TECHNICALSPECIFICATION OF
'LT' RING TYPECURRENTTRANSFORMEROF DIFFERENT RATIO

1. **Scope:** The Current Transformer will be used with poly phase energy meters formeasuring energy.
2. **General:** The Current Transformer should conform to the I.S. 16227:2016(Part 1 ToPart 4) with subsequent modification thereof. The Current Transformer will be of RingType suitable for fixing on Bar Primary as per existing approved LT Kiosk of WBSEDCL.
3. **Current Ratio: 400/5Amps & 200/5Amps**
4. **Rated Voltage:** The Current Transformer will have to be suitable for continuous working at system voltage up to **660Volts** and frequency 50Hz.
5. **Highest Voltage for the equipment U_m (r.m.s): 0.72 kV.**
6. **Rated Power Frequency withstand voltage (r.m.s):-** 3 kV
7. **Burden:** 5VA at 0.8pf (lag).
8. **ClassofAccuracy: 0.5S.**
9. **Inner Diameter**: 45mm,suitableformounting through40x10mm² flat bar.
10. **Instrument Security Factor:** <5.
11. **Rated continuous thermal current temperature rise over ambient:** 1.2 times rated primary current with maximum temp.rise limit of 55^0C
12. **Power frequency Voltage between primary & secondary**:3KV (for 1 minute)
13. **Short time current rating**:5KA for 1 second
14. **Ambient Conditions**: -5^0c and 50^0C
15. **Class of Insulation:** A
16. **Humidity**:
    a) Average value of Humidity measured for a period of 24 hours should not exceed 95%
    b) The average value of Water vapor Pressure measured for a period of 24 hours should not exceed 2.2kPA
    c) Average value of Humidity measured for a period of one month should not exceed 90%
    d) The average value of Water vapor Pressure measured for a period of 24 hours should not exceed 1.8kPA

17. **Particulars:**
    a) Primary and Secondary Terminal markings will have to be clearly indicated as per I.S. These markings should be permanent in nature.
    b) Metal name plate having at least the following particulars will have to be rigidly fixed on the current transformer:-
        i. Ratio
        ii. Class
        iii. Burden
        iv. Line voltage & Frequency
        v. ISF
        vi. Type
        vii. Name of Manufacturer
        viii. Name of Customer in terms of property of the customer)
        ix. Serial No.
        x. Manufacturing month & year.
    c) The nameplate should be fixed on the Current Transformer in such a way that the same cannot be peeled off without damaging the Current Transformer or any part of it.

d) Fixing arrangement (Base/ Mounting plate with legs) will have to be provided along with the Current Transformer. The height of the Base /Mounting plate with legs will be 28mm.

e) CT ratio will have to be punched on the base/ Mounting plate Legs. CT primary polarity marking P1 & P2 will have to be punched suitably on the CT base/ Mounting plate Legs.

f) Properly insulated long lead Enameled copper Secondary wires (without anyjoint in-between and having continuous current carrying capacity of at least 10 Amp) measuring at least 1.5 meters (Red colour for S1 & Black colour forS2) are to be provided for secondary connection. These secondary leads will have to be drawn out from inside the secondary winding insulation of the CT in such a way that no joint is visible or accessible from outside.

18. **DegreeofProtection**:-TherecommendedminimumdegreeofrprotectionisIP20

19. The following schedule of type test for CT (As per reference standard) to beconductedandcertified byGovt.approved laboratory/testhouse.
    - i) Verification ofterminalmarkingandpolarity.
    - ii) Highvoltagepowerfrequencytest
    - iii) Overvoltageinterturn test
    - iv) Determinationof ratioandphaseangleerror
    - v) Shorttimecurrenttestandpeakdynamiccurrent
    - vi) Temperaturerisetest.

20. **Testing:**Two numbers of sample CTs are to be delivered to Chief Engineer (Testing),Distribution TestingDepartment, Abhikshan, Kolkata, for routine test and approval.

GUARANTEEDTECHNICALPARTICULARSFOR
LT RING TYPE CURRENT TRANSFORMER OF DIFFERENT RATIO

Name of the manufacturer & address			
Sl. No	**Description**	**Ratings**	**Ratings**
1.	Item	**Ring type tape wound LT current Transformer with CTR 200/5 A & 400/5 A**	
2.	TypeofCT	Tape wound Ring type	
3.	Reference Standard	IS:- 16227:2016(Part-1 to 4) and subsequent revision if any	
4.	Rated operating Voltage&Frequency	433 Volts (phase to phase),50 Hz ± 5%	433 Volts (phase to phase),50 Hz ± 5%
5.	Rated Voltage		
6.	Highestsystemvoltage		
7.	Supply voltage variation		
8.	No.ofphases	Single	Single
9.	CTratio	**200/5A**	**400/5A**
i)	Ratedprimarycurrent	200 A	400 A
ii)	Ratedsecondarycurrent	5Amps (Balanceandunbalance load)	5Amps (Balanceandunbalance load)
10.	ClassofAccuracy	0.5S	0.5S
11.	Rated output Burden	5VA at 0.8pf(Lag)	5VA at 0.8pf(Lag)
12.	ISF	<5	<5
13.	Numberofsecondarywinding		
14.	Ambient temperature		
15.	Rated continuous thermal current & maximum temperature rise over ambient	1.2 times rated primary current with maximum temp.rise limit of 50 degC	
16.	PF withstand voltage between primary & secondary winding	3 KV	3 KV
17.	Insulation level voltage (HV test)	3 KV	3 KV
18.	Material of core	Low loss CRGO high grade Core loss should not exceed 0.8 watt/ Kg at 1.5 tesla)	Low loss CRGO high grade Core losss hould not exceed 0.8 watt/ Kg at 1.5 tesla)
19.	Material of conductor	Super enameled copper wire as per IS 4800 Part IX/ IEC317	Super enameled copper wire as per IS 4800 Part IX/ IEC 317
20.	Inner and outer diameter of CT		
21.	Class of insulation	Class of insulation "A" for indoor application	Class of insulation "A" for indoor application
22.	STC rating	5KA for 1 second	5KA for 1 second
23.	Dynamic peak current	2.5 times STC	2.5 times STC
24.	Secondary termination		
25.	Polarity marking		
26.	Minimum degree of protection		
27.	Weight		
28.	Guarantee	5 years from the date of supply	5 years from the date of supply

Signature with Designation & Seal
With Name of the Firm