# TECHNICAL SPECIFICATION OF 'LT' RING TYPE CURRENT TRANSFORMER

1. **Scope:** The Current Transformer will be used with poly phase energy meters for measuring energy.
2. **General**: The Current Transformer should conform to the I.S.2705 (part 1 & part 2) with subsequent modification thereof. The Current Transformer will be of Ring Type (Tape wound type) suitable for fixing on Bar Primary.
3. **Current Ratio:** 200/5Amps.
4. **Rated Voltage:** The Current Transformer will have to be suitable for continuous working at system voltage up to 660 volts and Frequency 50Hz.
5. **Burden:** 5 VA at 0.8 pf (lag).
6. Class of Accuracy: 0.5S.
7. **Inner Diameter:** 45mm, suitable for mounting through 40x10mm$^2$ flat bar.
8. **Instrument Security Factor**: < 5.
9. **Rated continuous thermal current temperature rise** over ambient: 1.2 times rated primary current with maximum temp. rise limit of 50 ˚C
10. One minute withstand of power frequency Voltage between primary & secondary: 3 KV
11. **Short time current rating**: 5KA for 1 second

**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 nameplate 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**
**v) Frequency,**
vi) **Type**
vii) **Name of Manufacturer**
viii) **Name of Customer (in terms of property of the customer)**
ix) **Serial No**
x) **Manufacturing month & year.**

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.

c) 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

d) 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.

e) Properly insulated long lead Enameled copper Secondary wires (without any joint in-between and having continuous current carrying capacity of at least 10Amps ) measuring at least 1.5 meters (Red colour for S1 & Black colour for S2) 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.

12. The following schedule of type test for CT (As per reference standard) to be conducted and certified by Govt. approved laboratory/test house.

i) Verification of terminal marking and polarity.
ii) High voltage power frequency test
iii) Over voltage inter turn test
iv) Determination of ratio and phase angle error
v) Short time current test and peak dynamic current
vi) Temperature rise test.

Beside this, following tests shall also be conducted

vii) Extended life cycle test
viii) Ingress protection

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