



DATA SHEET

Hall Effect Current Sensor

PN: CHB_LTB15D100

IPN=200~500A

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 $\pm 15\sim 24V$

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time
- High immunity to external interference
- 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= ±15VDC)

Parameter	Ref	CHB200 LTB15D100S	CHB300 LTB15D100S	CHB400 LTB15D100S	CHB500 LTB15D100S
Rated input Ip(A)		200	300	400	500
Measuring range Ip(A)		0 ~ ±600	0 ~ ±900	0 ~ ±1200	0 ~ ±1500
Turns ratio Np/NS (T)		1:2000	1:3000	1:4000	1:5000
Output current rms IS(mA)		±100*IP/IPN	±100*IP/IPN	±100*IP/IPN	±100*IP/IPN
Secondary coil resistance RS (Ω)		20	28	40	58
Inside resistance RM (Ω)		[(VC-0.4V)/(IS*0.001)]-RS			
Supply voltage VC(V)		(±15 ~ ±24) ±5%			
Accuracy XG(%)		@IPN,T=25°C	< ±0.5		
Offset current IOE(mA)		@IP=0,T=25°C	< ±0.2		
Temperature variation of IOE IOT(mA/°C)		@IP=0,-40 ~ +85°C	< ±0.005		
Linearity error εr(%FS)					< 0.1
Di/dt accurately followed (A/μs)					> 100
Response time tra(μs)		@90% of IPN	< 1.0		
Power consumption IC(mA)					20+Is



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Bandwidth BW(KHZ)	@-3dB,IPN	DC-100
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)	295
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

CHB-LTB15D100M	CHB-LTB15D100S	Connection
		<p>General tolerance</p> <p>General tolerance: <math>\pm 0.5\text{mm}</math> Primary through-hole: $D 35 \pm 0.15$ Connection of Secondary : M:2510-04A (instead of MOLEX5045-04A) S :DG301-5.0-03P</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.



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