Open Loop Hall AC/DC Current Sensor CYHCS-HAX

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 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 • Small size • Light in weight • 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 • Electrolyzing and electroplating equipment • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data

Primary Nominal Current I_r (A)	Measuring Range (A)	Output voltage (Analog)(V)	Window size (mm)	Part number
500	±1500	X=0: ±4V ±1.0% X=1: ±5V ±1.0%	64 x 21	CYHCS-HAX500A-X
850	±2550			CYHCS-HAX850A-X
1000	±3000			CYHCS-HAX1000A-X
1500	±4500			CYHCS-HAX1500A-X
2000	±6000			CYHCS-HAX2000A-X
2500	±6000			CYHCS-HAX2500A-X
3000	±6000			CYHCS-HAX3000A-X
4000	±6000			CYHCS-HAX3000A-X

Supply Voltage	V_{cc}= ±15V ± 5%
Current Consumption	I_c < 30mA
Galvanic isolation, 50/60Hz, 1min:	5kV rms
Load resistance:	10kΩ
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 <±0.5% FS
Electric Offset Voltage, T_A=25°C,	V_{oe} <±25mV
Magnetic Offset Voltage (I_r →0)	V_{om} <±25mV
Thermal Drift of Offset Voltage,	V_{ot} <±1.0mV/°C
Thermal Drift (-10°C to 50°C),	T.C. < ±0.1% /°C
Frequency bandwidth (- 3 dB):	DC-20kHz
Response Time at 90% of I_P (f=1k Hz)	t_r ≤ 5µs

Markt Schwabener Str. 8
D-85464 Finsing
Germany

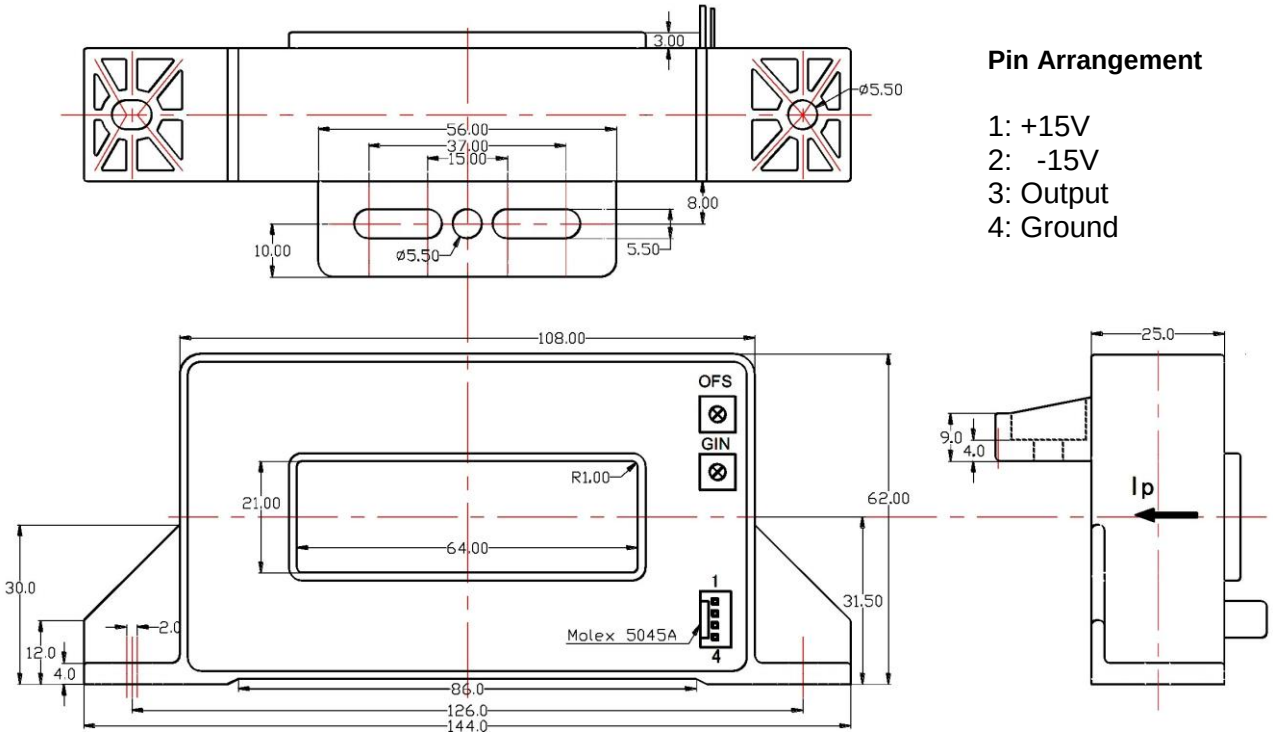
Tel.: +49 (0)8121 – 2574100
Fax: +49 (0)8121– 2574101
Email: info@cy-sensors.com
http://www.cy-sensors.com

ChenYang Technologies GmbH & Co KG

General Data

Ambient Operating Temperature,	T_A = -25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C
Unit weight:	520g/unit

Dimensions



Pin Arrangement

1: +15V
2: -15V
3: Output
4: Ground

OFS: Offset Adjustment
GIN: Gain Adjustment

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 primary current is the same as the direction of arrow marked on the transducer.

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