

## TECHNICAL SPECIFICATION OF 11 KV 5 KA LIGHTNING ARRESTOR

### Galvanization:

All ferrous parts should be galvanized as per IS - 2633 / 1972 or its latest amendments if any & all non-ferrous part should be duly electroplated with silver.

### Type Test Certificate:

The Type Test reports & Certificate conducted within five years proceeding to date of opening of tender from NABL accredited / CPRI shall be submitted.

### GTP of 11 KV 5 KA LIGHTNING ARRESTOR

Sl. No.	Description	Unit	Requirement as per tender norms	Bidder's Offer
<b>A</b>	<b>General:</b>			
1	Name & Address of the manufacturer			
2	Type & Model			
3	Catalogue Number			
4	Standards with which it complies		IS: 3070 (Part-III) & IEC 60099-4 (2009)	
<b>B</b>	<b>Rating:</b>			
1	Frequency	Hz	50	
2	Rated Voltage	KV rms	12	
3	Continuous operating voltage	KV rms	10	
4	Nominal discharge current, 8/20 $\mu$ s	KA rms	5	
5	Long duration discharge class	Class	2	
6	Temporary over voltage capability			
	a) 1 Second	KV Peak	20	
	b) 10 Seconds	KV Peak	18	
	c) 3 Hours	KV Peak		
7	Release voltage	KV rms		
8	Maximum lightening impulse residual voltage with:			
	a) 1.5 KA, 8/20 $\mu$ s wave form	KV Peak	30	
	b) 5.0 KA, 8/20 $\mu$ s wave form	KV Peak	34	
	c) 10 KA, 8/20 $\mu$ s wave form	KV Peak	40	
9	Steep current impulse residual voltage, 1/20 $\mu$ s	KV Peak	40	
	Long duration impulse withstand capability:			
	a) Peak	KA	As per Type Test	
	b) Virtual Duration	$\mu$ s	As per Type Test	
10	High current impulse withstand value, 4/10 $\mu$ s	KA Peak	100	
11	Leakage current through arrester:			
	100% of rated voltage	mA	< 3	
	60% of rated voltage	mA	< 800	
	40% of rated voltage	mA	< 500	
	22% of rated voltage	mA	< 200	
12	Partial Discharge Level	pC	< 10 pC	

13	Energy Absorption capacity	KJ/KV	6 KJ/KV (for 3 sequential shots)	
<b>C</b>	<b>ARRESTOR HOUSING INSULATION:</b>			
1	Impulse withstand voltage (1.2/50 $\mu$ s wave-peak)	KV Peak	75	
2	One minute power frequency withstand voltage (Wet)	KV Peak	28	
3	Power frequency voltage vs Time curve (Attach Curve)			
4	Creepage distance	mm	380	
5	Type of materials & Grade of Housing		Porcelain	
<b>D</b>	<b>CONSTRUCTIONAL DETAILS:</b>			
1	Type of materials & Grade of MOV Discs		Zinc Oxide	
2	Filling medium			
3	Pressure relief class		Class "A"	
4	Type of mounting arrangement		Vertical	
5	Type of moisture sealing		Hermetically sealed with neoprene gasket	
6	Cantilever strength of lightning arrester	KN/m		
7	Colour of Insulator			
8	Height of Lightning arrester	mm	As per Drawing	
9	Weight of lightning arrester in service	Kg		
<b>E</b>	<b>TERMINAL:</b>			
1	Type of materials & grade of terminals		M.S. / Aluminium	
2	Type of terminal corrosion protection		Zn Plate	
3	Range of conductor type & size it suits	mm <sup>2</sup>		
4	Bi-metallic or not	Yes/No		
5	Material of earth terminal			
6	Size of earth terminal	mm <sup>2</sup>		
<b>F</b>	<b>CLEARANCES:</b>			
1	Recommended minimum clearances of arresters, centre to centre	mm	300	
2	Recommended minimum clearances from centre to arrester to nearest earthed object	mm		
3	Clearance from live parts to earth	mm	300	
<b>G</b>	<b>SEAL LEAKAGE TEST:</b>			
1	Method to be adopted for seal leakage test		Rubber "O" ring cementing	
<b>H</b>	<b>CORROSION PREVENTION:</b>			
1	Surface preparation		Galvanized	
2	Rust inhibition		Hot Dip Galvanized	
3	Galvanisation - Weight deposited	Kg/m <sup>2</sup>		
4	Treatment of fasteners		GI	