

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.



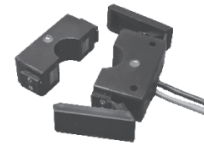
Measuring
Equipment
7N93

**5 YEAR
WARRANTY**

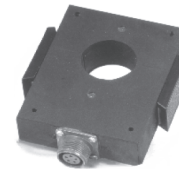
Sensor Size A
3/8" dia.
Window Aperture



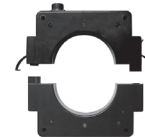
Sensor Size C
3/4" dia.
Window Aperture



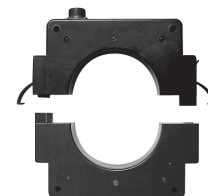
Sensor Size D
1 1/8" dia.
Window Aperture



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.



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**5 YEAR
WARRANTY**



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

MODEL CTL-202ZZS and CTL-302ZZS SERIES

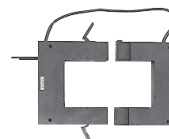
Current ranges from 1000 through 3000 amperes dc and up to 2000 amperes ac. Standard current ranges of 1000 to 3000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a rectangular 2 7/16" x 4 1/2" opening designed for a 4" current bus with sections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

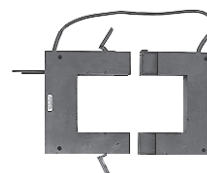
Current ranges from 2000 through 5000 amperes dc and up to 3000 amperes ac. Standard current ranges of 2000, 2500, 3000, 4000 and 5000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a rectangular 3" x 6 1/2" opening designed for a 6" current bus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



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

MODEL CTL-103 SERIES

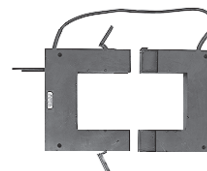
Current ranges from 5000 through 10000 amperes dc and up to 7000 amperes ac. Standard current ranges of 5000, 6000, 7000, 8000, 9000 and 10000 amperes are available when calibrated with the CTA series signal conditioners. The window aperture is a rectangular 5 1/2" x 8" opening designed for cable bundles 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 ±30%
 Current range dc/RMS up to 2000A
 Insulation 600Vac
 Dielectric Test
 (conductor through window/output) 2200Vac
 * Split-core option is not included in UL listing.

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

5 YEAR WARRANTY



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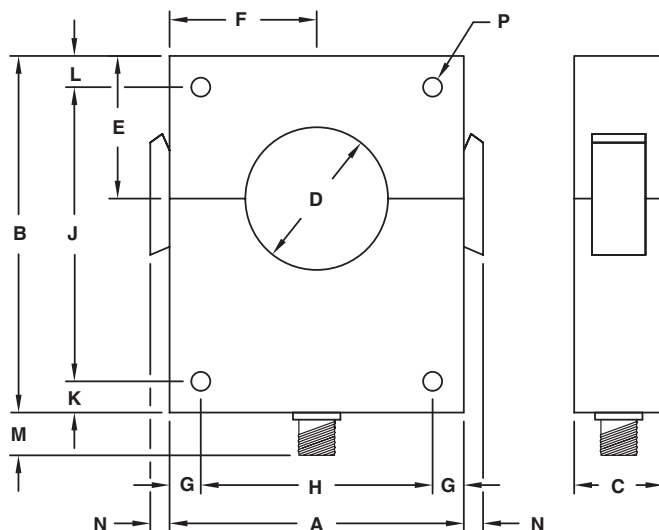
ORDERING INFORMATION

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 ±0.5% F.S.
 (when calibrated with CTA)
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)
 0 - 400A models 6 Ohms ±3
 600A + models 23 Ohms ±5
Output Resistance (Ohms) 25 Ohms ±15
Initial Offset < ±2mV
OPTIONS
 Split-core models (above 50A)
 Add suffix "S" to model number.
 Extended temperature range (-40°C to +65°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 $\pm 30\%$ Window Size
 Current range dc/RMS up to 2000A F 2 1/4"
 2500A & above dc/pk ac EE .. 4 1/4"
 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

