

## Split Core AC Hall Current Sensor CYHCS-EKAD

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"> <li>• Excellent accuracy</li> <li>• Very good linearity</li> <li>• Using split cores and easy mounting</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>• <b>Photovoltaic equipment</b></li> <li>• Frequency conversion timing equipment</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>• Electric powered locomotive</li> <li>• Microcomputer monitoring</li> <li>• Electric power network monitoring</li> </ul>

### Electrical Data

Primary Nominal RMS Current $I_r$ (A)	Measuring Range RMS (A)	DC Output voltage (V)	Aperture Diameter (mm)	Part number
30	60	0-5 ±1.0%	Ø21	CYHCS-EKAD30A-C
50	100			CYHCS-EKAD50A-C
100	200			CYHCS-EKAD100A-C
200	400			CYHCS-EKAD200A-C
400	800			CYHCS-EKAD400A-C
500	1000			CYHCS-EKAD500A-C

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

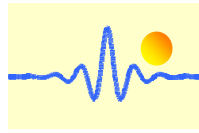
Supply Voltage	$V_{cc} = \pm 15V \pm 5\%$
Current Consumption	$I_c < 25mA$
Galvanic isolation, 50/60Hz, 1min:	2.5kV
Load resistance:	10kΩ
Isolation resistance @ 500 VDC	> 500 MΩ

### Accuracy and Dynamic performance data

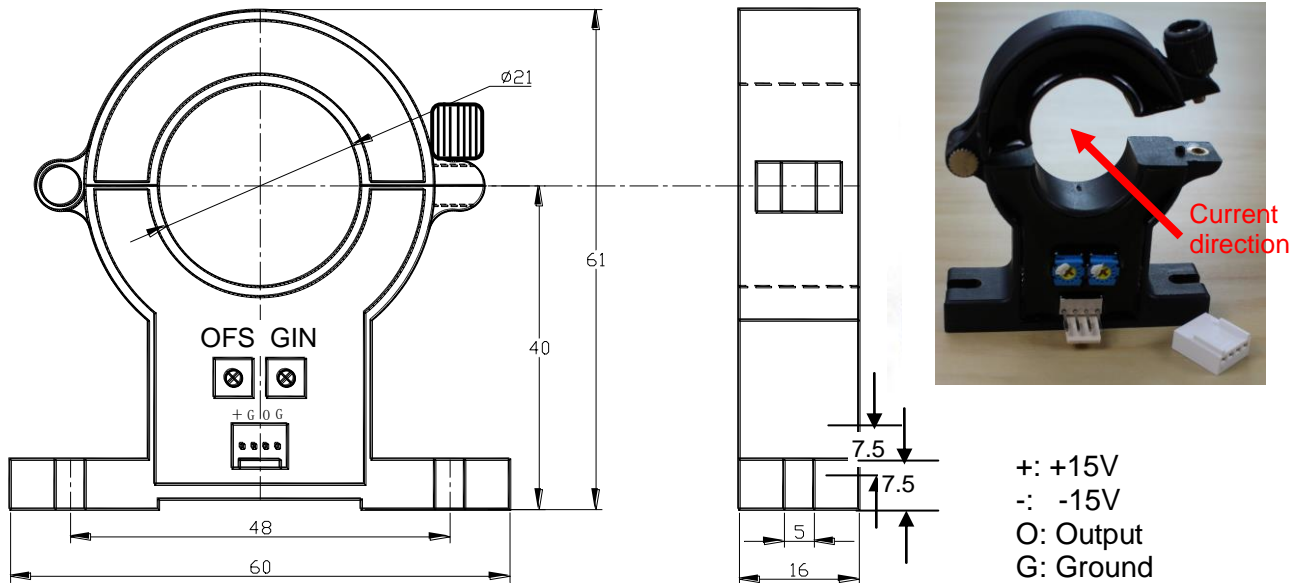
Accuracy at $I_r$ , $T_A=25^\circ C$ (without offset),	$X < 1.0\%$
Linearity from 0 to $I_r$ , $T_A=25^\circ C$ ,	$E_L < 1.0\% FS$
Electric Offset Voltage, $T_A=25^\circ C$ ,	$V_{oe} < 25mV$
Thermal Drift of Offset Voltage,	$V_{ot} < \pm 0.5mV/^\circ C$
Response Time at 90% of $I_P$ ( $f=1k Hz$ )	$t_r < 200ms$
Frequency bandwidth (- 3 dB):	20Hz - 20kHz

### General Data

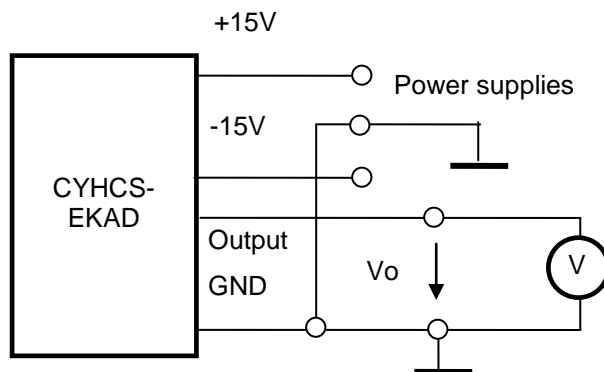
Ambient Operating Temperature,	$T_A = -25^\circ C \sim +85^\circ C$
Ambient Storage Temperature,	$T_S = -40^\circ C \sim +100^\circ C$



