ChenYang Technologies GmbH & Co KG

Closed Loop Hall AC/DC Current Sensor CYHCS-D6-X

This Hall Effect current sensor is based on closed loop compensating 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 • Various kinds of output signals • Window structure and encapsulated • Large current measuring range • High current overload capability	• **Photovoltaic equipment** • General Purpose Inverters • AC/DC Variable Speed Drivers • Battery Supplied Applications • Uninterruptible Power Supplies • Switched Mode Power Supplies

ELECTRICAL DATA

Part number	CYHCS-D6-100A-X	CYHCS-D6-250A-X	CYHCS-D6-500A-X
Nominal current	100A	250A	500A
Measuring range	0~±200A	0~±500A	0~±1000A
Turns ratio	1:5000		
Internal sampling resistance	≤60Ω±0.1%	≤50Ω±0.1%	≤25Ω±0.1%
Nominal output signal	X=20mA (0~±20mA); X=4V (0~±4V); X=5V (0~±5V)		
Supply voltage	±15V ~ ±24V		
Current consumption	20mA + input current / 5000		
Galvanic isolation	6kV, 50Hz 1min		

ACCURACY DYNAMIC PERFORMANCE

Zero offset current Ta=25°C	< ±0.04mA
Magnetic Offset current IP→0	< ±0.02mA
Thermal drift of offset current	-25°C ~ +85°C, ±0.2mA
Response time	<2μs
Accuracy	±0.5% for rated current 100A~500A
Linearity	± 0.1% for rated current 100A~500A
Bandwidth(-3dB)	DC…100kHz
di/dt following accuracy	>100A/μs

GENERAL DATA

Operating temperature	-25°C ~ +85°C
Storage temperature	-40°C ~ +100°C
Unit weight	328g

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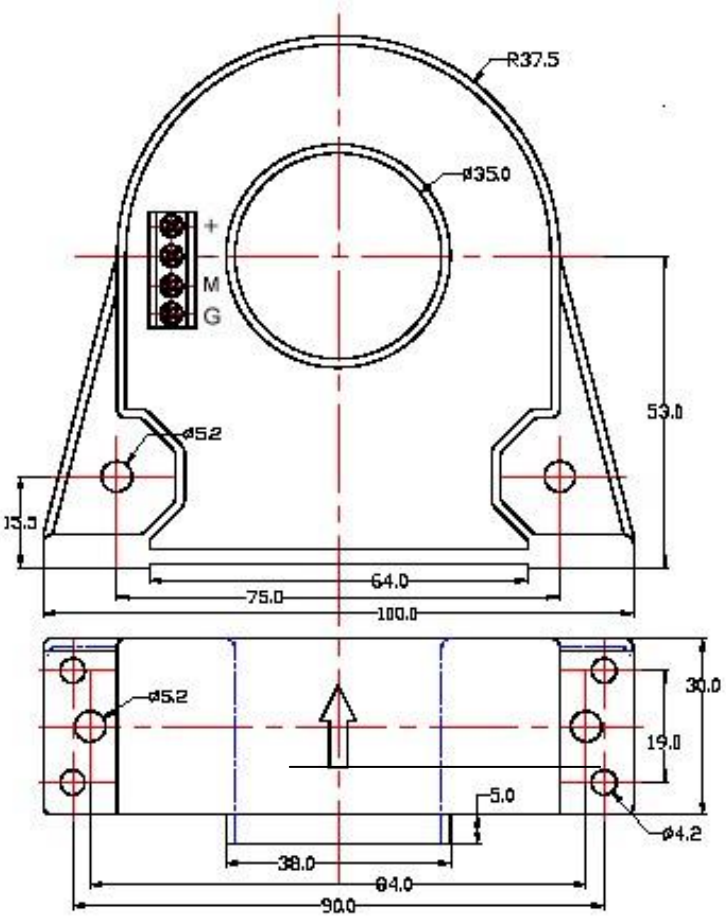
Dimensions (mm)
CYHCS-D6-nnnn-X



