



DATA SHEET

Hall Effect Current Sensor

PN: CHK_DHAB5S2L

I_{PN}=20~1000A

Feature

- Open- loop
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Having different current measuring range in the same housing :from ±20A to ±600A;
- Internal circuit adopts ASIC packaging technology
- Supply voltage: DC +5V

Advantages

- Good accuracy for high and low current range ;
- Easy installation
- Low thermal offset drift
- Low thermal sensitivity drift
- Good linearity
- Can be customized

Applications

- EV and utility vehicle
- Battery pack monitoring
- Hybird Vehicles
- Uninterruptible Power Supplies (UPS)
- Inverter applications



Electrical data: (T_a=25°C, V_e=+5.0VDC,RL=10KΩ)

Parameter	Ref	CHK-DHAB5S2L		Conditions
		Channel 1	Channel 2	
Rated input I _{pn} (A)		±20~±100	±200~±1000	@T=25°C
Measuring range I _p (A)		±20~±100	±200~±1000	@T=25°C
Sensitivity S (mV/A)		66.7	6.67	@T=25°C
Output voltage V _o (V)		2.500±2.0*(I _p /I _{PN})	2.500±2.0*(I _p /I _{PN})	@T=25°C
Output voltage V _o (V)		2.500(V _c /2)	2.500(V _c /2)	@I _p =0,T=25°C, +5V
Offset current I _{oE} (mA)		±50	±700	@T=25°C
Magnetic offset curret I _{oM} (mA)		±50	±2300	@T=25°C
General offset current I _o (A)		±0.1	±3.0	@T=25°C
		-0.3~+0.3	-4~+4	@-10°C<T<65°C
		-0.5~+0.5	-4.5~+4.5	@-40°C<T<125°C
Sensitive error X _G (%)		±0.5		@T=25°C



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	-2.5~+2.5	@-10°C<T<65°C
	-4~+4	@-40°C<T<125°C
Linearity error ϵ_r (%FS)	-1~+1	
Supply voltage V(V _c)	+5.0 ±5%	
Current consumption I _c (mA)	<20	
Load resistance R _L (KΩ)	>10	
Capacitive loading C _L (nF)	1~100	
Resolution (mV)	2.5	@V _c =5.0V
Output clamping voltage min VSZ(V)	0.24~0.26	@V _c =5.0V
Output clamping voltage max VSZ(V)	4.74~4.76	@V _c =5.0V
Output internal resistance R _{out} (Ω)	1~10	
Bandwidth Bw(KHZ)	1.0	@-3DB
Power up time (ms)	110	
Setting time after over load (ms)	25	

Absolute maximum ratings:

Parameter	Value	Conditions
Supply voltage V _c (V)	<8.5	
	14	@1min, T=25°C
	-14	@1min, T=25°C
Output voltage (analog) V _{out} (V)	8.5	
Output over voltage (analog) V _{out} (V)	14	@1min, T=25°C

General data:

Parameter	Value
Operating temperature T _A (°C)	-40 ~ +85
Storage temperature T _S (°C)	-55 ~ +125
Mass M(g)	70
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000



Dimensions(mm):	
	<p style="text-align: center;">Connection</p>
General tolerance	
<p>General tolerance: <math>\lt; \pm 0.5\text{mm}</math> Primary through-hole: <math>21.55 \pm 0.3</math></p>	

Remarks:
<ul style="list-style-type: none"> ➤ 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 <math>< 100^{\circ}\text{C}</math>.
<p>WARNING : Incorrect wiring may cause damage to the sensor.</p>

