

# OSI SINGLE-PHASE AC CURRENT TRANSDUCER MODEL ACT-

## DESCRIPTION

The model ACT is a UL-, CUL-, and CE-approved AC current transducer which provides an isolated DC analog output that is directly proportional to the current input. The output is derived from the average absolute value of the input waveform and calibrated in terms of the RMS value of an input sine wave. With the exception of models which provide 4-20mA output, all other models require no external power connections.



## FEATURES

- Accurate, reliable current measurement
- Rugged metal construction
- Designed to withstand motor start-up transients
- Average reading calibrated RMS
- Low Cost



**5 YEAR WARRANTY**

## APPLICATIONS

- Designed for use in applications which require inexpensive current measurement.
- Designed for use in applications where UL-, CUL-, or CE-approved measurement is required.

### ORDERING INFORMATION

Example: 200 Amp AC Input with 4-20mA Output and 230Vac instrument power

**ACT-200E-22**

400Hz models are available - consult factory for the CT5 series, which is not UL-, CUL- or CE-approved.

## MODEL SELECTION

INPUTS AC AMPS	SENSOR SIZE	STANDARD OUTPUT MODELS ACT-				
		UL, CUL & CE				UL & CUL
		0-1mAdc*	4-20mAdc**	0-10Vdc*	0-5Vdc*	4-20mAdc
0 - 1	INT	001A	001E2	001C	001CX5	001E
0 - 5	INT	005A	005E2	005C	005CX5	005E
0 - 10	INT	010A	010E2	010C	010CX5	010E
0 - 20	INT	020A	020E2	020C	020CX5	020E
0 - 25 †	W	025A	025E2	025C	025CX5	025E
0 - 50	W	050A	050E2	050C	050CX5	050E
0 - 100	W	100A	100E2	100C	100CX5	100E
0 - 200	W	200A	200E2	200C	200CX5	200E
0 - 300	W	300A	300E2	300C	300CX5	300E
0 - 400	X	400A	400E2	400C	400CX5	400E
0 - 500	X	500A	500E2	500C	500CX5	500E
0 - 600	X	600A	600E2	600C	600CX5	600E
0 - 800	X	800A	800E2	800C	800CX5	800E
0 - 1000	Y	1000A	1000E2	1000C	1000CX5	1000E
0 - 1500	Y	1500A	1500E2	1500C	1500CX5	1500E

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

\*\* "E2" models are loop-powered, and require 15-24Vdc instrument power.

† Indicates two turns required through transformer window.

## SPECIFICATIONS

### INPUT

Frequency Range..... 50/60Hz  
 Burden..... 1.0VA F.S.  
 Current Overload (continuous)  
 20A model..... 1.25 X F.S. rating  
 all other models ..... 2 X F.S. rating

### DIELECTRIC TEST

Input/Output/Case .....2200Vac

### INSTRUMENT POWER

"A", "C", "CX5" models.....Self-powered  
 "E2" models..... 15-24Vdc  
 "E" models..... 115Vac, 50/60Hz, ±15%, 10VA  
 "-22" option ..... 230Vac, 50/60Hz, ±15%, 10VA

### OUTPUT

Response ..... 400ms  
 Loading  
 "A" models ..... (0-1mAdc output)..... 0-10kΩ  
 "E" models ..... (4-20mAdc output)..... 0-1kΩ  
 "E2" models ... (4-20mAdc output)....0-600Ω at 24V  
 "C" & "CX5" models (5Vdc, 10Vdc output) ..... ≥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.

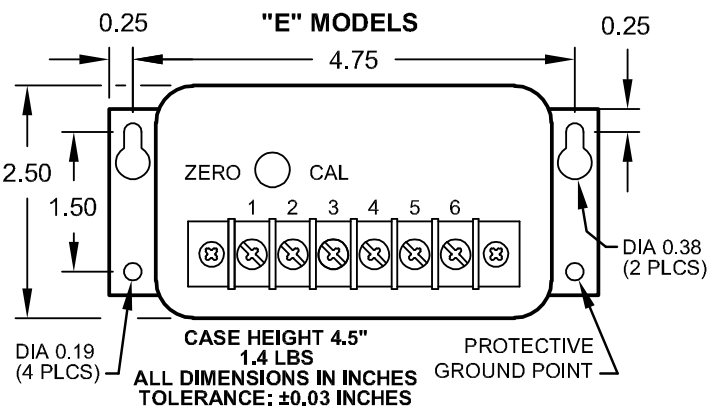
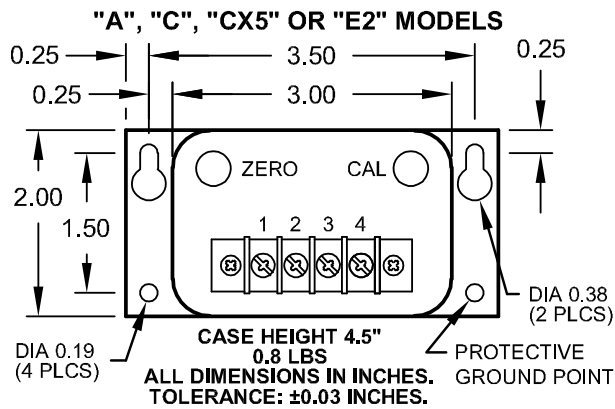
### TEMPERATURE

