



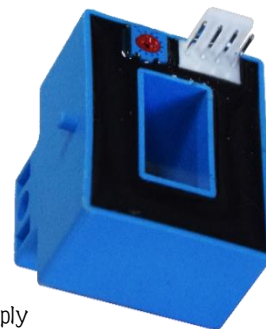
## THK\_BS5S6L-S1

### 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:

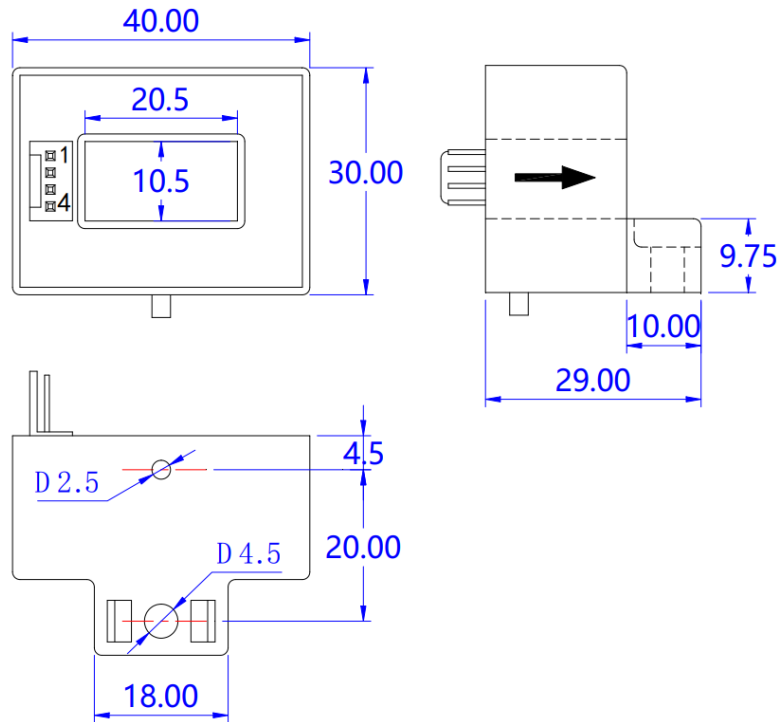
Parameter	Symbol	THK100	THK200	THK300	THK400	THK500
		BS5S6L-S1	BS5S6L-S1	BS5S6L-S1	BS5S6L-S1	BS5S6L-S1
Rated current	$I_{PN}(A), R_{MS}$	100	200	300	400	500
Measuring range	$I_P(A)$	0 ~ ± 300	0 ~ ± 600	0 ~ ± 900	0 ~ ± 900	0 ~ ± 900
Output voltage	$V_O(V)$	$2.5 \pm 0.625 * I_P / I_{PN}$				
Insulation voltage	$V_C(V)$	+5V DC ± 5%				

### General parameters:

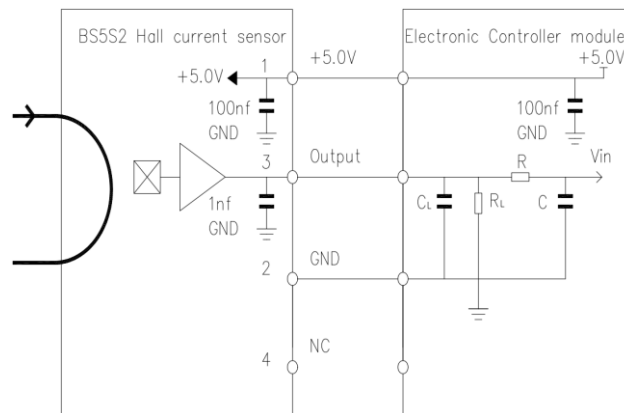
Project	Condition	Date	Unit
Accuracy $X_G$	@ $I_{PN}, T=25^\circ C$	< ± 1.0	%
Accuracy $X_G$	@ $I_{PN}, -40^\circ C < T < 125^\circ C$	< ± 3.0	%
Offset voltage $V_{OE}$	@ $I_P=0, T=25^\circ C$	< ± 20	mV
Voltage offset temperature drift $V_{OT}$	@ $I_P=0, -40 \sim +125^\circ C$	< ± 0.2	mA/°C
Hysteresis offset voltage $V_{OH}$	@ $I_P=0, \text{after } 1 * I_{PN}$	< ± 5	mV
Linearity $\epsilon_r$		≤ 1.0	%FS
Load resistance $R_L$		> 10	kΩ
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
Output internal impedance $R_{OUT}$		1 ~ 10	Ω
Operating bandwidth $B_w$	-3dB	DC-30	KHZ
Working temperature $T_A$		-40 ~ +85	°C
Storage temperature $T_S$		55 ~ +125	°C
Static power consumption $I_C$		15+I <sub>s</sub>	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



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°C ;