



# HALL-EFFECT CURRENT SENSORS

MODEL CTG

The CTG Current Transducer is a Hall-effect sensor integrated with an output amplifier. The CTG series offers a number of current ranges, outputs and sensor dimensions. Hall-effect current measurement is a non-contact technique that measures the magnetizing effects of current flowing in a conductor. This measurement type offers a number of benefits not afforded by conventional direct or contact (in-line) measurement. Some of these benefits are high electrical isolation between conductor and sensor output, high overload capability, fast response to input changes and no power consumption on measured circuit.

## Features and Applications:

- Accuracy of  $\pm 1\%$  F.S.
- 5000 Volt line-to-output isolation.
- DC to 400 Hertz response.
- Sensor and amplifier in one package.
- Available in split-core configurations.
- Output is proportional in direction and magnitude to the current flow through the window.
- Overload capability to **10** times rating (at 60 Hz).
- Stability maintained during severe vibration.
- Models available to 5,000 A.
- Replaces shunts. No insertion loss.
- Ideal for use on ac systems with dc components and/or chopped waveforms.
- Response time less than 100 microseconds.

## CTG SPECIFICATIONS:

### INPUT

Current (See table): dc/Peak ac  
Overcurrent (without damage): 10 times rating  
Instrument Power (nominal):  $\pm 15$ Vdc  
Operating Range:  $\pm 13$ Vdc to  $\pm 20$ Vdc  
Instrument Current: less than  $\pm 20$ mA dc  
Isolation:  
Solid-core: 5000Vdc  
Split-core: 1000Vdc

### OUTPUT

Accuracy and Linearity:  $\pm 1.0\%$  F.S.  
Load on output: greater than 2K ohm  
Response Time (typical): 500 microsec  
Saturation (Approx.): 13.5V @  $\pm 15$ Vdc  
Temperature Effects:  $\pm 0.05\%/^{\circ}\text{C}$   
Temperature Range:  $0^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$   
Extended temp. range ( $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$ ):  
- add "T" suffix

### ORDERING INFORMATION

EXAMPLE: 300 Amp split-core current sensor  
with  $\pm 5$ V output.  
**CTG-301X5S**

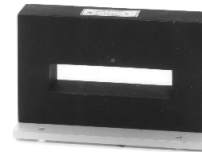
## Circular Window Models



Current Range	$\pm 10$ Vdc Output	$\pm 5$ Vdc Output	Sensor Size
0 - 100A	CTG-101	CTG-101X5	D
0 - 200A	CTG-201	CTG-201X5	D
0 - 300A	CTG-301	CTG-301X5	D
0 - 400A	CTG-401	CTG-401X5	D
0 - 500A	CTG-501	CTG-501X5	E
0 - 600A	CTG-601	CTG-601X5	E
0 - 800A	CTG-801	CTG-801X5	E
0 - 1000A	CTG-102	CTG-102X5	E
0 - 1500A	CTG-152	CTG-152X5	E
0 - 2000A	CTG-202	CTG-202X5	E
0 - 2500A	CTG-252	CTG-252X5	E

CURRENT

## Rectangular Window Models



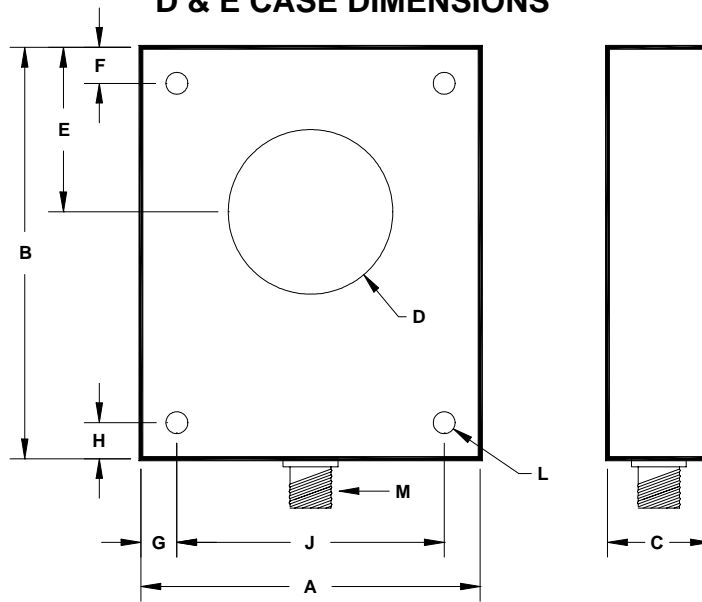
Current Range	$\pm 10$ Vdc Output	$\pm 5$ Vdc Output	Sensor Size
0 - 500A	CTG-501H	CTG-501HX5	Z
0 - 600A	CTG-601H	CTG-601HX5	Z
0 - 800A	CTG-801H	CTG-801HX5	Z
0 - 1000A	CTG-102H	CTG-102HX5	Z
0 - 1500A	CTG-152H	CTG-152HX5	Z
0 - 2000A	CTG-202H	CTG-202HX5	Z
0 - 3000A	CTG-302H	CTG-302HX5	Z
0 - 4000A	CTG-402H	CTG-402HX5	Z
0 - 5000A	CTG-502H	CTG-502HX5	Z

