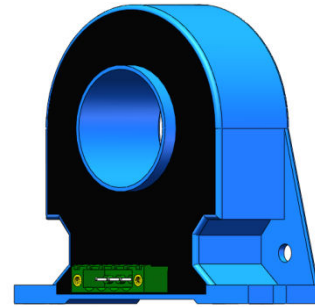


Hall effect Current Sensor

SCK12

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.
- Designed according to UL94-V0 flame retardant rating.
- Standing and lying two installation methods.

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.).

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

Certifications



Technical Parameters

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Model Parameters (25℃)	SCK12T-						
	200A	300A	500A	800A	1000A	1500A	2000A
Primary Current (A) I_{PN}	200A	300A	500A	800A	1000A	1500A	2000A
Primary Current Max. Peak Value (A) I_{PM}	±600A	±900A	±1500A	±2400A	±3000A	±3000A	±3000A
Output voltage (V) V_{out} @± I_{PN} , $R_L=10K\Omega$	±4V±1%						

Electrical Data

Item	Min.	Typical	Max.	Unit
Input power supply voltage range V_c (±5%) (Remark 1, Remark 2)	±11	±15	±18	V_{DC}
Current consumption I_c	-	±15	±20	mA
Withstand resistance R_{INS} @500V DC	1000	-	-	$M\Omega$
Output voltage V_{out} @ I_{PN} , $R_L=10K\Omega$, $T_A=25^\circ C$	3.960	4.000	4.040	V
Output internal resistance R_{OUT}	-	102	-	Ω
Load Resistance R_L (Remark 3)	1	10	-	$K\Omega$
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}	-	±0.5	±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
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_{AC}
Weight m		260		g

Remarks:

1. If V_C is less than the minimum value, the measurement will be inaccurate. If V_C is greater than the maximum value, it may cause permanent failure of the measuring device.
2. When $\pm 12V < V_{CC} < \pm 15V$, will reduce the measurement range.

$$3. V_{OUT} = 4.00 * \frac{R_L}{102 + R_L} * \frac{I_P}{I_{PN}} + V_{OE}$$

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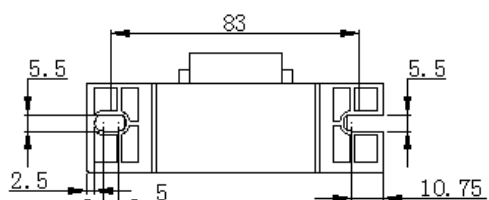
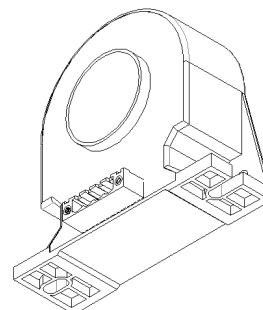
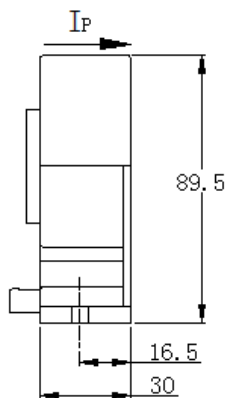
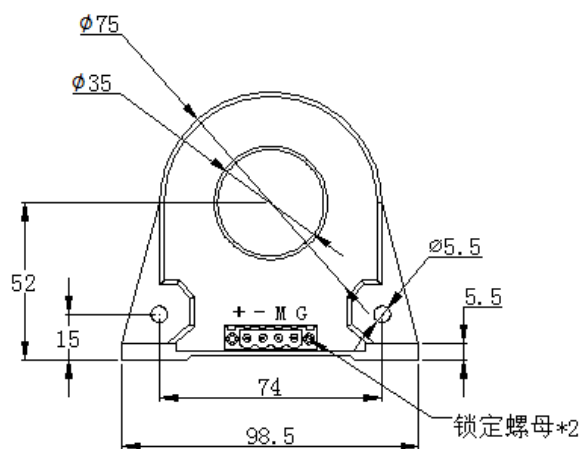
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4. $di/dt > 50A/uS$

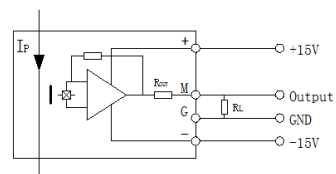
Dimensions (in mm)

