



## 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). The 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. (For instance 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. In this case, 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 primary terminals marked P1 & P2 and 2 secondary terminals marked S1 & S2) instead of a window & 2 secondary terminals. (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 200A & above	Outputs available with bar/window primary construction. -----All-----	Output available with wound primary construction This construction not required.
150A 125A 100A 75A	Up to 15VA, Cl. 1.0 Up to 10VA, Cl. 1.0 Up to 7.5 VA, Cl. 1.0 Up to 2.5 VA, Cl. 1.0 5 VA, Cl. 3.0	> 15VA, Cl. 1.0 > 10 VA, Cl. 1.0 > 7.5 VA, Cl. 1.0 > 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	> 1 VA, Cl. 1.0 > 2.5 VA, Cl. 3.0 > 5VA, Cl. 5.0
Below 40A.	-Bulky/not feasible /uneconomical	-----All-----

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