



# DATA SHEET

## Hall Effect Current Sensor

**PN: CHB\_LX15D4**

**IPN=05~50A**

### 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  $\pm 12 \sim 15V$
- PCB installation

### 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, RL=2KΩ, CL=10000pF)**

Parameter \ Ref	CHB05 LX15D4	CHB10 LX15D4	CHB15 LX15D4	CHB20 LX15D4	CHB30 LX15D4	CHB50 LX15D4
Rated input Ip(A)	05	10	15	20	30	50
Measuring range Ip(A)	0 ~ ±15	0 ~ ±30	0 ~ ±45	0 ~ ±60	0 ~ ±90	0 ~ ±150
Size of Input pin *d (MM)	Ø0.6	Ø0.8	Ø1.0	Ø1.4	Ø1.6	2×□2.4×1.6
Turns ratio Np/NS (T)	4:2000	3:3000	2:3000	1:2000	1:3000	1:3125
Inside resistance RM (Ω)	400±0.1%	400±0.1%	400±0.1%	400±0.1%	400±0.1%	250±0.1%
Output voltage Vo(V)	±4.0*(IP/IPN)					
Supply voltage VC(V)	( ±12 ~ ±15 ) ±5%					
Accuracy XG(%)	@IPN, T=25°C			< ±0.5		
Offset Voltage VOE(mV)	@IP=0, T=25°C			< ±30		
Temperature variation of VOE VOT(mV/°C)	@IP=0, -40 ~ +85°C			< ±0.5		
Linearity error er(%FS)	< 0.1					
Di/dt accurately followed (A/μs)	> 50					
Response time tra(μs)	@90% of IPN			< 1.0		
Power consumption IC(mA)	15+Is					
Bandwidth BW(KHZ)	@-3dB, IPN			DC-100		



Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	5.0
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## General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	17
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

Dimensions(mm):		Connection																											
<p>Size of primary pin &amp; Distance, in mm</p> <table border="1"> <thead> <tr> <th>Type</th> <th>05LX</th> <th>10LX</th> <th>15LX</th> <th>20LX</th> <th>25LX</th> <th>30LX</th> <th>40LX</th> <th>50LX</th> </tr> </thead> <tbody> <tr> <td>*a</td> <td>1.3</td> <td>1.4</td> <td>1.6</td> <td>1.6</td> <td>1.6</td> <td>1.7</td> <td>1.7</td> <td>1.7</td> </tr> <tr> <td>*d</td> <td>0.6</td> <td>0.8</td> <td>1.0</td> <td>1.4</td> <td>1.4</td> <td>1.6</td> <td>1.6</td> <td>2.4* 1.6</td> </tr> </tbody> </table>		Type	05LX	10LX	15LX	20LX	25LX	30LX	40LX	50LX	*a	1.3	1.4	1.6	1.6	1.6	1.7	1.7	1.7	*d	0.6	0.8	1.0	1.4	1.4	1.6	1.6	2.4* 1.6	<p>General tolerance</p> <p>General tolerance: &lt;math&gt;\pm 0.5\text{mm}&lt;/math&gt; Secondary Pin size : &lt;math&gt;0.25 \times 0.5 \pm 0.1\text{mm}&lt;/math&gt;</p>
Type	05LX	10LX	15LX	20LX	25LX	30LX	40LX	50LX																					
*a	1.3	1.4	1.6	1.6	1.6	1.7	1.7	1.7																					
*d	0.6	0.8	1.0	1.4	1.4	1.6	1.6	2.4* 1.6																					

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

**WARNING : Incorrect wiring may cause damage to the sensor.**

