Donut Current Transformers

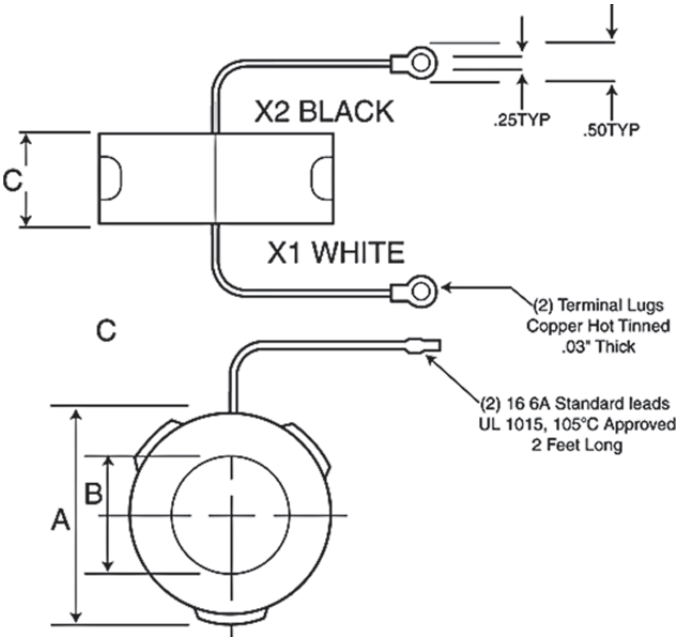
Ordering Information

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

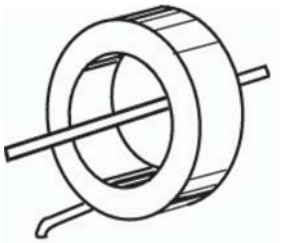
Where:
Ka = Actual Transformer Ratio
Kn = Nameplate Transformer Ratio
Na = Actual Number of Primary Turns
Nn = Nameplate Number of Primary Turns

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.

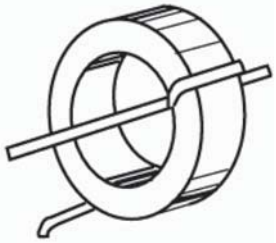
1 Primary Turn

Nameplate Ratio	Actual Ratio
100:5	100:5



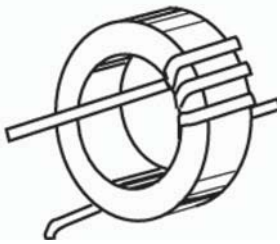
2 Primary Turns

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.

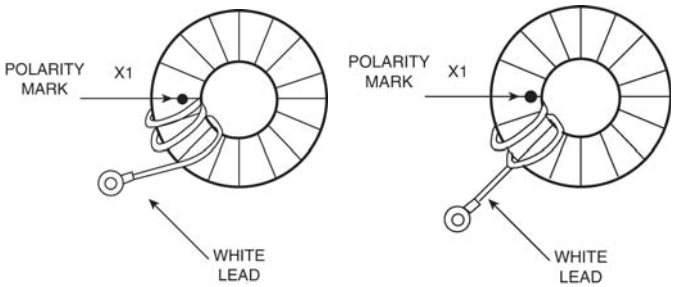
Again using the 300:5 example adding five secondary turns will require 325 amps on the primary to maintain the 5 amp secondary output or

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

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:



Model 183 Multiplier

- ***Reduces high AC Voltage Signals down to 150 VAC***
- ***Reduces high DC Voltage signals down to 500µADC***
- ***Accuracy ±1%***

