

Hall Effect DC current Transducer model CTH-

CURRENT SENSOR WITH OUTPUT AMPLIFIER 4-20mA, 5Vdc OR 10Vdc OUTPUT

DESCRIPTION

The CTH Series Current Transducer is a Hall-effect sensor integrated with an output amplifier. The CTH Series Current Transducer offers a 4-20mA, 4-12-20mA, 5V, or 10V output and can be operated from either a 24Vdc source or a low-cost 24Vac control transformer. Available options are split-core, extended temperature range, ruggedized design and 12Vdc or 15Vdc instrument power.

FEATURES

- **ACCURACY 0.5%**
- Sensor & Amplifier in one package
- Output is proportional in direction and magnitude to the current flow through the window. (ac input yields ac output, dc input yields dc output)
- Available in split-core configurations
- Replaces shunts. No insertion loss.
- Output is isolated from measured current
- Supplied with 8ft cable, optional cable lengths available
- UL fire retardant materials used throughout

**5 YEAR
WARRANTY**

SPECIFICATIONS

INPUT

Current..... See Tablesdc or Peak ac
Over-current..... 10 X rating

INSTRUMENT POWER

Standard 24Vdc or ac $\pm 10\%$
Instrument Current..... 25mA + load current

DIELECTRIC TEST

Bare Bus to Output 3750Vac
Split-Core Sensor Size D 1000Vdc

OUTPUT

Load 4-20mA models 0-500 Ω
5 & 10V models >2K Ω
Response Time (to 90%) 500 μ s, typical

TEMPERATURE

Temperature Effects..(0 $^{\circ}$ C to +40 $^{\circ}$ C)..... $\pm 0.025\%/^{\circ}$ C
Temperature Range 0 $^{\circ}$ C to +40 $^{\circ}$ C
Extended Temp. Range -40 $^{\circ}$ C to +60 $^{\circ}$ C

ACCURACY AND LINEARITY

CTH-050, CTH-050M, CTH-050X5, CTH-050D.... $\pm 1.0\%$ F.S.
CTH-025, CTH-025M, CTH-025X5, CTH-025D.... $\pm 2.0\%$ F.S.
All Other Models $\pm 0.5\%$ F.S.

AVAILABLE OPTIONS

Add Suffix in order shown:
Split-Core Add suffix "S"
Extended Temperature Range Add Suffix "T"
Ruggedized (potted) Add Suffix "R"
NOTE: Sensor size D split-core models are potted, so "R" is not required in model number.
Instrument Power..... 12Vdc, $\pm 10\%$ Add Suffix "-12"
15Vdc, $\pm 10\%$ Add Suffix "-15"

MODEL SELECTION

Circular Window Models



Ordering Information

Example of CTH part number generation:
CTH/Input Amps/Output/SC or TH/Inst power Core Type
Where SC is Split Core and TH is Through Hole

Ordering Example

Example: Input 0-400Adc Output 0-10V, Split Core
Core Size: 2"/50mm hole (Type 8), 24V dc power
Part number = CTH/400A/10/SC/24Vdc Type 8

Ordering Example

Example: Input 0-100Adc Output 4-12-20mA, Split Core
Core Size: 1.125"/28.6mm hole (Type 4), 12V dc power
Part number = CTH/100A/4-12-20/SC/12Vdc Type 4

Rectangular Window Models



Type 9z

Ordering Example

Example: Input 0-1000Adc Output 4-20mA, Through hole
Core Size: 1.25" x 4.25" hole (Type 9z), 24V dc power
Part number = CTH/1000A/4-20/TH/24Vdc Type 9z

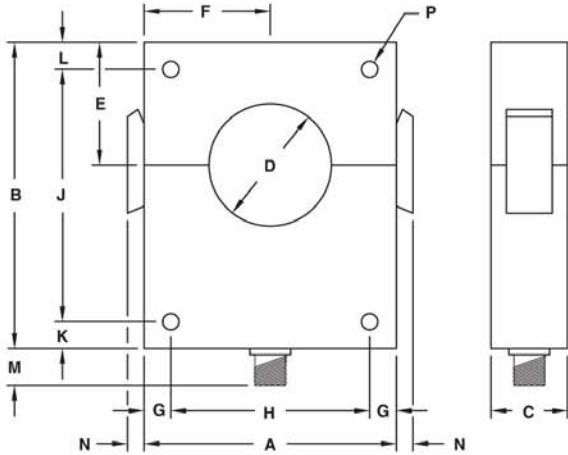
Powertek

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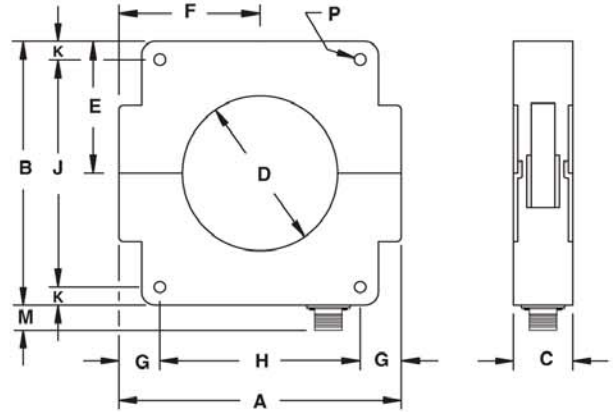
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CTH Case Dimensions & Connections

