



Current Sensors

CYHCT-C2TV

Split Core Hall Effect DC Current Sensor



This Hall Effect current sensor is based on open loop compensating principle and designed with a split core and a high galvanic isolation between primary and secondary circuits. It can be used for measurement of DC current etc. The output of the transducer reflects the real wave of the current carrying conductor.

Product Characteristics	Applications
<ul style="list-style-type: none"> • Excellent accuracy • Very good linearity • Light in weight • Less power consumption • Window structure • Electrically isolating the output of the transducer from the current carrying conductor • No insertion loss • Current overload capability 	<ul style="list-style-type: none"> • Photovoltaic equipment • Frequency conversion timing equipment • Various power supply • Uninterruptible power supplies (UPS) • Electric welding machines • Numerical controlled machine tools • Electrolyzing and electroplating equipments • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data/Input

Primary Nominal DC Current I_r (A)	Primary Current Measuring Range I_p (A)	DC Output Voltage (V)	Part number
25A	0 ~ ±25A	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	CYHCT-C2TV-U/B25A-xn
30A	0 ~ ±30A		CYHCT-C2TV-U/B30A-xn
40A	0 ~ ±40A		CYHCT-C2TV-U/B40A-xn
50A	0 ~ ±50A		CYHCT-C2TV-U/B50A-xn
100A	0 ~ ±100A		CYHCT-C2TV-U/B100A-xn
200A	0 ~ ±200A		CYHCT-C2TV-U/B200A-xn
300A	0 ~ ±300A		CYHCT-C2TV-U/B300A-xn
400A	0 ~ ±400A		CYHCT-C2TV-U/B400A-xn
500A	0 ~ ±500A		CYHCT-C2TV-U/B500A-xn
600A	0 ~ ±600A		CYHCT-C2TV-U/B600A-xn

(n=2, V_{cc} = +12VDC; n=3, V_{cc} =+15VDC; n=4, V_{cc} =+24VDC, U: unidirectional, B: bidirectional)

Supply Voltage:
Current Consumption
Isolation Voltage

V_{cc} =+12V, +15V, +24V± 5%
 I_c < 20mA
2.5kV, 50/60Hz, 1min

Electrical Data/Output

Output Voltage at I_r , $T_A=25^\circ\text{C}$:
Output Impedance:
Load Resistor:

V_{out} =0- 4V, 0-5V, 0-10VDC
 R_{out} < 150Ω
 R_L > 10kΩ

Accuracy

Accuracy at I_r , $T_A=25^\circ\text{C}$,
Linearity from 0 to I_r , $T_A=25^\circ\text{C}$,
Electric Offset Voltage, $T_A=25^\circ\text{C}$,
Magnetic Offset Voltage ($I_r \rightarrow 0$)
Thermal Drift of Offset Voltage,
Thermal Drift (-10°C to 50°C),
Response Time at 90% of I_p ($f=1\text{kHz}$)

X <1.0%
 E_L <1.0% FS
 V_{oe} <50mV
 V_{om} <±20mV
 V_{ot} <±1.0mV/°C
T.C. < ±0.1% /°C
 t_r < 7μs

Products constantly update. All specifications are subject to change without notice.

For more information on this product, please contact:

PC&S, Inc. at +1 (800) 523-9194 or +1 (973) 448-9400

www.pc-s.com

CYHCT-C2TV Current Sensor

Frequency Bandwidth (-3dB),
Case Material:

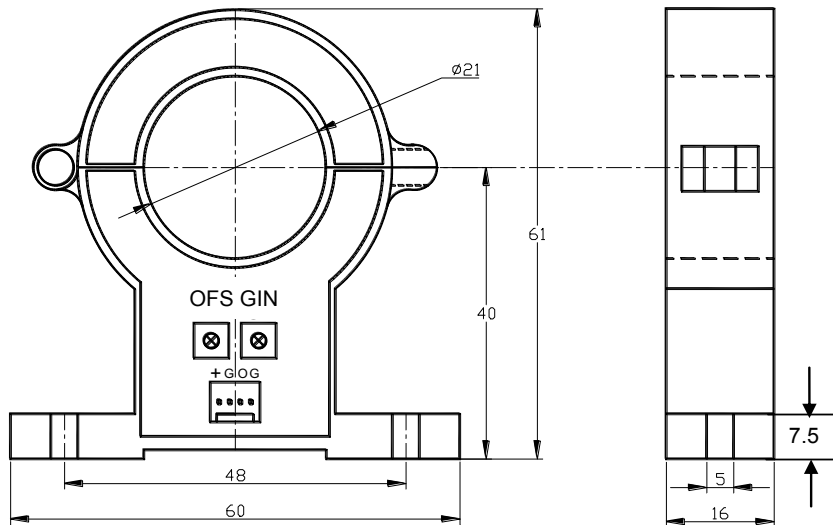
$f_b = \text{DC} - 20 \text{ kHz}$
PBT, heat resistant 125°C flame retardant

