ChenYang
Technologies GmbH & Co KG

Split Core Hall Current Sensor CYHCT-EKCC

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 current, DC pulse currents etc. The output of the transducer reflects the real wave of the current carrying conductor.

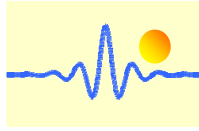| Product Characteristics	Applications
- Excellent accuracy - Very good linearity - Using split cores and easy mounting - Less power consumption - Window structure - Electrically isolating the output of the transducer from the current carrying conductor - No insertion loss - Current overload capability	**Photovoltaic equipment** - Frequency conversion timing equipment - Various power supply - Uninterruptible power supplies (UPS) - Electric welding machines - Transformer substation - Numerical controlled machine tools - Electric powered locomotive - Microcomputer monitoring - Electric power network monitoring

Electrical Data

Primary Nominal DC Current I_r (A)	Measuring Range (A)	DC Output Current (mA)	Aperture Diameter (mm)	Part number
30A	0 ~ ± 30A			CYHCT-EKCC-U/B30A-n
50A	0 ~ ± 50A			CYHCT-EKCC-U/B50A-n
80A	0 ~ ± 80A	4-20 ±1.0%	12	CYHCT-EKCC-U/B80A-n
100A	0 ~ ± 100A			CYHCT-EKCC-U/B100A-n
200A	0 ~ ± 200A			CYHCT-EKCC-U/B200A-n
300A	0 ~ ± 300A			CYHCT-EKCC-U/B300A-n

(U: unidirectional input current; B: bidirectional input current, please give U or B in Part number)
(n=3, Vcc= +12VDC ±5%; n=4, Vcc =+15VDC ±5%; n=5, Vcc =+24VDC±5%)

Supply Voltage	V_{cc}= +12V, +15V, +24VDC $\pm$ 5%
Current Consumption	I_c < 25mA + Output current
Galvanic isolation, 50/60Hz, 1min:	3kV rms
Isolation resistance @ 500 VDC	> 500 MΩ

Accuracy and Dynamic performance data

Accuracy at I_r, T_A=25°C,	X <±1.0% FS
Linearity from 0 to I_r, T_A=25°C,	E_L <±0.5% FS
Electric Offset current, T_A=25°C,	4mA DC or 12mA DC
Thermal Drift of Offset Current,	<±0.005mA/°C
Response Time at 90% of I_P	t_r < 1ms
Load resistance:	80-450Ω
Frequency Bandwidth (-3dB),	f_b = DC - 20 kHz
Case Material:	PBT

Version 2
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Dr.-Ing. habil. Jigou Liu

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General Data

Operating Temperature, T_A = -25°C ~ +85°C
Storage Temperature, T_S =-40°C ~ +100°C
Unit weight: 35g/unit

Dimensions

1Vcc: +12V, +15V, +24V

CYHCT-EKCC

2GND

3Output

4GND

Io

V

R_m=80~450Ω
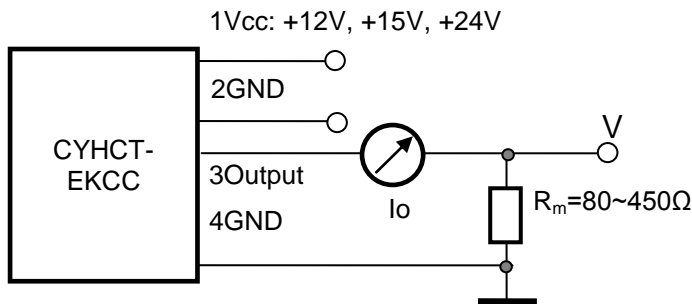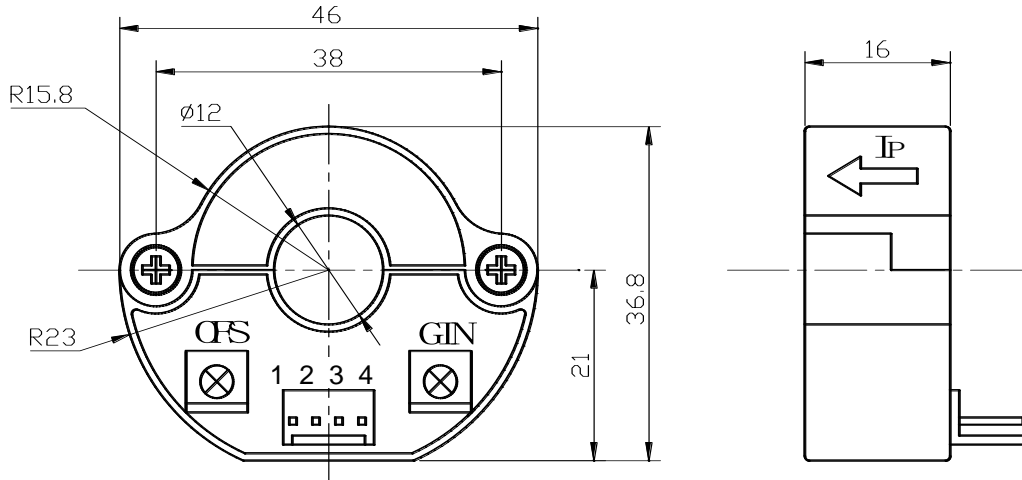
Pin Arrangement

1: Vcc   2: Ground (GND)   3: Output   4: Ground (GND)

GIN: gain adjustment   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 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