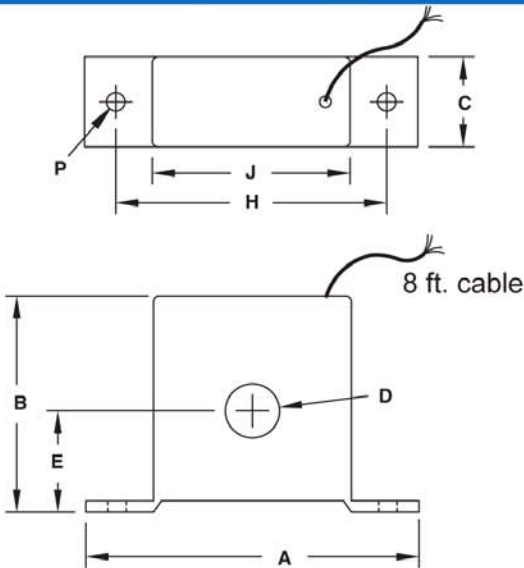
Case Dimensions Types 4, 4 mini, 8 & 8 mini



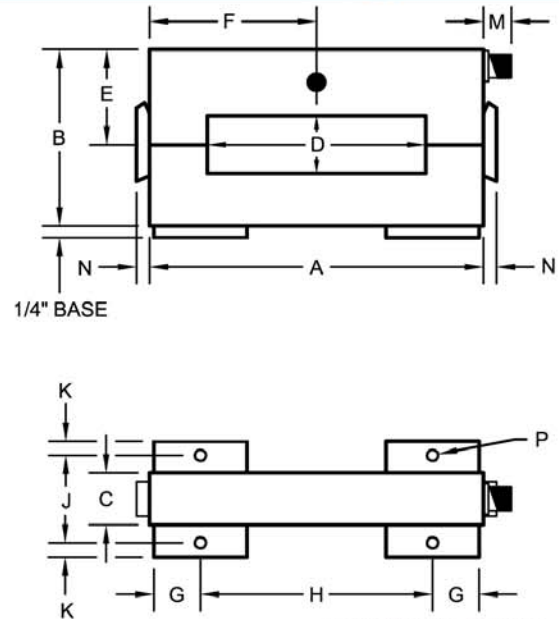
Case Dimensions Types 8EE & 8F



Case Dimensions Type B



Case Dimensions Type 9z



Dwg# 0902-00806-B Rev -- (mod.)

Sensor Size Type	SENSOR DIMENSIONS (inches)														WT. LBS.
	A	B	C	D	E	F	G	H	J	K	L	M	N	P	
Type B	3 5/8	2 9/16	1	5/8	1 5/32	NA	NA	2 3/4	2 3/16	NA	NA	NA	NA	3/16	0.2
4 mini & 8 mini	3 1/8	4	25/32	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
Type 4 & 8	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
Type 8F	5 3/8	5 1/4	1 5/8	2 1/4	2 5/8	2 11/16	1 1/16	3 1/4	4 1/8	9/16	NA	5/8	NA	1/4	2.8
Type 8EE	7 3/4	7 1/4	1 5/8	4 1/4	3 5/8	3 7/8	1 1/8	5 1/2	6 1/4	1/2	NA	5/8	NA	5/16	4.5
Type 9z	7 3/16	3 15/16	1 5/16	1 1/4 x 4 1/2	2 9/64	3 1/2	1	5	1 7/8	5/16	NA	1/2	5/16	3/16	2.8

CABLE ASSEMBLY

Sensor Size Types 4 mini, 8 mini and 9z				Sensor Size Types 8E, 8EE & 8F			
CONN. PINS	18AWG 8' LEADS	TYPE		CONN. PINS	18AWG 8' LEADS	TYPE	
1	WHITE	-	OUTPUT*	A	WHITE	-	OUTPUT*
2	GREEN	+		B	GREEN	+	
6	BLACK	COM	INST. PWR.	C	BLACK	COM	INST. PWR.
8	RED	+24V		D	RED	+24V	

*For positive output, insert positive current cable through "red dot" side of sensor.

Power supply available by using the PS-4753-5 or -6.

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