



# DATA SHEET

## Hall Effect Current Sensor

**PN: CHB\_EP15D**

**IPN=2~200A**

### 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  $\pm 12\sim 18V$

### Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time
- High immunity to external interference
- Very good linearity
- Can be customized

### Applications

- Variable speed drives
- Welding machine
- Battery supplied applications
- Uninterruptible Power Supplies (UPS)
- Electrochemical



RoHS

Electrical data    Ta=25°C    Vc= ±15VDC				
Parmeter \ Ref	CHB25 EP15D	CHB50 EP15D	CHB100 EP15D	CHB200 EP15D
Rated input    I <sub>pn</sub> (A)	2-25	5-50	10-100	20-200
Measuring range    I <sub>p</sub> (A)	75 (±18V, 200Ω)	150 ( ±18V , 82Ω)	300 ( ±18V , 33Ω)	600 ( ±18V , 10Ω)
Turns ratio    N <sub>p</sub> /N <sub>S</sub> (T)	1:1000	1:1000	1:1000	1:2000
Output current rms    I <sub>S</sub> (mA)	2 (2A) - 25(25A)±0.2%FS	5 (5A) - 50(50A)±0.2%FS	10 (10A) - 100(100A)±0.2%FS	10 (20A) - 100(200A)±0.2%FS
Secondary coil resistance    R <sub>S</sub> (Ω)	30	25	20	45
Measure resister with ±12V RM (Ω)	@±25Amax 390(max)	@±50Amax 200(max)	@±100Amax 91(max)	@±200Amax 82(max)
	@±75Amax 120(max)	@±150Amax 50(max)	@±300Amax 15(max)	@400Amax 10(max)
Measure resister with ±15V RM (Ω)	@±25Amax 510(max)	@±50Amax 270(max)	@±100Amax 120(max)	@200Amax 100(max)
	@±75Amax 150(max)	@±150Amax 68(max)	@±300Amax 25(max)	@600Amax 2.0(max)



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.

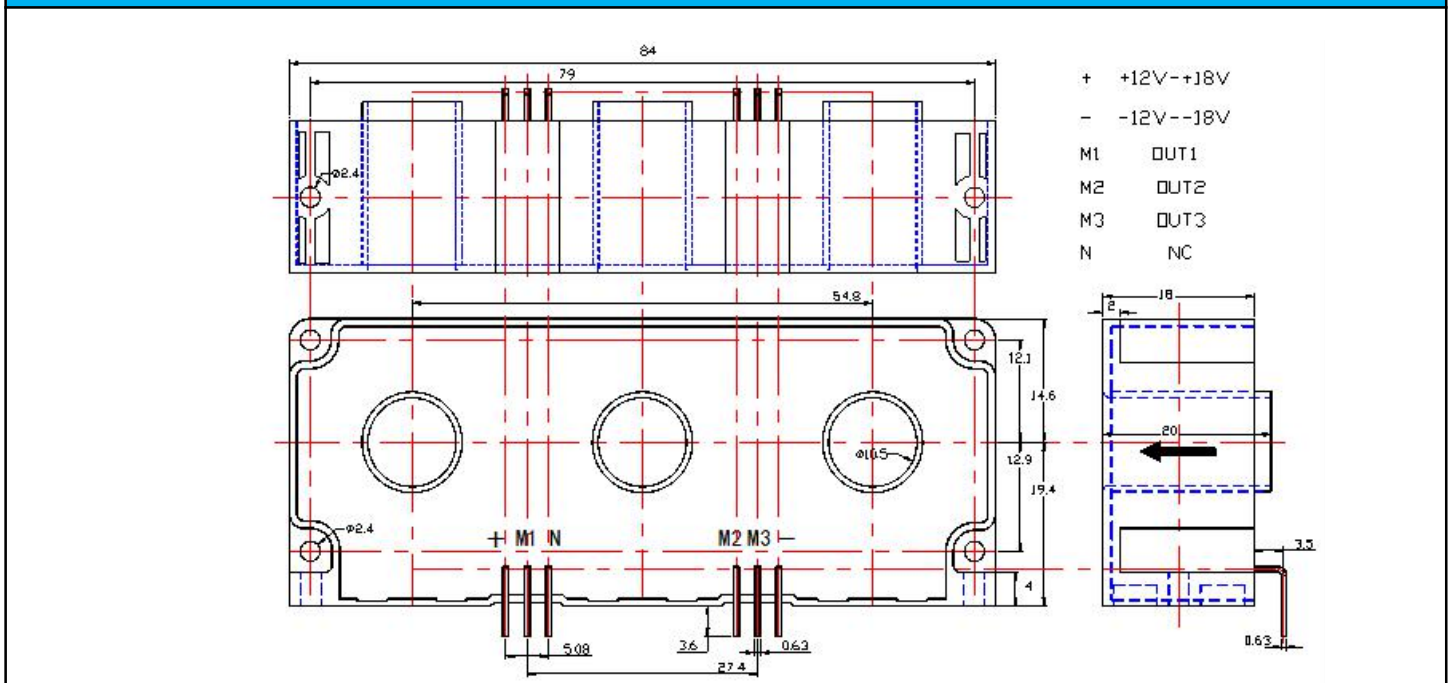
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Supply voltage VC(V)		( ±12 ~ ±18 ) ±5%
Accuracy XG(%)	@IPN,T=25°C	< ±0.1
Offset current IOE(mA)	@Ip=0	≤±0.2
Offset drift(mA)	@ -40°C ~ 85°C	≤±0.5
Linearity error εr(%FS)	@Ip=±Ipn	≤0.1
Di/dt accurately followed A/μs		>200
Response time tra(μs)	@100A/μS,10%-90%	<1.0
Power consumption IC(mA)		≤40+3XIp(Np/Ns)
Bandwidth BW(KHZ)	@ -3db	DC...250
Insulation voltage Vd(KV)	@ 50HZ,AC,1min	3

## General data

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-40 ~ +125
Mass M(g)	50
Plastic material	UL94-V0.
Standards	EN60947-1:2004
	IEC60950-1:2001
	EN50178:1998
	SJ 20790-2000

## Dimensions(mm):

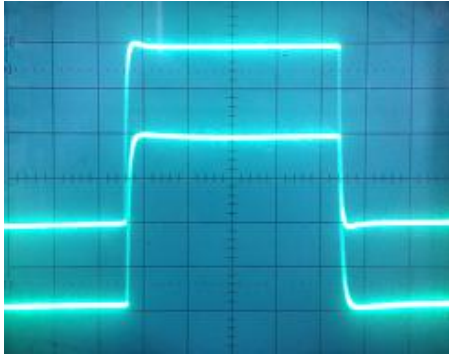


## Remarks

1. All dimensions are in mm.
2. General tolerance  $\pm 1$ mm.

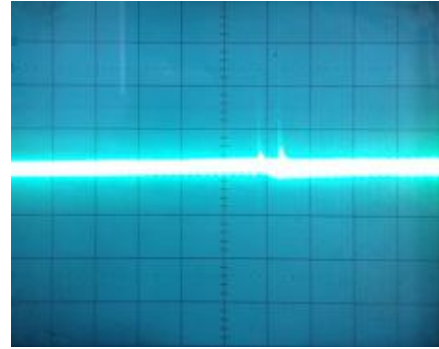
## Characteristics chart:

Pulse current signal response characteristic



← input signal  
← output signal

Effects of impulse noise



← Output voltage

## Directions for use

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- Is will be in a forward direction when the  $I_p$  flows according to the direction of arrowhead.
- 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  $\leq 120^\circ\text{C}$ .

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

