



H-ACDC-70 Current Sensor Board

Description

The H-ACDC-70 Current Sensor Board utilizes a linear output Hall effect transducer to allow the isolated measurement of AC or DC electrical current by measuring the magnetic field surrounding a wire as a current passes through the wire. The sensor board contains an on-board voltage regulator to power the supplied transducer with the voltage it requires.

The output of the sensor board is a voltage linearly proportional to the current present in the sensed conductor at that moment. To increase sensitivity (and subsequently lower the range) simply pass the sensed current path wire through the sensor as many times as needed to increase the gain to the desired level.

When measuring purely AC currents, put a capacitor in series with the output of the sensor board. This will decouple the DC offset voltage from the output signal leaving only an AC output that is proportional to the AC current being sensed.

Use a voltmeter or data acquisition device to read the output of the current sensor board.



Sensor Features

- Linear output
- AC or DC current sensing
- Through-hole design
- Fast response time (3 μ s)
- Output voltage isolation from input
- Minimum energy dissipation
- Maximum current limited only by conductor size
- Adjustable performance and built-in temperature compensation assures reliable operation
- Accurate, low cost sensing
- Housing: PBT polyester

Typical Applications

- Variable speed drives
- Overcurrent protection
- Ground fault detectors
- Current feedback control systems
- Robotics
- UPS and telecommunication power supplies
- Welding power supplies
- Automotive - Battery management systems
- Wattmeters
- Solar, wind, hydroelectric and other power generation/usage monitoring

Table 1. Current Sensor Specifications

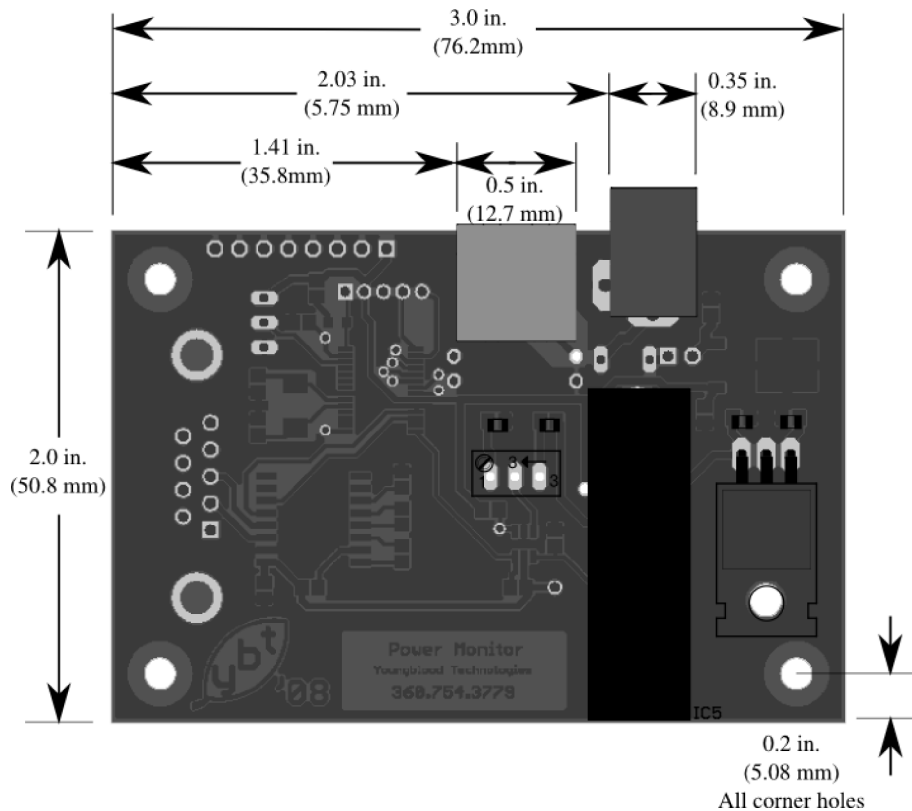
Product Type	Inductive Analog Current Sensor
Sensed Current Type	AC or DC
Sensed Current Range ^[a]	$\pm 72 \text{ Amps} \div N$
Output Type	Voltage
Sensitivity ^[b]	$32.7 \text{ mV} \times N \pm 3.0 \text{ mV} \times N$
Supply Voltage	11.0 Vdc to 30.0 Vdc
Supply Current	13mA (20mA Max)

Offset Voltage ^[c]	4 Volts $\pm 2\%$
Response Time	3 μ s
Dimensions	2.0 x 3.0 inches (raw board)
Operating Temperature	-25 °C to 85 °C [-13 °F to 185 °F]
Storage Temperature	-40 °C to 100°C [-40 °F to 212 °F]

^[a,b] N denotes number of times the wire is passed through the sensor element.

^[c] When monitoring purely AC current with zero DC component, a capacitor can be inserted in series with the output of the current sensor. The capacitor will block out the effect of the temperature variation of the offset voltage which increases the accuracy of the device.

Dimensions



Technical Support

If you require more information or assistance with the setup or usage of this device, please visit our website at <http://measure-current.com>. There you will find more documentation regarding the operation of this sensor board as well as other great ideas.

If you need to contact our support team:
 write support @ wattsview.com or
 call 480-266-4444 (M-F 8AM to 5PM Pacific Time).