

**OSI HALL EFFECT CURRENT SENSORS****MODEL CTL-****CIRCULAR WINDOW MODELS**

The CTL series of Hall effect current transducers listed below provides the user with a wide range of current selections, either for DC and AC applications with various window apertures. Optional features are "take apart" split-core transducers, extended temperature ranges, and special calibration ranges when calibrated with a signal conditioner.

**MODEL CTL-51 SERIES**

Current ranges from 35 through 100 amperes dc and up to 50 amperes ac. Standard current ranges of 35, 50, 75 and 100 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a 3/8" diameter opening which will accommodate #6 gauge cable or smaller. Not available in split-core.

**MODEL CTL-101 SERIES**

Current ranges from 50 through 150 amperes dc and up to 100 amperes ac. Standard current ranges of 50, 75, 100, and 150 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a 3/4" diameter opening which will accommodate 4/0 cable or smaller.

NOTE: Split-Core option is not included in the UL listing.

**MODEL CTL-201 and CTL-401 SERIES**

Current ranges from 100 through 500 amperes dc and up to 400 amperes ac. Standard current ranges of 100, 150, 200, 300, 400 and 500 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a 1 1/8" diameter opening which will accommodate a 400 MCM cable or smaller.

NOTE: Split-Core option is not included in the UL listing.

**MODEL CTL-601 AND CTL-202 SERIES**

Current ranges from 500 through 2000 amperes dc and up to 2000 amperes ac. Standard current ranges of 500, 600, 800, 1000, 1500 and 2000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a 2" diameter opening, allowing for a bundle of four 0.71" diameter insulated 4/0 cables, or three 0.95" diameter 350 MCM cables.

**MODEL CTL-601FS AND CTL-202FS SERIES****NEW**

Current ranges from 500 through 2000 amperes dc and up to 2000 amperes ac. Standard current ranges of 500, 600, 800, 1000, 1500 and 2000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a 2 1/4" diameter opening, allowing for a bundle of five 0.71" diameter insulated 4/0 cables, or two 1.06" diameter 350 MCM cables. Available in split-core only.

**MODEL CTL-202EES AND CTL-302EES SERIES****NEW**

Current ranges from 1000 through 3000 amperes dc and up to 2000 amperes ac. Standard current ranges of 1000 to 3000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a 4 1/4" diameter.

Available in split-core only.



Measuring  
Equipment  
7N93

**5 YEAR  
WARRANTY**

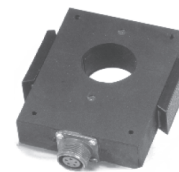
Sensor Size A  
3/8" dia.  
Window Aperture



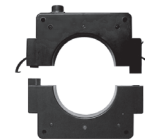
Sensor Size C  
3/4" dia.  
Window Aperture



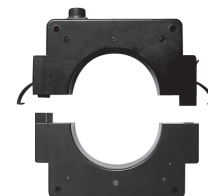
Sensor Size D  
1 1/8" dia.  
Window Aperture



Sensor Size E  
2" dia.  
Window Aperture



Sensor Size F  
2 1/4" dia.  
Window Aperture



Sensor Size EE  
4 1/4" dia.  
Window Aperture

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**OSI HALL EFFECT CURRENT SENSORS****MODEL CTL-****RECTANGULAR WINDOW (BUS BAR) MODELS****MODEL CTL-202H and CTL-502H SERIES**

Current ranges from 500 through 5000 amperes dc and up to 3000 amperes ac. Standard current ranges of 500, 1000, 1500, 2000, 3000, 4000 and 5000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a rectangular 1 1/4" x 4 1/2" opening designed for a 4" current bus with sections up to 1" high.



