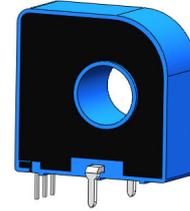# Hall effect Current Sensor

SCK19

Product description

Features
- Based on Hall effect measurement principle, open loop circuit mode.
- The isolation voltage between primary and secondary is greater than 3000VAC.
- Easy to install, small size, does not take up space.
- Comply with UL94-V0 flame retardant rating.
- Single-chip programmable Hall IC is adopted.

Performance:
- Can measure DC, AC, pulse, and various irregular waveforms under isolated conditions.
- +5V working voltage, fast response speed, low zero drift, low temperature drift, high accuracy and good linearity.
- Dynamic performance (di/dt and response time) is optimal when the busbar is fully filled with primary perforations.
- Strong ability to resist external electromagnetic interference (BCI, EFT, CS, CE, ESD, dv/dt, etc.).

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Application:
-     It can be widely used in photovoltaic inverters, electric vehicle drivers, battery management and other products.

Implementation standards
- GB/T 7665-2005
- JB/T 7490-2007
- JB/T 25480-2010
- JB/T 9473-2020
- SJ 20792-2000

Certifications

Shenzhen SoCan Technologies Co.,Ltd

SoCan is committed to continuously improving product quality, and the company reserves the right to update its products.

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Technical Parameters

Model Parameters（25℃）	SCK19-							
	3A	10A	15A	20A	25A	30A	50A	70A
Primary Current (A)I_{PN}	3A	10A	15A	20A	25A	30A	50A	70A
Primary Current Max. Peak Value (A) I_{PM}	±6A	±20A	±30A	±20A	±25A	±30A	±50A	±70A
Output voltage (V) V_{out} @±I_{PN}，R_L=10KΩ	2.5V±1V			2.5V±2V				

Electrical Data

Item	Min.	Max.	Typical	Unit
Input power supply voltage range Vc （±5%）（Remark 1，Remark 2）	+4.5	+5	+5.5	V_{DC}
Current consumption Ic	-	+13	+15	mA
Withstand resistance R_{INS} @500V DC		2.5		V
Output voltage Vout @I_{PN}， R_L=10KΩ，T_A= 25℃	$V_{OUT} = \dfrac{V_{CC}}{2} + 2.0 * \dfrac{V_{CC}}{5} * \dfrac{I_P}{I_{PN}}$			V
Output internal resistance R_{OUT}	-	1	-	Ω
Load Resistance R_L（Remark 3）	10	-	-	KΩ
Accuracy X @I_{PN}，T_A= 25℃	-	±1	-	%
Linearity ε_L @R_L=10KΩ，T_A= 25℃	-	±0.5	-	%I_{PN}
Offset voltage V_{OE} @T_A= 25℃	-	±10	±20	mV
Hysteresis voltage V_{OM} @ I_{PN}→0	-	±10	±20	mV
Temperature Coefficient of Offset Voltage TCV_{OE}	-	±0.05	±1	mV/℃
Output voltage temperature coefficient TCV_{out}	-	±0.05	±0.1	%/℃
Response time t_D @ 0→I_{PN}	-	3	5	us
Ambient operating temperature T_A	-	-	5	ms
Ambient storage temperature T_s	-40	25	125	℃
Withstand voltage V_D@50Hz,60s,0.1mA	-40	25	125	℃
Weight m	-	3000	-	V_{AC}
Input power supply voltage range Vc （±5%）（Remark 1，Remark 2）	-	8.5	-	g

Remark:

1. VC is less than the minimum value, which will lead to inaccurate measurement, VC is greater than the maximum value, which may cause permanent failure of the measurement device.

2. The zero bias voltage and output voltage are linearly related to Vc, so the accuracy of Vc should be ensured as much as possible when applying.

Dimensions (in mm)

单位：mm

序号	标识	说明
1	+	+5V
2	−	0V
3	M	Out
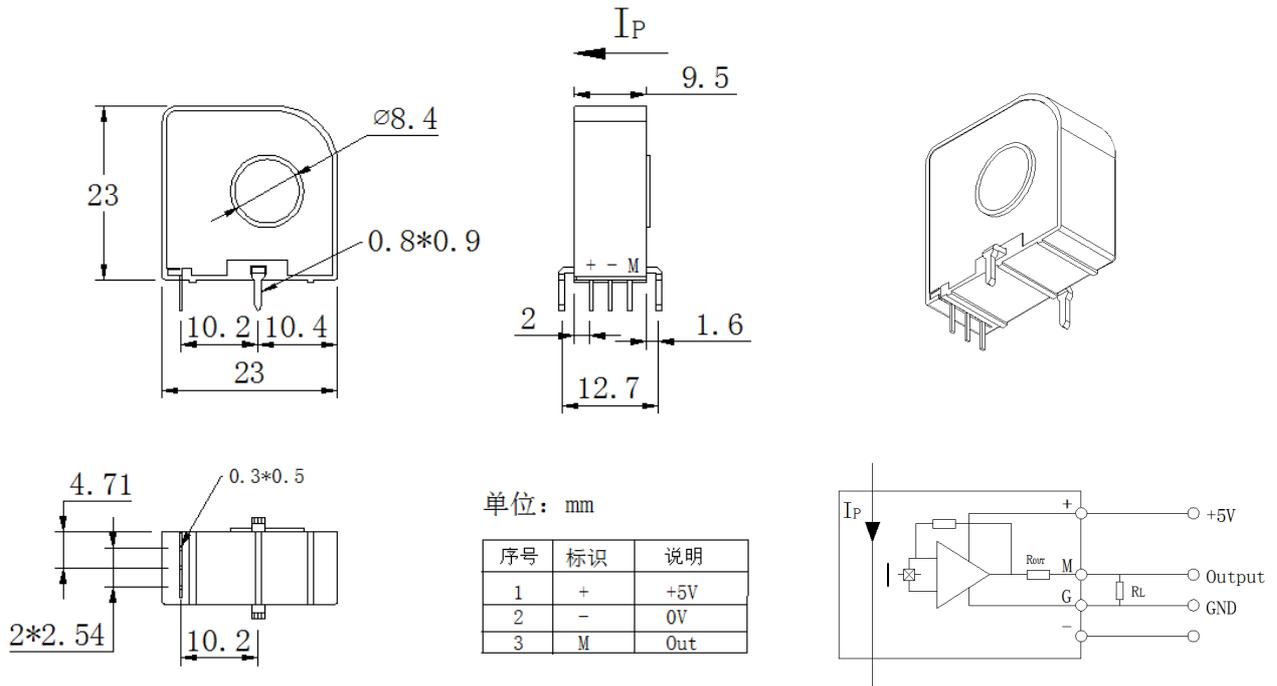
Notes:

1. Size error: ±0.5mm;

2. Primary aperture: φ8.4mm;

3. Fixed lead: □ 0.8*0.9mm pitch 12.7mm;

4. Needle output: □0.3*0.5mm pitch 2.54*2mm;

5. The IP indication direction is the positive direction of the current;

6. The temperature of the primary conductor shall not exceed 105°C;

7. Incorrect wiring may cause damage to the sensor.