

Split Core Hall Effect AC Current Sensor CYHCS-C2TV

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 AC current, pulse currents etc. The output of the transducer reflects the rectified average value of the current in the carrying conductor.

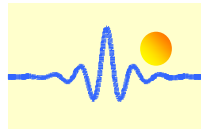
Product Characteristics	Applications
<ul style="list-style-type: none"> • Excellent accuracy • Very good linearity • Light in weight • Less power consumption • Window structure • Electrically isolating the output of the transducer from the current carrying conductor • No insertion loss • Current overload 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 equipment • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data/Input

Primary Nominal rms Current I_r (A)	Primary Current Measuring Range I_p (A)	DC Output Voltage (V)	Part number
25A	0 ~ 25A	x=0: 0-4V $\pm 1.0\%$ x=3: 0-5V $\pm 1.0\%$ x=8: 0-10V $\pm 1.0\%$	CYHCS-C2TV-25A-xnC
30A	0 ~ 30A		CYHCS-C2TV-30A-xnC
40A	0 ~ 40A		CYHCS-C2TV-40A-xnC
50A	0 ~ 50A		CYHCS-C2TV-50A-xnC
100A	0 ~ 100A		CYHCS-C2TV-100A-xnC
200A	0 ~ 200A		CYHCS-C2TV-200A-xnC
300A	0 ~ 300A		CYHCS-C2TV-300A-xnC
400A	0 ~ 400A		CYHCS-C2TV-400A-xnC
500A	0 ~ 500A		CYHCS-C2TV-500A-xnC
600A	0 ~ 600A		CYHCS-C2TV-600A-xnC

(n=2, V_{cc} = +12VDC; n=3, V_{cc} =+15VDC; n=4, V_{cc} =+24VDC)
(Connector: Molex connector C=M; Phoenix Connector: C=P)

Supply Voltage:	V_{cc} =+12V, +15V, +24V $\pm 5\%$
Current Consumption	$I_c < 25\text{mA}$
Isolation Voltage	2.5kV, 50/60Hz, 1min
Output Impedance:	$R_{out} < 150\Omega$
Load Resistor:	$R_L > 10\text{k}\Omega$
Accuracy at I_r , $T_A=25^\circ\text{C}$,	$X < 1.0\% \text{ FS}$
Linearity from 0 to I_r , $T_A=25^\circ\text{C}$,	$E_L < 1.0\% \text{ FS}$
Electric Offset Voltage, $T_A=25^\circ\text{C}$,	$V_{oe} < 50\text{mV}$
Magnetic Offset Voltage ($I_r \rightarrow 0$)	$V_{om} < \pm 20\text{mV}$
Thermal Drift of Offset Voltage,	$V_{ot} < \pm 1.0\text{mV}/^\circ\text{C}$
Thermal Drift (-10°C to 50°C),	T.C. $< \pm 0.1\% / ^\circ\text{C}$
Response Time at 90% of I_p ($f=1\text{kHz}$)	$t_r < 200\text{ms}$
Frequency Bandwidth (-3dB),	$f_b = 20\text{Hz} - 20\text{kHz}$
Case Material:	PBT

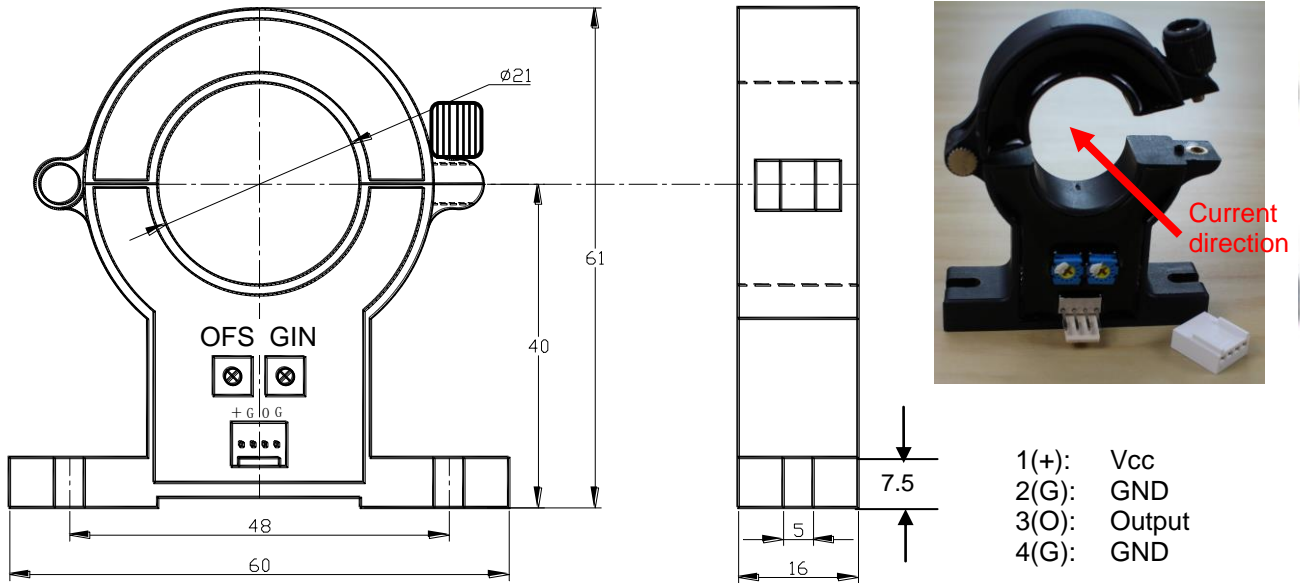


General Data

Ambient Operating Temperature,
Ambient Storage Temperature,

$T_A = -25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
 $T_S = -40^{\circ}\text{C} \sim +100^{\circ}\text{C}$

