



DATA SHEET

Hall Effect Current Sensor

P/N: CHB_A15D25

$I_{PN}=25\sim35A$

Feature

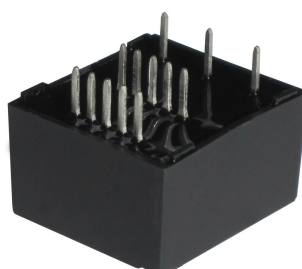
- Closed- loop current transducer
- Supply voltage: DC $\pm 12\sim\pm 18$ (5%)
- The principle of Hall effect can be applied to measure the current of DC, AC, pulse, and various irregular waveforms under electrical isolation conditions.

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time
- Low power consumption

Applications

- Welding machine power supply
- Switching Mode Power Supply
- Battery power supply
- Uninterruptible power supply
- Variable frequency speed control, servo motor



RoHS



Electrical data: ($T_A=25^\circ C$, $V_c=\pm 15VDC$)

Parameter Ref	CHB25A15D25	CHB35A15D35
Rated input $I_{pn}(A)$	25	35
Measuring range $I_p(A)$	0~50	0~70
Rated output current rms IS(mA)	$\pm 25 \pm 0.5\% (@I_p = \pm I_{pn})$	$\pm 35 \pm 0.5\% (@I_p = \pm I_{pn})$
Secondary coil resistance RS (Ω)	45	35
Turns ratio Np/NS (T)	1-2-3-4-5: 1000	
Supply voltage VC(V)	$(\pm 12\sim\pm 18) \pm 5\%$	
Load resistance VC= $\pm 15V(\Omega)$	$I_p = \pm 25A$	Load resistance 100-320 Ω
	$I_p = \pm 50A$	Load resistance 100-190 Ω
Accuracy XG(%)	$T_A=25^\circ C$	± 0.5
Zero offset current (mA)	$T_A=25^\circ C @I_p=0$	$\leq \pm 0.2$
Magnetic offset current drift (mA)	$@-40^\circ C \sim +85^\circ C$	$< \pm 0.5$
di/dt accurately followed	> 50	
Linearity $\epsilon_L(\%FS)$	$@I_p=0\sim\pm I_{pn}$	≤ 0.1
Response time tr(μs)	$@50A/\mu S, 10\%-90\%$	< 1.0
Power consumption IC(mA)	$20+I_p X(N_p/N_s)$	

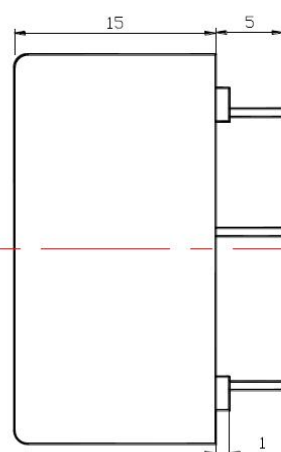
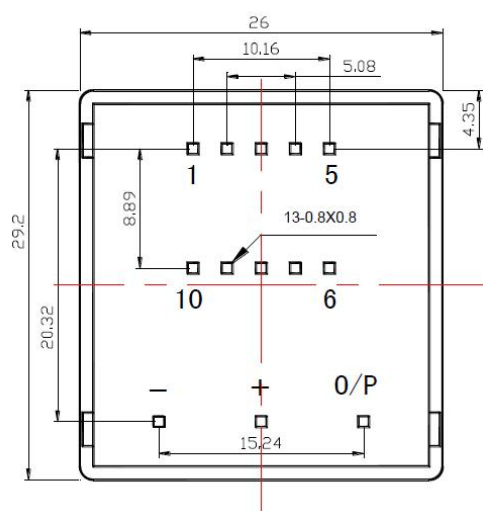


Bandwidth	@ -3dB	DC~150
Galvanic isolation (KV)	@ 50HZ,AC,1min	2.5

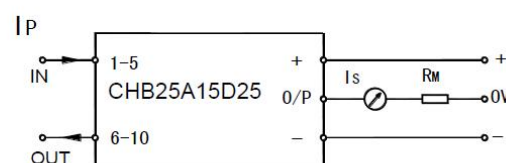
General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-40 ~ +125
Net weight (g)	20
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):



Pins connections



- All dimensions are in mm.
- General tolerance ± 1 mm.

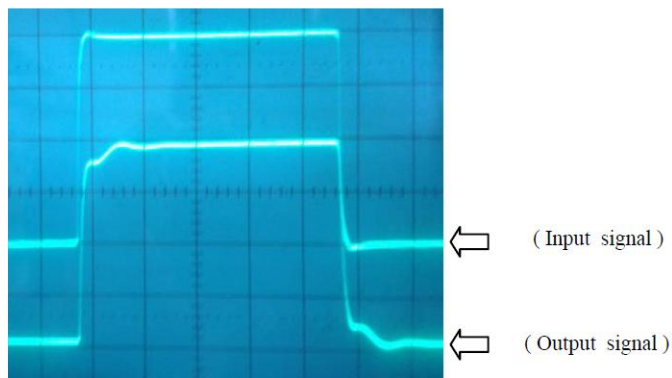
PIN Connections

匝数 Turns	额定电流 Rated current IPN (A)	峰值电流 Measure range Ip (A)	额定输出 Rated output Isn(mA)	匝 比 Turns ratio	初级阻抗 Primary resister (mΩ)	初级漏感 Primary inductance (uH)	初级连接 Pins connections
1	25 (35)	50 (70)	25 (35)	1/1000	0.3	0.023	
2	12 (17.5)	24 (35)	24 (35)	2/1000	1.1	0.09	
3	8 (12)	16 (24)	24 (36)	3/1000	2.5	0.21	
4	6 (9)	12 (18)	24 (36)	4/1000	4.4	0.37	
5	5 (7)	10 (14)	25 (35)	5/1000	6.3	0.58	

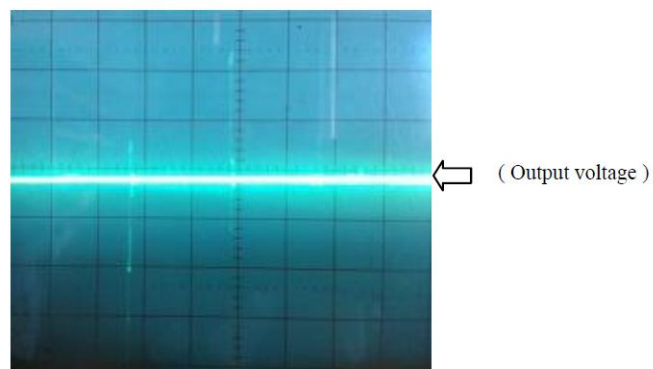


Characteristics chart:

Pulse current signal response characteristic



Effects of impulse noise



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.

