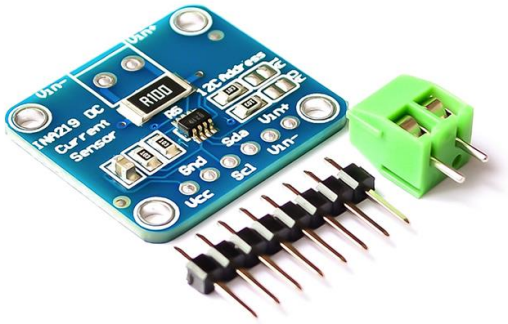
INA219 I2C Bi-directional Current / Power Monitor Sensor Module



Description:

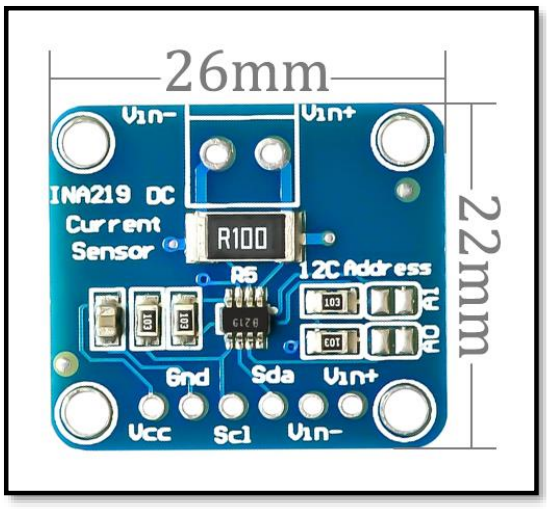
The MCU-219 module is a zero-drift, bidirectional current/power monitoring integrated circuit (IC) with an I2C interface that further expands TI's energy-efficient electronics portfolio. With the industry's highest accuracy and the smallest size, the INA219 not only monitors the voltage drop across the shunt resistor, senses the shunt supply voltage, but also calculates the power supply. Available in a SOT23 package, the device provides a small, low-cost solution for server, notebook, power, battery management, and digital current sensing in automotive and telecom equipment.

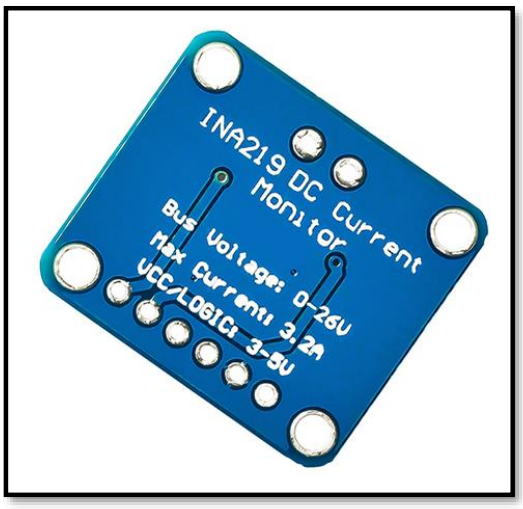
The INA219 achieves a 1% maximum error accuracy over the -40°C to +85°C temperature range with a maximum offset of 100 uV. The product's high precision combined with 12-bit resolution helps customers minimize the voltage drop across the shunt resistors, minimizing power loss and power consumption and saving board space. The device senses a bus voltage range of 0 V to +26 V.

Features:

- The programmable calibration register reads the current directly in amps and reads the power in watts.
- Up to 128 samples can be averaged for filtering in noisy environments.
- The I2C interface has a timeout setting that not only avoids bus lock, but also provides a high-speed mode that meets communication requirements of up to 3.4 MHz.
- All features of the INA219 support software programmable.
- It operates from a single power supply between +3.0 and +5.5V.

More Detailed Photos:





Made in China