

DATA SHEET

Hall Effect Current Sensor



PN: CHB_LTR15D50/100

IPN=50~300A

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 $\pm 12\sim 18V$

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



RoHS



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

Parameter \ Ref	CHB50 LTR15D50	CHB100 LTR15D100	CHB200 LTR15D100	CHB300 LTR15D100
Rated input $I_{pn}(A)$	50	100	200	300
Measuring range $I_p(A)$	0 ~ ± 150	0 ~ ± 300	0 ~ ± 600	0 ~ ± 900
Turns ratio $N_p/NS (T)$	1:1000	1:1000	1:2000	1:3000
Output current rms $I_S(mA)$	$\pm 50 * I_P / I_{PN}$	$\pm 100 * I_P / I_{PN}$	$\pm 100 * I_P / I_{PN}$	$\pm 100 * I_P / I_{PN}$
Secondary coil resistance $R_S (\Omega)$	15	15	22	38
Inside resistance $R_M (\Omega)$	$[(V_C - 0.6V) / I_S * 0.001] - R_S$			
Supply voltage $V_C(V)$	$(\pm 12 \sim \pm 18) \pm 5\%$			
Accuracy $X_G(\%)$	@ $I_{PN}, T=25^\circ C$		< ± 0.5	
Offset Current $I_{OE}(mA)$	@ $I_P=0, T=25^\circ C$		< ± 0.2	
Temperature variation of IOE $I_{OT}(mA/^\circ C)$	@ $I_P=0, -40 \sim +85^\circ C$		< ± 0.005	
Linearity error $\epsilon_r(\%FS)$	< 0.1			
Di/dt accurately followed ($A/\mu s$)	> 100			
Response time $t_{ra}(\mu s)$	@90% of I_{PN}		< 1.0	
Power consumption $I_C(mA)$	15+ I_S			

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)	70
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

Connection

General tolerance

General tolerance: $\pm 0.5\text{mm}$
Primary through-hole: $D 20.2 \pm 0.15$
Connection of Secondary :
2510-04Y (instead of MOLEX5045-04Y);
length of high temperature wire:
 $205 \pm 2.0\text{mm}$

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 $< 100^\circ\text{C}</math>.$

WARNING : Incorrect wiring may cause damage to the sensor.