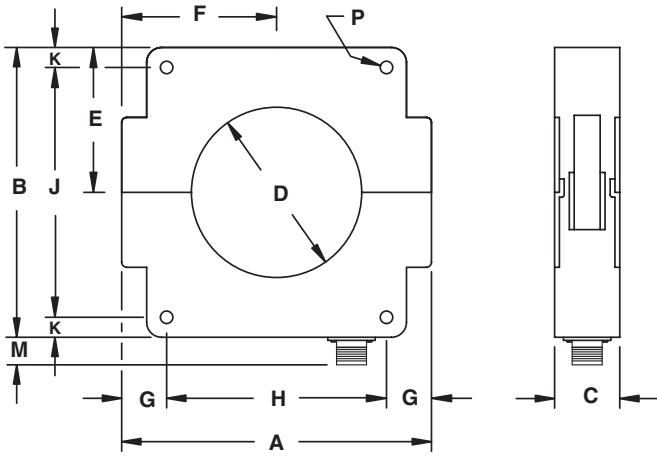


Measuring Equipment 7N93



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 $\pm 0.5\%$ F.S.
 (when calibrated with CTA) $\pm 0.6\%$ 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 $\pm 1\%$ F.S.
 Input Resistance (Ohms) 23 Ohms ± 5
 Output Resistance (Ohms) 25 Ohms ± 15
 Initial Offset $< \pm 2$ mV

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
 Typical output range is $\pm 30\%$ Z
 Current range is listed in dc/peak ac. 1 1/4" X 4 1/2"
 Specifications are for uni-directional operation. ZZ
 For bi-directional operation, consult factory. 2 7/16" X 4 1/2"
 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 ± 5
Output Resistance (Ohms) 25 Ohms ± 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.

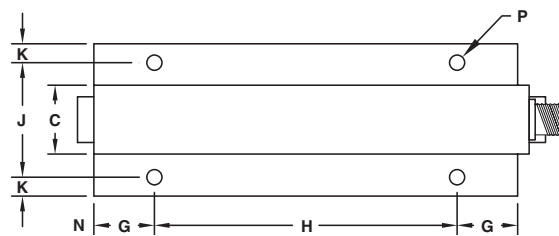
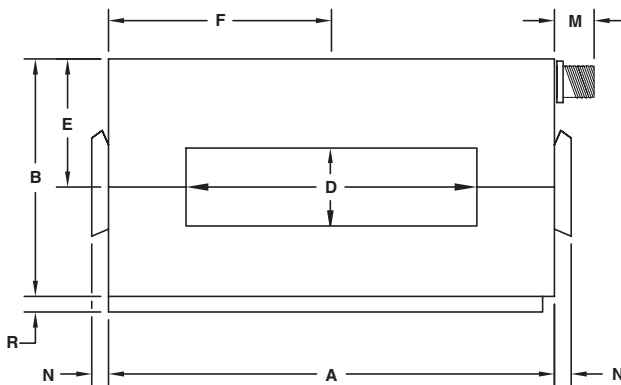
ORDERING INFORMATION

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

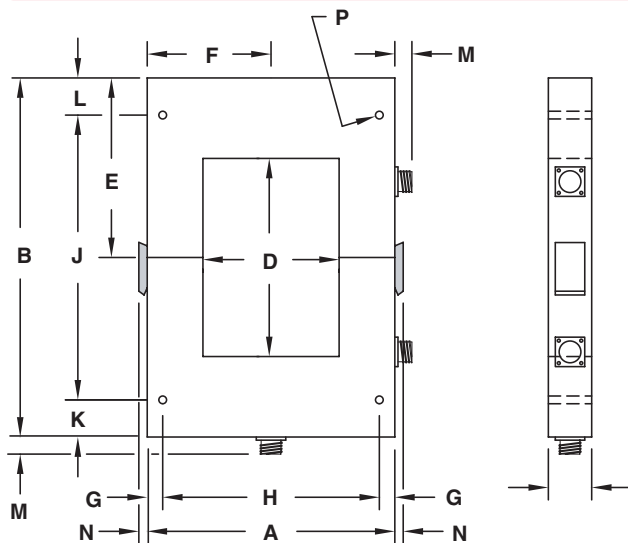


SPECIFICATIONS

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°C to $+40^{\circ}\text{C}$
 Extended -40°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 ± 5
 6000A + models 12 Ohms ± 5
 Output Resistance (Ohms)
 500-5000A models 25 Ohms ± 15
 6000A + models 32 Ohms ± 10
 Initial Offset $\leq \pm 2\text{mV}$
Options
 Split-core models Add suffix "S" to model number.
 Extended temperature range (-40°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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