



## Current Sensors

# CYHCS-RC2

Split Core Hall Effect DC Current Sensor



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 sensors use split cores and are easily to mount.

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

### Electrical Data/Input

Primary Nominal RMS Current $I_r$ (A)	Primary Current Measuring Range $I_p$ (A) at $V_{cc}=15V$	Aperture Diameter (mm)	Part number
30	$\pm 60$	21	CYHCS-RC2-30A-C
50	$\pm 100$	21	CYHCS-RC2-50A-C
100	$\pm 200$	21	CYHCS-RC2-100A-C
200	$\pm 400$	21	CYHCS-RC2-200A-C
300	$\pm 600$	21	CYHCS-RC2-300A-C
400	$\pm 800$	21	CYHCS-RC2-400A-C
500	$\pm 1000$	21	CYHCS-RC2-500A-C
600	$\pm 1000$	21	CYHCS-RC2-600A-C

(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 $I_r$ , $T_A=25^\circ C$ :	$V_{out} = 4V$
Output Impedance:	$R_{out} < 150\Omega$
Load Resistor:	$R_L > 10k\Omega$
Accuracy at $I_r$ , $T_A=25^\circ C$ (without offset),	$X < 1.0\%$
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 ( $I_r \rightarrow 0$ )	$V_{om} \leq \pm 15mV$
Thermal Drift of Offset Voltage,	$V_{ot} \leq \pm 1.0mV/^\circ C$
Thermal Drift (-10°C to 50°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)

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

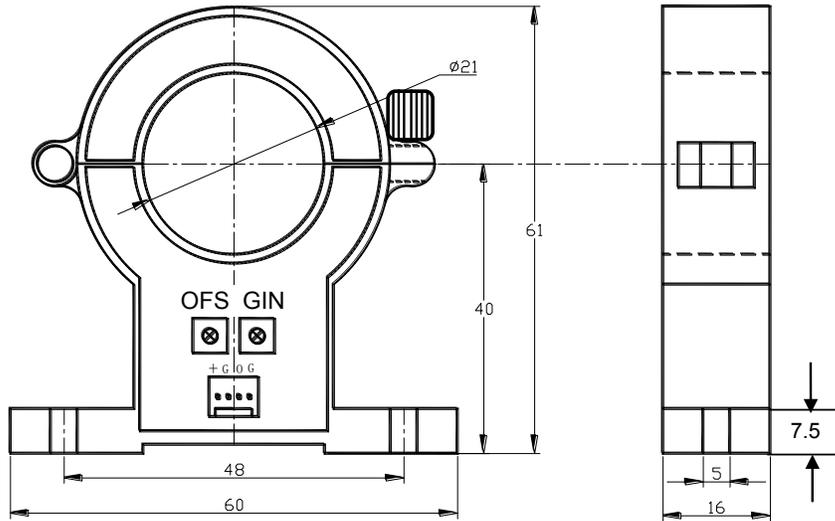
# CYHCS-RC2 Current Sensor

## 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

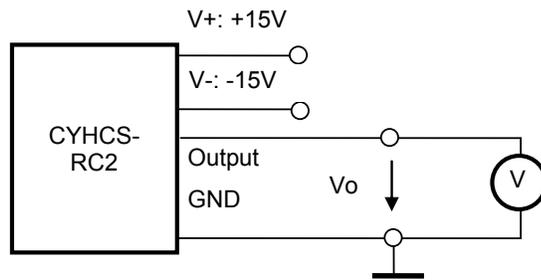


1(+): +15V  
2(G): -15V  
3(O): Output  
4(G): GND

OFS: Offset Adjustment

GIN: Gain Adjustment

## Connection



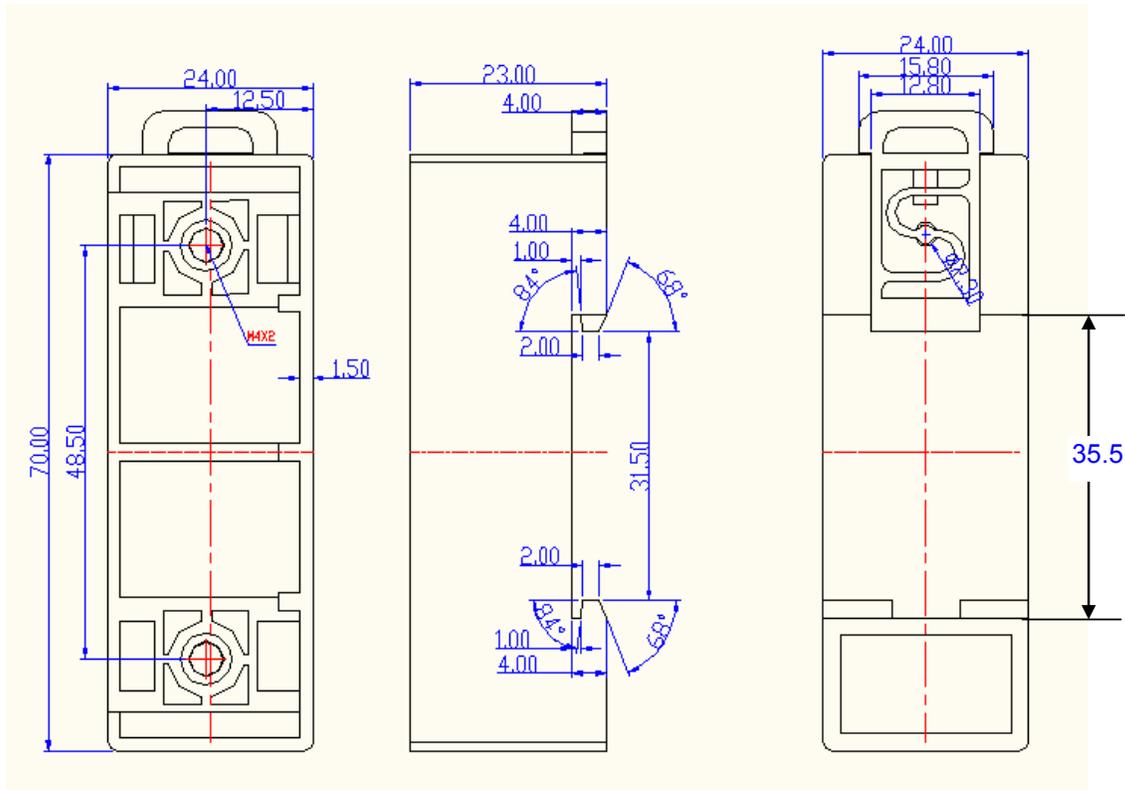
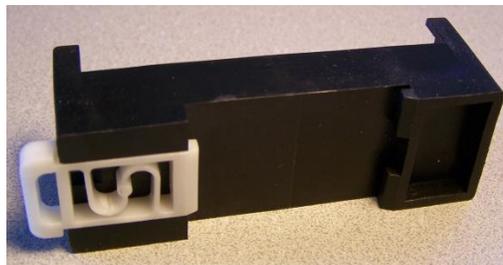
## Notes:

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

# CYHCS-RC2 Current Sensor

## 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.



# CYHCS-RC2S 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)



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For more information and certifications, please contact:

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