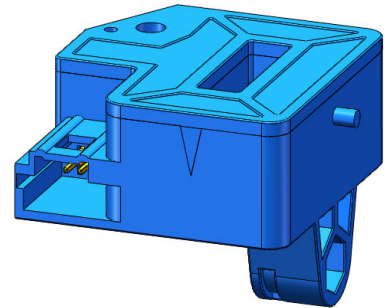


# Hall effect Current Sensor

## SCK28



### Product description

#### Features

- Based on Hall effect measurement principle, open loop circuit mode.
- Single-chip programmable Hall IC, compatible with automotive-specific connectors.
- Working temperature  $-40\text{ }^{\circ}\text{C}\sim 125\text{ }^{\circ}\text{C}$ .
- Easy to install, small size, does not take up space.
- Comply with UL94-V0 flame retardant rating

#### Performance

- It can measure DC, AC, pulse, and various irregular waveform currents of cable conductors under isolation conditions.
- Wide measurement range, 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.).

#### Application

- It can be widely used in 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

#### Certification



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## Technical Parameters

Model Parameters (25°C)	SCK28-					
	100A	300A	500A	600A	900A	1200A
Primary Current (A) $I_{PN}$	100A	300A	500A	600A	900A	1200A
Primary Current Max. Peak Value (A) $I_{PM}$	±100A	±300A	±500A	±600A	±900A	±1200A
Output voltage (V) $V_{out}$ @± $I_{PN}$ , $R_L=10K\Omega$	2.5V±2V					

## Electrical Data

Item	Min.	Typical	Max.	Unit
Input power supply voltage range $V_c$ (±5%) (Remark 1, Remark 2)	+4.5	+5	+5.5	V <sub>DC</sub>
Current consumption $I_c$	-	+13	+15	mA
Withstand resistance $R_{INS}$ @500V DC		2.5		V
Output voltage $V_{out}$ @ $I_{PN}$ , $R_L=10K\Omega$ , $T_A=25^\circ C$	$V_{OUT} = \frac{V_{CC}}{2} + 2.0 * \frac{V_{CC}}{5} * \frac{I_P}{I_{PN}}$			V
Output internal resistance $R_{OUT}$	-	1	-	$\Omega$
Load Resistance $R_L$ (Remark 2)	10	-	-	K $\Omega$
Accuracy X @ $I_{PN}$ , $T_A=25^\circ C$	-	±1	-	%
Linearity $\epsilon_L$ @ $R_L=10K\Omega$ , $T_A=25^\circ C$	-	±0.5	-	% $I_{PN}$
Offset voltage $V_{OE}$ @ $T_A=25^\circ C$	-	±10	±20	mV
Hysteresis voltage $V_{OM}$ @ $I_{PN} \rightarrow 0$	-	±10	±20	mV
Temperature Coefficient of Offset Voltage $TCV_{OE}$	-	±0.05	±1	mV/°C
Output voltage temperature coefficient $TCV_{out}$	-	±0.05	±0.1	%/°C
Response time $t_D$ @ $0 \rightarrow I_{PN}$	-	3	5	us
Power-on delay TPOD	-	-	5	ms
Ambient operating temperature $T_A$	-40	25	125	°C
Ambient storage temperature $T_s$	-40	25	125	°C
Withstand voltage $V_D$ @50Hz,60s,0.1mA	-	3000	-	V <sub>AC</sub>
Weight m	-	60	-	g

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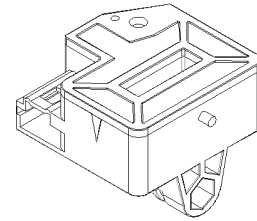
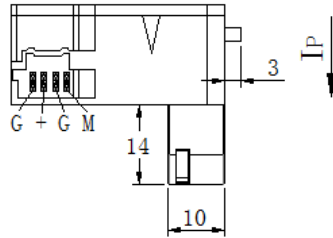
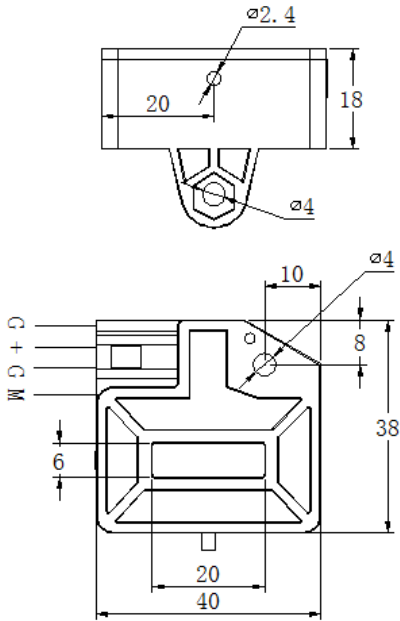
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**Remarks:**

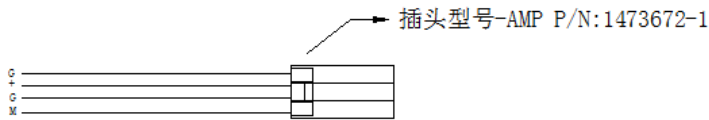
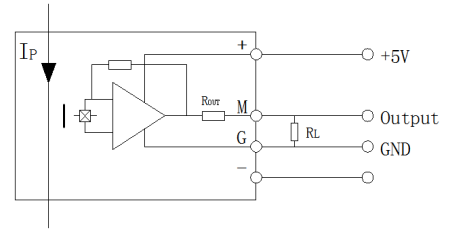
1. VC is less than the minimum value, which will lead to inaccurate measurement, VC is greater than the maximum value, which may cause permanent failure of the measurement device.
2. The zero bias voltage and output voltage are linearly related to Vc, so the accuracy of Vc should be ensured as much as possible when applying.

**Dimensions (in mm)**



单位: mm

序号	标识	说明
1	G	GND
2	+	+5V
3	G	GND
4	M	Output



**Notes:**

1. Size error:  $\pm 1\text{mm}$ ;
2. Primary aperture:  $6*20\text{mm}$ ;
3. Fastening hole:  $\phi 4.5\text{mm}$ ;
4. Output wiring plug: AMP P/N: 1473672-1;
5. The IP indication direction is the positive direction of the current;
6. The temperature of the primary conductor shall not exceed  $105^{\circ}\text{C}$ ;
7. Incorrect wiring may cause damage to the sensor.

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