Measuring  
Equipment  
7N93

**5 YEAR  
WARRANTY**



Sensor Size Z  
1 1/4" x 4 1/2" dia.  
Window Aperture

**MODEL CTL-202ZZS and CTL-302ZZS SERIES**

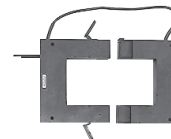
Current ranges from 1000 through 3000 amperes dc and up to 2000 amperes ac. Standard current ranges of 1000 to 3000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a rectangular 2 7/16" x 4 1/2" opening designed for a 4" current bus with sections up to 1 1/2" high. Available in split-core only.



Sensor Size ZZ  
4 1/2" x 2 7/16" dia.  
Window Aperture

**MODEL CTL-502 SERIES**

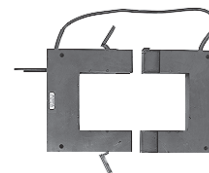
Current ranges from 2000 through 5000 amperes dc and up to 3000 amperes ac. Standard current ranges of 2000, 2500, 3000, 4000 and 5000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a rectangular 3" x 6 1/2" opening designed for a 6" current bus with sections up to 2 1/2" high.



Sensor Size G  
3" x 6 1/2" dia.  
Window Aperture

**MODEL CTL-103 SERIES**

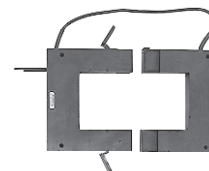
Current ranges from 5000 through 10000 amperes dc and up to 7000 amperes ac. Standard current ranges of 5000, 6000, 7000, 8000, 9000 and 10000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a rectangular 5 1/2" x 8" opening designed for cable bundles or for a larger interleaved bus.



Sensor Size H  
5 1/2" x 8" dia.  
Window Aperture

**MODEL CTL-203S SERIES**

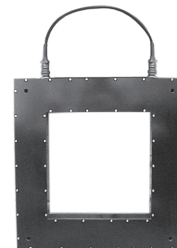
Current ranges from 12000 through 20000 amperes dc and up to 15000 amperes ac. Standard current ranges of 12000, 15000, 18000 and 20000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a rectangular 5 1/2" x 8" opening designed for cable bundles or for a larger interleaved bus. Available in split-core only.



Sensor Size H  
5 1/2" x 8" dia.  
Window Aperture

**MODEL CTL-303S AND CTL-403S SERIES**

Current ranges from 20000 through 40000 amperes dc and up to 20000 amperes ac. Standard current ranges of 20000, 25000, 30000, 35000, and 40000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a square 13" x 13" opening designed for cables or interleaved bus. Available in split-core only.



Sensor Size HH  
13" x 13" dia.  
Window Aperture

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# OSI HALL EFFECT CURRENT SENSORS

MODEL CTL-

## CIRCULAR WINDOW MODELS

CURRENT RANGE	MODEL NUMBER	TYPICAL 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

Typical output range .....  $\pm 30\%$  Window Size  
 Current range ..... dc/RMS up to 2000A  
 Insulation ..... 600Vac A ..... 3/8"  
 Dielectric Test C ..... 3/4"  
 (conductor through window/output) .... 2200Vac D ..... 1 1/8"  
 \* Split-core option is not included in UL listing. E ..... 2"

**5 YEAR WARRANTY**



Measuring Equipment 7N93



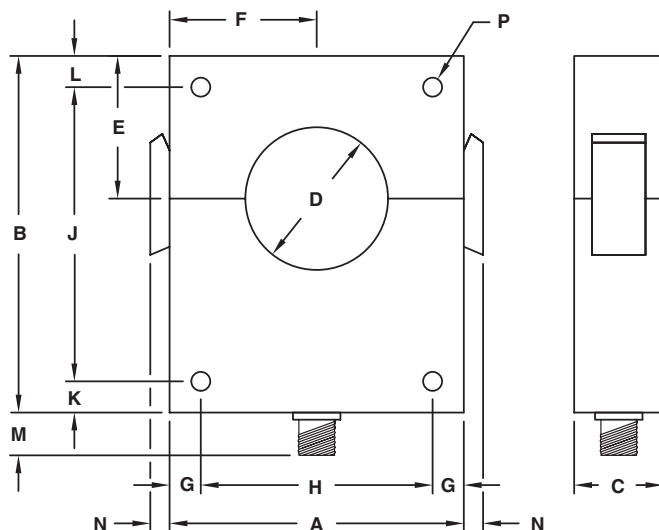
### ORDERING INFORMATION

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

#### CTL-401TS/300

Order in combination with appropriate CTA Signal Conditioner found on page 33

## CASE DIMENSIONS A,C,D,E



All dimensions in inches

SENS SIZE	SENSOR DIMENSIONS														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	1/2	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	3/8	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	2.0

