

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.

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption
- High immunity to external interference

Applications

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

PCB mounting installation

• Supply voltage: DC +5 V

Very good linearity

Can be customized







S50



Electrical data: (Ta=25°C, Vc=+5.0VDC)			
Parmeter Ref	CHB50AP5S50	CHB100AP58	
Rated input Ipn(A)	50	100	
Managering range In(A)	0~.100	0~100	

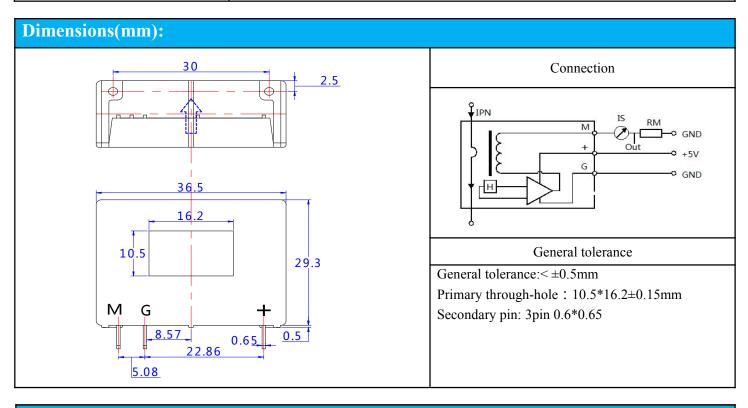
Rated input Ipn(A)	50	100
Measuring range Ip(A)	0~+100	0~+100
Turns ratio Np/NS (T)	1:1000	1:2000
Output current rms IS(mA)	+50*IP/IPN	+50*IP/IPN
Secondary coil resistance RS (Ω)	30	50
Inside resistance RM (Ω)	[(VC-0.6V)/ (IS*0.001)]-RS
Supply voltage VC(V)	+5.0	±5%
Accuracy XG(%)	@IPN,T=25°C <=	=0.5
Offset current IOE(mA)	@IP=0,T=25°C <+	0.2
Temperature variation of IOE IOT(mA/°C)	@IP=0,-40 ~ +85°C <=	±0.005
Linearity error $\varepsilon r(\%FS)$	<	0.1
Di/dt accurately followed (A/μs)	> 100	
Response time tra(μs)	@90% of IPN < 1.0	
Power consumption IC(mA)	15-	+Is



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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;	
	IEC60950-1:2001	
Standards	EN50178:1998	
	SJ20790-2000	



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.

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The primary conductor should be <100°C.

WARNING: Incorrect wiring may cause damage to the sensor.

