HKC2000K Hall-effect Current Sensor Series

HKC2000K series is a new generation of current sensor based on the principle of Hall-effect. It can be used for detecting DC、 pulse and various irregular waveform current under electrical isolation between output and input.

Electrical characteristics

	Type	HKC400K	HKC600K	HKC800K	HKC1000K	HKC2000K	
I_{PN}	Primary nominal input current	400	600	800	1000	2000	A
I_P	Measuring primary current range	0~±800	0~±1200	0~±1600	0~±2000	0~±3000	A
V_{SN}	Nominal output voltage	4±1%					V
V_C	Supply voltage	±12～±15（±5%）					V
I_C	Current loss	V_C=±15V		<25			mA
V_d	Insulation voltage	6KV AC/50Hz/1min					

Dynamic characteristics

ε_L	Linearity	<1	%FS
V_0	Offset voltage	T_A =25℃ <±20	mV
V_{OM}	Residual voltage	I_{PN}→0 <±30	mV
V_{OT}	Offset voltage temperature drift	I_P=0 T_A =–25～+85℃ <±0.5	mV/℃
T_R	Response time	≤7	μs
f	Band width（-3dB）	DC~20	KHz

Generic characteristics

T_A	Operation temperature	–40～+85	℃
T_S	Storage temperature	–55～+125	℃
R_L	Load resistance	T_A =25℃ ≥10K	Ω
	Standard		

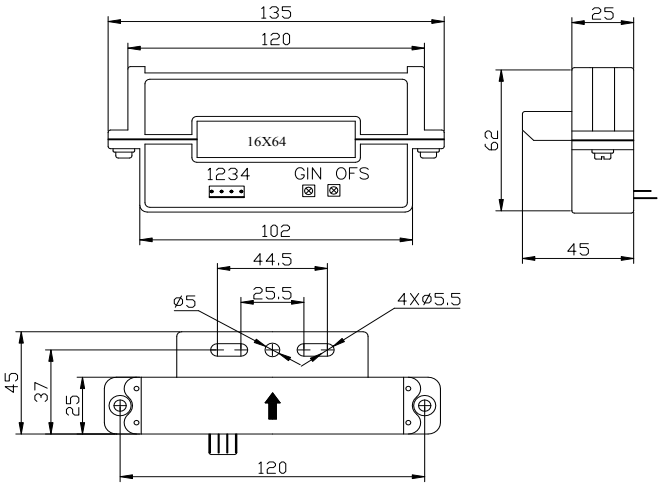
Advantages

- insulation between input and output
- no insertion loss
- removable construction being easy to installation

Typical applications

- alternating current frequency conversion timing system
- UPS
- Welding machine system
- switching power supplies(SMPS)

package outline（mm）



Usage elucidation:

1、 The sensor connects the line according to the structural graph declaration, put the measured current through the magnetic core hole , then you can detect out the correspondent voltage according to the measured current from the output.(note : incorrect connection may lead to the damage of the sensor)

2、 The output amplitude of the sensor can do some adequate adjustment according to the customer's demands.

3、 When the measured current flows along the sensor's arrowhead direction, the output gains the synchronism voltage.

4、 When the measured current fills the aperture, it can gain optimal dynamic characteristics

Elucidation：

1：＋15V 2：－15V 3：Vout 4： 0V

OFS：zero adjustment GIN：gain adjustment