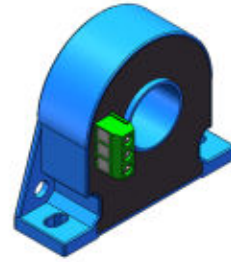


Hall effect Current Sensor

SCB39 Series



Product description

Features

- Based on Hall effect measurement principle, close loop circuit mode.
- The isolation voltage between primary and secondary is greater than 3000VAC.
- 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.
- Very low temperature drift, zero drift, fast response time, good linearity, accuracy can reach 0.1%.
- 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 inverters, UPS, photovoltaic inverters, electric vehicle drives, high-frequency power supplies, inverter welding machines 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)	SCB39-	
	200A	300A
Primary Current (A) I_{PN}	200A	300A
Primary Current Max. Peak Value (A) I_{PM}	$\pm 300A$	$\pm 500A$
Turns ratio K_N	1:2000	1:2000
Output signal I_{SN} @ I_{PN} ,	$\pm 100mA$	$\pm 150mA$
Measure resistance R_M @ I_{PN} , $V_c = \pm 15V$,	40 Ω	26.7 Ω

Electrical Data

Item	Min.	Max.	Typical	Unit
Input power supply voltage range V_c ($\pm 5\%$) (Remark 1, Remark 2)	± 12	± 15	± 18	V_{DC}
Current consumption I_c @ $\pm 15V$	13mA+Output Current I_s			mA
Accuracy X @ I_{PN} , $T_A = 25^\circ C$	-	± 0.5	-	%
Linearity ε_L @ $R_L = 10K\Omega$, $T_A = 25^\circ C$	-	± 0.1	-	%
Offset current I_{OE} @ $T_A = 25^\circ C$, $I_p = 0$	-	± 0.2	-	mA
Magnetic offset current I_{OM} @ $I_p \rightarrow 0$	-	± 0.2	-	mA
Temperature coefficient of offset current TCI_{OE}	-	± 0.2	± 0.6	mA
Response time t_D @ $0 \rightarrow I_{PN}$	-	1	-	us
Band width BW	-	50	100K	Hz
Ambient operating temperature T_A	-40	25	85	$^\circ C$
Ambient storage temperature T_s	-40	25	90	$^\circ C$
Withstand voltage $V_D @ 50Hz, 60s, 0.1mA$	-	3000	-	V_{AC}
Weight m	-	105	-	g

Remarks:

1. V_C is greater than the maximum value, which may cause permanent failure of the measurement device.

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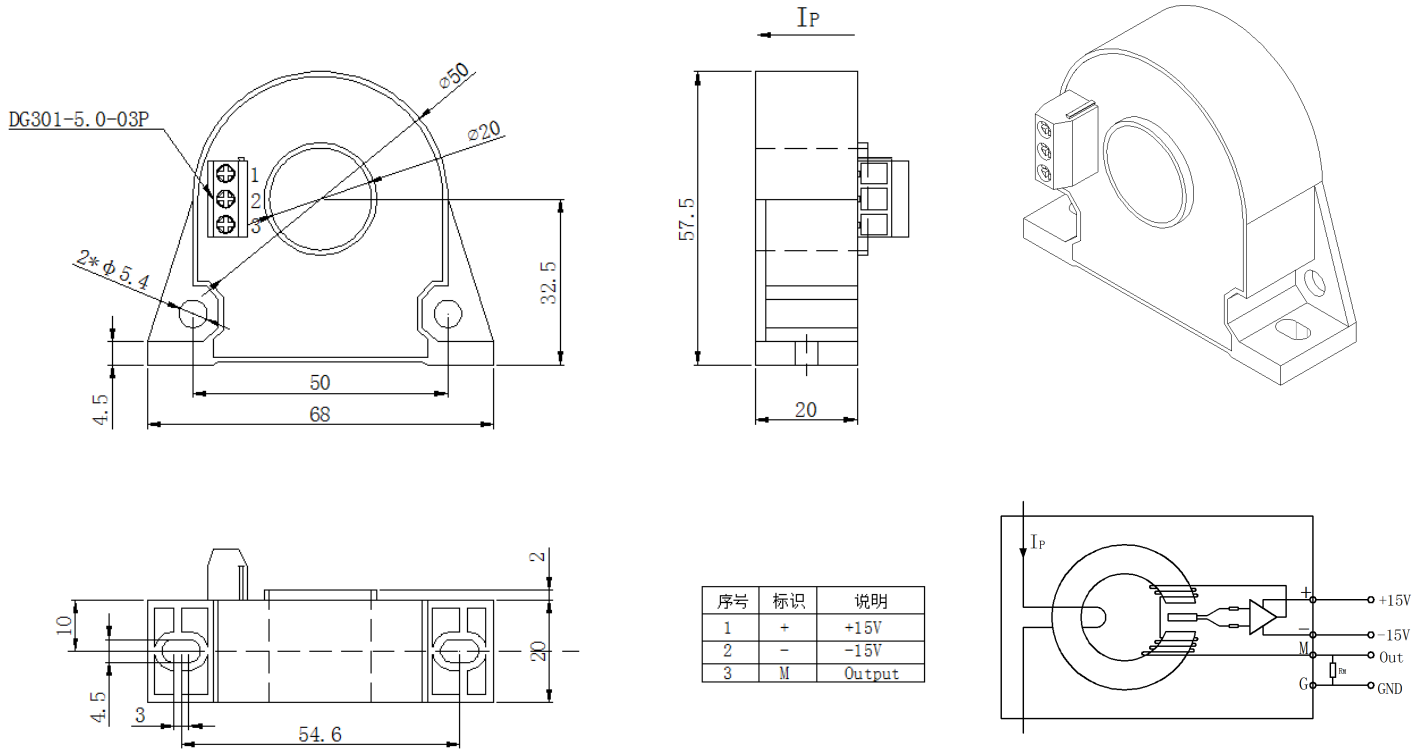
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$$2. I_{OUT} = I_{SN} * \frac{I_P}{I_{PN}} + I_{OE}$$

3. Follow speed $di/dt > 100A/uS$

Dimensions (in mm)



Notes:

1. Size error: $\pm 0.5mm$;
2. Primary aperture: $\phi 20mm$;
3. Fastening hole: $\phi 4.5mm \times 2$;
4. SCB39 output terminal: DG301-5.0-03P;
- 5 The IP indication direction is the positive direction of the current;
- 6 Incorrect wiring may cause damage to the sensor.

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