## SPECIFICATIONS

**Accuracy and Linearity** .....  $\pm 0.5\%$  F.S.  
 (when calibrated with CTA)  
**Excitation Current** ..... 200mA  
**Temperature Range**  
 Standard .....  $-10^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$   
 Extended .....  $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$   
 Add suffix "T" to part number.  
**Temperature Effects** .....  $\pm 1\%$  F.S.  
**Input Resistance (Ohms)**  
 0 - 400A models ..... 6 Ohms  $\pm 3$   
 600A + models ..... 23 Ohms  $\pm 5$   
**Output Resistance (Ohms)** ..... 25 Ohms  $\pm 15$   
**Initial Offset** .....  $< \pm 2\text{mV}$   
**OPTIONS**  
 Split-core models (above 50A)  
 Add suffix "S" to model number.  
 Extended temperature range ( $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ )  
 Add suffix "T" to model number.  
 Specifications are for uni-directional operation.  
 For bi-directional operation, consult factory.

### CABLE LENGTHS

Sensor size A, C, D solid-core models are supplied with 18" cable, non-detachable cable.  
 Sensor size C, D, & E split-core models are supplied with detachable 8' cables.

See page 33 for cable connections.

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**OSI HALL EFFECT CURRENT SENSORS MODEL CTL-**

**CIRCULAR WINDOW MODELS**

CURRENT RANGE	MODEL NUMBER	TYPICAL OUTPUT	SENSOR SIZE
0 to 500A	CTL-601FS/500	40mV	F
0 to 600A	CTL-601FS/600	50mV	F
0 to 800A	CTL-202FS/800	40mV	F
0 to 1000A	CTL-202FS/1000	50mV	F
0 to 1000A	CTL-202EES/1000	100mV	EE
0 to 1500A	CTL-202FS/1500	75mV	F
0 to 1500A	CTL-202EES/1500	150mV	EE
0 to 2000A	CTL-202FS/2000	100mV	F
0 to 2000A	CTL-202EES/2000	200mV	EE
0 to 2500A	CTL-302EES/2500	75mV	EE
0 to 3000A	CTL-302EES/3000	100mV	EE

Typical output range ..... ±30%  
 Current range ..... dc/RMS up to 2000A  
 2500A & above dc/pk ac  
 Insulation ..... 600Vac  
 Dielectric Test  
 (conductor through window/output) .... 2200Vac  
 Split-Core standard on all models.  
 Specifications are for uni-directional operation.  
 For bi-directional operation, consult factory.

**Options**  
 Extended temperature range (-40°C to +65°C)  
 Add suffix "T" to model number.

**5 YEAR WARRANTY**

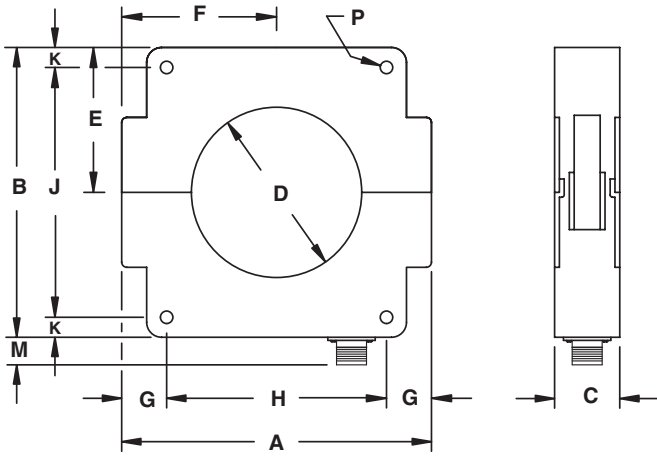


Measuring Equipment 7N93



**ORDERING INFORMATION**  
 Example: 2000 Amp Split-Core Current Sensor with Extended Temperature Range and 4 1/4" Window.  
**CTL-202EETS/2000**  
 Order in combination with appropriate CTA Signal Conditioner found on page 33

