



# DATA SHEET

## Hall Effect Current Sensor

**P/N: CHB1000LTC15D250SF/SP2**

**I<sub>PN</sub>=1000A**

### 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

### 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)

Parameter	Ref	CHB1000LTC15D250SFC/SP2	CHB1000LTC15D200SFC/SP2
Rated input I <sub>pn</sub> (A)		1000	1000
Measuring range I <sub>p</sub> (A)		0 ~ ±3000	0 ~ ±2400
Turns ratio N <sub>p</sub> /N <sub>s</sub> (T)		1:4000	1:5000
Output current rms I <sub>S</sub> (mA)		I <sub>p</sub> /N <sub>s</sub>	I <sub>p</sub> /N <sub>s</sub>
Secondary coil resistance R <sub>S</sub> (Ω)		26	45
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> (%)	@I <sub>PN</sub> ,T=25°C	< ±0.4	
Offset current I <sub>OE</sub> (mA)	@I <sub>p</sub> =0,T=25°C	< ±0.5	
Temperature variation of I <sub>OE</sub>	@I <sub>p</sub> =0,-40 ~ +85°C	< ±0.5	
I <sub>OT</sub> (mA/°C)			
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)		< 32+ $I_s$
Bandwidth BW(KHZ)	@-1dB, $I_{PN}$	DC-100
Insulation voltage $V_d$ (KV)	@50/60Hz, 1min,AC	10.0

## General data:

Parameter	Value
Operating temperature $T_A$ (°C)	-50~ +85
Storage temperature $T_S$ (°C)	-55~ +90
Mass $M$ (g)	
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

	<p>Connection</p>
	<p>General tolerance</p>
	<p>General tolerance: &lt;math&gt;\pm 0.5\text{mm}&lt;/math&gt;            Primary through-hole: <math>D 42\pm 0.2</math>            Connection of Secondary :</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 <math>< 100^\circ\text{C}</math>.

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



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