DATA SHEET
Hall Effect Current Sensor

PN: CHK_LSP5S2L | **IPN=15-50A**

Feature

- Open- loop
- Supply voltage: DC +5.0V
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Low power consumption
- Optimized response time, no insertion losses
- High immunity to external interference
- Very good linearity
- Can be customized

Applications

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

CE RoHS

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

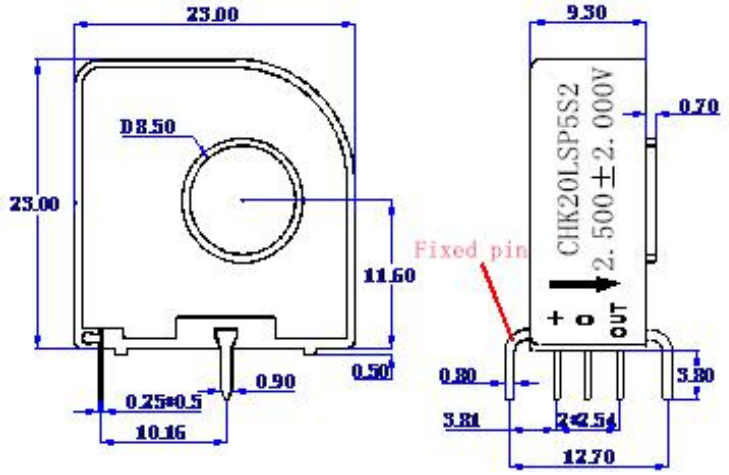
Parmeter \ Ref	CHK15 LSP5S2L	CHK20 LSP5S2L	CHK25 LSP5S2L	CHK30 LSP5S2L	CHK50 LSP5S2L
Rated input Ipn(A)	15	20	25	30	50
Measuring range Ip(A)	0～±15	0～±20	0～±25	0～±30	0～±50
Overload Current Ipm(A)	300				
Output voltage Vo(V)	Vc/2±2.000*(Ip/Ipn)				
Output voltage Vo(V)	@Ip=0,T=25°C Vc/2				
Supply voltage Vc(V)	+5.0 ±5%				
Accuracy X_G(%)	@Ipn,T=25°C < ±1.0				
Offset voltage V_{OE}(mV)	@Ip=0,T=25°C < ±10				
Temperature variation of V_{OE} V_{OT}(mV/°C)	@Ip=0,-40～+85°C < ±0.1				
Temperature variation of V_O V_{OS}(%)	@Ip=Ipn,-40～+85°C < ±2.0				
Linearity error εr(%FS)	< 0.5				
Di/dt accurately followed （A/μs）	> 50				

Response time t_{ra}(μs)	@90% of Ipn	<100
Power consumption Ic(mA)		10
Bandwidth Bw(KHZ)	@-3dB, Ipn	DC-3.0
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	4.0
Insulation Resistance R_{is} (MΩ)	@500VDC	>1000

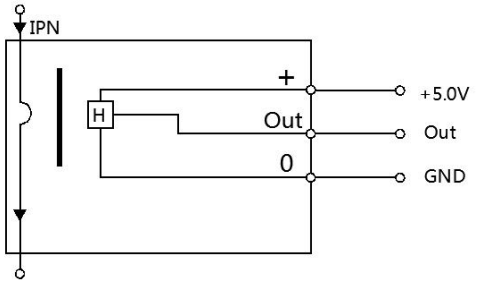
General data:

Parameter	Value
Operating temperature TA(°C)	-40 ~ +85
Storage temperature TS(°C)	-55~ +125
Mass M(g)	10
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

Dimensions(mm):



Connection



General tolerance

General tolerance:< ±0.5mm
Primary through-hole：D 8.5±0.15mm
Fixed pin: 0.8*0.9±0.15mm；
Secondary pin:3pin 0.25*0.5

Reference Data:

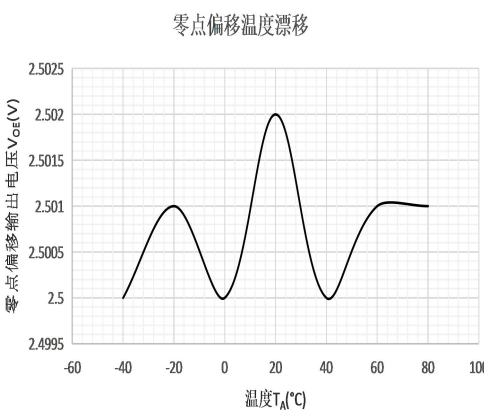


Figure 1 Zero offset voltage temperature Variation

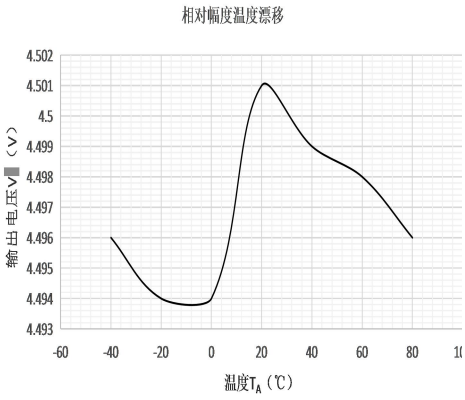


Figure 2 Temp Variation of V_O

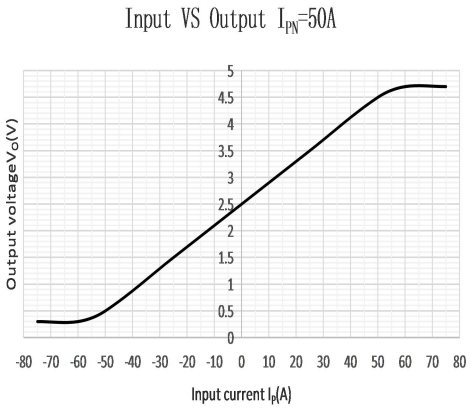


Figure 3 Input vs Output

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 if fully filled with.
- The primary conductor should be <100°C.

WARNING : Incorrect wiring may cause damage to the sensor.