**CASE DIMENSIONS EE, F**



All dimensions in inches

**SPECIFICATIONS**

**Accuracy and Linearity** ..... ±0.5% F.S.  
 (when calibrated with CTA) ..... ±0.6% F.S.  
 Excitation Current ..... 200mA  
 Temperature Range  
 Standard ..... -10°C to +40°C  
 Extended ..... -40°C to +65°C  
 Add suffix "T" to part number.  
 Temperature Effects ..... ±1% F.S.  
 Input Resistance (Ohms) ..... 23 Ohms ±5  
 Output Resistance (Ohms) ..... 25 Ohms ±15  
 Initial Offset ..... < ±2mV

**CABLE LENGTHS**  
 Split-core models are supplied with detachable 8 foot cable.  
 Longer cables are available.

See page 33 for cable connections.

SENS SIZE	SENSOR DIMENSIONS												WT. LBS.
	A	B	C	D	E	F	G	H	J	K	M	P	
F	5 3/8	5 1/4	1 5/8	2 1/4	2 5/8	2 11/16	1 11/16	3 1/4	4 1/8	9/16	5/8	1/4	2.8
EE	6 1/4	7 1/4	1 9/16	4 1/4	3 5/8	3 7/8	1/2	5 1/2	6 1/4	1/2	5/8	5/16	4.5

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# OSI HALL EFFECT CURRENT SENSORS MODEL CTL-

## RECTANGULAR WINDOW (BUS BAR) MODELS

CURRENT RANGE	MODEL NUMBER	TYPICAL OUTPUT	SENSOR SIZE
0 to 500A	CTL-202H/500	50mV	Z
0 to 1000A	CTL-202H/1000	100mV	Z
0 to 1000A	CTL-202ZZS/1000 *	100mV	ZZ *
0 to 1500A	CTL-202H/1500	150mV	Z
0 to 1500A	CTL-202ZZS/1500 *	150mV	ZZ *
0 to 2000A	CTL-202H/2000	200mV	Z
0 to 2000A	CTL-202ZZS/2000 *	200mV	ZZ *
0 to 2000A	CTL-502H/2000	60mV	Z
0 to 2500A	CTL-302ZZS/2500 *	125mV	ZZ *
0 to 2500A	CTL-502H/2500	75mV	Z
0 to 3000A	CTL-302ZZS/3000 *	150mV	ZZ *
0 to 3000A	CTL-502H/3000	90mV	Z
0 to 4000A	CTL-502H/4000	120mV	Z
0 to 5000A	CTL-502H/5000	150mV	Z

\*Sensor size ZZ available in split-core only. Window Size Z  
 Typical output range is  $\pm 30\%$  1 1/4" X 4 1/2"  
 Current range is listed in dc/peak ac. ZZ  
 Specifications are for uni-directional operation. 2 7/16" X 4 1/2"  
 For bi-directional operation, consult factory.  
 Insulation ..... 600Vac  
 Dielectric Test  
 (conductor through window/output) .... 2200Vac



Measuring Equipment 7N93



## SPECIFICATIONS

**Accuracy and Linearity** .....  $\pm 1\%$  F.S.  
**Excitation Current** ..... 200mA  
**Temperature Range**  
 Standard ..... -10°C to +40°C  
 Extended ..... -40°C to +65°C  
 Add suffix "T" to part number.  
**Temperature Effects** .....  $\pm 1\%$  F.S.  
**Input Resistance (Ohms)** ..... 23 Ohms  $\pm 5$   
**Output Resistance (Ohms)** ..... 25 Ohms  $\pm 15$   
**Options**  
 Split-core models ..... Add suffix "S" to model number.  
 Extended temperature range (-40°C to +65°C)  
 Add suffix "T" to model number.

