

Hall Effect AC Current Sensor CYHCS-HBV

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 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	
 Excellent accuracy Very good linearity easy mounting Less power consumption Window structure Electrically isolating the output of the transducer from the current carrying conductor No insertion loss 	 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 	
Current overload capability	 Electric power network monitoring 	

Electrical Data

Primary Nominal Current <i>I_r</i> (A), rms	Measuring Range (A)	DC Output Voltage (V)	Window Size (mm)	Part number
2000	0~±2000	x=0: 0-4V ±1.0% x=3: 0-5V ±1.0% x=8: 0-10V ±1.0%		CYHCS-HBV-2000A-xn
3000	0~±3000			CYHCS-HBV-3000A-xn
4000	0~±4000		140 x 50	CYHCS-HBV-4000A-xn
5000	0~±5000			CYHCS-HBV-50000A-xn
6000	0~±6000			CYHCS-HBV-6000A-xn
8000	0~±8000			CYHCS-HBV-8000A-xn
9000	0~±9000			CYHCS-HBV-9000A-xn

(n=2, Vcc= +12VDC; n=3, Vcc =+15VDC; n=4, Vcc =+24VDC

Supply Voltage Output Voltage at I_r , T_A =25°C: Current Consumption Galvanic isolation, 50/60Hz, 1min: Output Impedance: Load resistance: V_{cc} = +12V, +15V, +24VDC ± 5% V_{out} =0- 4V, 0-5V, 0-10VDC I_c < 25mA 3kV rms R_{out} < 150Ω 10kΩ

Accuracy and Dynamic performance data

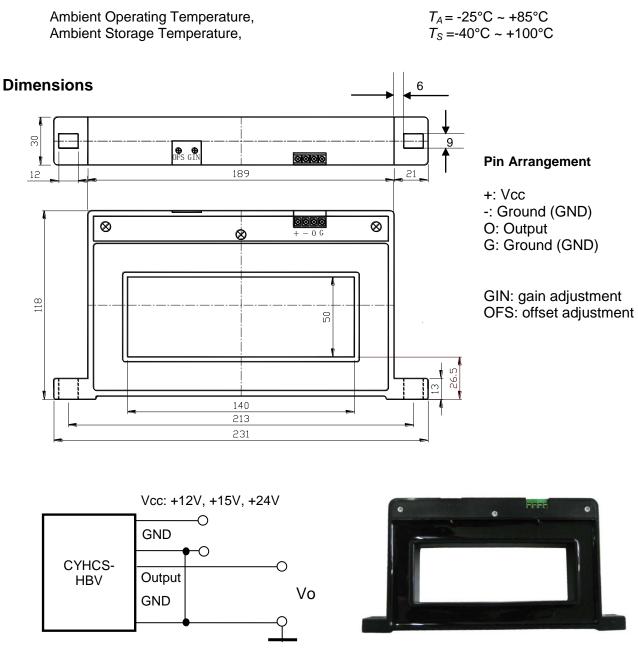
Accuracy at I_r , $T_A=25^{\circ}$ C, Linearity from 0 to I_r , $T_A=25^{\circ}$ C, Electric Offset Voltage, $T_A=25^{\circ}$ C, Magnetic Offset Voltage ($I_r \rightarrow 0$) Thermal Drift of Offset Voltage, Response Time at 90% of I_P (f=1k Hz) Frequency Bandwidth (-3dB), Case Material:

Markt Schwabener Str. 8 D-85464 Finsing Germany X <±1.0% FS E_{L} <±0.5% FS V_{oe} <50mV V_{om} <±20mV V_{ot} <±1.0mV/°C t_{r} < 200ms f_{b} = 20Hz - 20 kHz PBT

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General Data



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