Split Core Hall Effect DC Current Sensor CYHCT-C3TV

This Hall Effect current sensor is based on open loop principle and designed with a split core and a high galvanic isolation between primary conductor and secondary circuit. 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
• 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	• **Photovoltaic equipment** • Frequency conversion timing equipment • Various power supply • Uninterruptible power supplies (UPS) • Electric welding machines • Numerical controlled machine tools • Electrolyzing and electroplating equipment • 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
50A	0 ~ ±50A	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%	CYHCT-C3TV-U/B50A-xnC
100A	0 ~ ±100A		CYHCT-C3TV-U/B100A-xnC
200A	0 ~ ±200A		CYHCT-C3TV-U/B200A-xnC
300A	0 ~ ±300A		CYHCT-C3TV-U/B300A-xnC
400A	0 ~ ±400A		CYHCT-C3TV-U/B400A-xnC
500A	0 ~ ±500A		CYHCT-C3TV-U/B500A-xnC
800A	0 ~ ±800A		CYHCT-C3TV-U/B800A-xnC
1000A	0 ~ ±1000A		CYHCT-C3TV-U/B1000A-xnC
1500A	0 ~ ±1500A		CYHCT-C3TV-U/B1500A-xnC
2000A	0 ~ ±2000A		CYHCT-C3TV-U/B2000A-xnC

(n=2, *Vcc*= +12VDC; n=3, *Vcc* =+15VDC; n=4, *Vcc* =+24VDC, U: unidirectional, B: bidirectional)
(Connector: Molex connector C=M; Phoenix Connector: C=P)

Supply Voltage:	V_{cc}=+12V, +15V, +24V± 5%
Current Consumption	I_c < 25mA
Isolation Voltage	5kV, 50/60Hz, 1min

Electrical Data/Output

Output Voltage at I_r, T_A=25°C:	V_{out} =0- 4V, 0-5V, 0-10VDC
Output Impedance:	R_{out} < 150Ω
Load Resistor:	R_L > 10kΩ
Accuracy at I_r, T_A=25°C,	X <1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <50mV
Magnetic Offset Voltage (I_r →0)	V_{om} <±20mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C
Thermal Drift (-10°C to 50°C),	T.C. < ±0.1% /°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 1ms
Frequency Bandwidth (-3dB),	f_b = DC - 20 kHz
Case Material:	PBT

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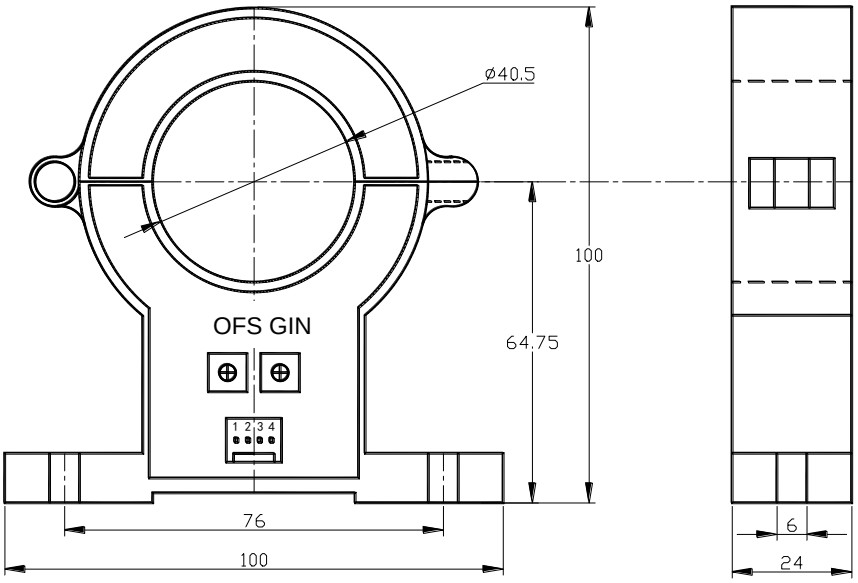
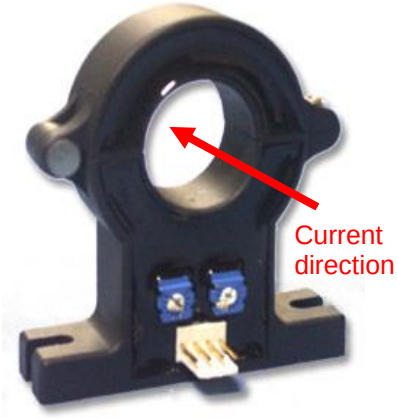
General Data

Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C

PIN Definition and Dimensions

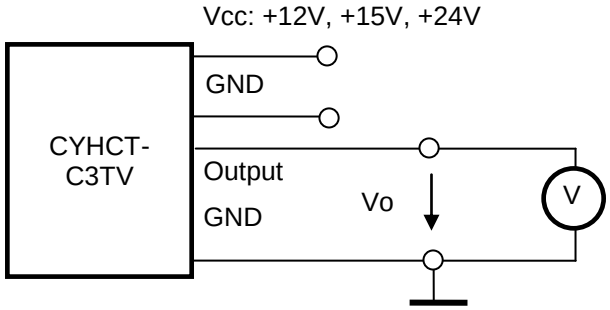




1(+): Vcc
2(G): GND
3(O): Output
4(G): GND

OFS: Offset Adjustment GIN: Gain Adjustment

Connection



Notes:

1. Connect the terminals of power source, output 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

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