

Split Core Hall AC/DC Current Sensor CYHCS-RC2

This Hall Effect current sensor can be used for measurement of DC and AC current, pulsed currents etc. The output of the transducer reflects the real wave of the current carrying conductor. The sensor uses split core and is easily to mount.

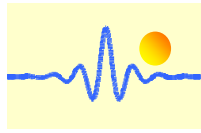
Product Characteristics	Applications
<ul style="list-style-type: none"> • Excellent accuracy • Very good linearity • Using split cores and easy mounting • Light in weight • Less power consumption • Window structure • Electrically isolating the output of the transducer from the current carrying conductor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

Electrical Data

Primary Nominal Current I_r (A)	Primary Current Measuring Range I_p (A) at $V_{cc}=15V$	Output voltage (Analog) (V)	Part number
30	± 60	X=0: $\pm 4V \pm 1.0\%$ X=1: $\pm 5V \pm 1.0\%$	CYHCS-RC2-30A-C-X
50	± 100		CYHCS-RC2-50A-C-X
100	± 200		CYHCS-RC2-100A-C-X
200	± 400		CYHCS-RC2-200A-C-X
300	± 600		CYHCS-RC2-300A-C-X
400	± 800		CYHCS-RC2-400A-C-X
500	± 1000		CYHCS-RC2-500A-C-X
600	± 1000		CYHCS-RC2-600A-C-X

(Connector: Molex connector C=M; Phoenix Connector: C=P)

Supply Voltage	$V_{cc} = \pm 15V \pm 5\%$
Current Consumption	$I_c < 25mA$
RMS Voltage for 2.5kV AC isolation test, 50/60Hz, 1min,	$V_{is} < 10mA$
Isolation Resistance at 500V DC	$R_{is} > 500 M\Omega$
Output Voltage at I_r , $T_A=25^\circ C$:	$V_{out} = 4V$ or $5V$
Output Impedance:	$R_{out} < 150\Omega$
Load Resistor:	$R_L > 10k\Omega$
Accuracy at I_r , $T_A=25^\circ C$ (without offset),	$E < 1.0\%$
Linearity from 0 to I_r , $T_A=25^\circ C$,	$E_L < 1.0\% FS$
Electric Offset Voltage, $T_A=25^\circ C$,	$V_{oe} < 20mV$
Magnetic Offset Voltage ($I_r \rightarrow 0$)	$V_{om} < \pm 15mV$
Thermal Drift of Offset Voltage,	$V_{ot} < \pm 1.0mV/^\circ C$
Thermal Drift ($-10^\circ C$ to $50^\circ C$),	T.C. $< \pm 0.1\% /^\circ C$
Response Time at 90% of I_p ($f=1k Hz$)	$t_r < 7\mu s$
Frequency Bandwidth (-3dB),	$f_b = 50 kHz$
Material of Case:	ABS (According to UL94V-0)

