



DATA SHEET

Hall Effect Current Sensor

PN: CHB_ES5S2

IPN=10~75A

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

- Excellent 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=1000pF)

Parameter	Ref	CHB10ES5S2	CHB25ES5S2	CH50ES5S2	CHB75ES5S2
Rated input I _{pn} (A)		10	25	50	75
Measuring range I _p (A)		0~±10	0~±25	0~±50	0~±75
Turns ratio N _p /N _s (T)		1:500	1:1250	1:2500	1:1500
Inside resistance R _M (Ω)		100±0.1%	100±0.1%	100±0.1%	40±0.1%
Output voltage V _o (V)		2.500±2.000*(IP/IPN)			
Output voltage V _o (V)	@IP=0,T=25°C	2.500			
Reference voltage V _R (V)	@Internal reference, re out	2.500			
Supply voltage V _C (V)		+5.0 ±5%			
Accuracy X _G (%)	@IPN,T=25°C	< ±0.7			
Offset voltage V _{OE} (mV)	@IP=0,T=25°C	< ±25			
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 I _C (mA)		10+I _s			
Bandwidth BW(KHZ)	@-3dB,IPN	DC-200			
Insulation voltage V _d (KV)	@50/60Hz, 1min,AC	3.0			



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General data:	
Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	13
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> Primary through-hole: $D8.2 \pm 0.15\text{mm}$; Secondary pin: 4pin 0.65×0.65;</p>

Remarks:
<ul style="list-style-type: none"> ➤ 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 $< 100^\circ\text{C}</math>.$
<p>WARNING : Incorrect wiring may cause damage to the sensor.</p>