SCK12T dimension

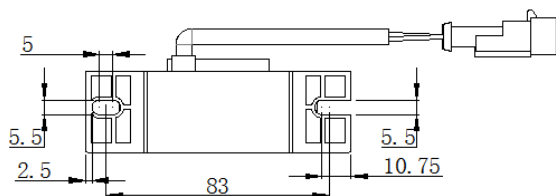
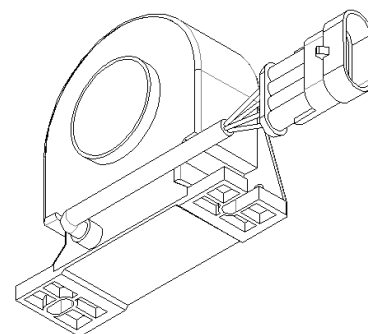
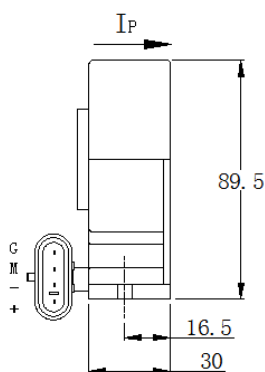
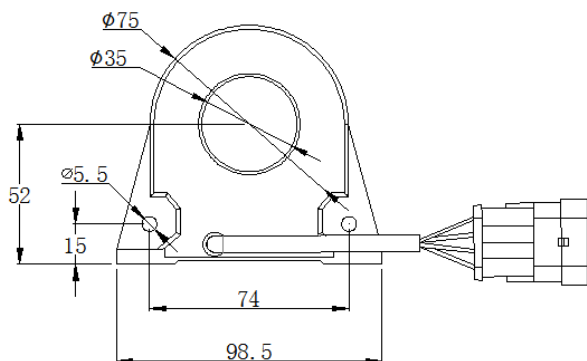


单位: mm

序号	标识	说明
1	+	+15V
2	-	-15V
3	M	Output
4	G	0V

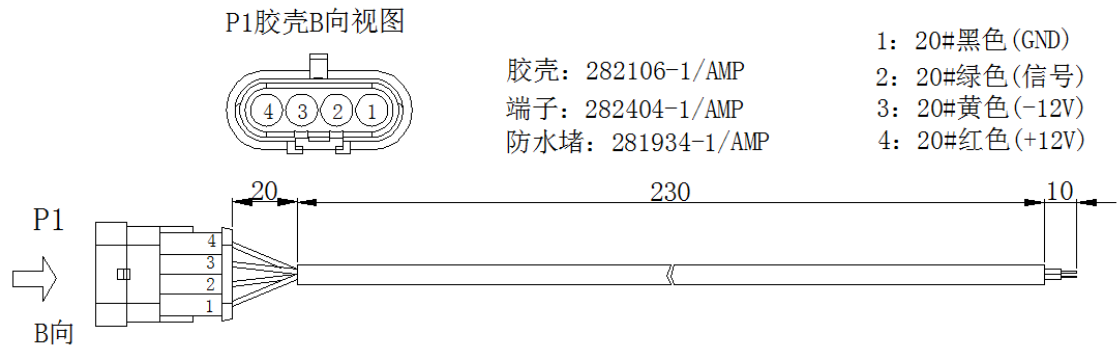


SCK12R dimension



单位: mm

序号	标识	说明
1	G	0V
2	M	Output
3	-	-12
4	+	+12V



Notes

1. Size error: $\pm 1\text{mm}$;
2. Primary aperture: $\phi 35\text{mm}$;
3. Fastening hole: $\phi 5.5\text{mm} \times 2$;
4. SCK12T output terminal: 2EDGIV-5.08-4P;
SCK12T matching plug: 2EDGIK-5.08-4P;
5. SCK12R rubber case: 282106-1/AMP
SCK12R Terminal: 282404-1/AMP
SCK12R waterproof plug: 281934-1/AMP
6. The IP indication direction is the positive direction of the current;
7. The temperature of the primary conductor shall not exceed 105°C ;
8. Incorrect wiring may cause damage to the sensor.