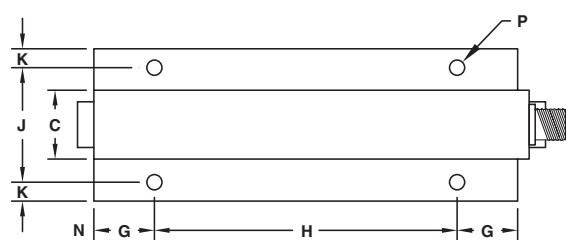
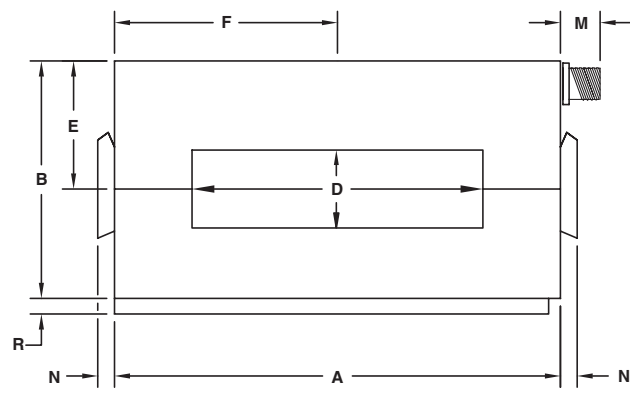
**ORDERING INFORMATION**

Example: 2000 Amp dc, Split-Core  
 Current Sensor with Extended Temperature Range.

**CTL-202HTS/2000**  
 Order in combination with appropriate  
 CTA Signal Conditioner found on page 33

5 YEAR WARRANTY

## CASE DIMENSIONS Z, ZZ



**CABLE LENGTHS**  
 All units are supplied with detachable 8 foot cable.  
 See page 33 for cable connections.

SENS SIZE	SENSOR DIMENSIONS															WT. LBS.
	A	B	C	D	E	F	G	H	J	K	M	N	P	R		
Z	7 3/16	3 3/4	1 1/8	1 1/4 X 4 1/2	2 1/16	3 1/2	1	5	1 7/8	5/16	3/8	1/4	3/16	1/4	2.8	
ZZ	7 3/16	5 1/2	1 1/8	2 7/16 X 4 1/2	2 1/2	3 1/2	1	5	1 7/8	5/16	3/8	1/4	3/16	1/4	3.5	

All dimensions in inches

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# OSI HALL EFFECT CURRENT SENSORS

MODEL CTL-

## RECTANGULAR WINDOW (BUS BAR) MODELS

CURRENT RANGE	MODEL NUMBER	TYPICAL OUTPUT	SENSOR SIZE
0 to 2500A	CTL-502/2500	75mV	G
0 to 3000A	CTL-502/3000	90mV	G
0 to 4000A	CTL-502/4000	120mV	G
0 to 5000A	CTL-502/5000	150mV	G
0 to 5000A	CTL-103/5000	50mV	H
0 to 6000A	CTL-103/6000	60mV	H
0 to 7000A	CTL-103/7000	70mV	H
0 to 8000A	CTL-103/8000	80mV	H
0 to 9000A	CTL-103/9000	90mV	H
0 to 10000A	CTL-103/10000	100mV	H
0 to 12000A	CTL-203S/12000	60mV	H
0 to 15000A	CTL-203S/15000	75mV	H
0 to 18000A	CTL-203S/18000	100mV	H
0 to 20000A	CTL-203S/20000	100mV	H
0 to 25000A	CTL-303S/25000	80mV	HH
0 to 30000A	CTL-303S/30000	100mV	HH
0 to 35000A	CTL-403S/35000	75mV	HH
0 to 40000A	CTL-403S/40000	100mV	HH

Typical output range is  $\pm 30\%$  Window Size  
 Current range is listed in dc/peak ac. G  
 Specifications are for uni-directional operation. 3" X 6 1/2"  
 For bi-directional operation, consult factory. H  
 Insulation ..... 600Vac 5 1/2" X 8"  
 Dielectric Test HH  
 (conductor through window/output) .... 2200Vac 13" X 13"

Sensor size HH & H above 12000A available in split-core only.



