

## HS-P Series Hall Current Sensor

LI051V1/2008-EN

### 1. Features:

- ① Being able to be directly soldered on PCB, elegant outline;
- ② Based on Hall's effect and Magnetic compensation, High galvanic isolation between the primary loop being measured and secondary loop;
- ③ Being able to be used for measuring DC, AC and impulse current.
- ④ Completely sealed, strong mechanical and environmental endurance, strong dielectric strength, safe and reliable

### 2. Ambient Conditions:

- ① Ambient temperature:  $-20^{\circ}\text{C} \sim +75^{\circ}\text{C}$ ;
- ② Relative humidity:  $\leq 90\%$  at  $40^{\circ}\text{C}$ ;
- ③ Storage temperature:  $-40^{\circ}\text{C} \sim +95^{\circ}\text{C}$
- ④ Atmospheric pressure:  $860 \sim 1060\text{mbar}$   
(about  $650 \sim 800\text{mmHg}$ );

### 3. Range of Operating Frequency: $0 \sim 150\text{KHz}$ ;

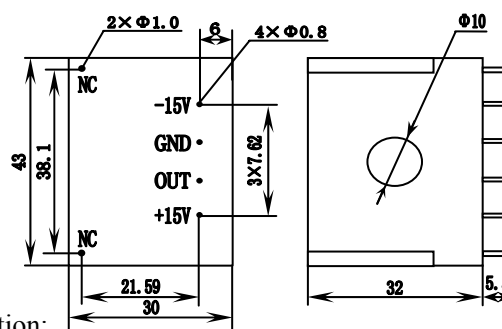
### 4. Insulation Rating: Class B ( $130^{\circ}\text{C}$ ).

### 5. Safety features:

- ① Insulation resistance:  $>1000\text{M}\Omega$  in normal condition;
- ② Insulation withstand voltages:  $3000\text{V } 50\text{Hz}/1 \text{ min}$ ;
- ③ Fire retardancy: In conformity with UL94-Vo.

### 6. Outline Drawing, Installation Dimension: (unit : mm)

(Note: NC means no connecting pin, only for fixing)



### 7. Technical Parameters:

Spec. \ Models	HS-20A-P	HS-30A-P	HS-50A-P	HS-100A-P
Rated Input Current( $I_{IN}$ )	20A	30A	50A	100A
Measuring Range	$0 \sim 30\text{A}$	$0 \sim 45\text{A}$	$0 \sim 75\text{A}$	$0 \sim 150\text{A}$
Rated Output Current( $I_{OUT}$ )	50mA	50mA	100mA	100mA
Measuring Resistor	$\leq 85 \Omega$	$\leq 80 \Omega$	$\leq 40 \Omega$	$\leq 30 \Omega$
Working Voltage	$\pm 15\text{V DC} (\pm 5\%)$			
Linearity	$\pm 0.1\%$			
Current Consumption	10mA+Output Current			
Zero Offset Current	Within $\pm 0.2\text{mA} (I_{IN} = 0)$			
Bandwidth	DC $\sim 150\text{KHz}$			
Isolation Voltage	3KV rms/50Hz/Per Minute			
Response Time	Less than $1\mu\text{S}$			
Temperature Drift	Within $\pm 0.01\%/^{\circ}\text{C}$			

### 8. Attention:

- ① In order to obtain the forward output current at the terminal of OUT, the input current should flow along the direction of arrow specified on the current sensor.
- ② Before turn on the input current, please connect the measuring resistor and turn on the DC supply voltage ( $\pm 15\text{V DC}$  and GND) first.
- ③ If the maximum input current in application is smaller as N times as the rated input current, insert N turns through the central hole to obtain the better measuring accuracy.

### 9. Typical Application:

- Static converters for DC motor drives
- AC variable speed drives and servo motor drives
- Switched Mode Power Supplies (SMPS), Uninterruptable Power Supplies(UPS)