

Hall Effect AC Current Sensor CYHCS-HBC

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 Current (mA)	Window Size (mm)	Part number
2000	0~±2000			CYHCS-HBC-2000A-n
3000	0~±3000			CYHCS-HBC-3000A-n
4000	0~±4000			CYHCS-HBC-4000A-n
5000	0~±5000	4-20 ±1.0%	140 x 50	CYHCS-HBC-5000A-n
6000	0~±6000			CYHCS-HBC-6000A-n
8000	0~±8000			CYHCS-HBC-8000A-n
9000	0~±9000			CYHCS-HBC-9000A-n

(n=3, Vcc= +12VDC ±5%; n=4, Vcc =+15VDC ±5%; n=5, Vcc =+24VDC±5%)

Supply Voltage Output current: Current Consumption Galvanic isolation, 50/60Hz, 1min: Isolation resistance @ 500 VDC V_{cc} = +12V, +15V, +24VDC ± 5% 4-20mADC I_c < 25mA + Output current 3kV rms > 500 MΩ

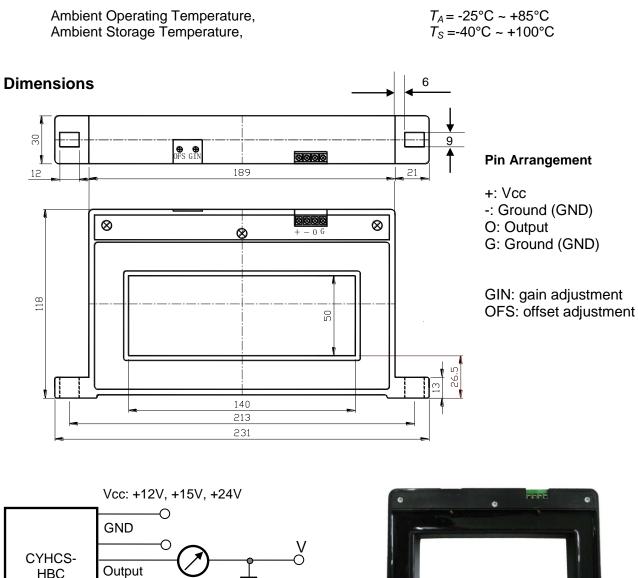
Accuracy and Dynamic performance data

Accuracy at I_r , T_A =25°C, Linearity from 0 to I_r , T_A =25°C, Electric Offset current, T_A =25°C, Thermal Drift of Offset Current, Response Time at 90% of I_P Load resistance: Frequency Bandwidth (-3dB), Case Material: $X \le \pm 1.0\%$ FS $E_{L} \le \pm 0.5\%$ FS 4mA DC $\le \pm 0.005$ mA/°C $t_{r} < 200$ ms 80-450Ω $f_{b} = 20$ Hz- 20 kHz PBT

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General Data



Notes:

HBC

1. Connect the terminals of power source, output respectively and correctly, never make wrong connection.

R_m=80~450Ω

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- 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

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