

DATA SHEET

Hall Effect Current Sensor



PN: CHB_LTR5S2

IPN=25~100A

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



Electrical data: (Ta=25°C, Vc=+5.0VDC,RL=2KΩ,CL=10000pF)

Parameter \ Ref	CHB25LTR5S2	CHB50LTR5S2	CH75LTR5S2	CHB100 LTR5S2
Rated input I _{pn} (A)	25	50	75	100
Measuring range I _p (A)	0 ~ ±25	0 ~ ±50	0 ~ ±75	0 ~ ±100
Turns ratio N _p /N _s (T)	1:1250	1:2500	1:1875	1:2500
Inside resistance R _M (Ω)	100±0.1%	100±0.1%	50±0.1%	50±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 ref,ref out model		2.500	
Reference voltage V _R (V)	@External ref,ref in model		1.9~2.7	
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 (A/μs)		> 50
Response time t_{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	6.0

General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	32
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 0.5\text{mm}</math> Primary through-hole: $D20.2 \pm 0.15\text{mm}$ Secondary pin: 4pin 0.65×0.65</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.