

DATA SHEET

Hall Effect Current Sensor



PN: CHB_LSP5S2R

IPN=10~30A

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

Applications

- Photovoltaic (PV) current applications
- 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)

Parameter \ Ref	CHB10 LSP5S2R	CHB15 LSP5S2R	CH20 LSP5S2R	CHB25 LSP5S2R	CHB30 LSP5S2R
Rated input Ip(A)	10	15	20	25	30
Measuring range Ip(A)	0 ~ ±10	0 ~ ±15	0 ~ ±20	0 ~ ±25	0 ~ ±30
Turns ratio Np/NS (T)	1:1000	1:750	1:500	1:625	1:1500
Inside resistance RM(Ω)	50±0.1%	100±0.1%	50±0.1%	50±0.1%	100±0.1%
Output voltage Vo(V)	2.500±2.000*(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		< ±0.7		
Offset voltage VOE(mV)	@IP=0,T=25°C		< ±25		
Temperature variation of VOE VOT(mV/°C)	@IP=0,-40 ~ +85°C		< ±0.5		
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

General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55 ~ +125
Mass M(g)	15
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

	<p style="text-align: center;">Connection</p>
	<p style="text-align: center;">General tolerance</p> <p>General tolerance: <math>\pm 0.2\text{mm}</math> Primary through-hole: $D8.5 \pm 0.15\text{mm}$ 3core cable Length $L=650\text{mm}$;</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 $<100^\circ\text{C}$.

WARNING : Incorrect wiring may cause damage to the sensor.