



Current Transformer Ratios & Window Openings

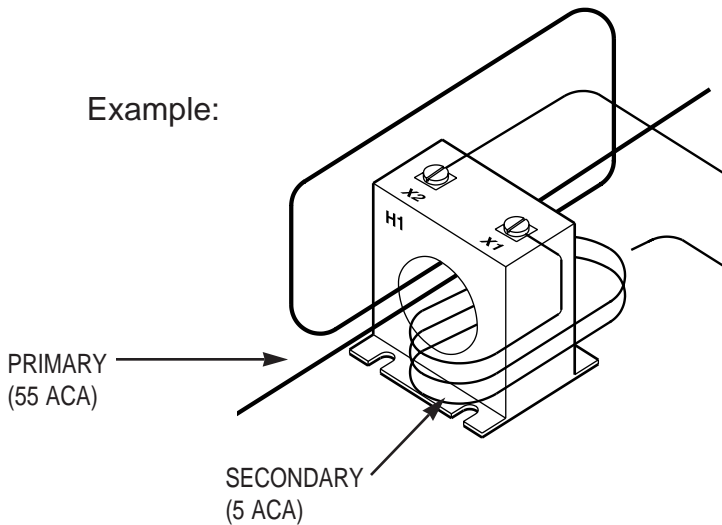
Changing Current Transformer Ratios

The actual current ratio may be changed from the nameplate ratio by wrapping the primary and/or secondary leads through the window opening.

- for X1 Lead wound from H1 side through window opening (As shown in illustration below)
- + for X1 Lead wound from side opposite H1

$$\text{ACTUAL TURNS RATIO} = \frac{\text{NAMEPLATE RATIO} \pm \text{NUMBER OF SECONDARY TURNS THROUGH WINDOW OPENING}}{\text{NUMBER OF PRIMARY TURNS THROUGH WINDOW OPENING}}$$

Example:



The illustration shows how a standard 125:5 nameplate ratio transformer can be rescaled to provide a non-standard 55:5 current ratio.

$$\frac{\frac{125}{5} - 3}{2} = 11$$

Turns Ratio = 11:1
Current Ratio = 55:5

Window Openings

The current transformer window opening should be sized according to the outside diameter of the wire and the number of wires, with ample clearance added to facilitate installation.

Use the following formula for multiple wires of the same diameters through the current transformer window opening.

$$\text{Minimum Window Diameter} = K \times \text{Outside Wire Diameter}$$

Number of Wires Through Opening	K
2	2
3	2.165
4	2.414
5	2.704
6	3.0
7	3.0
8	3.73
9	3.83