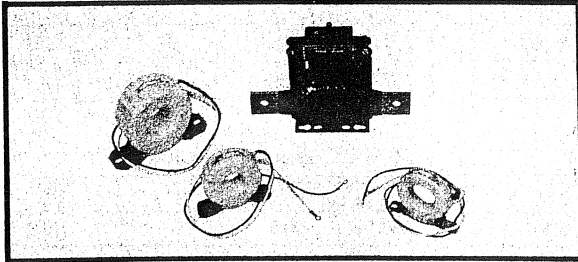


Midwest[®] ELECTRIC PRODUCTS, INC.

Midwest[®] CURRENT TRANSFORMERS

The Midwest line of current transformers has represented quality and reliability for over 30 years. At Midwest, quality is the consideration above all others.



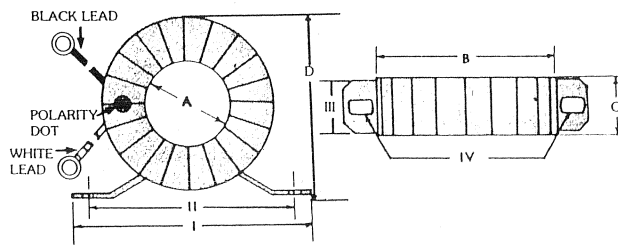
General Description

The Midwest donut type current transformer is available in ratios ranging from 5:5 to 3000:5. The VA output capacity is from 2 VA to 15 VA. Standard leads are 24" in length. Screw terminals are available at no extra cost when specified on order. 600 volt insulation is standard. Optional taps and optional mounting brackets are also available.

Midwest also produces a line of wound primary transformers available in ratios from 50:5 to 500:5. The VA output capacity is 25 VA. All wound primary models are standard with mounting bracket.

Installation

The donut transformer can be ordered with the optional mounting bracket for quick installation. When the primary conductor enters the CT from the side marked with the polarity dot, the secondary output from the white lead is in phase with the primary current. Care must be taken to ensure the secondary leads are connected at all times when current is passing through the primary conductor. The following table provides dimensional information on the CT and also the mounting bracket.



Donut CT Mounting Dimensions

Transformer Dimensions				Mounting Bracket Dimensions				CT Group Size
A	B	C	D	I	II	III	IV	
1¼	3¾	2¾	3¾	5¼	4	2⅞	.281 x .5	1
1¼	3½	1¼	3¾	4½	3⅞	⅞	.250 x .375	2
1¼	3⅞	1¼	4	4½	3⅞	⅞	.250 x .375	3
1⅞	4	1¼	4⅞	4½	3⅞	⅞	.250 x .375	4
1¼	3¾	1⅞	3¾	4⅞	3¾	1¼	.281 x .5	5
2¼	4⅞	1½	5	7⅞	5 ¹³ / ₁₆	1	.281 x .5	6
2¼	5	1½	5⅞	7⅞	5 ¹³ / ₁₆	1	.281 x .5	7
3¼	6¼	1⅞	6⅞	7⅞	6⅞	1⅞	.281 x .5	8
3¼	6½	1⅞	6⅞	7⅞	6⅞	1⅞	.281 x .5	9
2¼	5	2	5⅞	7	5¾	1½	.281 x .5	10
2	5⅞	2⅞	5¼	7	5¾	1½	.281 x .5	11
1¾	5⅞	2¼	5¼	6⅞	6	2⅞	.281 x .5	13
3⅞	6¼	3	6⅞	7⅞	6⅞	2¼	.281 x .5	14

Data subject to change without notice.

Construction

The Midwest current transformer core is made with grain oriented steel. The core is insulated and then wound with the secondary windings which are securely taped in place to prevent shorting. The 24" leads are permanently fastened in place and then a PVC coating is applied over the entire current transformer. The permanent nameplate provides the appropriate data on the electrical ratings of the current transformer. Optional mounting brackets are available.

Ratio Modification

The formula to use in this calculation is:

$$\frac{I_p}{I_s} = \frac{N_s}{N_p}$$

Where I_p = Primary Amperage
 I_s = Secondary Amperage
 N_p = Number of Primary Turns
 N_s = Number of Secondary Turns

Example: A 300:5 current transformer =

$$\frac{300_p}{5_s} = \frac{60_s}{1_p}$$

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

The ratio of the current transformer can be modified then by altering the number of secondary turns by forward or backwinding the secondary leads through the window of the current transformer.

By adding secondary turns the same primary amperage will result in a decrease in secondary output. By subtracting secondary turns the same primary amperage 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

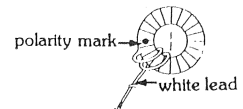
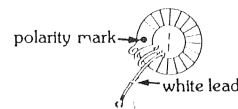
$$\frac{325_p}{5_s} = \frac{65_s}{1_p}$$

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

$$\frac{275_p}{5_s} = \frac{55_s}{1_p}$$

The above ratio modifications are achieved in the following manner:

- To add secondary turns, the white lead should be wound through the CT from the side opposite the polarity mark.
- To subtract secondary turns, the white lead should be wound through the CT from the same side as the polarity mark.



