



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= ± 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 ~ ± 55	0 ~ ± 100	0 ~ ± 55	0 ~ ± 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		< ± 0.5	
Offset current $I_{OE}(mA)$	@IP=0,T=25°C		< ± 0.2	
Temperature variation of IOE $I_{OT}(mA/^{\circ}C)$	@IP=0,-40 ~ +85°C		< ± 0.005	
Linearity error $\epsilon_r(\%FS)$			< 0.1	
Di/dt accurately followed (A/ μs)			> 50	



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

General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	15
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):

CHB25C15D12.5Y2

Dimensions: 31.75 (width), 20.30 (height), 4.00 (pin height), 1.60 (bottom thickness), 7.75 (pin pitch), 9.50 (pin offset), 2*254 (pin length).

CHB25C15D25Y1

Dimensions: 31.75 (width), 20.30 (height), 2.90 (pin height), 1.60 (bottom thickness), 7.75 (pin pitch), 9.50 (pin offset), 3*254 (pin length).

Connection

General tolerance

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

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	5
								IN 1	4

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

WARNING : Incorrect wiring may cause damage to the sensor.

