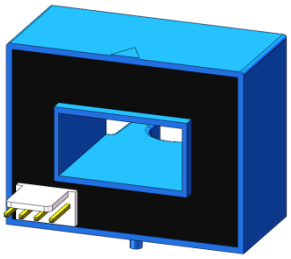
Hall effect Current Sensor
SEH3D Series



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.
- Easy to install, small in size and not occupying space.
- Designed according to UL94-V0 flame retardant rating.
- Adapt the programmable single-chip Hall IC

Performance：

- It can measure DC, AC, pulse, and various irregular waveform currents of cable conductors under isolation conditions.
- +5V operating voltage, fast response speed, zero drift, low temperature drift, high accuracy, 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 photovoltaic inverters, electric vehicle drives, 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

Technical Parameters

Model / Parameters (25℃)	SEH3D						
	50A	100A	200A	300A	400A	500A	600A
Primary Current (A)I_{PN}	50A	100A	200A	300A	400A	500A	600A
Primary Current Max. Peak Value (A) I_{PM}	±150A	±300A	±600A	±900A	±900A	±900A	±900A
Output voltage (V) V_{out} @±I_{PN}， R_L=10KΩ	2.5V±0.625V						

Electrical Data

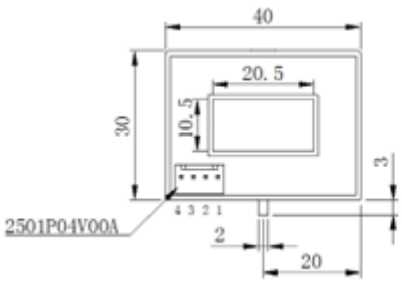
Item	Min.	Typical	Max.	Unit
Input power supply voltage range Vc (Remark 1, 2)	+4.5	+5	+5.5	V_{DC}
Current consumption Ic	-	+13	+15	mA
Output voltage Vout @I_{PN}, R_L=10KΩ， T_A= 25℃	$V_{OUT} = \frac{V_{CC}}{2} + 0.625 * \frac{V_{CC}}{5} * \frac{I_P}{I_{PN}}$			V
Reference Voltage Vref	2.500±0.020			V
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}	-	±0.5	±1	mV/℃
Output voltage temperature coefficient TCV_{out}	-	±0.08	±0.15	%/℃
Response time t_D @ 0→I_{PN}	-	3	5	us
Ambient operating temperature T_A	-40	25	105	℃
Ambient storage temperature T_s	-40	25	105	℃
Insulation withstand voltage VD@50Hz,60s		3000		V_{AC}
Unit Weight		55		g

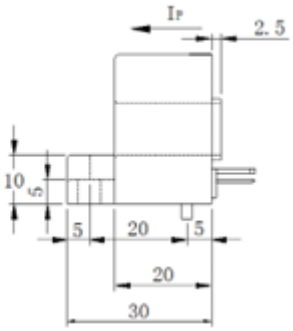
Remarks：

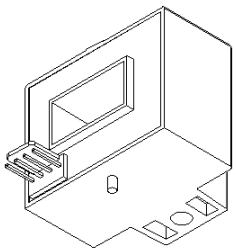
1. If VC is less than the minimum value, the measurement will be inaccurate. If VC is greater than the maximum value, it may cause permanent failure of the measuring device.

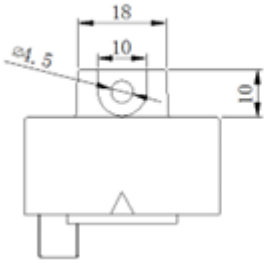
2. The zero bias voltage and output voltage are linearly related to Vc, so the accuracy of Vc should be ensured as much as possible when applying.

Dimension (in mm) & Wiring ref.:

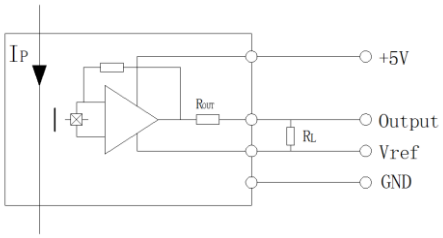








1	ref	Vref
2	M	Output
3	G	GND
4	+	+5V



Notes：

1. Size error: ±1mm;
2. Primary aperture: 20.5*10.5mm;
3. Fastening hole: ϕ4.5mm;
4. The output terminal is compatible with Molex 5045-04A;
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.