

# **DATA SHEET Hall Effect Current Sensor**

PN: CHB BS3S1H

IPN=20~200A

#### **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

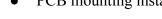
secondary circuit.

### **Advantages**

- High accuracy
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption

## **Applications**

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



- Very good linearity
- Can be customized









Electrical data: (Ta=25°C, Vc=+3.3VDC,RL=2KΩ,CL=10000pF)							
Ref Parmeter	CHB20BS3S1H	CHB50BS3S1H	CH100BS3S1H	CHB200BS3S1H			
Rated input Ipn(A)	20	50	100	200			
Measuring range Ip(A)	0∼±20	0~±50	0~±100	0~±200			
Turns ratio Np/NS (T)	1:2000	1:2500	1:4000	1:4000			
Inside resistance $RM(\Omega)$	31.25±0.1%	15.6±0.1%	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						
Reference voltage VR(V)	@Internal reference,reout 1.650						
Supply voltage VC(V)	+3.3 ±5%						
Accuracy XG(%)	@IPN,T=25°C <±0.5						
Offset voltage VOE(mV)	@IP=0,T=25°C <±10						
Temperature variation of VOE VOT(mV/°C)	@IP=0,-40 $\sim$ +85°C $< \pm 0.05$						
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						
Bandwidth BW(KHZ)	@-3dB,IPN DC-200						

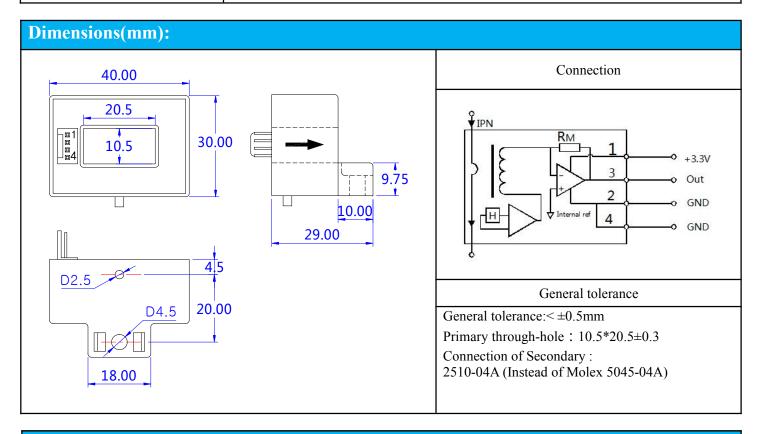


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Ingulation valtage	V4(VV)	@50/60Hz. 1min.AC	2.0	
Insulation voltage	Vd(KV)	( <i>a</i> )50/60Hz, 1min,AC	3.0	

General data:				
Parameter	Value			
Operating temperature TA(°C)	<b>-</b> 40 ∼ +85			
Storage temperature TS(°C)	<b>-</b> 55∼ +125			
Mass M(g)	70			
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.
- The primary conductor should be <100°C.

WARNING: Incorrect wiring may cause damage to the sensor.



2