

Hall AC/DC Current Sensor CYHCS-HB

This Hall Effect current sensor is based on open loop principle and designed with a high galvanic isolation between primary conductor and secondary circuit. It can be used for measurement of DC, AC current, pulse currents etc. The output of the transducer reflects the real wave of the current carrying conductor.

Product Characteristics	Applications
<ul style="list-style-type: none"> • Excellent accuracy • Very good linearity • easy installation • 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 • Transformer substation • Numerical controlled machine tools • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data

Primary Nominal RMS Current I_r (A)	Measuring Range (A)	Output current (Analog) V_o	Aperture Diameter (mm)	Part number
2000	± 4000	4V \pm 1.0%	140 x 50	CYHCS-HB2000A
3000	± 5000			CYHCS-HB3000A
4000	± 6000			CYHCS-HB4000A
5000	± 7500			CYHCS-HB5000A
8000	± 10000			CYHCS-HB8000A
10000	± 12000			CYHCS-HB10000A

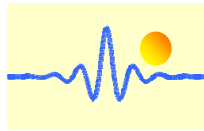
Supply Voltage
Current Consumption
Galvanic isolation, 50/60Hz, 1min:
Isolation resistance @ 500 VDC

$V_{cc} = \pm 12$ or ± 15 VDC $\pm 5\%$
 $I_c < 25$ mA
6kV
> 500 M Ω

Accuracy and Dynamic performance data

Accuracy at I_r , $T_A = 25^\circ\text{C}$ (without offset),
Linearity from 0 to I_r , $T_A = 25^\circ\text{C}$,
Electric Offset Voltage, $T_A = 25^\circ\text{C}$,
Magnetic Offset Voltage,
Thermal Drift of Offset Voltage,
Frequency bandwidth (- 3 dB):
Response Time at 90% of I_P
Load resistance:

$X < 1.0\%$
 $E_L < 1.0\%$ FS
25mV
30mV
 $V_{ot} < \pm 1.0$ mV/ $^\circ\text{C}$
DC-20kHz
 $t_r \leq 7$ μs
10k Ω

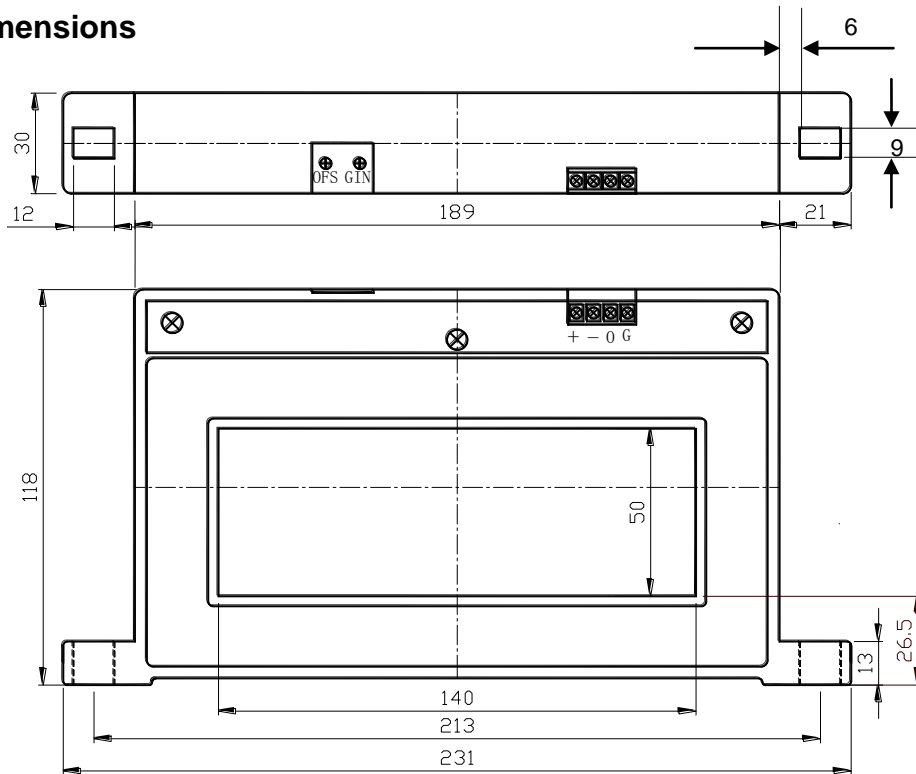


General Data

Ambient Operating Temperature,
Ambient Storage Temperature,

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

Dimensions



Pin Arrangement

+: +15V
-: -15V
O: Output
G: GND



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.