



# DATA SHEET

## Hall Effect Current Sensor

PN: CHB\_SH15D200

IPN=1000A

### Feature

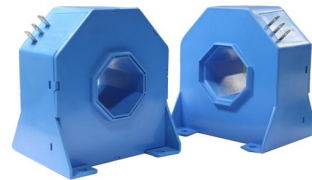
- Closed- loop (compensated) current transducer using the hall effect
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Insulated plastic case recognized according to UL94\_V0.
- Supply voltage: DC  $\pm 15 \sim 24$  V

### Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time
- Low power consumption
- 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)

Parameter	Ref	CHB1000SH15D200
Rated input I <sub>pn</sub> (A)		1000
Measuring range I <sub>p</sub> (A)		0 ~ ±2000
Turns ratio N <sub>p</sub> /N <sub>s</sub> (T)		1:5000
Output current rms I <sub>S</sub> (mA)		±200*IP/IPN
Secondary coil resistance R <sub>S</sub> (Ω)		50
Inside resistance R <sub>M</sub> (Ω)		[(V <sub>C</sub> -0.4V)/ ( I <sub>S</sub> *0.001 ) ]-R <sub>S</sub>
Supply voltage V <sub>C</sub> (V)		( ±15 ~ ±24 ) ±5%
Accuracy X <sub>G</sub> (%)	@IPN,T=25°C	< ±0.2
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 accurately followed (A/μs)		> 100
Response time $t_{ra}$ (μs)	@90% of IPN	< 1.0
Power consumption $I_C$ (mA)		20+I <sub>s</sub>
Bandwidth BW(KHZ)	@-3dB,IPN	DC-150
Insulation voltage $V_d$ (KV)	@50/60Hz, 1min,AC	6.0

## General data:

Parameter	Value
Operating temperature $T_A$ (°C)	-40 ~ +85
Storage temperature $T_S$ (°C)	-55~ +125
Mass $M$ (g)	620
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

Connection

General tolerance

General tolerance: <math>\pm 0.5\text{mm}</math>  
 Primary through-hole :  $D40.5 \pm 0.2$

## 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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