



DATA SHEET

Hall Effect Current Sensor

PN: CHB_LTB15D4

IPN=200~500A

Feature

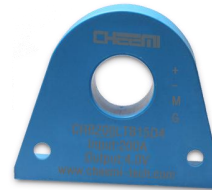
- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC, pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC $\pm 15\sim 24V$

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time
- High immunity to external interference
- 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: ($T_a=25^\circ C$, $V_c=\pm 15VDC$)

| 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 $N_p/NS (T)$ | | 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 $I_{OT}(mA/^\circ C)$ | | @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+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) | 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 $< 100^{\circ}\text{C}</math>.$

WARNING : Incorrect wiring may cause damage to the sensor.

