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 secondary circuit.
- PCB mounting installation

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time, no insertion losse
- 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

Electrical data：（Ta=25℃， Vc=+3.3VDC,RL=2KΩ,CL=10000pF）

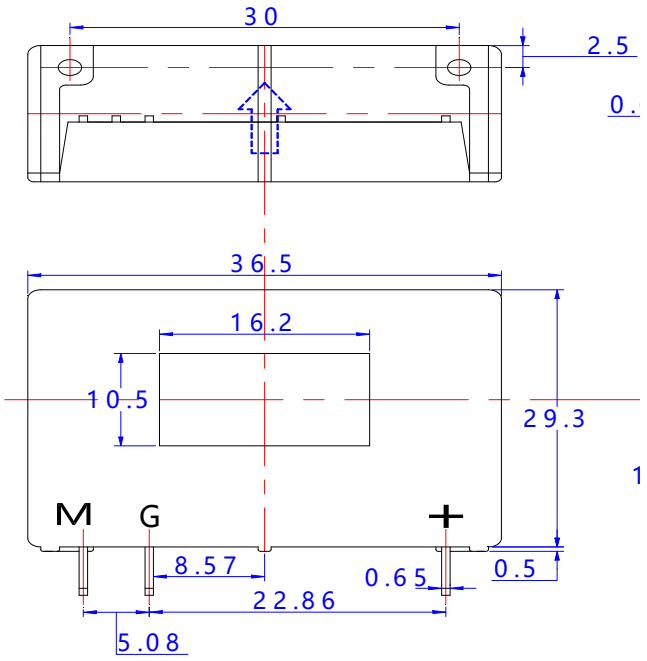
Parmeter / Ref	CHB50AP3S1	CHB100AP3S1
Rated input Ipn(A)	50	100
Measuring range Ip(A)	0～±50	0～±100
Turns ratio Np/NS (T)	2000	2000
Inside resistance RM(Ω)	12.5±0.1%	6.25±0.1%
Output voltage Vo(V)	1.650±1.250*(IP/IPN)	
Output voltage Vo(V)	@IP=0,T=25°C	1.6500
Supply voltage VC(V)	+3.3 ±5%	
Accuracy XG(%)	@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 εr(%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	

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

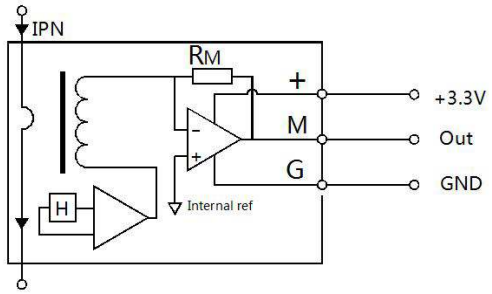
General data:

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

Dimensions(mm):



Connection



General tolerance

General tolerance:< ±0.2mm

Primary through-hole： 10.5 *16.2 ±0.15mm

Secondary pin: 3pin 0.6*0.65

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.
- The primary conductor should be <100°C.

WARNING : Incorrect wiring may cause damage to the sensor.