



# DATA SHEET

## Hall Effect Current Sensor

**PN: CHB\_LTA24S2H**

**IPN=50~200A**

### 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 +24.0V

### Advantages

- High accuracy
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption
- 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



### Electrical data: (Ta=25°C, Vc=+24.0VDC, RL=2KΩ, CL=10000pF)

Parameter	Ref	CHB50LTA24S2H	CHB100LTA24S2H	CHB200 LTA24S2H
Rated input Ip(A)		50	100	200
Measuring range Ip(A)		0 ~ ±50	0 ~ ±100	0 ~ ±200
Turns ratio Np/NS (T)		1:2000	1:4000	1:4000
Inside resistance RM(Ω)		20±0.1%	20±0.1%	10±0.1%
Output voltage Vo(V)		2.500±2.0*(IP/IPN)		
Output voltage Vo(V)		@IP=0,T=25°C	2.500	
Reference voltage VR(V)		@Internal reference,re out	2.500	
Supply voltage VC(V)		+24.0±5%		
Accuracy XG(%)		@IPN,T=25°C	< ±0.2	
Repeat accuracy XGR(%)		@IPN,T=25°C	< ±0.2	
Offset voltage VOE(mV)		@IP=0,T=25°C	< ±5.0	
Temperature variation of VOE VOT(mV/°C)		@IP=0,-40 ~ +85°C	< ±0.02	
Temperature variation of Vo VMT (mV/°C)		@IP=0,-40 ~ +85°C	< ±0.05	



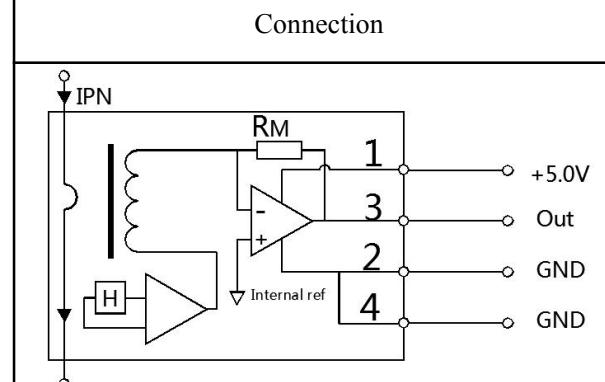
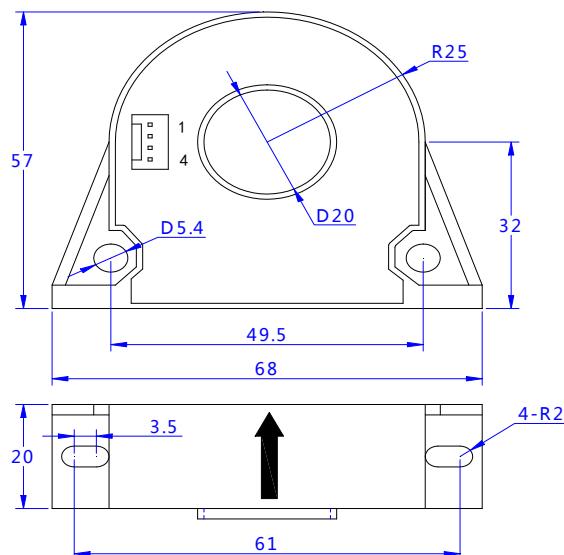
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Linearity error $\epsilon_r$ (%FS)	< 0.1
Di/dt accurately followed (A/ $\mu$ s)	> 50
Response time $t_{ra}$ ( $\mu$ s)	@90% of IPN < 1.0
Power consumption IC(mA)	10+Is
Bandwidth BW(KHZ)	@-3dB,IPN DC-100
Insulation voltage Vd(kV)	@50/60Hz, 1min,AC 3.0

## General data:

Parameter	Value
Operating temperature TA( $^{\circ}$ C)	-40 ~ +125
Storage temperature TS( $^{\circ}$ C)	-55 ~ +150
Mass M(g)	50
Plastic material	PBT G30/G15, UL94-V0;
Standards	IEC60950-1:2001 EN50178:1998 SJ20790-2000

## Dimensions(mm):



### General tolerance

General tolerance:  $< \pm 0.5$ mm  
Primary through-hole:  $D20 \pm 0.3$ mm ;  
Connection of Secondary :  
2510-04A (Instead of Molex 5045-04A)

## 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  $< 100^{\circ}$ C.

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

