Donut Current Transformers

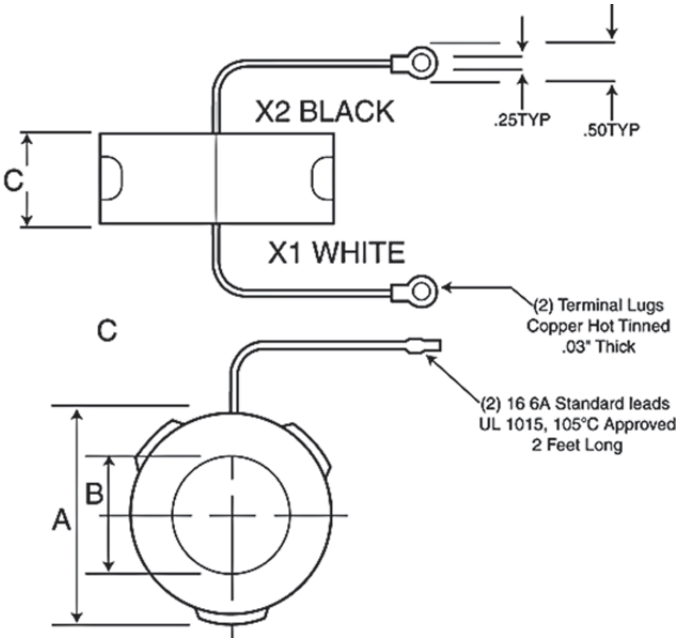
Ordering Information

Ampere		Turns	Catalog	Dimensions		
Primary	Secondary	Ratio	Number	A	B	C
50	5	10:1	01293			
75	5	15:1	01306	3.56”	1.56”	1.10”
100	5	20:1	01297			
150	5	30:1	01298			
200	5	40:1	01299			
250	5	50:1	01313			
300	5	60:1	01300	3.56”	2.06”	1.10”
400	5	80:1	01305			
500	5	100:1	01301			
600	5	120:1	02303			
750	5	150:1	02459	4.50”	3.00”	1.09”
1000	5	200:1	02304			

- ***Meets A.S.A C57.13 Standard***
- ***Flexible leads are UL105, 105°C CSA approved***
- ***Molded from impact and abrasive resistance black nylon for rugged construction***
- ***±2% Accuracy***

Catalog Number	Turns Ratio	Accuracy For 2 VA Burden
01293	10:1	2%
01306	15:1	2%
01297	20:1	1%
01298	30:1	1%
01299	40:1	1%
01313	50:1	.8%
01300	60:1	.6%
01305	80:1	.5%
01301	100:1	.5%
02303	120:1	.5%
02459	150:1	.3%
02304	200:1	.3%

Dimensions



Donut Current Transformer Wrapping Information

Primary Turn Ratio Modification

Formula: Ka = Kn x Nn / Na

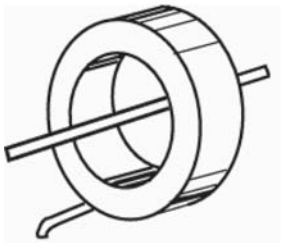
Where:
Ka = Actual Transformer Ratio
Kn = Nameplate Transformer Ratio
Na = Actual Number of Primary Turns
Nn = Nameplate Number of Primary Turns

The ratio of the current transformer can be modified by adding more primary turns to the transformer. By adding primary turns, the current required to maintain five amps on the secondary is reduced.

Example: A 100:5 current transformer designed for one primary turn.

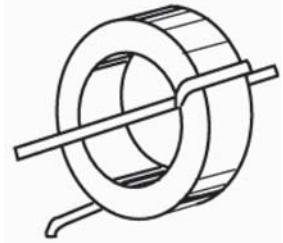
1 Primary Turn

Nameplate Ratio	Actual Ratio
100:5	100:5



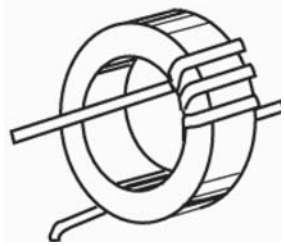
2 Primary Turns

Nameplate Ratio	Actual Ratio
100:5	50:5



4 Primary Turns

Nameplate Ratio	Actual Ratio
100:5	25:5



Primary Turn Ratio Modification

Formula: $\frac{Ip}{Is} = \frac{Ns}{Np}$

Where:
Ip - Primary Current
Is - Secondary Current
Np - Number of Primary Turns
Ns - Number of Secondary Turns

Example: A 300:5 Current Transformer.

$$\frac{300p}{5s} = \frac{60s}{1p}$$

(In practicality one turn is dropped from the secondary as a ratio correction factor.)

The ratio of the current transformer can be modified by altering the number of secondary turns by forward or backwinding the secondary lead through the window of the current transformer. By adding secondary turns, the same primary current will result in a decrease in secondary output. By subtracting turns, the same primary current will result in greater secondary output.

Again using the 300:5 example adding five secondary turns will require 325 amps on the primary to maintain the 5 amp secondary output or

$$\frac{325p}{5s} = \frac{65s}{1p}$$

Deducting 5 secondary turns will only require 275 amps on the primary to maintain the 5 amp secondary output or

$$\frac{325p}{5s} = \frac{65s}{1p}$$

The above ratio modifications are achieved in the following manner: