Hall Effect Current Sensor CYHCS-K5

This Hall Effect current sensor is based on open loop principle and designed with a high galvanic isolation between primary and secondary circuits. It can be used for measurement of DC and 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 • 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 equipments • Uninterruptible power supplies (UPS) • Electric welding machines • Transformer substation • Numerical controlled machine tools • Electric powered locomotive • Electric power network monitoring • Inverters etc.

Electrical Data

Primary Nominal RMS Current I_r (A)	Measuring Range (A)	Output voltage (V)	Aperture Diameter (mm)	Part number
2000	4000	4 ±1.0%	140 x 50	CYHCS-K5-2000A
3000	5000			CYHCS-K5-3000A
5000	7500			CYHCS-K5-5000A
8000	10000			CYHCS-K5-8000A
10000	12000			CYHCS-K5-10000A

Supply Voltage	V_{cc}= ±12~15VDC
Current Consumption at ±15VDC	I_c < 25mA
Galvanic isolation, 50/60Hz, 1min:	6kV
Load resistance:	10kΩ
Isolation resistance @ 500 VDC	> 500 MΩ

Accuracy and Dynamic performance data

Accuracy at I_r, T_A=25°C (without offset),	X <1.0%
Linearity from 0 to I_r, T_A=25°C,	E_L <1.0% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <25mV
Magnetic Offset Voltage ($I_r \rightarrow 0$)	V_{om} <±30mV
Thermal Drift of Offset Voltage,	V_{ot} <±1mV/°C
Response Time at 90% of I_P (f=1k Hz)	t_r < 7µs
Frequency bandwidth (- 3 dB):	DC-20kHz

General Data

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

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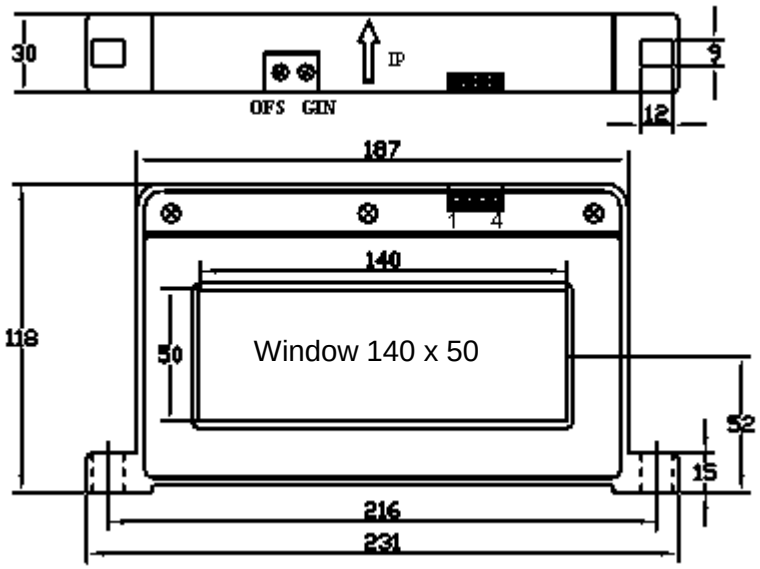
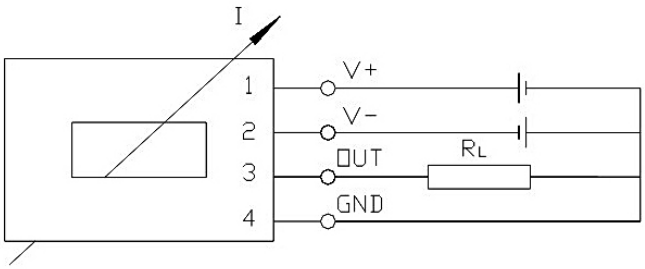
Dimensions





Terminal Arrangement:

1:	V+ (+12~15VDC)
2:	V- (-12~15VDC)
3:	OUTPUT
4:	GND

Notes:

1. Connect the terminals of power source, outputs 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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