



DATA SHEET

Hall Effect Current Sensor

PN: CHB_LF15D

IPN=20-2000A

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

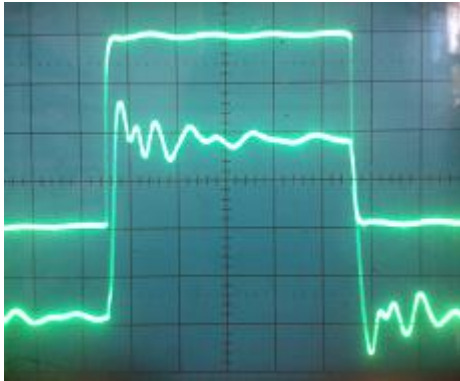
Electrical data $T_a=25^\circ C$ $V_c= \pm 15VDC$		
Parameter	Ref	CHB2000LF15D
Rated input $I_{pn}(A)$		20-2000
Measuring range $I_p(A)$		3000($\pm 24V$, 3.0 Ω)
Turns ratio $N_p/N_S (T)$		1:5000
Output current rms $I_S(mA)$		4 (20A)-400 (2000A) $\pm 2\%FS$
Secondary coil resistance $R_S (\Omega)$	@ 85 $^\circ C$	34
Measure resister $R_M (\Omega)$		with $\pm 15V$ @ $\pm 2000A_{max}$ 0(min) 1.0(max)
		with $\pm 24V$ @ $\pm 2000A_{max}$ 0(min) 20(max)
		with $\pm 24V$ @ $\pm 3000A_{max}$ 0(min) 3.0(max)
Supply voltage $V_C(V)$		($\pm 15 \sim \pm 24$) $\pm 5\%$
Offset current $I_{OE}(mA)$	@ $I_P=0$	$< \pm 0.2$
Offset current drift (mA)	-40 \sim +85 $^\circ C$	$< \pm 0.005$
Accuracy $X_G(\%)$	@ $I_{PN}, T=25^\circ C$	$< \pm 0.1$
Linearity error $\epsilon_r(\%FS)$		< 0.1
Di/dt accurately followed $A/\mu s$		> 100



1. All dimensions are in mm.
2. General tolerance ± 1 mm.

Characteristics chart:

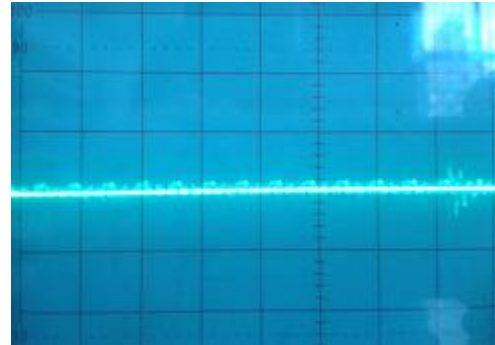
Pulse current signal response characteristic



← input signal

← output signal

Effects of impulse noise



← Output voltage

Directions for use

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- It will be in a forward direction when the I_p flows according to the direction of arrowhead.
- 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 $\leq 120^\circ\text{C}$.

WARNING : Incorrect wiring may cause damage to the sensor.