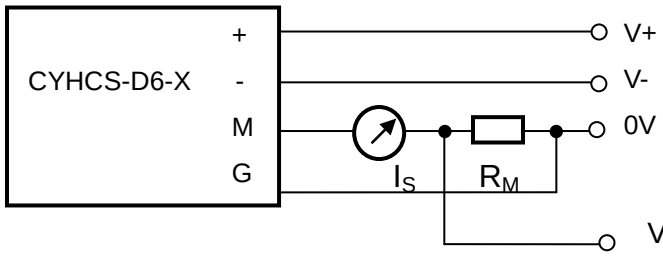
Current direction

Terminal Arrangement

+:	V+ +15V~+24VDC
-:	V- -15V~ -24VDC
M:	Output signal
G:	ground

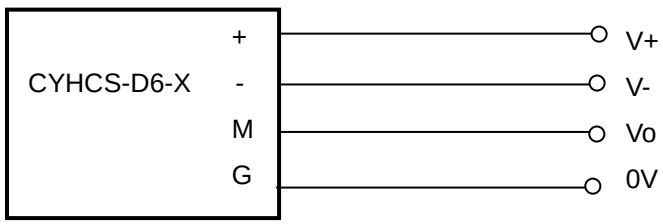
Screw connector: DG300-5.0 Screw terminal block

1) Current Output



Measuring resistance R_M = 10Ω ~ 100Ω

2) Voltage Output



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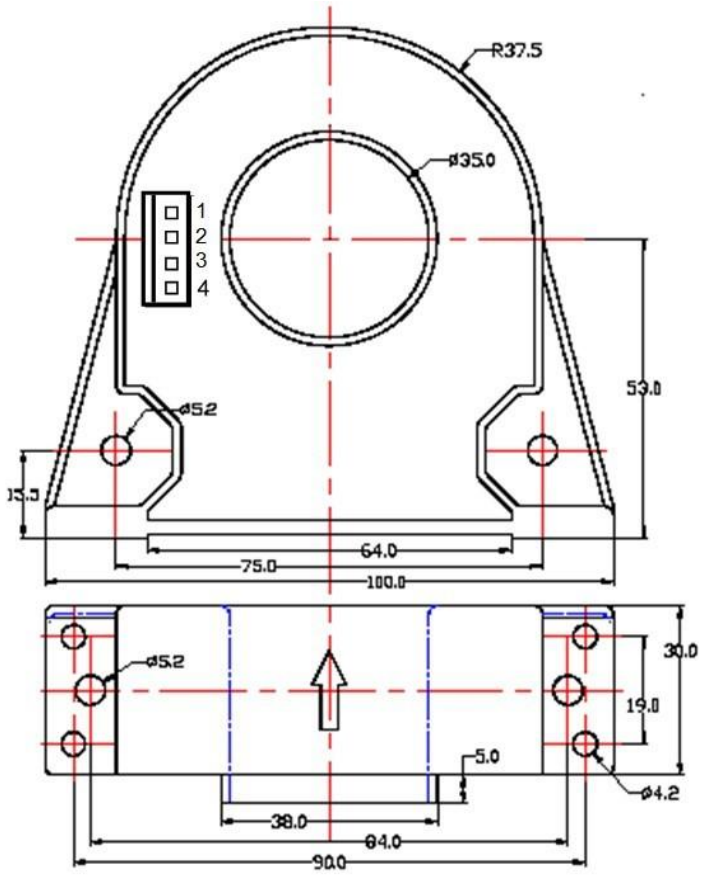

Current direction

Terminal Arrangement

1(+):	V+ +15V~+24VDC
2(-):	V- -15V~ -24VDC
3(M):	Output signal
4(G):	ground

Molex Connector: Molex 22011042, 5045-04AG, 5051-04

Operating instructions

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

2. Temperature of the primary conductor should not exceed 120 °C.

3. Dynamic performances (di/dt and the response time) are the best if the primary hole is completely filled with the bus bar.

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