

### CIRCULAR WINDOW MODELS

CURRENT RANGE	MODEL NUMBER	NOMINAL OUTPUT	SENSOR SIZE
0 to 35A	CTL-51/35	35mV	A
0 to 50A	CTL-51/50	50mV	A
0 to 50A	CTL-101/50 *	50mV	C
0 to 75A	CTL-101/75 *	75mV	C
0 to 100A	CTL-101/100 *	100mV	C
0 to 150A	CTL-201/150 *	75mV	D
0 to 200A	CTL-201/200 *	100mV	D
0 to 300A	CTL-401/300 *	75mV	D
0 to 400A	CTL-401/400 *	100mV	D
0 to 500A	CTL-601/500	40mV	E
0 to 600A	CTL-601/600	50mV	E
0 to 800A	CTL-202/800	40mV	E
0 to 1000A	CTL-202/1000	50mV	E
0 to 1500A	CTL-202/1500	75mV	E
0 to 2000A	CTL-202/2000	100mV	E

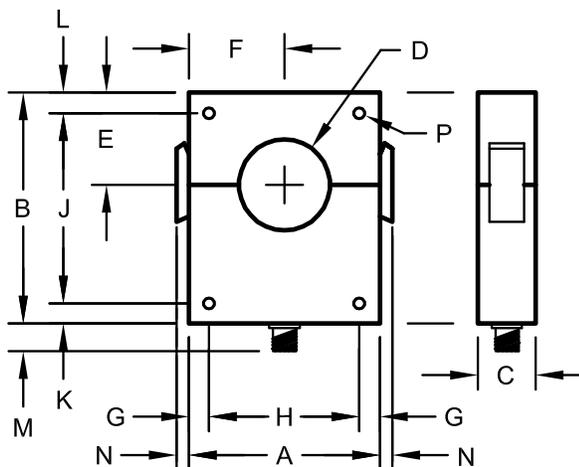
\* Split-core option is not included in UL listing. Sensor size A is supplied as solid core only.

**5 YEAR WARRANTY**



Measuring Equipment 7N93

### DIMENSIONS A, C, D & E



Dwg# 0902-00927-B Rev --

SENS. SIZE	SENSOR DIMENSIONS (inches)													WT. LBS	
	A	B	C	D	E	F	G	H	J	K	L	M	N		P
A	1 1/8	1 1/2	1/2	3/8	9/16	9/16	9/32	9/16	NA	3/16	NA	NA	NA	1/8	0.12
C	2	2	3/4	3/4	7/8	1	1/4	1 1/2	NA	1/4	NA	NA	1/4	5/32	0.28
D	3 1/8	4	3/4	1 1/8	1 1/2	1 9/16	1/2	2 1/8	NA	1/2	NA	1/2	1/4	11/64	0.75
E	4 1/8	5	1 1/4	2	2	2 1/16	7/16	3 1/4	4 1/8	7/16	7/16	5/8	5/16	17/64	2



Window Size  
 A .....3/8"  
 C .....3/4"  
 D .....1 1/8"  
 E .....2"

### ORDERING INFORMATION

Example: 300Amp Split-Core Current Sensor with Extended Temperature Range.

### CTL-401TS/300

(Order in combination with appropriate CTA Signal Conditioner)

### SPECIFICATIONS

#### INPUT

Current Range .....See Table.....dc/RMS  
 Over-current (without damage)..... 50X rating  
 Resistance  
 0-400A models ..... 6Ω ±3Ω  
 600A+ models ..... 23Ω ±5Ω  
 Excitation Current ..... 200mA

#### OUTPUT

With 200mA excitation current .....Nominal ±30%  
 Response Time (to 90% F.S.) .....50μs, typical  
 Resistance .....25Ω ±15Ω  
 Initial Offset ..... <±2mV

#### DIELECTRIC TEST (Conductor through window to output).

Standard Models ..... 2200Vac  
 Suitable for installation on 600Vac or 850Vdc uninsulated bus  
 Option "S" with sensor size C and D ..... 1000Vdc  
 To be used with insulated conductors only.

