ChenYang Technologies GmbH & Co KG

Hall Effect 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
• 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	• **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 Current I_r (A)	Measuring Range (A)	Output current (Analog) Vo	Aperture Diameter (mm)	Part number
2000	± 4000	X=0: ±4V ±1.0% X=1: ±5V ±1.0%	140 x 50	CYHCS-HB2000A-X
3000	± 5000			CYHCS-HB3000A-X
4000	± 6000			CYHCS-HB4000A-X
5000	± 7500			CYHCS-HB5000A-X
8000	± 10000			CYHCS-HB8000A-X
10000	± 12000			CYHCS-HB10000A-X

Supply Voltage	V_{cc}= ±12 or ±15VDC ± 5%
Current Consumption	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	6kV
Isolation resistance @ 500 VDC	> 500 MΩ

Accuracy and Dynamic performance data

Accuracy at I_r, T_A=25°C (without offset),	E <1.0%
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Voltage, T_A=25°C,	25mV
Magnetic Offset Voltage,	30mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C
Frequency bandwidth (- 3 dB):	DC-20kHz
Response Time at 90% of I_P	t_r ≤ 7µs
Load resistance:	10kΩ

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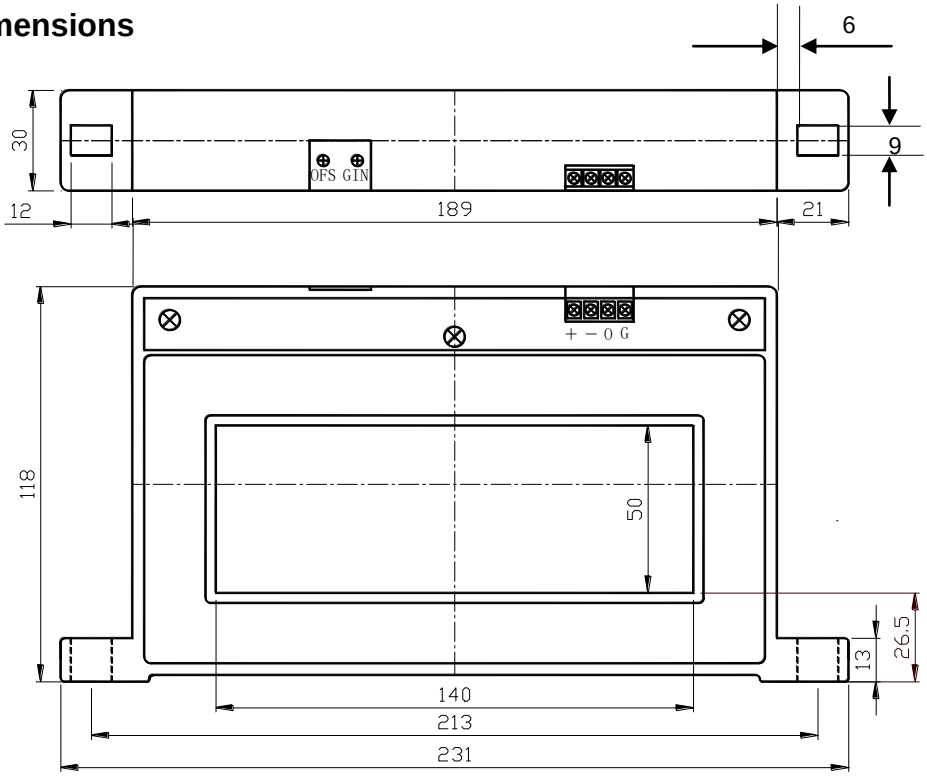
General Data

Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°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.

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