



DATA SHEET

Hall Effect Current Sensor

PN: CHK_BS5S2

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 BS5S2	CHK100 BS5S2	CHK200 BS5S2	CHK300 BS5S2	CHK400 BS5S2	CHK600 BS5S2
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			
	@IPN,T=-40~+85°C comparatively 25°C		< ±1.5			
Offset voltage V _{OE} (mV)	@Ip=0,T=25°C		< ±25			
Temperature variation of V _{OE} V _{OT} (mV/°C)	@Ip=0,-40 ~ +85°C		< ±0.3			
Hysteresis offset voltage V _{OH} (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					



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Bandwidth Bw(KHZ)	@-3dB, I _{PN}	DC-30
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	2.5

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-BS5S2M	CHK-BS5S2U	Connection
<p>MOLEX 5045-04A</p> <p>1 2 3 4 S + G M G</p>		
<p>CHK-BS5S2M</p>	<p>CHK-BS5S2U</p>	<p>General tolerance</p> <p>General tolerance: <math>\pm 0.5\text{mm}</math> Primary through-hole: 10.5*20.5±0.3 Connection of secondary : 2510-04A (instead of the Molex 5045-04A)</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 <math>< 100^{\circ}\text{C}</math>.

WARNING : Incorrect wiring may cause damage to the sensor.



Cheemi Technology Co., Ltd

Tel: 025-85996365 E-mail: info@cheemi-tech.com www.cheemi-tech.com
 Add: N22, Xianlongwan, Xianyin South Road, Qixia District, Nanjing - China.