



# DATA SHEET

## Hall Effect Current Sensor

PN: CHK-ES5S2LS2

IPN=15-100A

### Feature

- Open- loop current transducer using the hall effect
- For the electronic measurement of currents: DC, AC,pulsed,..., with galvanic separation between primary circuit and secondary circuit
- Supply voltage: DC +5.0V

### Advantages

- Excellent accuracy
- Very good linearity
- Low temperature drift
- Optimized response time, no insertion losses
- High immunity to external interference

### Applications

- Photovoltaic (PV) current applications
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications



RoHS



### Electrical data: (Ta=25±5°C, Vc=+5.0VDC,RL=2KΩ)

Parmeter Ref	CHK15 ES5S2LS2	CHK20 ES5S2LS2	CHK25 ES5S2LS2	CHK50 ES5S2LS2	CHK100 ES5S2LS2
Rated input Ipn(A)	15	20	25	50	100
Measuring range Ip(A)	0 ~ ±15	0 ~ ±20	0 ~ ±25	0 ~ ±50	0 ~ ±100
Overload Current Ipm(A)	300				
Output voltage Vo(V)	Vc/2±2.000*(Ip/Ipn)				
Output voltage Vo(V)	@Ip=0,T=25°C		Vc/2		
Supply voltage Vc(V)	+5.0 ±5%				
Accuracy XG(%)	@Ipn,T=25°C		< ±1.0		
Offset voltage V <sub>OE</sub> (mV)	@Ip=0,T=25°C		< ±10		
Temperature variation of V <sub>OE</sub> V <sub>OT</sub> (mV/°C)	@Ip=0,-40 ~ +85°C		< ±0.1		
Temperature variation of V <sub>O</sub> V <sub>OS</sub> (%)	@Ip=Ipn,-40 ~ +85°C		< ±1.0		
Linearity error er(%FS)	< 0.5				



Cheemi Technology Co., Ltd

Tel: 025-85996365

E-mail: info@cheemi-tech.com

www.cheemi-tech.com

Add:N22, Xianlongwan, Xianyin South Road, Qixia District, Nanjing - China.

# Cheemi Technology Co., Ltd

Di/dt accurately followed (A/μs)		> 50
Response time $t_{ra}$ (μs)	@90% of $I_{pn}$	<100
Power consumption $I_c$ (mA)		10
Bandwidth Bw(KHZ)	@-3dB, $I_{pn}$	DC-3.0
Insulation voltage $V_d$ (KV)	@50/60Hz, 1min,AC	4.0
Insulation Resistance $R_{is}$ (MΩ)	@500VDC	>1000

## General data:

Parameter	Value
Operating temperature $T_A$ (°C)	-40 ~ +85
Storage temperature $T_S$ (°C)	-55~ +125
Mass $M$ (g)	12
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 0.2\text{mm}&lt;/math&gt;            Primary through-hole : <math>D 8.2 \pm 0.15\text{mm}</math>            Secondary pin: 4pin <math>0.65 \times 0.65</math></p>



Reference Data:

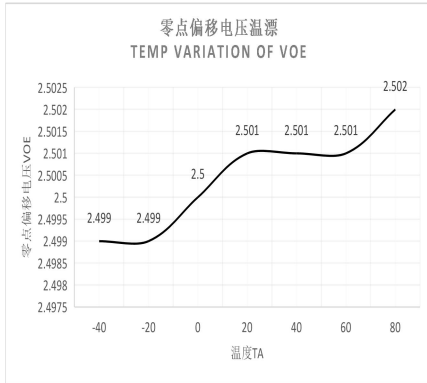


Figure 1 Zero offset voltage temperature Variation

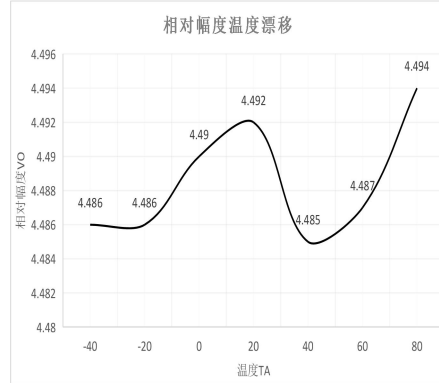


Figure 2 Temp Variation of  $V_O$

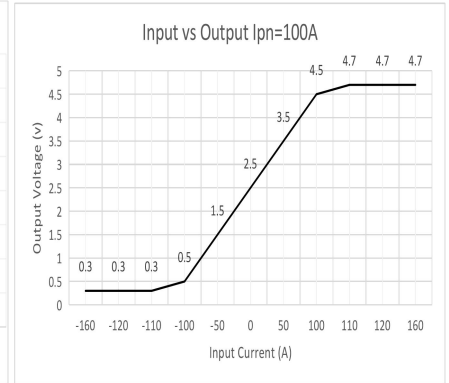


Figure 3 Input vs Output

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.**

