ChenYang Technologies GmbH & Co KG

Split Core Hall Effect AC/DC Current Sensor CYHCS-EKL

This Hall Effect current sensor is based on open loop principle and designed with a split core 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 • Less power consumption • Split core 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 • Electrolyzing and electroplating equipment • Electric powered locomotive • Electric power network monitoring

Electrical Data

Primary Nominal Current I_r (A)	Measuring Range I_p(A)	Output Voltage (Analog)(V)	Window Size (mm)	Part number
10000A	0 ~ ± 12000A	X=0: ±4V ±1.0% X=1: ±5V ±1.0%	Ø120	CYHCS-EKL-10000A-X
20000A	0 ~ ± 24000A			CYHCS-EKL-20000A-X
30000A	0 ~ ± 36000A			CYHCS-EKL-30000A-X
40000A	0 ~ ± 48000A			CYHCS-EKL-40000A-X
50000A	0 ~ ± 60000A			CYHCS-EKL-50000A-X
60000A	0 ~ ± 70000A			CYHCS-EKL-60000A-X
70000A	0 ~ ± 80000A			CYHCS-EKL-70000A-X
80000A	0 ~ ± 85000A			CYHCS-EKL-80000A-X

Supply Voltage:	V_{cc}=±12V ~ ±15VDC ± 5%
Current Consumption (Vc=±15VDC):	I_c < 50mA
Isolation Voltage:	6kV, 50/60Hz, 1min
Output Voltage at I_r, T_A=25°C:	V_{out} =4V or 5V
Output Impedance:	R_{out} < 150Ω
Load Resistor:	R_L > 10kΩ
Accuracy at I_r, T_A=25°C (without offset):	E <1.0% FS
Linearity from 0 to I_r, T_A=25°C:	E_L <1.0% FS
Linear Measuring range:	1.2 times of the nominal current
Overload capability:	3 times of measuring range
Electric Offset Voltage, T_A=25°C:	V_{oe} <±25mV
Magnetic Offset Voltage (I_r →0) :	V_{om} <±25mV
Thermal Drift of Offset Voltage (I_p=0, T_A=-25°C~85°C):	V_{ot} <±1.0mV/°C
Response Time at 90% of I_P (f=1k Hz):	t_r < 10μs
Frequency Bandwidth (-3dB):	f_b = DC - 6kHz

General Data

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

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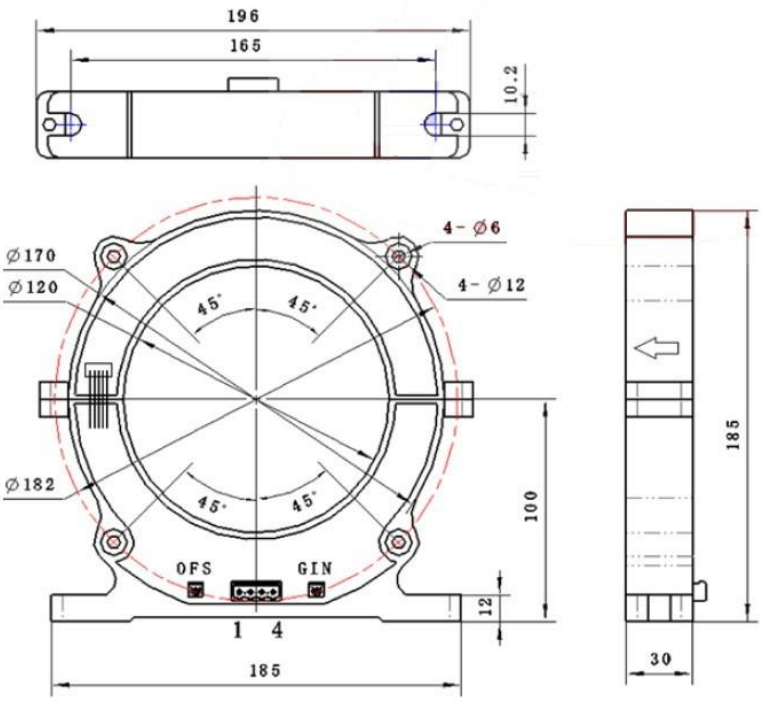
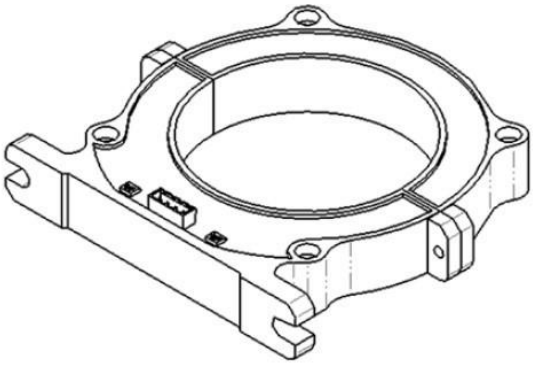
PIN Definition and Dimensions





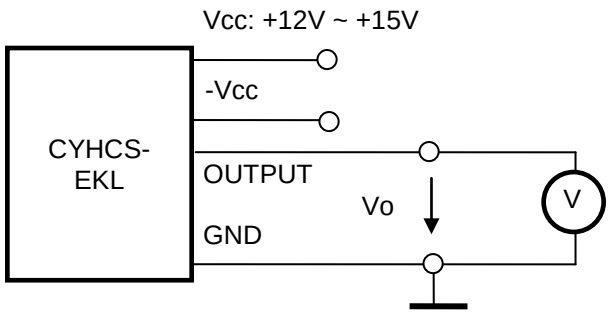
OFS: Offset Adjustment GIN: Gain Adjustment

Pin arrangement of connector:

1:	Vcc	2:	-Vcc
3:	OUTPUT	4:	0V (GND)

Cable connection:

Red:	Vcc
Blue:	-Vcc
Yellow:	OUTPUT
Black:	0V (GND)



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 current carrying conductor.
4. The in-phase output can be obtained when the current direction of current carrying conductor is the same as the direction of arrow marked on the transducer

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