

Split Core Hall AC/DC Current Sensor CYHCS-K

This Split Core 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 and AC current, pulse currents 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 • Small size • Light in weight • 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 • Transformer substation • Numerical controlled machine tools • Electrolyzing and electroplating equipment • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data

Primary Nominal Current I_r (A)	Measuring Range (A)	Output voltage (Analog) V_o	Window Size (mm)	Part number
300	± 600	4V \pm 1.0%	64 x 16	CYHCS-K300A
500	± 1000			CYHCS-K500A
600	± 1200			CYHCS-K600A
800	± 1600			CYHCS-K800A
1000	± 2000			CYHCS-K1000A
1500	± 3000			CYHCS-K1500A
2000	± 3000			CYHCS-K2000A

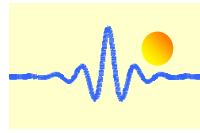
Supply Voltage
Current Consumption
Galvanic isolation, 50/60Hz, 1min:
Isolation resistance @ 500 VDC

$V_{cc} = \pm 12 \sim 15 \text{VDC} \pm 5\%$
 $I_c < 25 \text{mA}$
3kV rms
> 500 M Ω

Accuracy and Dynamic performance data

Accuracy at I_r , $T_A = 25^\circ\text{C}$ (without offset),
Linearity from 0 to I_r , $T_A = 25^\circ\text{C}$,
Electric Offset Voltage, $T_A = 25^\circ\text{C}$,
Magnetic Offset Voltage,
Thermal Drift of Offset Voltage,
Frequency bandwidth (- 3 dB):
Response Time at 90% of I_P ($f = 1 \text{k Hz}$)
Load resistance:

$X < \pm 1.0\%$
 $E_L < \pm 0.5\% \text{ FS}$
 $\pm 25 \text{mV}$
 $\pm 30 \text{mV}$
 $V_{ot} < \pm 1.0 \text{mV}/^\circ\text{C}$
DC-20kHz
 $t_r \leq 7 \mu\text{s}$
 $\geq 10 \text{k}\Omega$

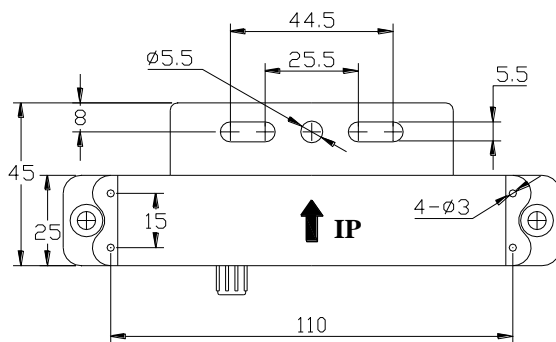
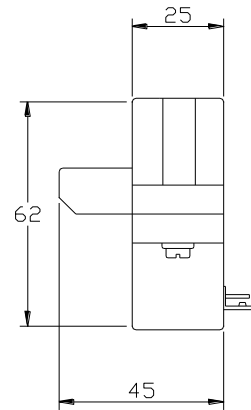
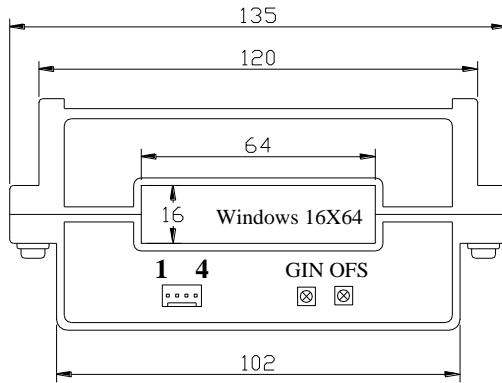


General Data

Ambient Operating Temperature,
Ambient Storage Temperature,

$T_A = -25^{\circ}\text{C} \sim +85^{\circ}\text{C}$
 $T_S = -40^{\circ}\text{C} \sim +100^{\circ}\text{C}$

Dimensions



Pin Arrangement

1: +15V
2: -15V
3: Output
4: 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 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.