



DATA SHEET

Hall Effect Current Sensor

PN: CHB_AP5S50

IPN=50/100A

Feature

- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC, pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC +5 V
- PCB mounting installation

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption
- High immunity to external interference
- Very good linearity
- Can be customized

Applications

- The application of induction cooker
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications



RoHS

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

Parameter	Ref	CHB50AP5S50	CHB100AP5S50
Rated input I _{pn} (A)		50	100
Measuring range I _p (A)		0~+100	0~+100
Turns ratio N _p /N _s (T)		1:1000	1:2000
Output current rms I _S (mA)		+50*IP/IPN	+50*IP/IPN
Secondary coil resistance R _S (Ω)		30	50
Inside resistance R _M (Ω)		[(VC-0.6V)/ (IS*0.001)]-R _S	
Supply voltage V _C (V)		+5.0 ±5%	
Accuracy X _G (%)	@IPN,T=25°C	< ±0.5	
Offset current I _{OE} (mA)	@IP=0,T=25°C	< +0.2	
Temperature variation of IOE I _{OT} (mA/°C)	@IP=0,-40 ~ +85°C	< ±0.005	
Linearity error ε _r (%FS)		< 0.1	
Di/dt accurately followed (A/μs)		> 100	
Response time τ _{ra} (μs)	@90% of IPN	< 1.0	
Power consumption I _C (mA)		15+I _s	



Cheemi Technology Co., Ltd

Bandwidth BW(KHZ)	@IPN	DC-DC
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)	21
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

	<p>Connection</p>
	<p>General tolerance</p> <p>General tolerance: <math>\pm 0.5\text{mm}</math> Primary through-hole : $10.5*16.2\pm 0.15\text{mm}$ Secondary pin: 3pin $0.6*0.65$</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 $<100^{\circ}\text{C}$.

WARNING : Incorrect wiring may cause damage to the sensor.

