DATA SHEET
Hall Effect Current Sensor

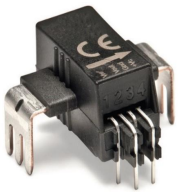
PN: CHK_LSR5S8 | **IPN=10~120A**

Feature

- Open- loop (compensated) current transducer
- Supply voltage: DC +5.0V
- Capable measurement of currents: DC, AC,pulse with galvanic isolation between primary circuit and secondary circuit.
- PCB mounting installation

Advantages

- High accuracy
- Low temperature drift
- Optimized response time, no insertion losses
- Low power consumption



- Very good linearity
- Can be customized

Applications

- The application of variable frequency electrical appliances
- AC/DC variable-speed drive
- Uninterruptible Power Supplies (UPS)
- Switched Mode Power Supplies (SMPS)
- Inverter applications

Electrical data：（Ta=25°C， Vc=+5.0VDC, RL=10KΩ, CL=10nF）

Parameter / Ref	CHK10 LSR5S8	CHK16 LSR5S8	CHK20 LSR5S8	CHK32 LSR5S8	CHK40 LSR5S8	CHK50 LSR5S8	CHK80 LSR5S8	CHK100 LSR5S8	CHK120 LSR5S8
Rated input Ipn(A)	10	16	20	32	40	50	80	100	120
Measuring range Ip(A)	±25	±40	±50	±80	±100	±125	±200	±250	±300
Output voltage Vo(V)	2.500±0.8*(IP/IPN)								
Reference voltage Vref(V)	@IP=0,T=25°C 2.500								
Output resistor RM(Ω)	≤20								
Supply voltage Vcc(V)	+5.0 ±5%								
Size of primary pins (mm)	□ 6.28*1.0								
Total accuracyXG(%)	@IPN,T_A=25°C <±1.0								
Total accuracyXG(%)	@IPN,T_A=-40~+105°C <±2.5								
Offset drift mV/℃	@ -40～+105℃ ≤±0.0075								
Output drift (mV/°C)	@ -40～+105℃ ≤±0.2								

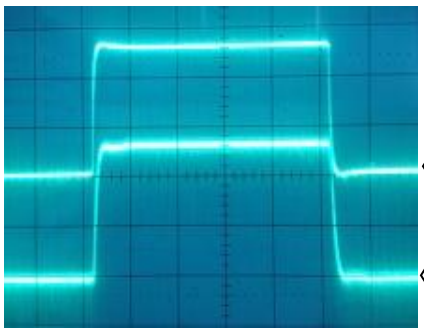
Linearity error εr(%FS)		< 0.4
Di/dt accurately followed（A/μs）		> 50
Response time tra(μs)	@90% of IPN	< 2.5
Power consumption IC(mA)		10
Bandwidth BW(KHZ)	@-3dB,IPN	DC-250
Insulation voltage Vd(KV)	@50/60Hz, 1min,AC	2.0

General data：

Parameter	Value
Operating temperature TA(°C)	-40 ~ 105
Storage temperature TS(°C)	-40~ +125
Mass M(g)	6
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000

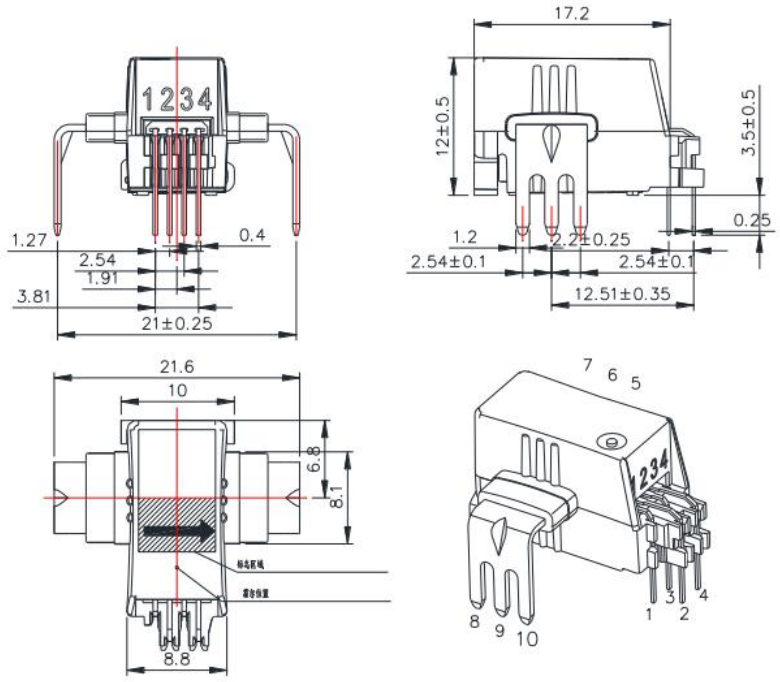
Characteristics chart:

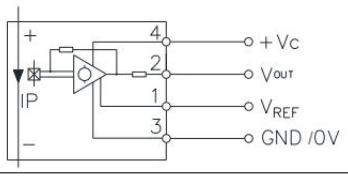
Pulse current signal response characteristic



Effects of impulse noise

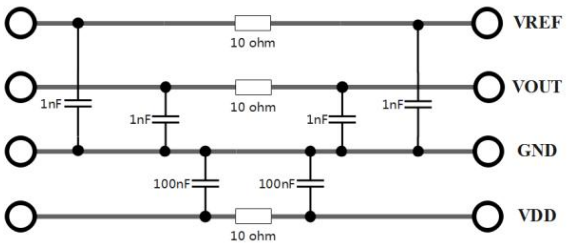
Dimensions(mm):



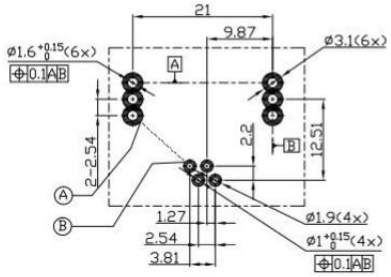
Pin definition			Connetion
1	V_{REF}		
2	V_{OUT}		
3	GND		
4	+Vc		
5, 6, 7	I+		
8, 9, 10	I-		

General Tolerance:±1mm
Other tolerances implemented:GB/T 1804-2000-M

Application Circuit



PCB Rrawing



	d_{c1}(mm)	d_{cp}(mm)
A–B	9.42	9.42

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.

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