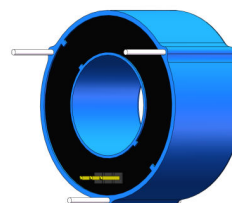


PCB Mount Hall effect Current Sensor

SCK33 Series



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:

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

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

Certification



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Technical Parameters

Model Parameters (25°C)	SCK33-				
	100A	200A	300A	400A	500A
Primary Current (A) I_{PN}	100A	200A	300A	400A	500A
Primary Current Max. Peak Value (A) I_{PM}	$\pm 100A$	$\pm 200A$	$\pm 300A$	$\pm 400A$	$\pm 500A$
Output voltage (V) $V_{out}@ \pm I_{PN}$, $R_L=10K\Omega$	2.5V $\pm 2V$				

Electrical Data

Item	Min.	Typical	Max.	Unit
Input power supply voltage range V_c ($\pm 0.5\%$) (Remark 1, Remark 2)	+4.5	+5	+5.5	V _{DC}
Current consumption I_c	-	+13	+15	mA
Zero output Signal V_o		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	-	Ω
Load Resistance R_L (Remark 3)	10	-	-	K Ω
Accuracy X @ I_{PN} , $T_A=25^\circ C$	-	± 1	-	%
Linearity ε_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/ $^\circ C$
Output voltage temperature coefficient TCV_{out}	-	± 0.05	± 0.1	%/ $^\circ C$
Response time t_D @ $0 \rightarrow I_{PN}$	-	3	5	us
Power-on delay	-	-	5	ms
Ambient operating temperature T_A	-40	25	125	$^\circ C$
Ambient storage temperature T_s	-40	25	125	$^\circ C$
Withstand voltage $V_D@50Hz, 60s, 0.1mA$	-	3000	-	V _{AC}
Weight m	-	33	-	g

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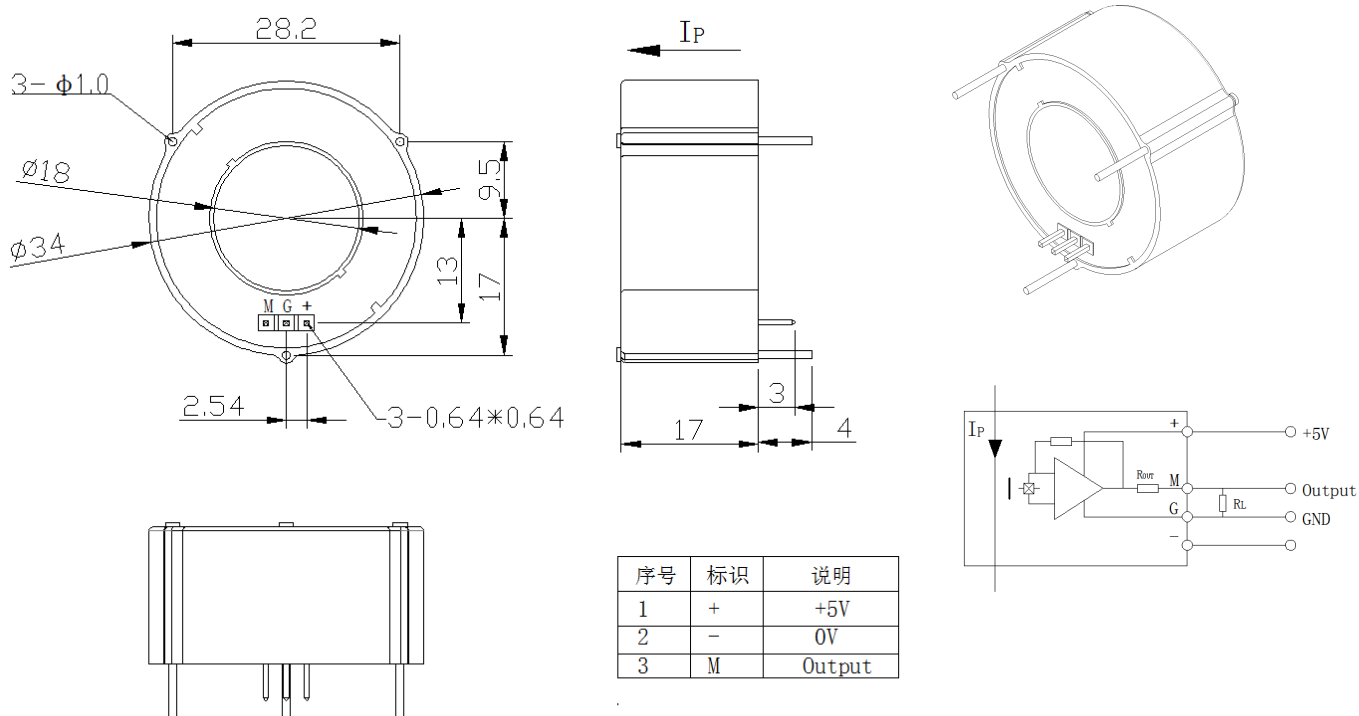
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Remarks:

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 V_c , so the accuracy of V_c should be ensured as much as possible when applying.

Dimensions (in mm)



Notes:

1. Size error: $\pm 0.5\text{mm}$;
2. Primary aperture: $\phi 18\text{mm}$;
3. Fixed lead: $\phi 1.0\text{mm} \times 3$
4. Pins output: $\square 0.64 \times 0.64\text{mm}$, pitch $2.54 \times 2\text{mm}$;
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.