



# DATA SHEET

## Hall Effect Current Sensor

**PN: CHB\_LFT15D100SP**

**I<sub>PN</sub>=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 ±15~24V
- Molex 4.2mm 2\*2P

### 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<sub>a</sub>=25°C, V<sub>c</sub>=±15VDC)

Parmeter \ Ref	CHB200LFT15 D100SP	CHB300LFT15 D100SP	CHB500LFT15 D100SP
Rated input I <sub>pn</sub> (A)	200	300	500
Measuring range I <sub>p</sub> (A)	0 ~ ±628	0 ~ ±940	0 ~ ±1570
Turns ratio N <sub>p</sub> /N <sub>s</sub> (T)	1:2000	1:3000	1:5000
Output current rms I <sub>S</sub> (mA)	I <sub>p</sub> /N <sub>s</sub> (±100)	I <sub>p</sub> /N <sub>s</sub> (±100)	I <sub>p</sub> /N <sub>s</sub> (±100)
Secondary coil resistance R <sub>S</sub> (Ω)	21	31	52
Inside resistance R <sub>M</sub> (Ω)	$R_{M\max} = N_s \frac{V_{c\min} - 0.5V}{I_p} - R_{S\max} - 1.1 \Omega$		
Supply voltage V <sub>C</sub> (V)	(±15 ~ ±24) ±5%		
Accuracy X <sub>G</sub> (%)	@IPN,T=25°C	< ±0.5	
Offset current IOE(mA)	@IP=0,T=25°C	< ±0.2	
Temperature variation of IOE IOT(mA/°C)	@IP=0,-40 ~ +85°C	< ±0.5	
Linearity error ε <sub>r</sub> (%FS)	< 0.1		



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Di/dt (A/μs)		> 100
Response time $t_{ra}$ (μs)	@90% of $I_{PN}$	< 1.0
Power consumption $I_C$ (mA)		20+ $I_s$
Bandwidth BW(KHZ)	@-3dB, $I_{PN}$	DC-150
Insulation voltage $V_d$ (KV)	@50/60Hz, 1min, AC	6.0

## General data:

Parameter	Value
Operating temperature $T_A$ (°C)	-50~ +85
Storage temperature $T_S$ (°C)	-55~ +125
Mass $M$ (g)	300
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

	<p style="text-align: center;"><b>Connection</b></p> <p style="text-align: center;"><b>General tolerance</b></p> <p>General tolerance: &lt;math&gt;\pm 0.5\text{mm}&lt;/math&gt;            Primary through-hole: <math>D\ 28\pm 0.2</math>            Connection of Secondary :            SP: Molex 4.2mm 2*2P</p>
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## 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.**



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