

## Technical Details of Current Transformer:

The detailed technical specifications of the current transformer to be supplied are mentioned below:

S. No.	Parameter	Details	Supplier compliance
1.	Type	Single phase (dead tank)	
2.	Installation indoor/outdoor	Outdoor	
3.	Rated system voltage kV	220	
4.	Highest Equipment Voltage kV	245	
5.	Frequency	50Hz	
6.	Rated insulation levels i) Impulse withstand test voltage (kV peak). ii) One minute power frequency withstand test voltage  a) Primary winding kV (rms)  b) Secondary winding kV (rms)	1050  460  3 kV for metering /4 kV for protection	
7.	Minimum creepage distance  i) Total (mm)  ii) Protected (mm)	5600  2800	
8.	Rated extended primary current %	120%	
9.	Rated continuous thermal current	120%	
10.	Short time current rating i) Rated short time thermal current ( kA) ii) Rated duration (sec.) iii) Rated dynamic current kA (peak)	40 3 102	
11.	Maximum temperature rise of winding at rated continuous thermal current, rated frequency and rated burden C	As per IS-2705	
12.	Reference ambient air temperature deg. C	45 deg. C	
13.	Class of insulation of winding (Minimum requirement)	Class-A	
14.	Current transformers suitable for i) Wind velocity Km/ph ii) Seismic condition (Minimum requirement)	130km/Hr. 0.25g	
15.	Radio interference voltage microvolts	Less than 2500 $\mu$ V at 156 kV	
16.	Minimum visible Discharge voltage level	175kV	
17.	Terminal box i) Degree of protection  ii) Cable glands to be supplied  iii) If Yes, size of cable glands for secondary winding termination.  iv) Whether short circuiting links to be supplied Yes/No	Two separate TBs for metering and protection IP-55  Yes  25mm $\pm$ 1mm  Yes	

S. No.	Parameter	Details	Supplier compliance
18.	Earthing connections	Suitable for 2 nos. of 50 X 6 mm GS flat.	
19.	Current transformer secondary details.		
19.1	Number of cores	5	
19.2	Rated primary current (A) for i) Core-1 ii) Core-2 iii) Core-3 iv) Core-4 v) Core-5	800-600-400 800-600-400 800-600-400 800-600-400 800-600-400	
19.3	Rated secondary current for i) Core -1 ii) Core -2 iii) Core-3 iv) Core -4 v) Core-5	1 Amp. For each core	
19.4	It should be possible to adjust tap setting of any core independent of other core	Yes	
19.5	Actual transformation ratio	800-600-400/1	
19.6	Rated transformation ratio	800-600-400/1	
19.7	Application i) Core-1 ii) Core -2 iii) Core-3 iv) Core -4 v) Core-5	Distance/differential. Distance/ differential. Metering Bus-bar differential. Bus-bar differential.	
19.8	Accuracy class i) Core-1 ii) Core -2 iii) Core-3 iv) Core -4 v) Core-5	PS PS 0.2 PS PS	
19.9	Rated VA i) Core-1 ii) Core -2 iii) Core-3 iv) Core -4 v) Core-5	-- -- 30 -- --	
19.10	Accuracy limit factor i) Core-1 ii) Core -2 iii) Core-3 iv) Core -4 v) Core-5	--- --- --- --- ---	
19.11	Minimum knee point voltage i) Core-1, (V) ii) Core -2 , (V) iii) Core-3 , (V) iv) Core -4 , (V) v) Core-5, (V)	1350-1000-675 1350-1000-675 --- 1350-1000-675 1350-1000-675	

S. No.	Parameter	Details	Supplier compliance
19.12	Maximum excitation current at VK/4 i) Core-1 mA ii) Core-2 mA iii) Core-3 mA iv) Core-4 mA v) Core-5 mA	<30 <30 --- <30 <30	
19.13	Maximum secondary resistance at 75 deg. C. i) Core-1 ohm ii) Core-2 ohm iii) Core-3 ohm iv) Core-4 ohm v) Core-5 ohm	4-3-2 4-3-2 --- 4-3-2 4-3-2	
19.14	Instrument securing factor i) Core-1 ii) Core -2 iii) Core-3 iv) Core -4 v) Core-5	--- --- <5 --- ---	
20.0	The manufacturing, Marking, Rating, and Testing etc. shall be in accordance with Indian Standards.	IS-2705(Latest)	
21.0	All routine test will be carried out as per IS 2705 part-1 (Latest version and amendments). In addition to this supplier will carry out	a) Measurement of dielectric dissipation factor b) Insulating Oil test as per IS: 335 (latest version).	
22.0	Dimensional drawing is to be submitted along with the offer.	Required	

**Note:**

- 1) Three nos. copies of operation, maintenance and erection manuals in English language shall be supplied one month prior to the dispatch of the Instrument Transformer.
- 2) The General Arrangement of the CT shall be as per drawing given in Annexure-2.

**General Arrangement of 220kV CT**

