DATA SHEET
Hall Effect Current Sensor

PN: CHK_EKB5S2 | **IPN=100-2000A**

Feature

- Open- loop
- Supply voltage: DC +5.0V
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.

Advantages

- Easy installation
- No insertion losses
- Low power consumption
- Wide current measuring range
- High immunity to external interference

Applications

- Inverter applications
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Frequency drive control home appliances

Electrical data：（Ta=25℃，Vc=+5.0VDC,RL=2KΩ）

Parmeter \ Ref	CHK100 EKB5S2	CHK200 EKB5S2	CHK400 EKB5S2	CHK800 EKB5S2	CHK1000 EKB5S2	CHK1500 EKB5S2	CHK2000 EKB5S2
Rated input Ipn(A)	100	200	400	800	1000	1500	2000
Measuring range Ip(A)	0～±100	0～±200	0～±400	0~±800	0～±1000	0～±1500	0～±2000
Output voltage Vo(V)	2.500±2.0*(IP/IPN)						
Output voltage Vo(V)	@IP=0,T=25°C	2.500					
Load resistance RL(KΩ)	>2.0						
Supply voltage VC(V)	+5.0 ±5%						
Accuracy XG(%)	@IPN,T=25°C	< ±1.0					
Offset voltage VOE(mV)	@IP=0,T=25°C	< ±25					
Temperature variation of VOE VOT(mV/°C)	@IP=0,-40 ~ +85°C	< ±1.0					
Hysteresis offset voltage VOH(mV)	@IP=0,after 1*IPN	< ±20					
Linearity error εr(%FS)	< 1.0						
Di/dt（A/μs）	> 100						
Response time tra(μs)	@90% of IPN	< 5.0					
Power consumption IC(mA)	15						
Bandwidth Bw(KHZ)	@-3dB, IPN	DC-20					

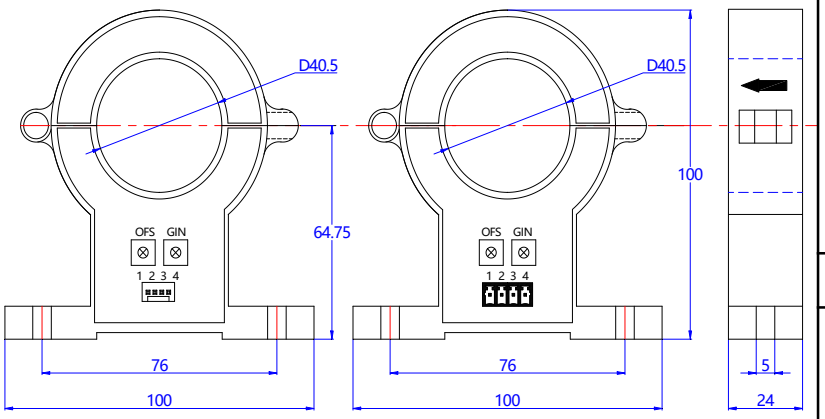
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC 3.0

General data:

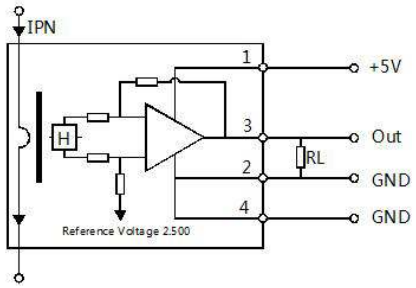
Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	120
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

CHK_EKB5S2M | CHK_EKB5S2S



Connection



General tolerance

General tolerance:< ±0.5mm

Primary through-hole： D40.5±0.3

Connection of secondary :

CHK_EKB5S2M:
2510-04A (Instead of Molex 5045-04A)

CHK_EKB5S2S: 15EDGK3.81-04P

Remarks:

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- Custom design is available for the different rated input current and the output voltage.
- The dynamic performance is the best when the primary hole if fully filled with.
- The primary conductor should be <100°C.

WARNING : Incorrect wiring may cause damage to the sensor.