

**Open Loop Hall Effect Current Sensor CYHCT-E1**

This Hall Effect current sensor is based on open loop principle and can be used for measurement of DC currents. The output of the transducer reflects the real wave of the current carrying conductor.

| <b>Product Characteristics</b>  | <b>Applications</b>  |
|---|--|
| <ul style="list-style-type: none"> <li>• Excellent accuracy</li> <li>• Very good linearity</li> <li>• Small size</li> <li>• Light in weight</li> <li>• Less power consumption</li> <li>• Window structure</li> <li>• Electrically isolating the output of the transducer from the current carrying conductor</li> <li>• No insertion loss</li> <li>• Current overload capability</li> </ul> | <ul style="list-style-type: none"> <li>• Frequency conversion timing equipments</li> <li>• Various power supply</li> <li>• Uninterruptible power supplies (UPS)</li> <li>• Electric welding machines</li> <li>• Transformer substation</li> <li>• Numerical controlled machine tools</li> <li>• Electrolyzing and electroplating equipments</li> <li>• Electric powered locomotive</li> <li>• Microcomputer monitoring</li> <li>• Electric power network monitoring</li> </ul> |

**ELECTRICAL DATA**

| Part number      | Measuring range | Linearity range | Overload capacity |
|------------------|-----------------|-----------------|-------------------|
| CYHCT-E1-50A-XY  | 50A             | 75A             | 1000A             |
| CYHCT-E1-100A-XY | 100A            | 150A            | 2000A             |
| CYHCT-E1-200A-XY | 200A            | 300A            | 4000A             |
| CYHCT-E1-300A-XY | 300A            | 450A            | 6000A             |
| CYHCT-E1-400A-XY | 400A            | 600A            | 8000A             |
| CYHCT-E1-500A-XY | 500A            | 750A            | 10000A            |
| CYHCT-E1-600A-XY | 600A            | 900A            | 12000A            |

|                        |   |    |
|------------------------|---|----|
| Nominal output voltage | Y=1 for 0-4V, Y=2 for 0-5V                            | V  |
| Supply voltage         | X=1 for $\pm 12V \pm 5\%$ , X=2 for $\pm 15V \pm 5\%$ | V  |
| Current consumption    | $\leq 25$   | mA |
| Galvanic isolation     | 3KV RMS/50Hz/min                                      | KV |

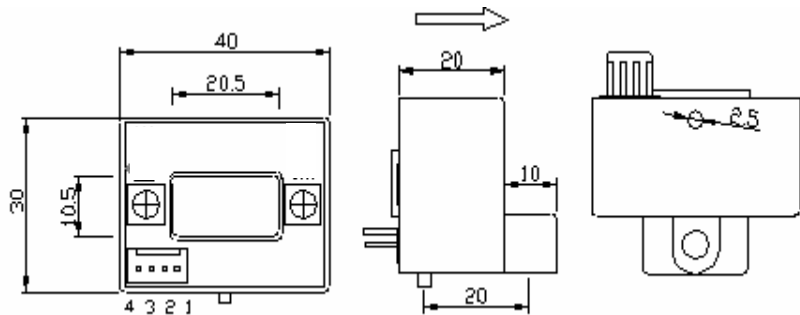
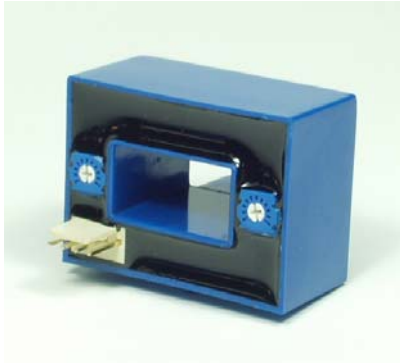
**ACCURACY DYNAMIC PERFORMANCE**

|                                 |            |                  |
|---------------------------------|------------|------------------|
| Zero offset voltage             | $\pm 20$   | mV               |
| Hysteresis error                | $\pm 10$   | mV               |
| Thermal drift of offset current | $\leq 250$ | ppm/ $^{\circ}C$ |
| Response time                   | $\leq 10$  | $\mu s$          |
| Accuracy                        | $\pm 1.0$  | %                |
| Linearity                       | $\leq 1.0$ | %FS              |

## GENERAL DATA

|                       |           |    |
|-----------------------|-----------|----|
| Operating temperature | -10 ~ +80 | °C |
| Storage temperature   | -25 ~ +85 | °C |

## DIMENSIONS (mm)

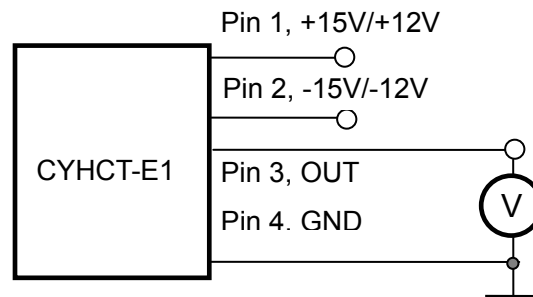


## CONNECTION

The current carrying cable must pass through the window. The phase of output is the same as that of the current passing the window in the direction of the arrow indicated on the case.

### Wiring of Terminals:

1. +15V/+12V Power Supply
2. -15V/-12V Power Supply
3. +Output
4. Ground



### Notes:

1. Connect the terminals of power source, outputs 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 bus-bar (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 case.