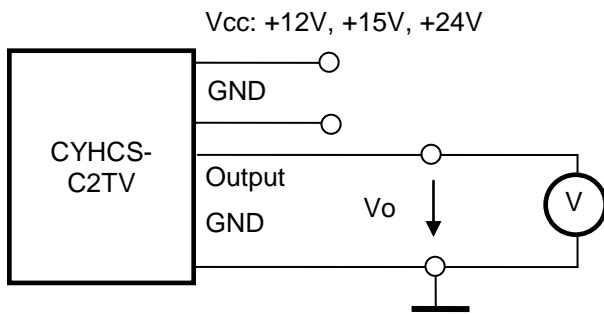
PIN Definition and Dimensions



OFS: Offset Adjustment

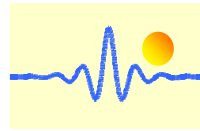
GIN: Gain Adjustment

Connection



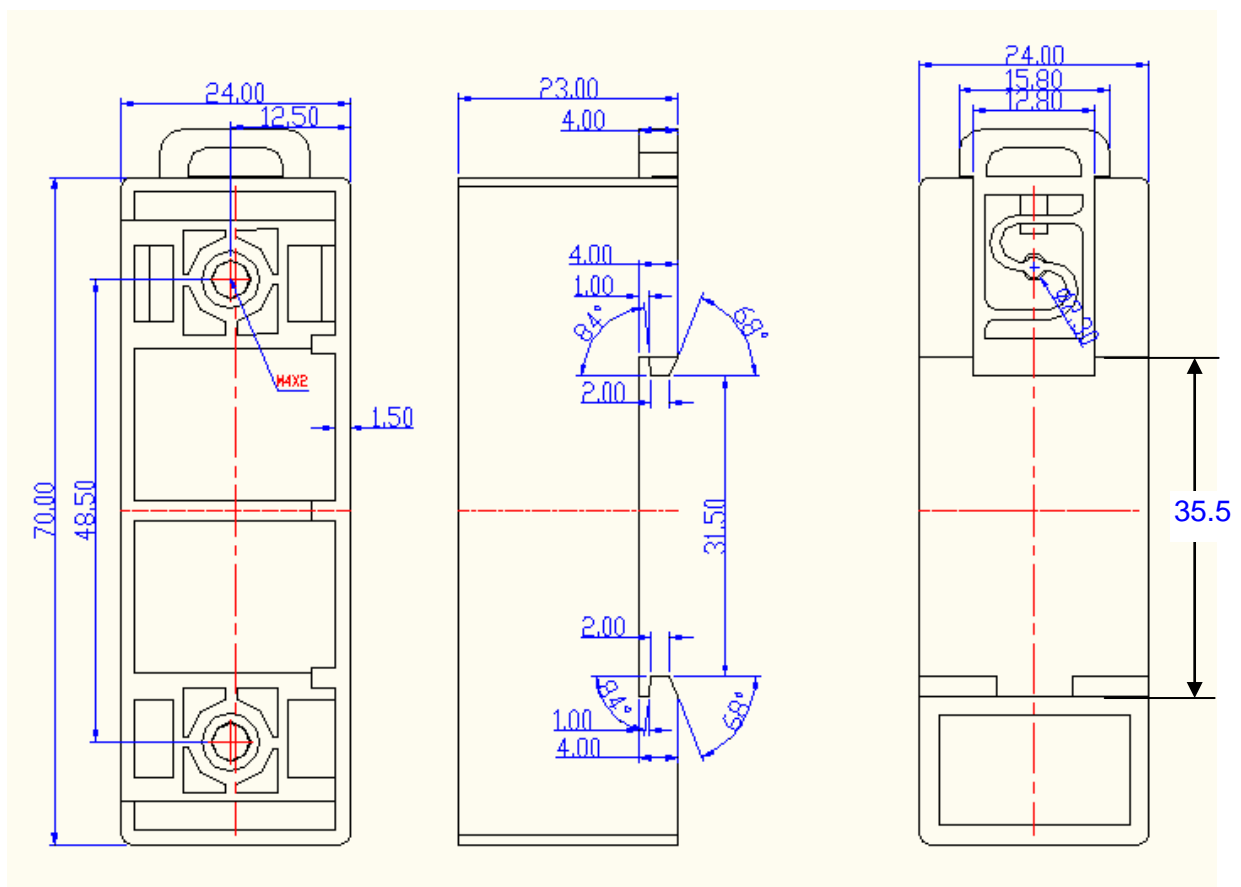
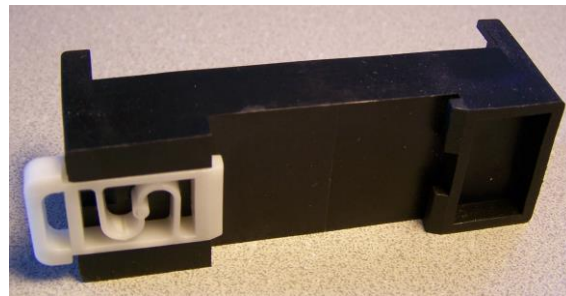
Notes:

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



DIN Rail Adapter CY-DRA88

The DIN Rail Adapter CY-DRA88 is designed for mounting the sensor on 35mm DIN Rail. It has the size 70 x 24 x 23mm. The height from bottom to mounting surface is 14.8mm.



Mounting of Sensors



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



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