

# OSI THREE-PHASE AC CURRENT TRANSDUCER MODEL 3CT5

## THREE CURRENT TRANSDUCERS IN ONE ENCLOSURE

### DESCRIPTION

The model 3CT5 is a three-phase ac current transducer which provides three isolated dc outputs which are directly proportional to the three current inputs. The output is derived from the average absolute value of the input and is calibrated in terms of the RMS value of the input sine wave. Models with full-scale input ranges of 25A and higher use external sensors (CTs). With the exception of models which provide 4-20mA outputs, all models are self-powered from the measured line.

### FEATURES

- Accurate, reliable current measurement
- Three separate inputs, three outputs
- Input/Output isolation

### APPLICATIONS

- Designed for use in three-phase applications which require inexpensive current measurement
- Designed to withstand motor start-up transients

## MODEL SELECTION

INPUT AC AMPS	SENSOR SIZE	STANDARD OUTPUTS MODEL 3CT5-				
		0-1mA*	4-20mA	4-20mA**	0-10V*	0-5V*
0 - 1	(Internal)	001A	001E	001E2	001C	001CX5
0 - 5	(Internal)	005A	005E	005E2	005C	005CX5
0 - 10	(Internal)	010A	010E	010E2	010C	010CX5
0 - 20	(Internal)	020A	020E	020E2	020C	020CX5
0 - 25 †	W	025A	025E	025E2	025C	025CX5
0 - 50	W	050A	050E	050E2	050C	050CX5
0 - 100	W	100A	100E	100E2	100C	100CX5
0 - 200	W	200A	200E	200E2	200C	200CX5
0 - 300	W	300A	300E	300E2	300C	300CX5
0 - 400	X	400A	400E	400E2	400C	400CX5
0 - 500	X	500A	500E	500E2	500C	500CX5
0 - 600	X	600A	600E	600E2	600C	600CX5
0 - 800	X	800A	800E	800E2	800C	800CX5
0 - 1000	Y	1000A	1000E	1000E2	1000C	1000CX5
0 - 1500	Y	1500A	1500E	1500E2	1500C	1500CX5

\* "A", "C", and "CX5" models are self-powered from measured line.

\*\* "E2" models are 4-20mA loop-powered, and require 15-24Vdc.

† Indicates two turns required through transformer window.

Standard "E" models require 115Vac instrument power.

For optional 230Vac instrument power - add suffix "- 22".

For optional "3 outputs summed" - add suffix "X668". This option provides a single output proportional to the average level of the 3 inputs.



**5 YEAR WARRANTY**

### ORDERING INFORMATION

Example: Three 200Aac Inputs with three 4-20mAadc Outputs.

**3CT5-200E**

## SPECIFICATIONS

### INPUT

Frequency Range ..... 50-400Hz  
 Burden ..... 1.0VA F.S. (each input)  
 Current Overload (continuous)  
     20A model ..... 1.25 X F.S. Rating  
     All other models ..... 2 X F.S. Rating  
 Transient (1 second) ..... 50 X F.S. Rating

### DIELECTRIC TEST

Input/Output/Case ..... 1500Vac

### INSTRUMENT POWER

"E" models... Standard ..... 85-135Vac, 50-400Hz, 10VA  
     "-22" option ..... 230Vac, 50-400Hz, 10VA  
 "E2" models ..... 15-24Vdc loop powered  
 All other models ..... Self-powered

### OUTPUT

Response ..... 400ms  
 Loading  
     "A" models ..... (0-1mAadc) ..... 0-10kΩ  
     "E" models ..... (4-20mAadc) ..... 0-500Ω  
     "E2" models ..... (4-20mAadc) ..... 0-1400Ω  
     "C", "CX5" models ..... (0-5Vdc, 0-10Vdc) ..... ≥10MΩ  
 Field Adjustable Cal. .... ±5%

### ACCURACY

Internal sensor ..... ±0.25% F.S. @ 60Hz  
 External sensor ..... ±0.5% F.S. @ 60Hz  
     Includes effects of linearity and setpoint  
 Output Ripple ..... <1.0% F.S.

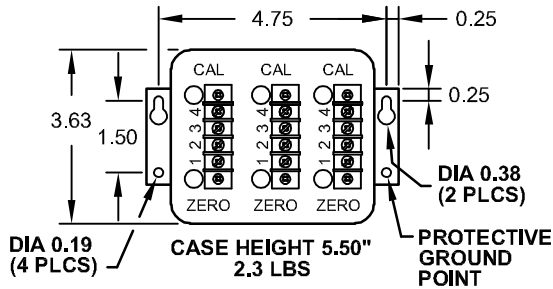
### TEMPERATURE

Operating Range ..... -20°C to +60°C  
 Effect ..... ±1.0% Rdg.

