



# DATA SHEET

## Hall Effect Current Sensor

PN: CHB\_C15D12.5/25/50

IPN=25~50A

### Feature

- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- PCB installation
- Supply voltage: DC  $\pm 12 \sim 15$  V

### Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time, no insertion losses
- 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= $\pm 15$ VDC )

Ref Parameter	CHB25 C15D25Y1	CHB50 C15D50Y1	CHB25 C15D12.5Y2	CHB50 C15D25Y1
Rated input $I_{pn}(A)$	25	50	25	50
Measuring range $I_p(A)$	0 ~ $\pm 55$	0 ~ $\pm 100$	0 ~ $\pm 55$	0 ~ $\pm 120$
Turns ratio $N_p/N_S (T)$	1-2-3-4:1000	1-2-3-4:1000	1-2-3:2000	1-2-3-4:2000
Output current rms $I_S(mA)$	$\pm 25.0^*(IP/IPN)$	$\pm 50.0^*(IP/IPN)$	$\pm 12.5^*(IP/IPN)$	$\pm 25.0^*(IP/IPN)$
Inside resistance $R_M (\Omega)$	54~360	68~180	200~730	54~250
Supply voltage $V_C(V)$	$(\pm 12 \sim \pm 15) \pm 5\%$			
Accuracy $X_G(\%)$	@IPN,T=25°C		< $\pm 0.5$	
Offset current $I_{OE}(mA)$	@IP=0,T=25°C		< $\pm 0.2$	
Temperature variation of IOE $I_{OT}(mA/^{\circ}C)$	@IP=0,-40 ~ +85°C		< $\pm 0.005$	
Linearity error $\epsilon_r(\%FS)$	< 0.1			
Di/dt accurately followed ( A/ $\mu s$ )	> 50			



Cheemi Technology Co., Ltd

Tel: 025-85996365

E-mail: [info@cheemi-tech.com](mailto:info@cheemi-tech.com)

[www.cheemi-tech.com](http://www.cheemi-tech.com)

Add:N22, Xianlongwan, Xianyin South Road, Qixia District, Nanjing - China.

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Response time $t_{ra}(\mu s)$	@90% of IPN	< 1.0
Power consumption $I_C(mA)$		15+I <sub>s</sub>
Bandwidth BW(KHZ)	@-3dB,IPN	DC-200
Insulation voltage $V_d(KV)$	@50/60Hz, 1min,AC	5.0

## General data :

Parameter	Value
Operating temperature $T_A(^{\circ}C)$	-40 ~ +85
Storage temperature $T_S(^{\circ}C)$	-55~ +125
Mass $M(g)$	15
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

**Connection**

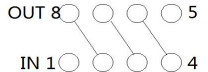
**General tolerance**

General tolerance: <  $\pm 0.5mm$   
 Primary Pin size : $*d=1.25\pm 0.1mm$   
 Secondary Pin size : $0.635*0.635\pm 0.1mm$

Primary turns NP(T)	Rated input INP(A)		Rated output ISN (A)				The connection of primary pin	
			NS=1000T		NS=2000T		6 Pin	8pin
1	25	50	25	50	12.5	25	OUT 6 ○ ○ ○ ○ 4 IN 1 ○ ○ ○ ○ 3	OUT 8 ○ ○ ○ ○ 5 IN 1 ○ ○ ○ ○ 4
2	12.5	25	25	50	12.5	25	OUT 6 ○ ○ ○ ○ 4 IN 1 ○ ○ ○ ○ 3	OUT 8 ○ ○ ○ ○ 5 IN 1 ○ ○ ○ ○ 4
3	8	16	24	48	12	24	OUT 6 ○ ○ ○ ○ 4 IN 1 ○ ○ ○ ○ 3	OUT 8 ○ ○ ○ ○ 5 IN 1 ○ ○ ○ ○ 4



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4	6	12	24	48	12	24		OUT 8 
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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 <100°C.

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

