

DATA SHEET

Hall Effect Current Sensor



PN: CHB_PS3S6

IPN=05~25A

Feature

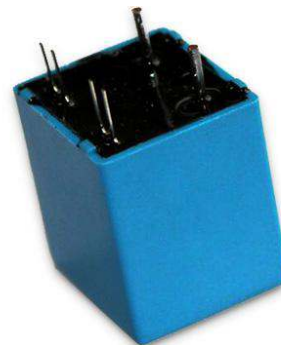
- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC +3.3V
- PCB mounting installation

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



RoHS



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

Ref Parmeter	CHB05PS3S6	CHB10PS3S6	CH15PS3S6	CHB25PS3S6
Rated input I _{pn} (A)	05	10	15	25
Measuring range I _p (A)	0 ~ ±10	0 ~ ±20	0 ~ ±30	0 ~ ±50
Size of Input pin *d (MM)	Ø1.0	Ø1.0	Ø1.0	Ø1.4
Turns ratio N _p /N _s (T)	2:1600	1:1600	1:1200	1:2000
Inside resistance R _M (Ω)	100±0.1%	100±0.1%	50±0.1%	50±0.1%
Output voltage V _o (V)	1.650±0.625*(IP/IPN)			
Output voltage V _o (V)	@IP=0,T=25°C		1.650	
Supply voltage V _C (V)	+3.3 ±5%			
Accuracy X _G (%)	@IPN,T=25°C		< ±0.7	
Offset voltage V _{OE} (mV)	@IP=0,T=25°C		< ±20	
Temperature variation of V _{OE} V _{OT} (mV/°C)	@IP=0,-40 ~ +85°C		< ±0.5	
Linearity error ε _r (%FS)	< 0.1			
Di/dt accurately followed (A/μs)	> 50			
Response time τ _{ra} (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	2.5

General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55 ~ +125
Mass M(g)	12
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

	<p>Connection</p>
	<p>General tolerance</p> <p>General tolerance: <math>\pm 0.2\text{mm}</math> size of Primary pin: *d (Find the electrical data); Secondary pin: 3pin 0.25*0.5;</p>

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 <math>< 100^{\circ}\text{C}</math>.

WARNING : Incorrect wiring may cause damage to the sensor.