

Hall Effect DC Current Sensor CYHCT-K210C

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 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 • 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 • Numerical controlled machine tools • Electrolyzing and electroplating equipment • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data/Input

Primary Nominal DC Current I_r (A)	Primary Current Measuring Range I_p (A)	Output current (mA)	Part number
3000A	0 ~ ± 3000A	4-20mA	CYHCT-K210C-U/B3000A-n
4000A	0 ~ ± 4000A		CYHCT-K210C-U/B4000A-n
5000A	0 ~ ± 5000A		CYHCT-K210C-U/B5000A-n
6000A	0 ~ ± 6000A		CYHCT-K210C-U/B6000A-n
8000A	0 ~ ± 8000A		CYHCT-K210C-U/B8000A-n
10000A	0 ~ ± 10000A		CYHCT-K210C-U/B10000A-n
15000A	0 ~ ± 15000A		CYHCT-K210C-U/B15000A-n
20000A	0 ~ ± 20000A		CYHCT-K210C-U/B20000A-n

(n=2, V_{cc} = +12VDC; n=3, V_{cc} =+15VDC; n=4, V_{cc} =+24VDC; n=5, V_{cc} =±12VDC; n=6, V_{cc} =±15VDC; n=7, V_{cc} =±24VDC; n=8, V_{cc} =+125VDC. U: unidirectional, B: bidirectional)

Supply Voltage:

Current Consumption

Isolation Voltage

V_{cc} =+12V, +15V, +24V± 5%

I_c < 50mA + Output current

6kV, 50/60Hz, 1min

Electrical Properties

Accuracy at I_r , T_A =25°C (without offset),

Linearity from 0 to I_r , T_A =25°C,

Linear Measuring range,

Overload capability,

Electric Offset Current, T_A =25°C,

Thermal Drift of Offset Current,

Load resistance:

Response Time at 90% of I_p (f =1k Hz)

Frequency Bandwidth (-3dB),

Ambient Operating Temperature,

Ambient Storage Temperature,

<1.0%

E_L <1.0% FS

1.2 times of measuring range

3 times of measuring range

4mA DC or 12mA DC

<±0.005mA/°C

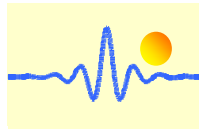
80-450Ω

t_r < 1ms

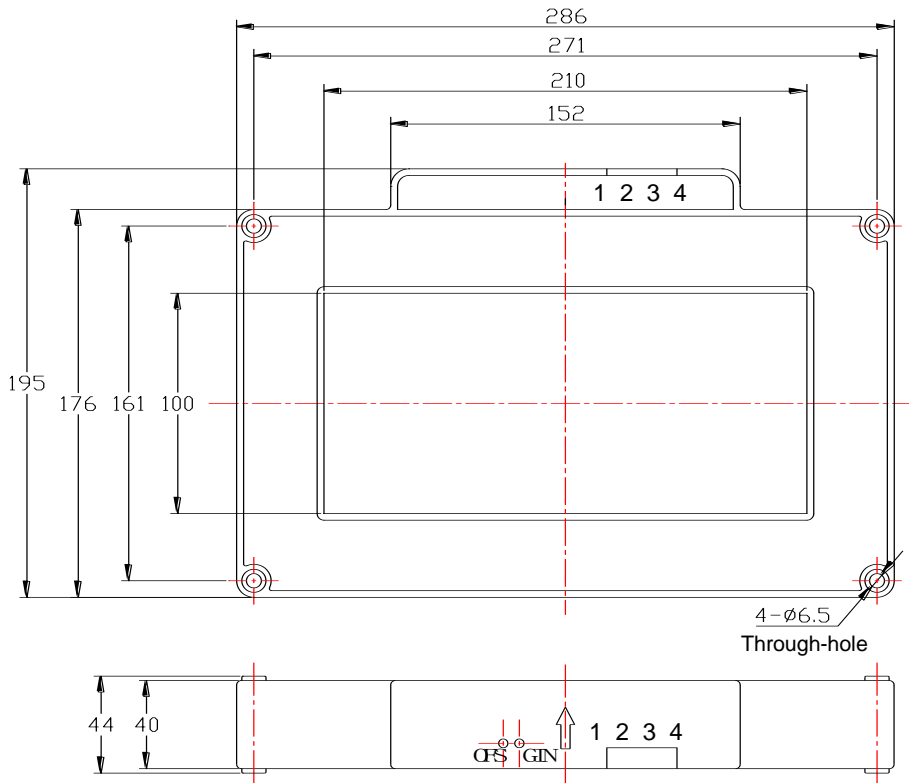
f_b = DC-3 kHz

T_A =-25°C ~ +85°C

T_S =-40°C ~ +100°C



PIN Definition and Dimensions

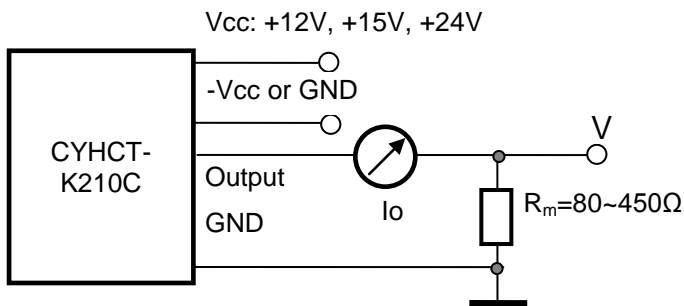


Pin arrangement:

1(V+):	V _{cc}
2(V-):	-V _{cc} or GND
3(OUT):	OUTPUT
4(GND):	0V (GND)

OFS: Offset Adjustment

GIN: Gain 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