# OHIO SEMITRONICS, INC.

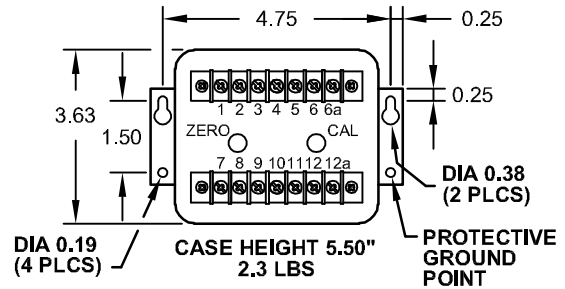
4242 REYNOLDS DRIVE \* HILLIARD, OHIO \* 43026-1264  
 PHONE: (614) 777-1005 \* FAX: (614) 777-4511  
 WWW.OHIOSEMITRONICS.COM \* 1-800-537-6732

### MODELS WITH A, C, CX5 OR E2 OPTION



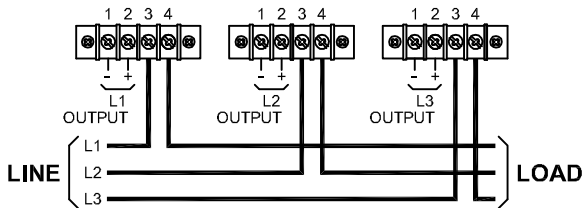
ALL DIMENSIONS ARE IN INCHES.

### MODELS WITH E OPTION

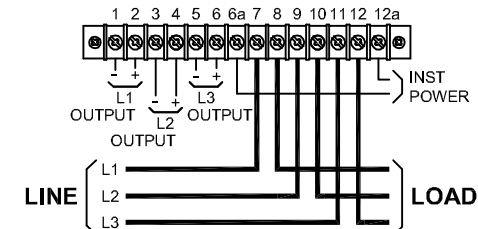


**NOTE: ALL "X668" OUTPUT CONNECTIONS ARE AT L1 (TERMINALS 1 & 2)**

### MODELS WITH A, C & CX5 OPTIONS - INTERNAL SENSOR

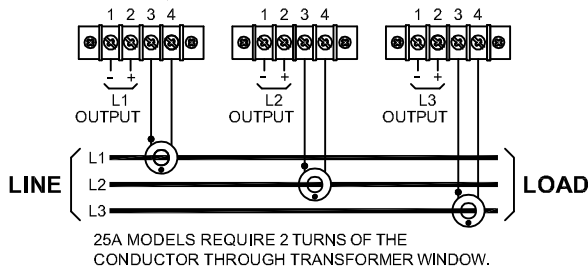


### MODELS WITH E OPTION - INTERNAL SENSOR

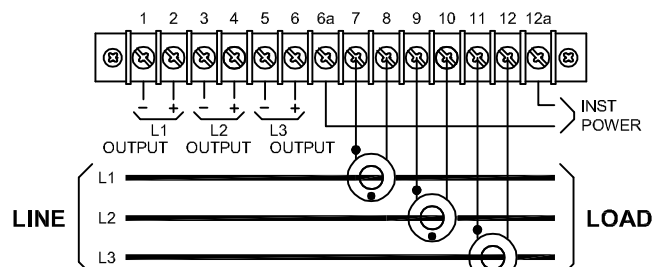


TERMINALS 1, 3, AND 5 ARE INTERNALLY COMMON  
AC INSTRUMENT POWER ON TERMINALS 6A AND 12A

### MODELS WITH A, C & CX5 OPTIONS - EXTERNAL SENSOR

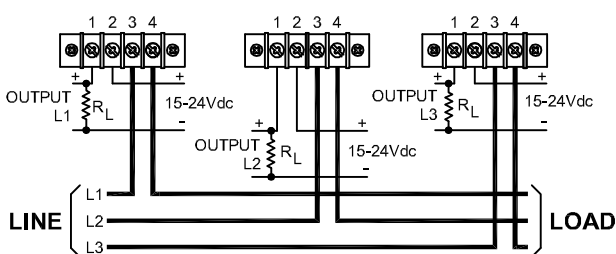


### MODELS WITH E OPTION - EXTERNAL SENSOR

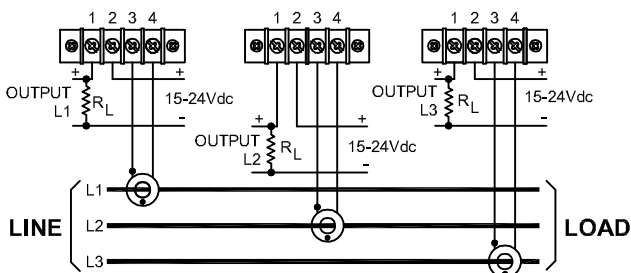


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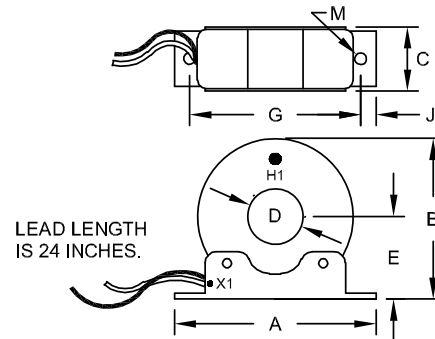
### MODELS WITH E2 OPTION - INTERNAL SENSOR



### MODELS WITH E2 OPTION - EXTERNAL SENSOR



## EXTERNAL SENSOR DIMENSIONS



SENS. SIZE	SENSOR DIMENSIONS (INCHES)							WT. LBS.	
	A	B	C	D	E	G	J		
W	4.50	3.7	1.25	1.25	1.94	3.88	0.34	0.27 x 0.44	1.43
X	6.50	4.7	1.25	2.50	2.46	5.75	0.39	0.28	1.61
Y	6.50	4.7	1.25	3.00	2.46	5.75	0.39	0.28	1.10

Dwg# 0902-00411-B Rev A