



**Current Transformers for Low Primary Currents :**

Current Transformers (CT's) are used in Power Systems / Electrical & Electronic Equipments for transforming Currents to be monitored / controlled to a Standard Value (usually, 1A or 5A).

Usual CT construction is of Bar / Window type. The Bus-Bar / Cable carrying the current to be transformed, is passed through the window. It functions as a single–turn Primary Winding.

For a given output (VA) rating, Class of accuracy and window opening, the size (Bulk) of a CT is INVERSELY proportional to the rated Primary Current. (e.g. 200/1A, 15VA, CL.1.0 CT is MORE BULKY than 300/1A CT with same output rating (and with same window opening).

For Low Primary Currents (i.e. Currents below 200A), to make the designs less bulky and more economical, **WOUND PRIMARY CONSTRUCTION** is used.

Here, CT has an in-built Primary Winding having more than one turn. Two primary terminals are provided to connect the CT in the circuit. No window is provided / required.

Thus the CT has four terminals (2 pri. Terminals marked P1 & P2 and 2 sec. Terminals marked S1 & S2) instead of a window & 2 sec. Terminals as in case of Bar/ Window type CT's.

**SPECIFYING WOUND PRIMARY CT'S**

WOUND PRIMARY CT's are to be specified giving,

- (1) Primary & Secondary currents.
- (2) Output VA rating and Class of accuracy.
- (3) Short Time Thermal Current.
- (4) Bus –Bar/ window Size is not required.

**SELECTION CHART FOR BAR/WINDOW and WOUND PRIMARY CONSTRUCTION**

Pri. Current	Outputs available with Bar/window primary construction.	Output available with wound primary construction
200A & above	-----All-----	This construction not required.
150A	Up to 15 VA, Cl. 1.0	> 15VA, Cl. 1.0
125A	Up to 10 VA, Cl. 1.0	>10 VA, Cl. 1.0
100A	Up to 7.5 VA, Cl. 1.0	>7.5 VA, Cl. 1.0
75A	Up to 2.5 VA, Cl. 1.0 5 VA, Cl. 3.0	> 2.5VA, Cl. 1.0 > 5VA, Cl. 3.0
60A to 40A	Up to 1 VA, Cl. 1.0 2.5 VA, Cl. 3.0 5VA, Cl. 5.0	> 1VA, Cl. 1.0 > 2.5VA, Cl. 3.0 > 5VA, Cl. 5.0
Below 40A.	-Bulky/not feasible/uneconomical-	-----All-----