



The Si85xx products are extremely low loss, adding less than 1.3 mΩ of series resistance and less than 2 nH series inductance in the sensing path at 25 °C. Current-sensing terminals are isolated from the other package pins to a maximum voltage of 1,000 VDC. The Si85xx AC Current Sensor family of products mimics the functionality of a traditional

current transformer (CT) circuit with burden resistor, diode and output filter, but offers enhanced performance and added capabilities. These devices use inductive current sensing and onboard signal conditioning electronics to generate a 2 V full-scale output signal proportional to the ac current flowing from the IIN to the IOUT terminals.

The Si85xx Evaluation Board demonstrates the Si8512 AC Current Sensor. The kit includes an assembled and tested evaluation board and documentation.

## Features

- Single-chip ac current sensor/conditioner
- Low loss: Less than 1.3 mΩ primary series resistance; less than 2 nH primary inductance at 25 °C
- Leading-edge noise suppression eliminates need for leading-edge blanking
- "Ping-Pong" output version allows one Si85xx to replace two current transformers in full-bridge applications
- 5, 10 and 20 A full-scale versions
- FAULT output helps safeguard operation
- 1,000 VDC isolation
- Accurate to ±5% of measurement
- Large 2 VPP output pins signal at full scale
- High-side or low-side current sensing
- -40 to 125 °C operating range (Si85x4/5/6)
- Small 4x4x1 mm package
- Low cost

## Current Sensor Block Diagram

> See next page



### Current Sensor Block Diagram