Measuring Equipment 7N93

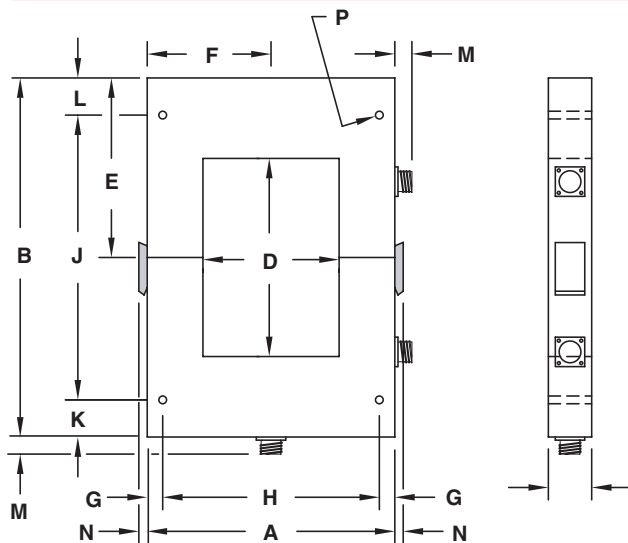


## SPECIFICATIONS

### Accuracy and Linearity

502 and 103 .....  $\pm 1\%$  F.S.  
 203, 303, and 403 .....  $\pm 2\%$  F.S.  
 Excitation Current ..... 200mA  
 Temperature Range  
 Standard .....  $-10^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$   
 Extended .....  $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$   
 Add suffix "T" to part number.  
 Temperature Effects .....  $\pm 1\%$  F.S.  
 20,000A & up Extended Range .....  $\pm 2\%$  F.S.  
 Input Resistance (Ohms)  
 500-5000A models ..... 23 Ohms  $\pm 5$   
 6000A + models ..... 12 Ohms  $\pm 5$   
 Output Resistance (Ohms)  
 500-5000A models ..... 25 Ohms  $\pm 15$   
 6000A + models ..... 32 Ohms  $\pm 10$   
 Initial Offset .....  $\leq \pm 2\text{mV}$   
**Options**  
 Split-core models ..... Add suffix "S" to model number.  
 Extended temperature range ( $-40^{\circ}\text{C}$  to  $+65^{\circ}\text{C}$ )  
 Add suffix "T" to model number.

## CASE DIMENSIONS G, H, HH



### ORDERING INFORMATION

Example: 20000 Amp, Split-Core Current Sensor with Extended Temperature Range.

**CTL-203TS/20000**  
 Order in combination with appropriate CTA Signal Conditioner found on page 33

**5 YEAR WARRANTY**

### CABLE LENGTHS

All units are supplied with detachable 8 foot cable. See page 33 for cable connections.

SENS SIZE	SENSOR DIMENSIONS														WT. LBS.
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	
G	7 3/4	12	1 3/4	3 X 6 1/2	6	3 7/8	5/8	6 1/2	10 3/4	5/8	5/8	5/8	5/16	9/32	12.3
H	10	13 3/4	1 3/4	5 1/2 X 8	6 1/2	5	5/8	8 3/4	11 1/2	3/4	1 1/2	5/8	5/16	9/32	13
HH	21	21	2	13 X 13	10 1/2	10 1/2	1 1/2	18	18	1 1/2	1 1/2	5/8	11/16	3/8	22

All dimensions in inches

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