Version 1
Released in August 2025
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ChenYang Technologies GmbH & Co KG

Hall Effect AC/DC Current Sensor CYHCS-GB

This Hall Effect current sensor is based on closed loop principle and designed with core structure and a high galvanic isolation between primary conductor and secondary circuit. It can be used for measurement of AC/DC current etc. The output of the transducer reflects the real wave of the current carrying conductor.

Product Characteristics	Applications
• Excellent accuracy • Very good linearity • Light in weight • Less power consumption • Window structure, easily mounting • Electrically isolating the output of the transducer from the current carrying conductor • No insertion loss • Current overload capability	• Photovoltaic equipment • Frequency conversion timing equipments • Various power supply • Uninterruptible power supplies (UPS) • Electric welding machines • Numerical controlled machine tools • Electrolyzing and electroplating equipments • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data

Part number	CYHCS-GB-10A	CYHCS-GB20A	CYHCS-GB-25A	CYHCS-GB40A	Unit
Nominal current	10	20	25	40	A
Measuring range	0～±20	0～±40	0～±50	0～±80	A
Turns ratio	1:1000	1:1000	1:1000	1:1600	
Nominal analogue output current	10	20	25	25	mA
Measuring resistance	1230 (max)	594 (max)	467 (max)	420 (max)	Ω
Secondary coil resistance	43	43	43	90	Ω
Supply voltage	±12 ~ ±15				V
Current consumption	20 + output current				mA
Galvanic isolation	50HZ, 1min, 3kV				kV

Accuracy and Dynamic Performance

Linearity	≤±0.1	%FS
Accuracy	≤±0.7	%FS
Zero offset current	±0.15	mA
Thermal drift of offset current	-25°C ~ +85°C, ±0.5	mA
Response time	<1	μs
Bandwidth(-3dB)	DC…200	kHz
di/dt following accuracy	>50	A/μs

General Data

Ambient Operating Temperature,	T_A =-25°C ~ +85°C
Ambient Storage Temperature,	T_S =-40°C ~ +100°C
Unit weight:	12g / unit
Standard:	Q/320115QHKJ01-2016

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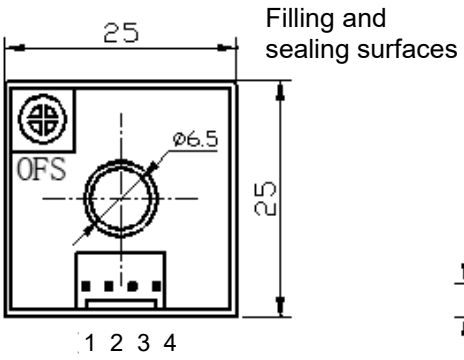
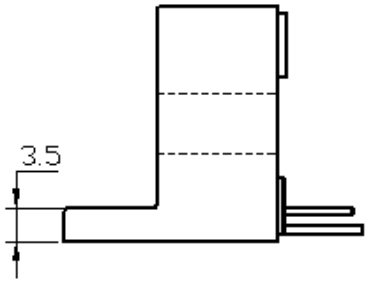
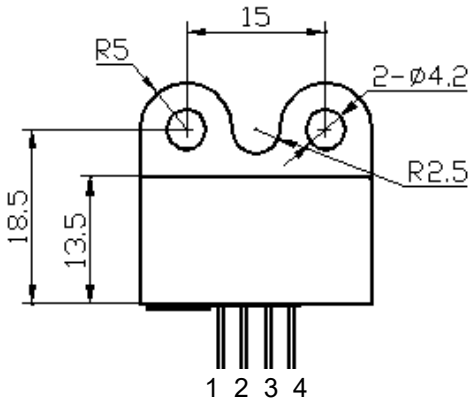
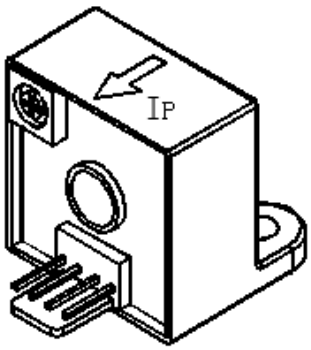
PIN Definition and Dimensions





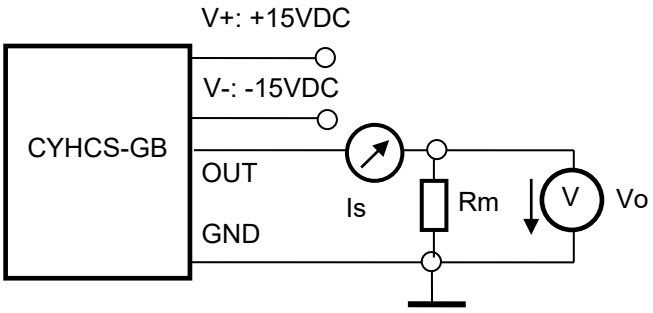




Pin arrangement:

1 (V+): +15V
2 (V-): -15V
3 (OUT): I_{OUT}
4 (GND): 0V (GND)

OFS: Offset 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 busbar (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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