#### ACCURACY & LINEARITY

When Calibrated with CTAXxxx ..... ±0.5% F.S.  
 (With current conductor centered in window)

#### TEMPERATURE

Operating Range  
 Standard ..... -10°C to 40°C  
 Extended .... Add suffix "T" ..... -40°C to 65°C  
 Effect ..... ±1% F.S.

#### OPTIONS

Split-core (Sensor sizes C, D and E) .....Add suffix "S"

#### PHYSICAL

Cable Length ... A(all), C(solid), D(solid) ... 18in. non-detachable  
 C (split) ..... 8ft. non-detachable  
 D (split), E(all) ..... 8ft. detachable  
 Other cable lengths available - Consult factory.

#### NOTES:

CTL specifications are for unidirectional operation. For bidirectional, add suffix "Y122". (use with direct model CTA)

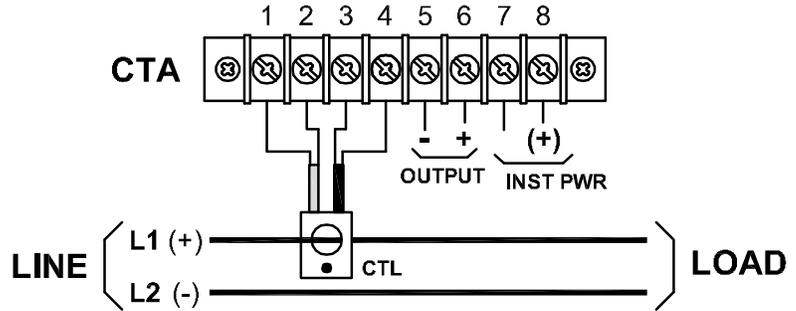
CTA signal conditioners provide the excitation current (instrument power) that the CTL sensor requires, as well as amplifying the low-level (mV) signal into a more typical signal.

See CTA spec sheet for details.

## CONNECTION DIAGRAM

### SENSOR SIZES A (all), C (all) & D (solid):

CABLE	WIRE	SIGNAL
GRAY.....	BLACK .....	OUTPUT (-)
GRAY.....	RED.....	OUTPUT (+)
SHIELD .....	SHIELD .....	SHIELD
BLACK.....	BLACK .....	EXCITATION (-)
BLACK.....	RED.....	EXCITATION (+)



Dwg. # 0902-00922-B Rev A (mod.)

### SENSOR SIZE D (split):

PIN	WIRE	SIGNAL
1 .....	WHITE.....	OUTPUT (-)
2 .....	GREEN.....	OUTPUT (+)
4 .....	SHIELD .....	SHIELD
6 .....	BLACK.....	EXCITATION (-)
8 .....	RED.....	EXCITATION (+)

### SENSOR SIZE E (all):

PIN	WIRE	SIGNAL
A.....	WHITE.....	OUTPUT (-)
B.....	GREEN.....	OUTPUT (+)
C.....	BLACK.....	EXCITATION (-)
D.....	RED.....	EXCITATION (+)
E.....	SHIELD.....	SHIELD

CTA TERMINAL IDENTIFICATION	
Terminal 1 (-)	CTL Output
Terminal 2 (+)	
Terminal 3 (-)	Excitation to CTL
Terminal 4 (+)	
Terminal 5 (-)	CTA Output
Terminal 6 (+)	
Terminal 7 (-)	CTA Instrument Power
Terminal 8 (+)	

“Red dot” side of CTL must face positive supply.  
All shields must be tied to terminal 3.  
DC Instrument Power is positive on terminal 8.

## INSTALLATION AND OPERATION

### 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. Transducers are suitable for installation on 600Vac lines.
6. To prevent contact with live circuits, when installed on a bare bus bar, the transducer is required to be mounted in an enclosure that requires the use of a tool for access. When installed on an insulated cable this second enclosure is not required.

### 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. 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.
4. Maximum relative humidity 80 percent for temperatures up to 31°C decreasing linearly to 50 percent relative humidity at 40°C.
5. Maximum operating temperature range is -20°C to 60°C.



UL approved for USA and Canada



Both Direct (dc) and Alternating (ac) current

### 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.

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