



DATA SHEET

Hall Effect Current Sensor

PN: CHB_EH15D

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 EH15D	CHB50 EH15D	CHB100 EH15D	CHB200 EH15D
Rated input Ipn(A)	2-25	5-50	10-100	20-200
Measuring range Ip(A)	75 (±18V, 190Ω)	150 (±18V, 82Ω)	300 (±18V, 33Ω)	600 (±18V, 10Ω)
Turns ratio Np/NS (T)	1:1000	1:1000	1:1000	1:2000
Output current rms IS(mA)	2 (2A) - 25(25A)±0.2%	5 (5A) - 50(50A)±0.2%	10 (10A) - 100(100A)±0.2%	10 (20A) - 100(200A)±0.2%
Secondary coil resistance RS (Ω)	30	25	20	45
Measure resister with ±12V RM (Ω)	@±25Amax 390(max)	@±50Amax 190(max)	@±100Amax 90(max)	@±200Amax 82(max)
	@±75Amax 115(max)	@±150Amax 45(max)	@±300Amax 15(max)	@±400Amax 10(max)
Measure resister with ±15V RM (Ω)	@±25Amax 510(max)	@±50Amax 250(max)	@100Amax 120(max)	@±200Amax 80(max)
	@±75Amax 150(max)	@±150Amax 68(max)	@±300Amax 25(max)	@600Amax 2.0(max)



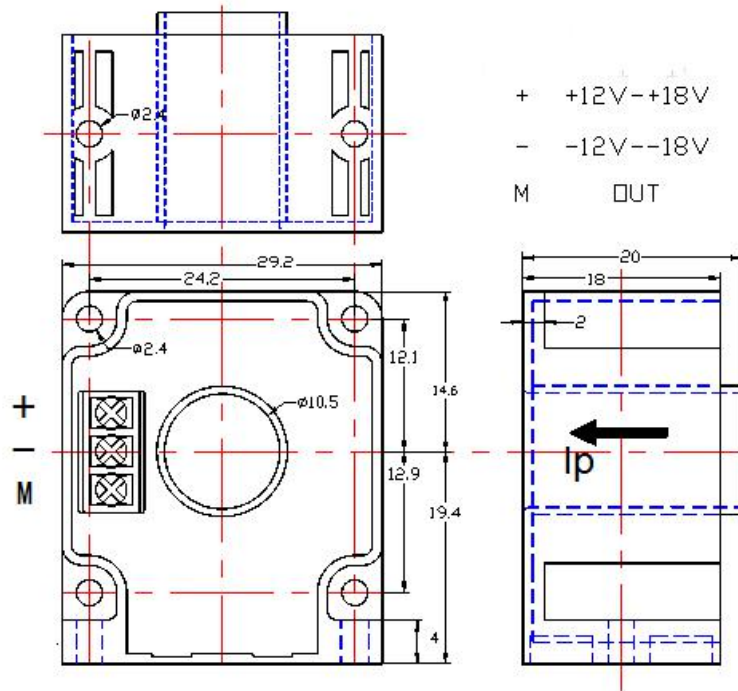
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Supply voltage VC(V)		(±12 ~ ±18) ±5%
Offset current IOE(mA)	@Ip=0	≤±0.2
Offset drift(mA)	@ -40°C ~ 85°C	≤±0.5
Accuracy XG(%)	@IPN,T=25°C	< ±0.1
Linearity error εr(%FS)	@Ip=0-±Ipn	≤0.1
Di/dt accurately followed A/μs		> 100
Response time tra(μs)	@100A/μS,10%-90%	<1.0
Power consumption IC(mA)		≤20+IpX(Np/Ns)
Bandwidth BW(KHZ)	@ -3db	DC...100
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)	30
Plastic material	UL94-V0.
Standards	EN60947-1:2004
	IEC60950-1:2001
	EN50178:1998
	SJ 20790-2000

Dimensions(mm):

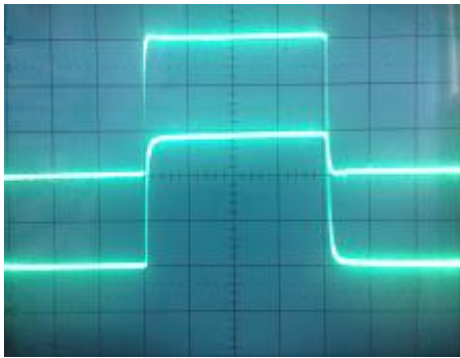


Remarks

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

Characteristics chart:

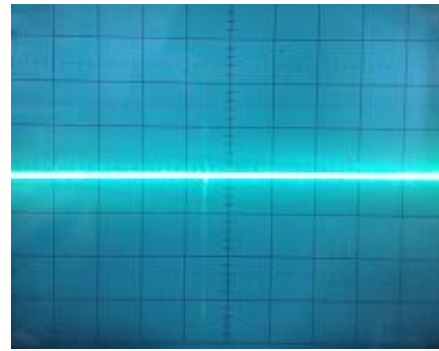
Pulse current signal response characteristic



← 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.
- It 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.