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

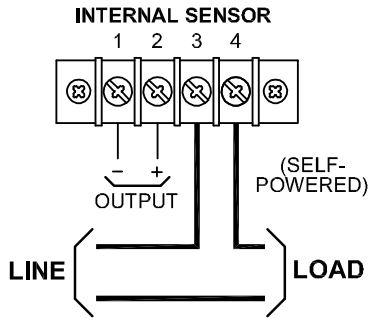
**OHIO SEMITRONICS, INC.**

4242 REYNOLDS DRIVE \* HILLIARD, OHIO \* 43026-1264  
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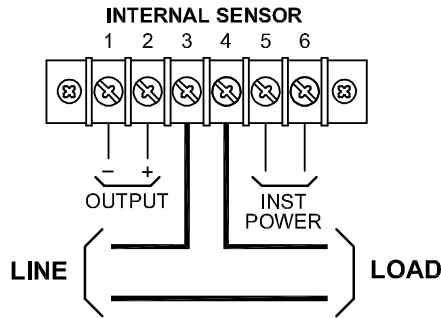
# OSI CASE DIMENSIONS & CONNECTION DIAGRAMS MODEL ACT-



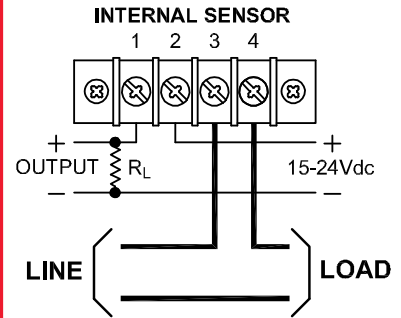
## "A", "C" & "CX5" MODELS



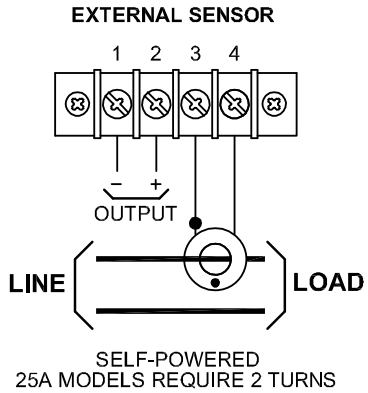
## "E" MODELS



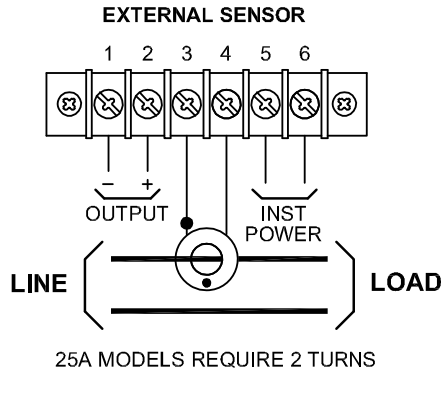
## "E2" MODELS



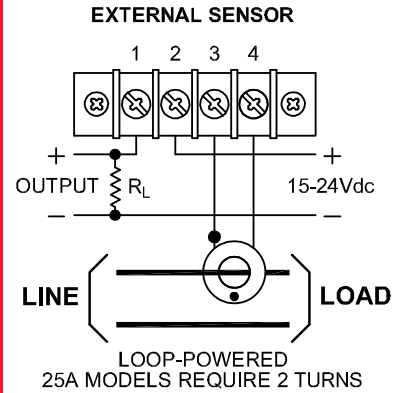
## "A", "C" & "CX5" MODELS



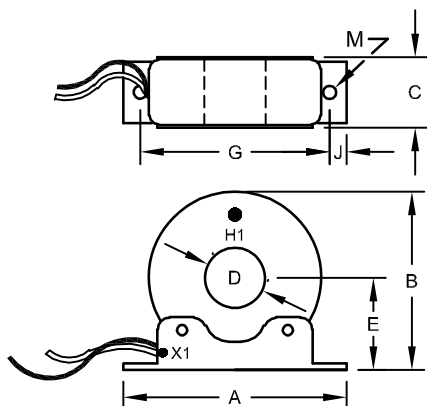
## "E" MODELS



## "E2" MODELS



## SENSOR DIMENSIONS



SENSOR SIZE	SENSOR DIMENSIONS (INCHES)								WT. LBS.
	A	B	C	D	E	G	J	M	
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


Lead Length..... 24 Inches

Dwg# 0902-00857-B Rev A

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## INSTALLATION INSTRUCTIONS

1. Installation should be performed by qualified electricians only!
2. Make sure electrical service is disconnected before making any electrical connections.
3. Branch circuit protection is required to be provided in accordance with the National and Local codes of the inspection authority.
4. Route wires as required and secure to terminals per connection diagram on this sheet and on the unit.
5. Attach the Protective Ground Point (  ) to earth ground by mounting to a grounded enclosure or by attaching a ground wire. Paint barrier on can must be broken by using an internal-tooth lock-washer or similar device.

## OPERATING INSTRUCTIONS

1. This unit is intended for indoor use at altitudes up to 2000 meters.
2. Transient overvoltages according to Installation Category (overvoltage category) II, pollution Degree 2.
3. The output signal is intended to be "Not accessible to the user". To prevent contact with live circuits, the transducer is required to be mounted in an enclosure that requires the use of a tool for access.
4. If cleaning of the exterior surface is necessary, de-energize all services of supply (both measuring and instrument power circuits) and brush with a soft brush or blow off with low-pressure air. Use appropriate eye protection. Not suitable for hose-down cleaning.
5. Maximum relative humidity 80 percent for temperatures up to 31°C decreasing linearly to 50 percent relative humidity at 40°C.
6. Maximum operating temperature range is -20°C to 60°C.

## WARRANTY STATEMENT

Ohio Semitronics Inc. warrants this unit to be free of defects in material and workmanship for a period of five years from date of shipment. This unit must not be used in any manner other than as specified in this document.