



DATA SHEET

Hall Effect Current Sensor

PN: CHK_EKA5S2

IPN=50-600A

Feature

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

Advantages

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

Applications

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



RoHS



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

Parameter	Ref	CHK50 EKA5S2	CHK100 EKA5S2	CHK200 EKA5S2	CHK300 EKA5S2	CHK400 EKA5S2	CHK600 EKA5S2
Rated input Ipn(A)		50	100	200	300	400	600
Measuring range Ip(A)		0~±50	0~±100	0~±200	0~±300	0~±400	0~±600
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 accurately followed (A/μs)		> 100					
Response time tra(μs)	@90% of IPN	< 3.0					
Power consumption IC(mA)		15					
Bandwidth Bw(KHZ)	@-3dB, IPN	DC-20					



Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	2.5
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General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	70
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

CHK_EKA5S2M	CHK_EKA5S2S	Connection
		<p>General tolerance</p> <p>General tolerance: <math>\pm 0.5\text{mm}</math> Primary through-hole : $D21.0 \pm 0.3$ Connection of Secondary : CHK_EKA5S2M: 2510-04A (Instead of Molex 5045-04A) CHK_EKA5S2S: 15EDGK3.81-04P</p>

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 is fully filled with.
- The primary conductor should be $< 100^{\circ}\text{C}</math>.$

WARNING : Incorrect wiring may cause damage to the sensor.