General Data

Ambient Operating Temperature,
Ambient Storage Temperature,

$T_A = -40^\circ\text{C} \sim +85^\circ\text{C}$
 $T_S = -55^\circ\text{C} \sim +125^\circ\text{C}$

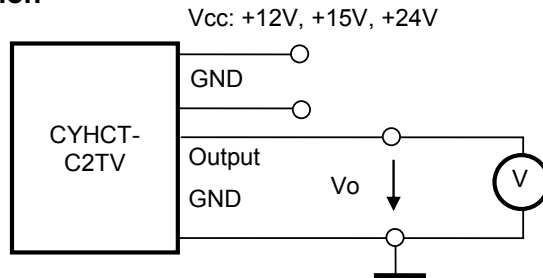
PIN Definition and Dimensions



1(+): Vcc
2(G): GND
3(O): Output
4(G): GND

OFS: Offset Adjustment GIN: Gain Adjustment

Connection



Notes:

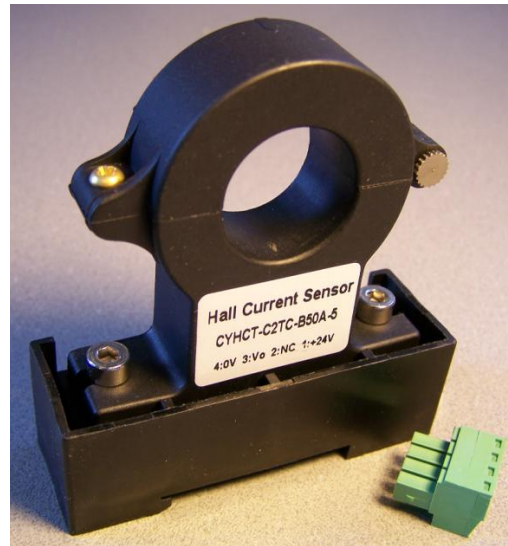
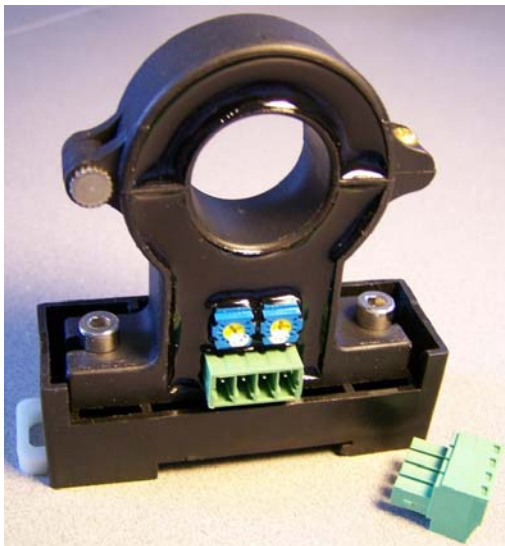
1. Connect the terminals of power source, outputs respectively and correctly, never make wrong connection.
2. Two potentiometers can be adjusted, only if necessary, by turning slowly to the required accuracy with a small screwdriver.
3. The best accuracy can be achieved when the window is fully filled with bus-bar (current carrying conductor).
4. The in-phase output can be obtained when the direction of current of current carrying conductor is the same as the direction of arrow marked on the transducer

CYHCT-C2TV Current Sensor

Mounting of Sensors



Sensor with Molex Connector
(The distance between the bottom and the middle of hole is 54.8mm)



Sensor with Phoenix Connector
(The distance between the bottom and the middle of hole is 54.8mm)



www.pc-s.com

For more information and certifications, please contact:

Panel Components & Systems, Inc. ■ Phone: (800) 523-9194 ■ info@pc-s.com

Main Office:

Stanhope, NJ

Phone: (973) 448-9400