class II	45m	45/45	22.5/38	10/28
Class III	60m	60/60	30/51.9	10/33

### Part III: Calculation of protecting range

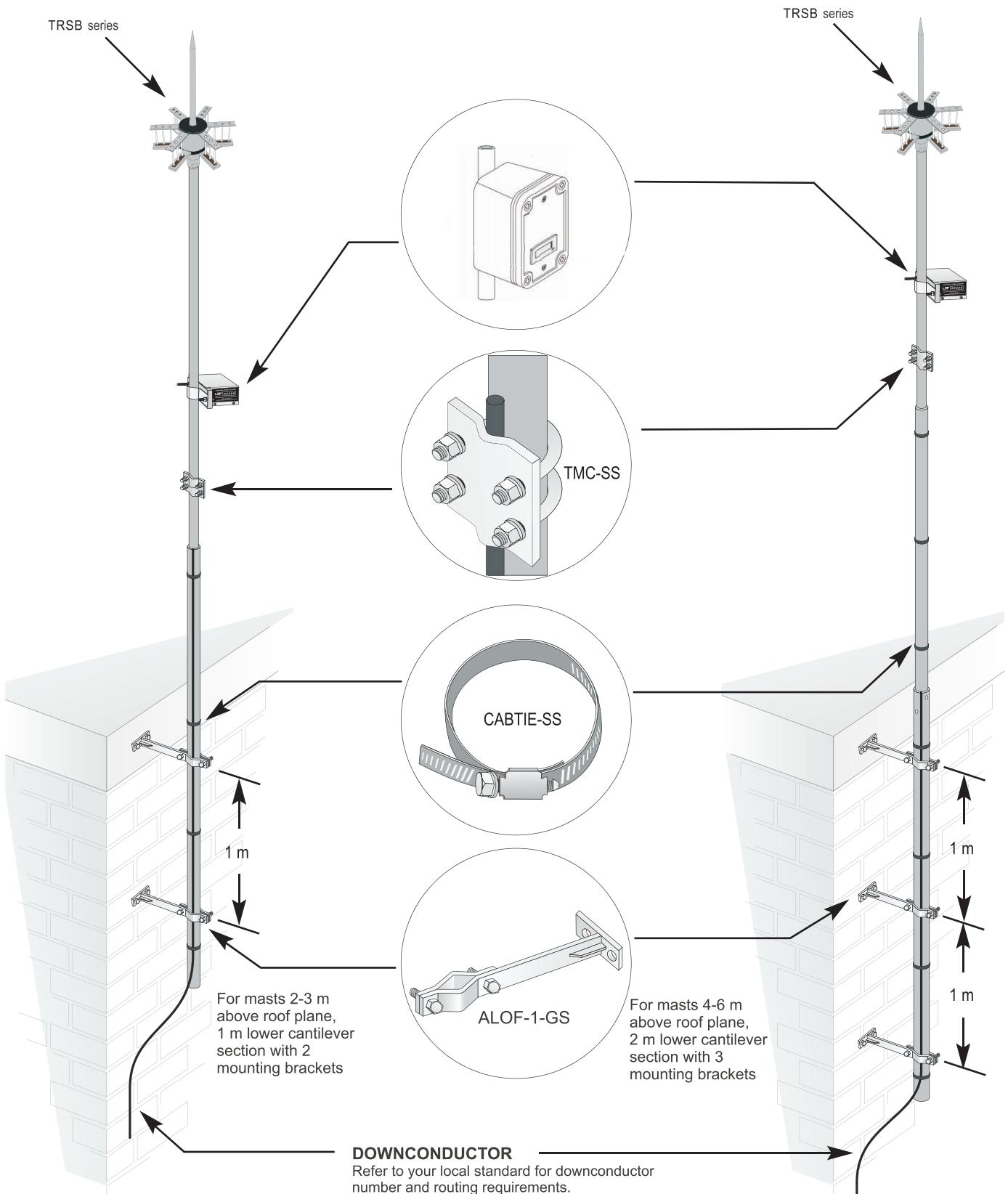
Protecting range X  
 Lightning rod height H  
 Rolling ball radius R

$$\text{Protecting range } X = \sqrt{R^2 - (R-h)^2}$$



## Typical MAST Installation Arrangement

### ■ For Cantilevered Mast



Lightning Rod