

DATA SHEET Hall Effect Current Sensor

PN: CHB_AP3S1 IPN=50/100A

Feature

- Closed- loop (compensated) current transducer
- Supply voltage: DC +3.3V Capable measurement of currents: DC, AC, pulse with galvanic isolation between primary circuit and PCB mounting installation 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

- Photovoltaic (PV) current applications
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications



Can be customized











Electrical data: (Ta=25°C, Vc=+3.3VDC,RL=2KΩ,CL=10000pF)			
Parmeter Ref	CHB50AP3S1	CHB100AP3S1	
Rated input Ipn(A)	50	100	
Measuring range Ip(A)	0∼±50	0~±100	
Turns ratio Np/NS (T)	2000	2000	
Inside resistance $RM(\Omega)$	12.5±0.1%	6.25±0.1%	
Output voltage Vo(V)	1.650±1.250*(IP/IPN)		
Output voltage Vo(V)	@IP=0,T=25°C 1.6	500	
Supply voltage VC(V)	+3.3 ±5%		
Accuracy XG(%)	@IPN,T=25°C <±0.5		
Offset voltage VOE(mV)	@IP=0,T=25°C <±	15	
Temperature variation of VOE VOT(mV/°C)	@IP=0,-40 ~ +85°C <=	±0.01	
Linearity error $\varepsilon r(\%FS)$	< 0.1		
Di/dt accurately followed (A/μs)	> 50		
Response time tra(µs)	@90% of IPN < 1.0		
Power consumption IC(mA)	10+Is		



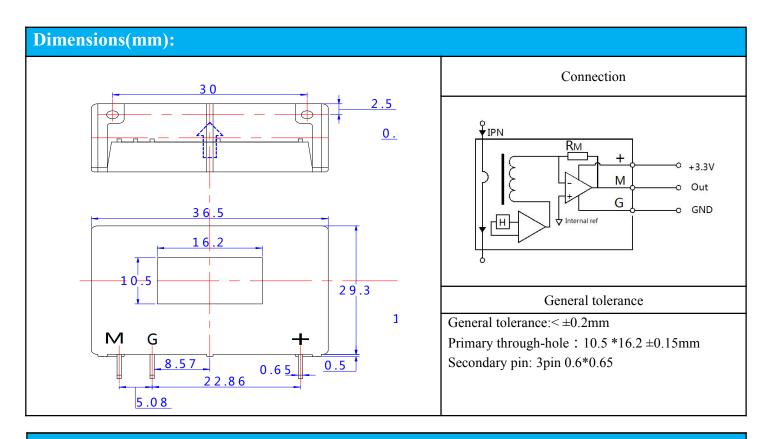
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Bandwidth BW(KHZ)	@-3dB,IPN	DC-200
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	3.0

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.