AC

DC

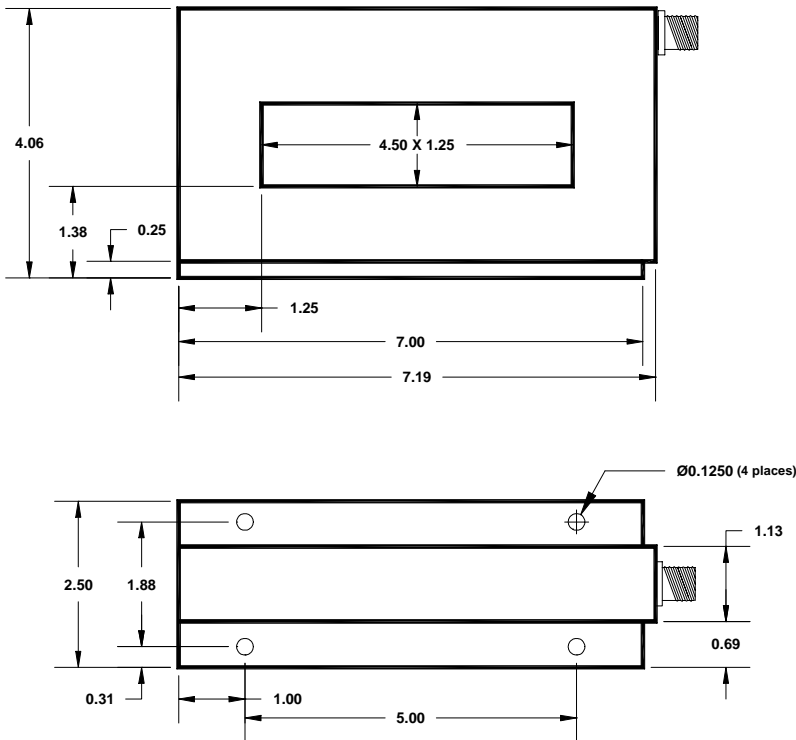
- Add suffix 'S' for split-core units.
- All units require  $\pm 13$ Vdc to  $\pm 20$ Vdc instrument power.

### D & E CASE DIMENSIONS



CASE DWG	A	B	C	D	E	F	G	H	J	L	M
D	3 1/8	4	3/4	1 1/8	1 1/2	-	1/2	1/2	2 1/4	11/64	TABLE 1
E	4 1/8	5	1 1/4	2	2	7/16	7/16	7/16	3 1/4	17/64	TABLE 2

### Z CASE DIMENSIONS



Use Table 1 for cable connections.

### CONNECTIONS

CABLE ASSEMBLY "M"			
TABLE 1			
Plastic Connector			
8' Rubber Cable			
Pins Leads			
1	WHITE	-	OUTPUT *
2	GREEN	+	
6	BLACK	-15V	INPUT
8	RED	+15V	
1	WHITE	COM	
TABLE 2			
Metal Connector			
8' Rubber Cable			
Pins Leads			
A	WHITE	-	OUTPUT *
B	GREEN	+	
C	BLACK	-15V	INPUT
D	RED	+15V	
A	WHITE	COM	

Power supply available by using CTA800-P.

All dimensions in inches.