



# DATA SHEET

## Hall Effect Current Sensor

**PN: CHB\_ES5S**

**IPN=10~100A**

### Feature

- Closed- loop (compensated) current transducer
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: +5±2.0%

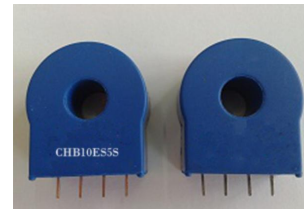
### Advantages

- 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	CHB10 ES5S	CHB25 ES5S	CHB50 ES5S	CHB75 ES5S	CHB100 ES5S
Rated input Ip(A)	±10	±25	±50	±75	±100
Measuring range Ip(A)	±20	±50	±100	±150	±200
Turns ratio Np/NS (T)	1:1200±0.1%	1:1200±0.1%	1:1200±0.1%	1:1500±0.1%	1:2000±0.1%
Inside measuring resistance	30±0.1%	12±0.1%	6±0.1%	5±0.1%	5±0.1%
Supply voltage Vc(V)	+5±2.0%				
Reference voltage (V)	+2.5±0.4%				
Zero voltage (V)	@Ip=0	+2.5 ± 0.4%			
Rated output (V)	@Ip=±Ipn	±1.0±0.2%			
Offset voltage drift (mV/°C)	@ -40°C ~ 105°C	≤±0.05			
output drift (mV/°C)	@ -40°C ~ 105°C	≤±0.05			
Temperature variation of IOE IOT(mA/°C)	@IP=0,-40 ~ +85°C	< ±0.005			
Accuracy XG(%)	@IPN,T=25°C	< ±0.1			
Linearity error εr(%FS)	@Ip=0-±Ipn	≤0.1			



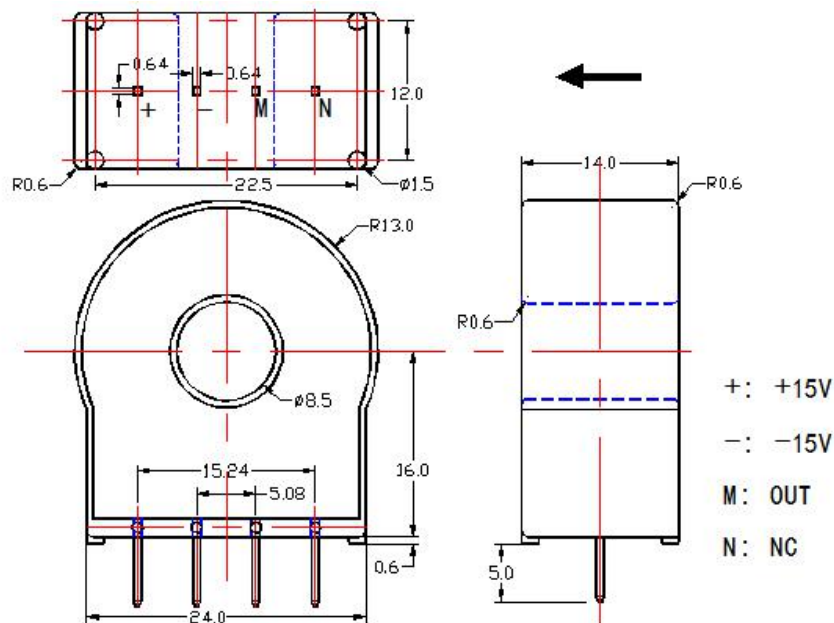
# Cheemi Technology Co., Ltd

Response time $t_{ra}(\mu s)$	@100A/ $\mu S$ ,10%-90%	$\leq 0.5$
Power consumption IC(mA)		$20+I_p X(N_p/N_s)$
Bandwidth BW(KHZ)	@ -3db	0~200
Insulation voltage Vd(KV)	@ 50HZ,AC,1min	3

## General data

Parameter	Value
Operating temperature $T_A(^{\circ}C)$	-40 ~ +105
Storage temperature $T_S(^{\circ}C)$	-40~ +125
Mass $M(g)$	15
Plastic material	UL94-V0.
Standards	EN60947-1:2004
	IEC60950-1:2001
	EN50178:1998
	SJ 20790-2000

## Dimensions(mm):



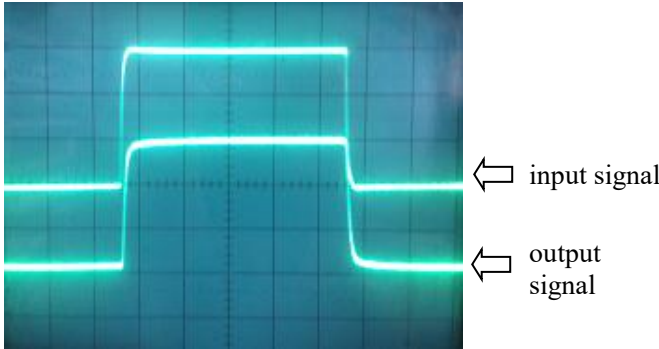
## Remarks

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

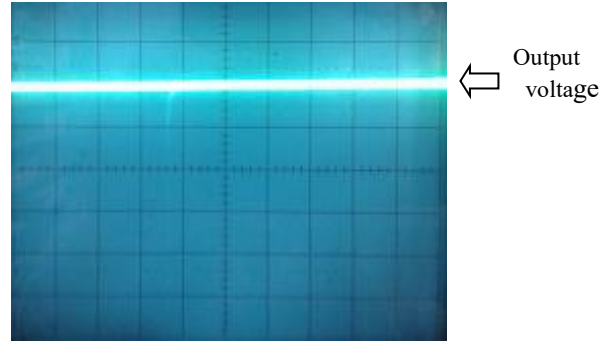


**Characteristics chart:**

Pulse current signal response characteristic



Effects of impulse noise



**Directions for use**

- When the current goes through the primary pin of a sensor, the voltage will be measured at the output end.
- $I_s$  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.**

