Closed Loop Hall AC/DC Current Sensor CYHCS-EC/ECH

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 • Small size and encapsulated • Less power consumption • 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-EC50A/ CYHCS-ECH50A	CYHCS-EC75A/ CYHCS-ECH75A	CYHCS-EC100A/ CYHCS-ECH100A	CYHCS-EC200A/ CYHCS-ECH200A	Unit
Nominal current	50	75	100	200	A
Measuring range	150 (±18V, 82 Ω)	225 (±18V, 68 Ω)	300 (±18V, 51 Ω)	400 (±18V, 15 Ω)	A
Turns ratio	1:1000	1:1500	1:2000	1:2000	
Nominal analogue output current	50±0.5% / 50±0.2%	50±0.5% / 50±0.2%	50±0.5% / 50±0.2%	100±0.5% / 100±0.2%	mA
Secondary coil resistance	30	45	50	55	Ω
Supply voltage	±12 ~ ±18				V
Current consumption	20 + output current				mA
Galvanic isolation	50HZ, 1min, 3kV				kV

ACCURACY DYNAMIC PERFORMANCE

Zero offset current	±0.2	mA
Thermal drift of offset current	-25°C ~ +85°C, ±0.005	mA/°C
Response time	<1	μs
Linearity	≤0.1	%FS
Bandwidth(-3dB)	DC…150	kHz
di/dt following accuracy	>100	A/μs

GENERAL DATA

Operating temperature	-25 ~ +85	°C
Storage temperature	-40 ~ +100	°C

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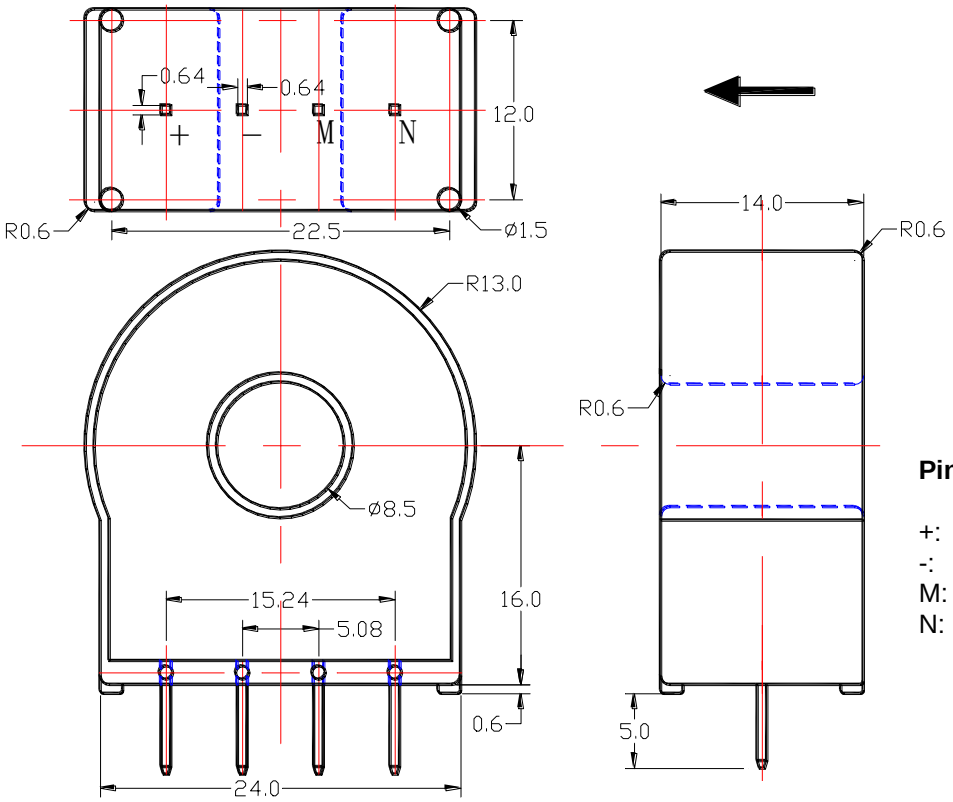
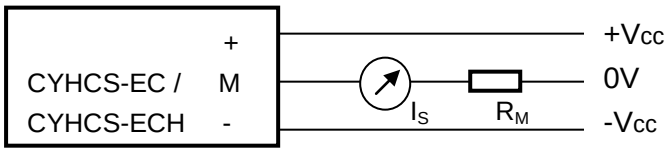
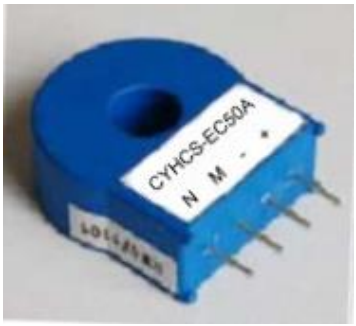
Dimensions (mm)



Pin Arrangement

+: +12V ~ +18VDC
-: -12V ~ -18VDC
M: Output
N: NC





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 100 °C.

3. Dynamic performances (di/dt and the response time) are best with a single bar completely filling the primary hole.

4. In order to achieve the best magnetic coupling, the primary windings have to be wound over the top edge of the device.

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