Ordering Information

DC Volts - 2000 Ohms/Volt

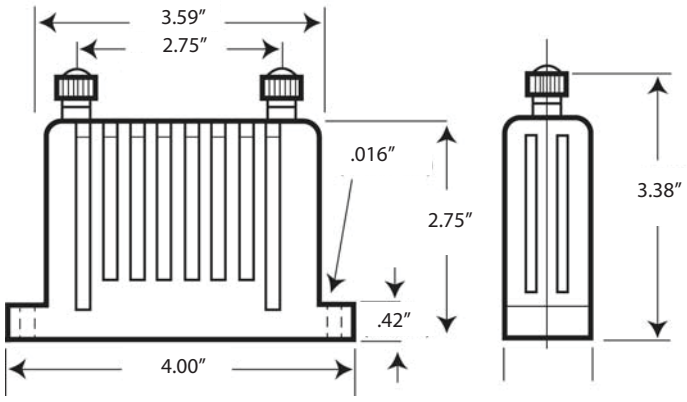
Used only with Simpson DC Volt analog panel meters or with 0-2 mA DC digital panel meters. Digital units will need to be recalibrated when a multiplier is used.

Range	Multiplier Resistance MΩ	Meter Sensitivity DC µA	Catalog Number
0-500	1	500	08552
0-1000	2	500	08554
0-2000	4	500	08557
0-4000	8	500	08560
0-5000	10	500	08561

AC Volts - 166 Ohms/Volt

Used only with Simpson AC Volt, iron vane analog panel meters or with a 0-200 VAC digital meter using an external 25KΩ/1W resistor across the inputs.

Range	Impedance Ω @ 60 Hz	Voltage Reduced	Voltage Drop	Catalog Number
0-500	58,333	350	150	08562
0-600	75,000	450	150	08563
0-750	100,000	600	150	08564
0-1000	141,666	850	150	08565



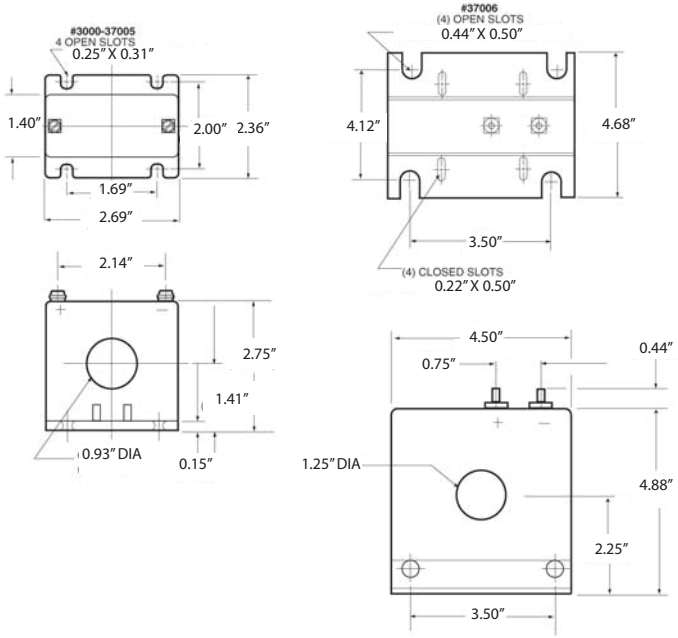
Current Transducers

- ***Reduces AC current signals down to 4-20 DCmA***
- ***Screw terminals for easy connection***
- ***Operates on 24V DC power***

Specifications

Accuracy:	±0.5% F.S. Max
Frequency:	60Hz
Insulation Class:	600V
Max. Output:	30DCmA
Temp. Effect:	
Accuracy:	±0.04%/°C
Operating:	-30°C to +65°C
Storage:	-55°C to +85°C
Supply Voltage:	24 DCV ±10%
Weight:	1.5lb (680.39kg)

Dimensions



Ordering Information

Input Current Range(ACA)	Output Current Range(DCmA)	Catalog Number
0-5 A	4-20mA	37000
0-50 A	4-20mA	37001
0-75 A	4-20mA	37002
0-100 A	4-20mA	37003
0-150 A	4-20mA	37004
0-200 A	4-20mA	37005
0-300 A	4-20mA	37006