



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 interferenc
- 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



RoHS

Electrical data: (Ta=25°C, Vc=+3.3~+5.0VDC,RL=2KΩ)

| Ref | CHK15LSP3S1L | CHK20LSP3S1L | CHK25LSP3S1L | CHK30LSP3S1L |
|---|----------------------|--------------|--------------|--------------|
| Rated input Ipn(A) | 15 | 20 | 25 | 30 |
| Measuring range Ip(A) | 0 ~ ±15 | 0 ~ ±20 | 0 ~ ±25 | 0 ~ ±30 |
| Output voltage Vo(V) | 1.650±1.250*(IP/IPN) | | | |
| Output voltage Vo(V) | @IP=0,T=25°C | | 1.650 | |
| Supply voltage VC(V) | +3.3~+5.0 ±5% | | | |
| Accuracy XG(%) | @IPN,T=25°C | | < ±1.0 | |
| Offset voltage VOE(mV) | @IP=0,T=25°C | | < ±20 | |
| Temperature variation of VOE VOT(mV/°C) | @IP=0,-40 ~ +85°C | | < ±0.1 | |
| Temperature variation of VO VOS(mV/°C) | @IP=0,-40 ~ +85°C | | < ±0.4 | |
| Linearity error er(%FS) | < 1.0 | | | |
| Di/dt accurately followed (A/μs) | > 50 | | | |
| Response time tra(μs) | @90% of IPN | | <3.0 | |



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|---------------------------|-------------------|------|
| 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>Connection</p> |
| | <p>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 if fully filled with.
- The primary conductor should be $< 100^{\circ}\text{C}$.

WARNING : Incorrect wiring may cause damage to the sensor.



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