

## AC/DC Closed Loop Hall Current Sensor CYHCS-B5V

This Hall Effect current sensor is based on closed loop compensating principle and designed with a high galvanic isolation between primary conductor and secondary circuit. It can be used for measurement of DC and AC current, pulse currents etc. The output of the transducer reflects the real wave of the current carrying conductor.

| Product Characteristics  | Applications  |
|--|---|
| <ul style="list-style-type: none"> <li>• Excellent accuracy</li> <li>• Very good linearity</li> <li>• Less power consumption</li> <li>• Current overload capability</li> <li>• Goods temperature properties</li> </ul> | <ul style="list-style-type: none"> <li>• <b>Photovoltaic equipment</b></li> <li>• General Purpose Inverters</li> <li>• AC/DC Variable Speed Drivers</li> <li>• Battery Supplied Applications</li> <li>• Uninterruptible Power Supplies (UPS)</li> <li>• Switched Mode Power Supplies</li> </ul> |

### ELECTRICAL CHARACTERISTICS

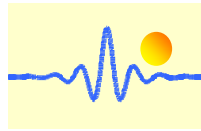
| Part number                   | CYHCS-B5V-200A     | CYHCS-B5V-300A | CYHCS-B5V-400A | CYHCS-B5V-500A | CYHCS-B5V-600A |
|-------------------------------|--------------------|----------------|----------------|----------------|----------------|
| Rated current (RMS)           | 200A               | 300A           | 400A           | 500A           | 600A           |
| Measuring range $I_P$         | 0~±300A            | 0~±450A        | 0~±600A        | 0~±750A        | 0~±900A        |
| Turns ratio 1:N               | 1:2000             | 1:3000         | 1:4000         | 1:5000         | 1:6000         |
| Secondary Internal Resistance | 13Ω                | 22Ω            | 39Ω            | 53Ω            | 75Ω            |
| Rated output voltage          | 4V±0.5%            |                |                |                |                |
| Supply voltage                | ±15VDC ±5%         |                |                |                |                |
| Galvanic isolation            | 5kV RMS/50Hz/1min, |                |                |                |                |
| Current consumption           | 20mA + $I_P/N$     |                |                |                |                |

### ACCURACY & DYNAMIC PERFORMANCE

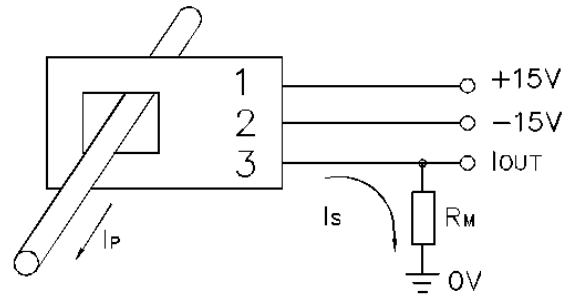
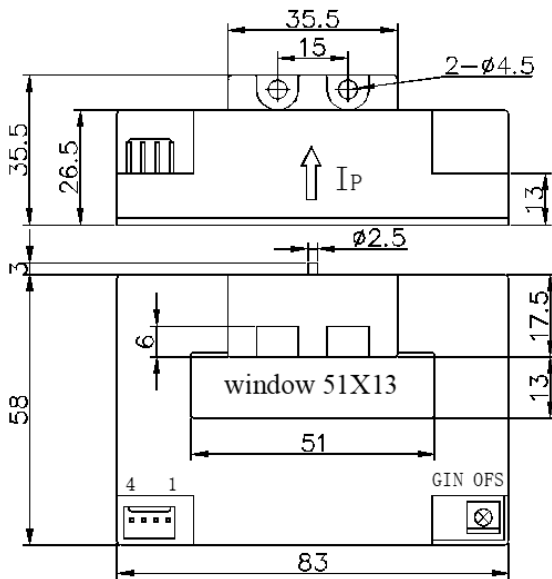
|   |                           |
|---|---------------------------|
| Zero offset voltage $T_A=25^\circ\text{C}$              | ±20mV                     |
| Magnetic zero offset voltage $I_P=0$                    | ±10mV                     |
| Thermal drift of offset voltage                         | ±0.5mV/°C (-25°C ~ +85°C) |
| Response time   | <1.0μs                    |
| Accuracy $T_A=25^\circ\text{C}$ , $V_C=\pm 15\text{V}$  | ±0.7%                     |
| Linearity $T_A=25^\circ\text{C}$ , $V_C=\pm 15\text{V}$ | ≤0.1% FS                  |
| di/dt following accuracy                                | 150A/μs                   |
| Bandwidth(-3dB)   | DC ~ 100kHz               |

### GENERAL CHARACTERISTIC

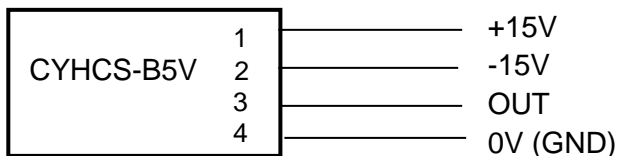
|                       |                     |
|-----------------------|---------------------|
| Operating temperature | -25°C~+85°C         |
| Storage temperature   | -40°C~+100°C        |
| Unit weight           | 160g                |
| Standard used         | Q/320115QHKJ01-2013 |



## Dimensions (mm)



- 1: +15V
- 2: -15V
- 3: Output voltage
- 4: GND
- OFS: offset adjustment
- GIN: gain adjustment



## Notes:

1. Connect the terminals of power source, output respectively and correctly, never make wrong connection.
2. Two potentiometers can be adjusted, only, if necessary, by turning slowly to the required accuracy with a small screwdriver.
3. The best accuracy can be achieved when the window is fully filled with busbar (current carrying conductor).
4. The in-phase output can be obtained when the direction of current of current carrying conductor is the same as the direction of arrow marked on the transducer