

Split Core AC Hall Effect Current Sensor CYHCS-KD

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 AC current, pulse currents etc. The output of the transducer reflects the rectified average value of the current in the carrying conductor.

Product Characteristics	Applications
<ul style="list-style-type: none"> • Excellent accuracy • Very good linearity • With Split Core, easy installation • 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 • Electric powered locomotive • Microcomputer monitoring • Electric power network monitoring

Electrical Data

Primary Nominal RMS Current I_r (A), (AC)	Measuring Range (A), AC	Output current V_o (DC)	Window Size (mm)	Part number
300	± 300	5V	64 x 16	CYHCS-KD300A
500	± 1000			CYHCS-KD500A
600	± 1200			CYHCS-KD600A
800	± 1600			CYHCS-KD800A
1000	± 2000			CYHCS-KD1000A
2000	± 3000			CYHCS-KD2000A

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

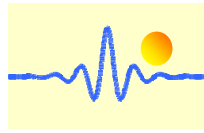
Accuracy at I_r , $T_A = 25^\circ\text{C}$ (without offset),
Linearity from 0 to I_r , $T_A = 25^\circ\text{C}$,
Electric Offset Voltage, $T_A = 25^\circ\text{C}$,
Thermal Drift of Offset Voltage,
Frequency bandwidth (- 3 dB):
Response Time at 90% of I_P ($f = 1 \text{k Hz}$)
Load resistance:

$X < 1.0\%$
 $E_L < 0.5\% \text{ FS}$
20mV
 $V_{ot} < \pm 0.5 \text{mV}/^\circ\text{C}$
DC-10kHz
 $t_r \leq 200 \text{ms}$
 $\geq 10 \text{k}\Omega$

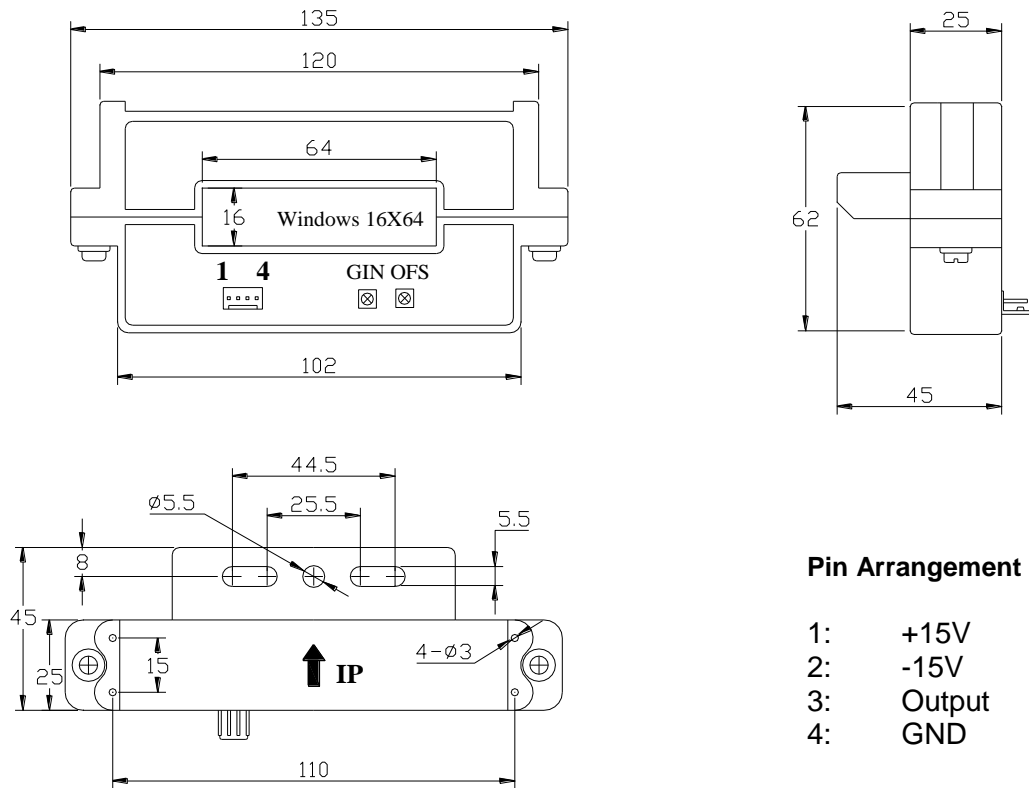
General Data

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



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.