Midwest[®] ELECTRIC PRODUCTS, INC.

MIDWEST RING TYPE CURRENT TRANSFORMER

2 VA Capacity Maximum

MODEL NUMBER	Ratio	Pri-T	Accuracy	Group Size
2CT210	10:5	2	6.00%	1
2CT120	20:5	1	6.00%	1
2CT125	25:5	1	6.00%	1
2CT130	30:5	1	6.00%	1
2CT140	40:5	1	6.00%	1
3CT205	5:5	20	3.00%	3
3CT101	10:5	10	3.00%	3
3CT1015	15:5	10	2.00%	3
3CT62	20:5	6	2.50%	3
3CT625	25:5	6	2.00%	3
3CT63	30:5	6	1.60%	3
3CT64	40:5	6	1.25%	3
3CT34	40:5	3	2.5%	3
3CT15	50:5	1	6.00%	3
3CT35	50:5	3	2.00%	2
3CT16	60:5	1	5.00%	3
3CT175	75:5	1	3.80%	3
3CT375	75:5	3	1.30%	2
3CT18	80:5	1	3.80%	3
3CT11	100:5	1	3.00%	2
3CT21	100:5	2	1.50%	2
3CT115	150:5	1	2.00%	2
3CT215	150:5	2	1.00%	2
3CT12	200:5	1	1.50%	2
3CT125	250:5	1	1.20%	2
3CT13	300:5	1	1.00%	2
4CT14	400:5	1	0.75%	2

2 VA Capacity Maximum continued

MODEL NUMBER	Ratio	Pri-T	Accuracy	Group Size
4CT15	500:5	1	0.60%	2
4CT16	600:5	1	0.50%	2
4CT175	750:5	1	0.40%	4
4CT18	800:5	1	0.38%	4
4CT110	1000:5	1	0.30%	4

5 VA Capacity Maximum continued

MODEL NUMBER	Ratio	Pri-T	Accuracy	Group Size
6CT112	1200:5	1	0.25%	8
6CT115	1500:5	1	0.15%	8
6CT120	2000:5	1	0.10%	9
6CT1250	2500:5	1	0.10%	9
6CT130	3000:5	1	0.10%	9

5 VA Capacity Maximum

MODEL NUMBER	Ratio	Pri-T	Accuracy	Group Size
6CT62	20:5	6	2.50%	5
6CT4	40:5	1	6.00%	1
6CT5	50:5	1	6.00%	1
6CT35	50:5	3	2.00%	5
6CT75	75:5	1	3.75%	1
6CT375	75:5	3	1.30%	5
6CT11	100:5	1	3.00%	5
6CT115	150:5	1	2.00%	5
6CT12	200:5	1	1.50%	5
6CT125	250:5	1	1.20%	5
6CT13	300:5	1	1.00%	5
6CT14	400:5	1	0.75%	6
6CT15	500:5	1	0.60%	6
6CT16	600:5	1	0.50%	6
6CT17	700:5	1	0.40%	7
6CT175	750:5	1	0.40%	7
6CT18	800:5	1	0.38%	7
6CT19	900:5	1	0.35%	7
6CT110	1000:5	1	0.30%	7

10 VA Capacity Maximum

MODEL NUMBER	Ratio	Pri-T	Accuracy	Group Size
8CT62	20:5	6	3.00%	10
8CT35	50:5	3	2.00%	10
8CT75	75:5	1	3.75%	10
8CT11	100:5	1	3.00%	10
8CT115	150:5	1	2.00%	10
8CT13	300:5	1	1.00%	10
8CT14	400:5	1	0.75%	10
8CT18	800:5	1	0.38%	11

15 VA Capacity Maximum

MODEL NUMBER	Ratio	Pri-T	Accuracy	Group Size
9CT11	100:5	1	3.00%	13
9CT12	200:5	1	1.50%	13
9CT125	250:5	1	1.20%	13
9CT14	400:5	1	0.75%	13
9CT16	600:5	1	0.50%	13
9CT110	1000:5	1	0.30%	13
9CT1115	1500:5	1	0.15%	14
9CT130	3000:5	1	0.10%	14

Options

CT Model Number Prefix	
Options	How to Order
Mounting Bracket	Add "B" Suffix to Model Number
Special Length Leads (Price shown per foot)	Specify Length Required
Extra Taps (Price per tap)	Specify Ratio(s) to be Tapped
Fungus treatment to Meet Military Specifications	Specify on order

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THIS IS ONLY A PARTIAL LISTING
OF THE PRODUCTS WE HAVE
AVAILABLE. PLEASE CONTACT US
FOR ADDITIONAL PRODUCT
INFORMATION.