



DATA SHEET

Hall Effect Current Sensor

PN: CHB_DS5S6H

IPN=06~50A

Feature

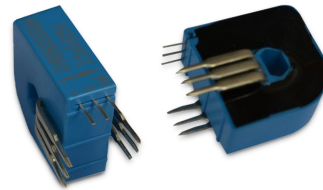
- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC +5.0V
- PCB mounting installation

Advantages

- High accuracy
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption
- Very good linearity
- Can be customized

Applications

- The application of variable frequency electrical appliances
- 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,RL=2KΩ,CL=10000pF)

Parmeter \ Ref	CHB06DS5S6H	CHB15DS5S6H	CHB25DS5S6H	CHB50DS5S6H
Rated input Ipn(A)	06	15	25	50
Measuring range Ip(A)	0~±19.2	0~±48	0~±84	0~±150
Turns ratio Np/NS (T)	1:960	1:1200	1:1000	1:2000
Inside resistance RM(Ω)	100±0.1%	50±0.1%	25±0.1%	25±0.1%
Output voltage Vo(V)	2.5±0.625*(IP/IPN)			
Output voltage Vo(V)	@IP=0,T=25°C 2.500			
Supply voltage VC(V)	+5.0 ±5%			
Accuracy XG(%)	@IPN,T=25°C < ±0.5			
Offset voltage VOE(mV)	@IP=0,T=25°C < ±8			
Temperature variation of VOE VOT(mV/°C)	@IP=0,-40 ~ +85°C < ±0.01			
Linearity error er(%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 4.0			



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General data:	
Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55 ~ +125
Mass M(g)	10
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

Technical drawing of the sensor showing top and side views with dimensions. The top view shows a rectangular package with a central hexagonal feature. Dimensions include overall width (12.20, 10.30), central width (6.60), and pin spacing (7.62, 2*2.54). The side view shows the package height (22.60) and pin height (9.60, 4.50). A red arrow points to the primary pin area labeled 1,2,3.

Connection

Circuit diagram showing a transformer with primary pins 1,2,3 and 4,5,6. The secondary has a center tap (0) and two outer pins (+ and -). The output is labeled Out, +5.0V, and GND. A resistor RM is connected between the center tap and the output.

General tolerance

General tolerance:< ±0.2mm
Primary through-hole& size of Primary pin:
4.4*6.6±0.15mm; 0.8*0.9±0.15mm;
Secondary pin:3pin 0.25*0.5;

Primary turns NP(T)	Rated input INP INP(A)				Rated output Voltage(V) VO(V)	Connection of primary pin
1	±6.0	±15.0	±25.0	±50.0	2.500±0.625	
2	±3.0	±7.5	±12.5	±25.0	2.500±0.625	
3	±2.0	±5.0	±8.3	±16.6	2.500±0.625	

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.

