

DATA SHEET

Hall Effect Current Sensor



PN: CHB_LTB15D4

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

Applications

- The application of variable frequency electrical appliances
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications



Electrical data: ($T_a=25^\circ C$, $V_c= \pm 15VDC$)

Parameter \ Ref	CHB200 LTB15D4	CHB300 LTB15D4	CHB400 LTB15D4	CHB500 LTB15D4
Rated input $I_{pn}(A)$	200	300	400	500
Measuring range $I_p(A)$	0 ~ ± 400	0 ~ ± 600	0 ~ ± 800	0 ~ ± 1000
Turns ratio $N_p/N_S (T)$	1:2000	1:3000	1:4000	1:5000
Inside resistance $R_M (\Omega)$	20 \pm 0.1%	20 \pm 0.1%	20 \pm 0.1%	20 \pm 0.1%
Output voltage $V_o(V)$	$\pm 4.0 * (IP/IPN)$			
Supply voltage $V_C(V)$	$(\pm 15 \sim \pm 24) \pm 5\%$			
Accuracy $X_G(\%)$	@IPN, T=25 $^\circ C$		< ± 0.5	
Offset Voltage $V_{OE}(mV)$	@IP=0, T=25 $^\circ C$		< ± 20	
Temperature variation of IOE IOT(mA/ $^\circ C$)	@IP=0, -40 ~ +85 $^\circ C$		< ± 0.005	
Linearity error $\epsilon_r(\%FS)$	< 0.1			
Di/dt accurately followed (A/ μs)	> 100			
Response time $t_{ra}(\mu s)$	@90% of IPN		< 1.0	
Power consumption $I_C(mA)$	20+I _s			

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)	350
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

CHB-LTB15D4M	CHB-LTB15D4S	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 : CHB-LTB15D4M:2510-04A (instead of MOLEX5045-04A) CHB-LTB15D4S :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.