

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

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
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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

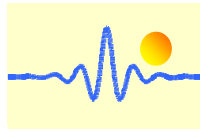
Electrical Data

Primary Nominal Current I_r (A)	Measuring Range I_p (A)	Output Voltage (Analog)(V)	Window Size (mm)	Part number
500A	0 ~ ± 1000A	X=0: ±4V ±1.0% X=1: ±5V ±1.0%	Ø80	CYHCS-EKO-500A-X
1000A	0 ~ ± 2000A			CYHCS-EKO-1000A-X
2000A	0 ~ ± 3000A			CYHCS-EKO-2000A-X
5000A	0 ~ ± 6000A			CYHCS-EKO-5000A-X
8000A	0 ~ ± 10000A			CYHCS-EKO-8000A-X
10000A	0 ~ ± 12000A			CYHCS-EKO-10000A-X
12000A	0 ~ ± 15000A			CYHCS-EKO-12000A-X
15000A	0 ~ ± 18000A			CYHCS-EKO-15000A-X
20000A	0 ~ ± 24000A			CYHCS-EKO-20000A-X

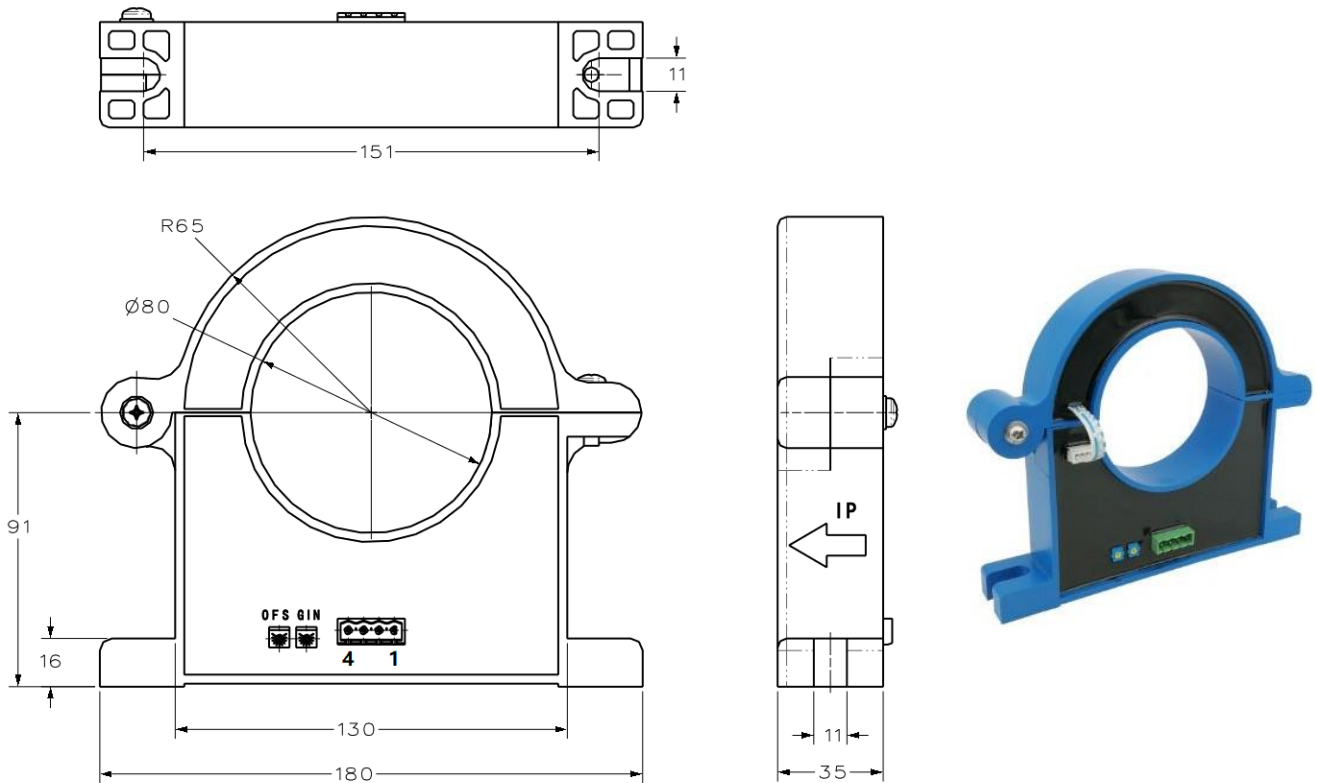
Supply Voltage:	$V_{cc} = \pm 12V \sim \pm 15VDC \pm 5\%$
Current Consumption ($V_c = \pm 15VDC$):	$I_c < 50mA$
Isolation Voltage:	6kV, 50/60Hz, 1min
Output Voltage at I_r , $T_A = 25^\circ C$:	$V_{out} = 4V$ or $5V$
Output Impedance:	$R_{out} < 150\Omega$
Load Resistor:	$R_L > 10k\Omega$
Accuracy at I_r , $T_A = 25^\circ C$ (without offset):	$E < 1.0\% FS$
Linearity from 0 to I_r , $T_A = 25^\circ C$:	$E_L < 1.0\% FS$
Linear Measuring range:	1.2 ~2 times of measuring range
Overload capability:	3 times of measuring range
Electric Offset Voltage, $T_A = 25^\circ C$:	$V_{oe} < \pm 25mV$
Magnetic Offset Voltage ($I_r \rightarrow 0$):	$V_{om} < \pm 25mV$
Thermal Drift of Offset Voltage ($I_p = 0$, $T_A = -25^\circ C \sim 85^\circ C$):	$V_{ot} < \pm 1.0mV/^\circ C$
Response Time at 90% of I_p ($f = 1k Hz$):	$t_r < 10\mu s$
Frequency Bandwidth (-3dB):	$f_b = DC - 6kHz$

General Data

Ambient Operating Temperature:	$T_A = -25^\circ C \sim +85^\circ C$
Ambient Storage Temperature:	$T_S = -40^\circ C \sim +100^\circ C$
Unit Weight:	1165g/pc
Standard:	Q/320115QHKJ01-2016



PIN Definition and Dimensions



OFS: Offset Adjustment

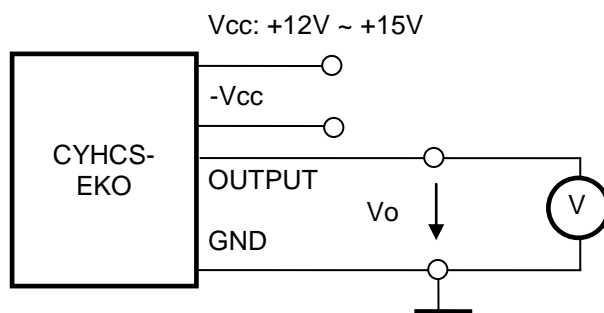
GIN: Gain Adjustment

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