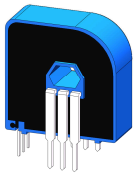
PCB Mounting Hall effect Current Sensor

SCK23D Series



Product description

Features：

- Based on the Hall effect measurement principle, open loop circuit method.
- The isolation voltage between primary and secondary is greater than 3000VAC.
- Easy to install, small in size and not occupying space.
- The material of the product has good mechanical properties such as corrosion resistance, aging resistance, and heat resistance.
- Potting glue has elastic characteristics.
- Designed according to UL94-V0 flame retardant rating.

Performance：

- It can measure DC, AC, pulse, and various irregular waveform currents of cable conductors under isolation conditions.
- High measurement accuracy, wide range, fast response speed, low zero drift, low temperature drift, small overshoot, and good linearity.
- The dynamic performance (DI/DT and response time) is the best when the busbar is completely filled with the primary perforation.
- Strong ability to resist external electromagnetic interference (ESD, EFT, CS, CE, BCI, dv/dt, etc.).

Implementation standards：

- GB 7665
- JB/T 7490
- JB/T 9329-1999
- JB/T9473-1999
- SJ/20792-2000

Application：

- It can be applied to AC frequency conversion speed regulation and servo motor traction.
- Battery power, uninterruptible power supply.
- Switching power supply, welding machine power supply.
- Electric vehicles.
- New energy sources such as photovoltaics.

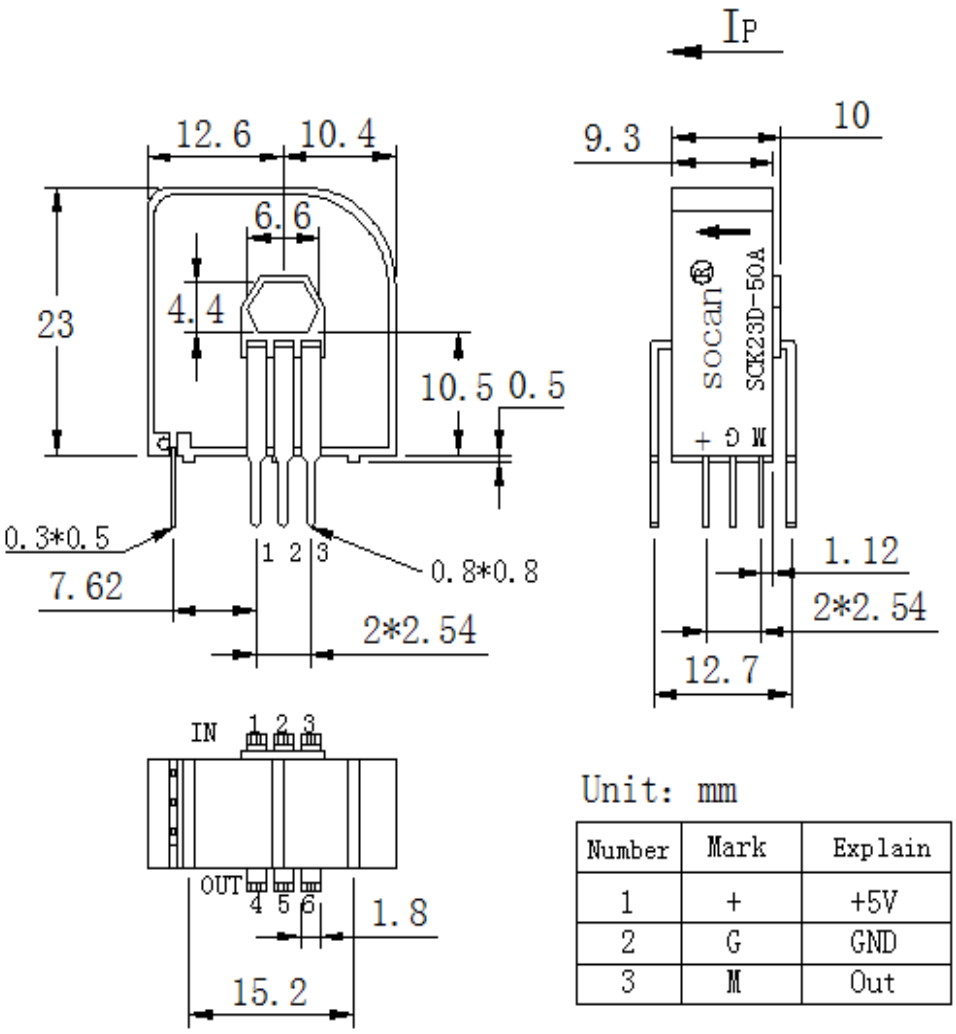
Performance Parameters

Model Index（25℃）	SCK23D-			
	6A	10A	25A	50A
Nominal Input Current (Ipn)	±18AT	±20AT	±25AT	±50AT
Measuring Range (Ip)	18AT	20AT	25AT	50AT
Withstand resistance R_{INS}@500V DC	⩾10kΩ			
Output Signal V_{out} @±I_{PN}, R_L=10KΩ	2.5 V ±2 V			
Input power supply voltage range Vc（Remark 1）	DC +5V(±0.5%)			
Accuracy @ Ta=25°C	±1%			
Linearity ε_L@R_L=10KΩ，T_A= 25℃	±0.5%			
Withstand voltage V_D@50Hz,60s,0.1mA	3.0kVrms/50Hz/min			
Zero output voltage V_{OE}@T_A= 25℃	2.5V <±1%			
Offset temperature characteristics	< ±0.05%/°C			
Offset voltage temperature characteristics	< ±0.1%/°C			
Hysteresis offset	<±5mV			
Response time t_D @ 0→I_{PN}	< 5uS			
Current consumption	<+13mA			
Operating temperature	-40~+85 °C			
Storage temperature	-40~+85 °C			

Remarks：

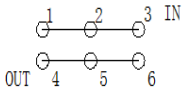
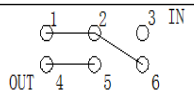
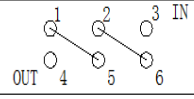
1. If VC is less than the minimum value, the measurement will be inaccurate, and if VC is greater than the maximum value, the measurement device may fail permanently.
2. When 4.5 < VCC < 5.05, the measurement range will be reduced.
3. di/dt＞50A/uS

Dimensions (in mm)



Unit: mm

Number	Mark	Explain
1	+	+5V
2	G	GND
3	M	Out

Primary Connection	Primary nominal input current (A)	Pin Connection
1	25、50	
2	10	
3	6	

Remark: Incorrect wiring may damage the sensor