

DATA SHEET

Hall Effect Current Sensor



PN: CHK_LSP3S1L

IPN=15-30A

Feature

- Open- loop
- Capable measurement of currents: DC, AC, pulse with galvanic isolation between primary circuit and secondary circuit.
- Supply voltage: DC +3.3~+5.0V

Advantages

- High accuracy
- Easy installation
- Low temperature drift
- Low power consumption
- 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°C, Vc=+3.3~+5.0VDC, RL=2KΩ)

Parameter \ Ref	CHK15LSP3S1L	CHK20LSP3S1L	CHK25LSP3S1L	CHK30LSP3S1L
Rated input I _{pn} (A)	15	20	25	30
Measuring range I _p (A)	0 ~ ±15	0 ~ ±20	0 ~ ±25	0 ~ ±30
Output voltage V _o (V)	1.650±1.250*(IP/IPN)			
Output voltage V _o (V)	@IP=0, T=25°C		1.650	
Supply voltage V _C (V)	+3.3~+5.0 ±5%			
Accuracy X _G (%)	@IPN, T=25°C		< ±1.0	
Offset voltage V _{OE} (mV)	@IP=0, T=25°C		< ±20	
Temperature variation of V _{OE} V _{OT} (mV/°C)	@IP=0, -40 ~ +85°C		< ±0.1	
Temperature variation of V _O V _{OS} (mV/°C)	@IP=0, -40 ~ +85°C		< ±0.4	
Linearity error ε _r (%FS)	< 1.0			
Di/dt accurately followed (A/μs)	> 50			
Response time τ _{ra} (μs)	@90% of IPN		< 3.0	

Power consumption IC(mA)		10
Bandwidth Bw(KHZ)	@-3dB, IPN	DC-2
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	4.0

General data:

Parameter	Value
Operating temperature A(°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):

	<p style="text-align: center;">Connection</p>
	<p style="text-align: center;">General tolerance</p> <p>General tolerance: <math>\pm 0.2\text{mm}</math> Primary through-hole: $D 8.5 \pm 0.15\text{mm}$ Fixed pin: $0.8 * 0.9 \pm 0.15\text{mm}$; Secondary pin: 3pin $0.25 * 0.5$</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 $< 100^{\circ}\text{C}$.

WARNING : Incorrect wiring may cause damage to the sensor.