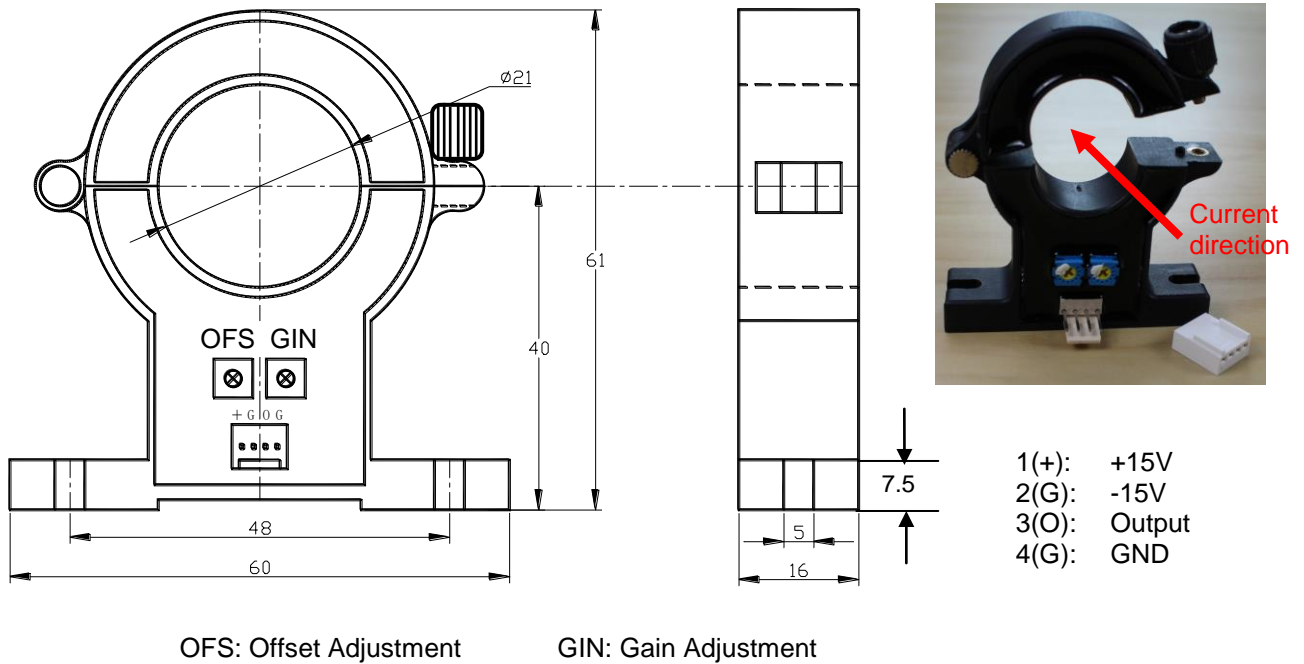


General Data

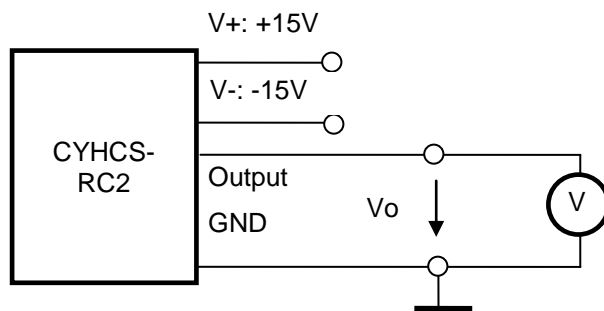
Ambient Operating Temperature,
Ambient Storage Temperature,

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

PIN Definition and Dimensions

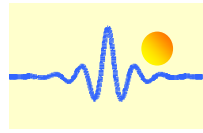


Connection



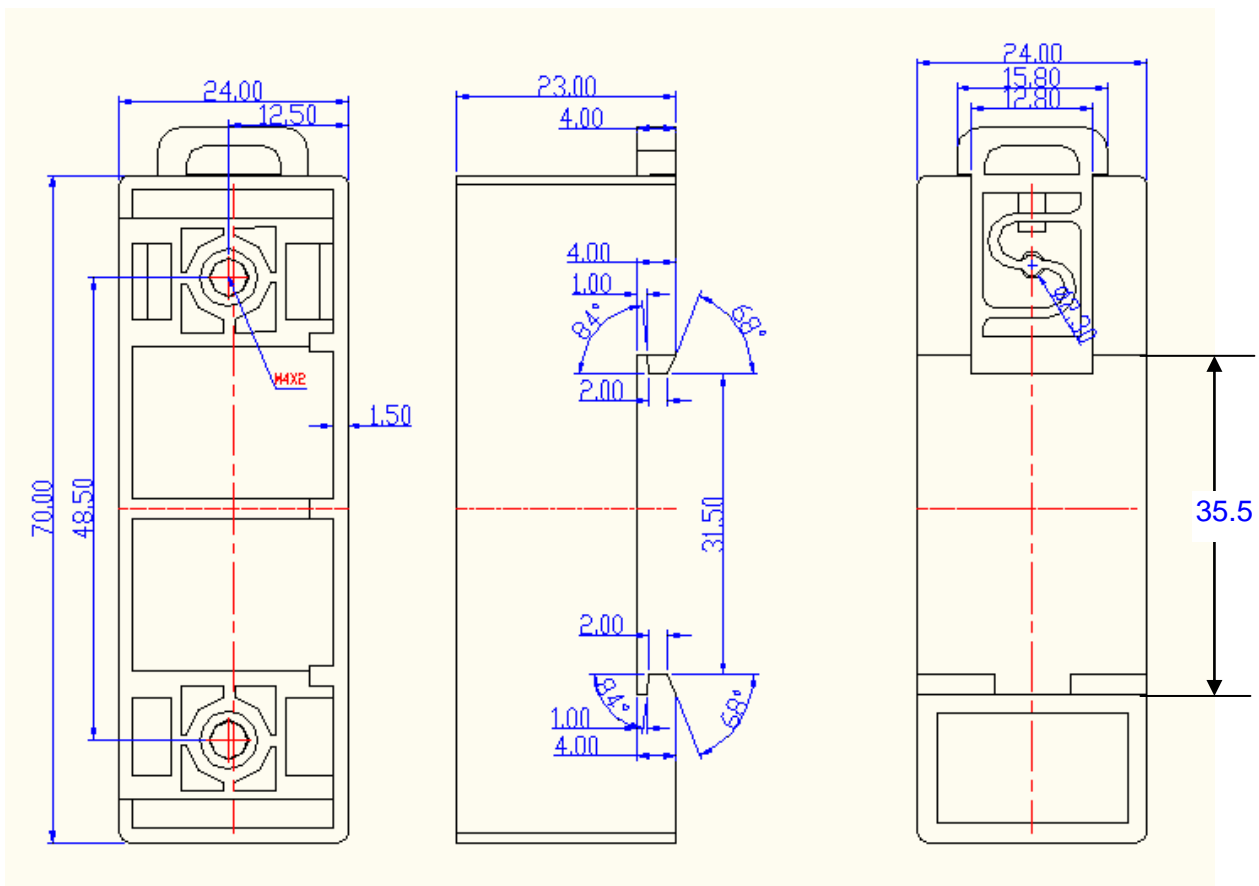
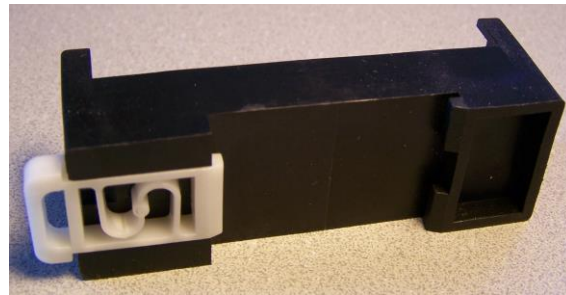
Notes:

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)