

# DATA SHEET

## Hall Effect Current Sensor



PN: CHB\_AP18S1R

IPN=50~200A

### Feature

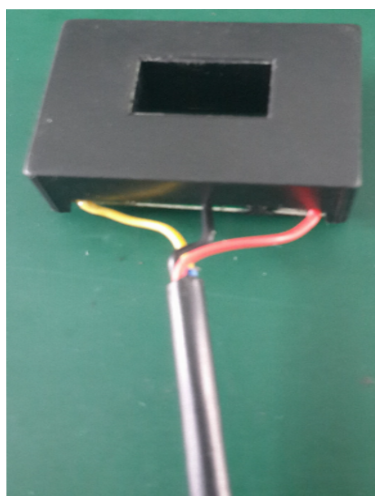
- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC +15~18 V

### Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption
- High immunity to external interference

### Applications

- The application of induction cooker
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications



RoHS



### Electrical data: (Ta=25°C, Vc=+18.0VDC)

Parmeter \ Ref	CHB50 AP18S1R	CHB100 AP18S1R	CHB125 AP18S1R	CHB200 AP18S1R
Rated input Ipn(A)	50	100	125	200
Measuring range Ip(A)	0~+150	0~+300	0~+375	0~+600
Turns ratio Np/NS (T)	1:1000	1:2000	1:1000	1:2000
Secondary coil resistance RS (Ω)	30	50	30	50
Output voltage Vo(v)	+1.0*IP/IPN			
Load resistance KL(KΩ)	>10			
Supply voltage VC(V)	(+15 ~ +18 ) ±5%			
Accuracy XG(%)	@IPN,T=25°C	< ±0.5		
Offset voltage VOE(mV)	@IP=0,T=25°C	< +40		
Temperature variation of VOE VOT(mA/°C)	@IP=0,-40 ~ +85°C	< ±0.5		
Linearity error er(%FS)	< 0.1			
Di/dt accurately followed (A/μs)	> 100			
Response time tra(μs)	@90% of IPN	< 1.0		
Power consumption IC(mA)	15+Is			
Bandwidth BW(KHZ)	@IPN	DC-DC		

Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	3.0
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## General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~+125
Mass M(g)	25
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

## Dimensions(mm):

	<p>Connection</p>
	<p>General tolerance</p> <p>General tolerance: &lt;math&gt;\pm 0.5\text{mm}&lt;/math&gt;            Primary through-hole: <math>10.5 \times 16.2 \pm 0.15\text{mm}</math>            Secondary pin:            3 core cable L=650mm</p>

## 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 <math>< 100^\circ\text{C}</math>.

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