DATA SHEET
Hall Effect Current Sensor

PN: CHK400Y3T5S2L-S1	I_{PN}=400A

Feature

- Open- loop current transducer using the hall effect
- Supply voltage: DC +5.0V
- Capable measurement of currents: DC, AC, pulse with galvanic isolation between primary circuit and secondary circuit.
- Automotive grade single chip integrated hall chip

Advantages

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

Applications

- EV and utility vehicle
- Battery pack monitoring
- Hybird Vehicles
- Uninterruptible Power Supplies (UPS)
- The applications of inverter

CE RoHS

Electrical data：（Ta=25°C，Vc=+5.0VDC, R_L=10.0KΩ）

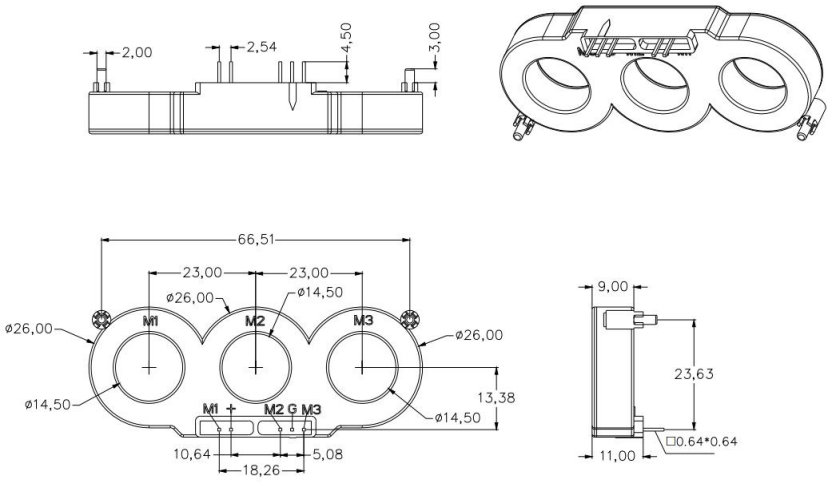
Parameter / Ref	CHK400Y3T5S2L-S1		
Channel	M1	M2	M3
Rated input I_{PN} (A)	400	150	400
Measuring range I_P (A)	±400	± 150	±400
Output offset voltage Vo(V)	@I_P=0,T_A=25°C	2.500±0.020	
Output voltage Vo(V)	@I_P,T_A=25°C	2.500± 2.000*(I_P/I_{PN})	
Supply voltage V_C(V)	+5.0 ± 5%		
Max Voltage V_{CMax}(V)	+6.5 ± 5%		
Output internal resistance R_{OUT}(Ω)	100		
Load resistance R_L(KΩ)	＞4.7		
Accuracy X_G (%)	@±I_{PN},T_A =25°C	＜±5.0	
Temperature variation of V_{OE} (mV/°C)	@I_P= 0,T_A=－40~+125°C	＜±0.15	
Tempe variation of V_O V_{OS} (%)	@ I_P = ± I_{PN}, T_A =-10 ~ +60°C	＜± 1.5	
Tempe variation of V_O V_{OS} (%)	@ I_P = ± I_{PN}, T_A =-40 ~ +125°C	＜± 2.0	
Hysteresis offset voltage V_{OH}(mV)	@I_P=0, after 1*I_{PN}	<+20	
Linearity error εr(%FS)	@ I_P = ± I_{PN}, T_A =25°C	＜ 1.0	

Di/dt accurately followed（A/μs）		> 100
Response time tra(μs)	@90% of I_{PN}	< 5.0
Power consumption I_C(mA)		<45
Bandwidth Bw(KHZ)	@-3dB, I_{PN}	DC-50
Insulation voltage Vd(KV)	@50/60Hz, 1min, AC	2.5
Insulation resistance R_{IS}(KΩ)	@500VDC	>1000

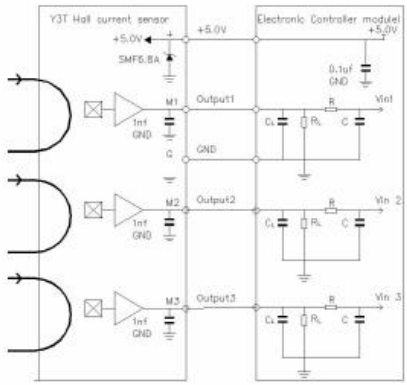
General data：

Parameter	Value
Operating temperature TA(°C)	-40 ~ +125
Storage temperature TS(°C)	-55~ +150
Mass M(g)	-
Plastic material	PBT G30/G15, UL94- V0;
Standards	IEC60950-1:2001
	EN50178:1998
	SJ20790-2000, JB/T7490-2007

Dimensions(mm):



Connection



General tolerance

General tolerance:< ±0.5mm

Primary through-hole：M1-M3:D14.5 ±0.5

Connection of secondary:

CHK-Y3T5S2L-S1: 5 pin 0.635*0.635

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.