



## THK-HAHE5S2L

### Product introduction:

- Power supply: +5v DC
- Hall effect principle — open loop current sensor;
- The internal circuit adopts programmable chip packaging technology
- The primary and secondary of the current sensor are insulated and can measure DC, AC, pulse, etc;

### Application:

- Battery pack detection
- Hybrid electric vehicle
- Application on Inverter
- UPS uninterruptible power supply
- Electric vehicles and multi-function vehicles



### Electrical characteristics:

Parameter	Symbol	THK10	THK20	THK30	THK40	THK50	THK60	THK80	THK90	THK10
		0HAHE 5S2L	0HAHE 5S2L	0HAHE 5S2L	0HAHE 5S2L	0HAHE 5S2L	0HAHE 5S2L	0HAHE 5S2L	0HAHE 5S2L	0HAHE 5S2L
Rated current	$I_{PN}(A)$	100	200	300	400	500	600	800	900	1000
Measuring range	$I_P(A)$	0 ~ ± 112	0 ~ ± 225	0 ~ ± 350	0 ~ ± 450	0 ~ ± 550	0 ~ ± 675	0 ~ ± 900	0 ~ ± 1000	0 ~ ± 1000
Output voltage	$V_O(V)$	$V_C/5*(2.5 \pm 2*I_P/I_{PN})$								
Output voltage	$V_O(V)$	@ $I_P=0, T=25^\circ C, +5V$				$V_C/2$				
Load resistance	$R_L(k\Omega)$	> 10								
Working power supply	$V_C(V)$	+5V DC ± 5%								
Insulation voltage	$V_D(V)$	50/60Hz, 1min, 5kV; RMS								

### General parameters:

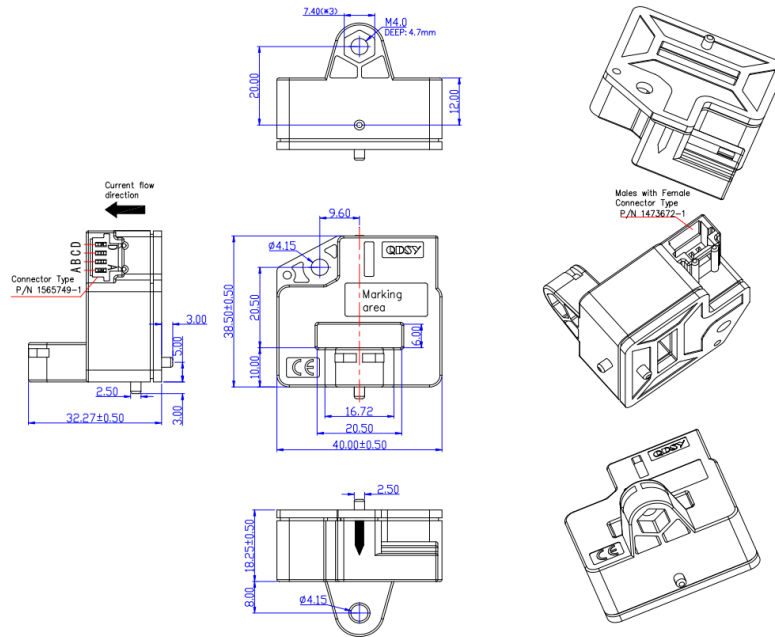
Project	Condition	Date	Unit
Accuracy $X_G$	@ $I_{PN}, T=25^\circ C$	$< \pm 0.5$	%
Accuracy $X_G$	@ $I_{PN}, -40^\circ C < T < 125^\circ C$	$< \pm 1.5$	%
Offset voltage $V_{OE}$	@ $I_P=0, T=25^\circ C$	$< \pm 5$	mV
Voltage offset temperature drift $V_{OT}$	@ $I_P=0, -40 \sim +85^\circ C$	$< \pm 0.05$	mV/°C
Hysteresis offset voltage $V_{OH}$	@ $I_P=0, \text{after } 1*I_{PN}$	$< \pm 5$	mV
Linearity $\epsilon_r$		$\leq 0.5$	%FS
Capacitive load $C_L$		1 ~ 10	nF
Minimum output voltage $V_{sz}$	@ $V_C=5.0V$	0.24 ~ 0.26	V
Maximum output voltage $V_{sz}$	@ $V_C=5.0V$	4.74 ~ 4.76	V
Response time $t_{ra}$	@ 90% of $I_{PN}$	$< 7.0$	μs
Operating bandwidth $B_w$	-3dB	DC-50	KHZ
Working temperature $T_A$		-40 ~ +125	°C
Storage temperature $T_s$		-55 ~ +125	°C
Static power consumption $I_c$		15+Is	mA
Product weight $m$		65	g
Shell material	PBT material containing 30% glass fiber, flame retardant grade: UL94-V0;		
Standard	IEC60950-1:2001	EN50178:1998	SJ20790-2000



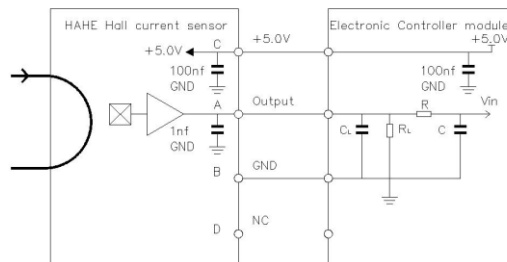
**Limit parameters:**

Project	Condition	Date	Unit
		<6.0	
Supply voltage Vc	@ 1min, T=25℃	6.0	V
	@ 1min, T=25℃	-0.1	

**Structural drawing: (mm)**



**Connection diagram:**



**Remarks:**

1. When the measured current passes through the primary pin of the sensor, there is a corresponding voltage signal output at the output end; (Note: wrong wiring may damage the sensor)
2. Products with different rated current can be designed according to the requirements of customers, and the output voltage of the sensor can be selected;
3. When the busbar is fully filled with holes, the dynamic performance is the best;
4. The temperature of primary conductor shall not exceed 100℃ ;