## PIN Definition and Dimensions

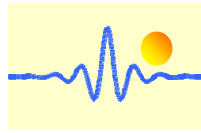


## Connection



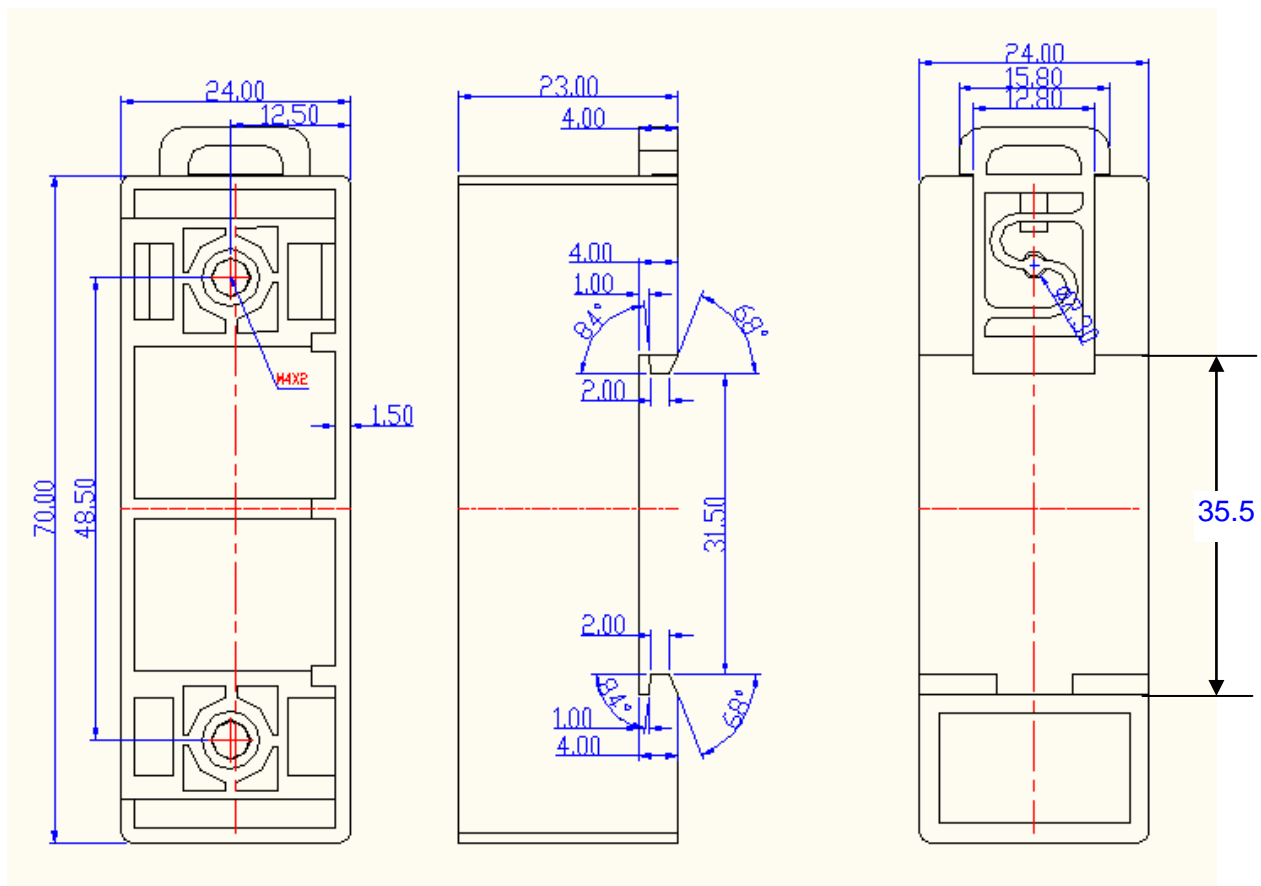
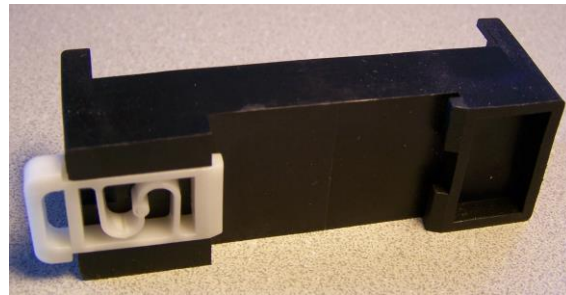
## Notes:

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)