

Description

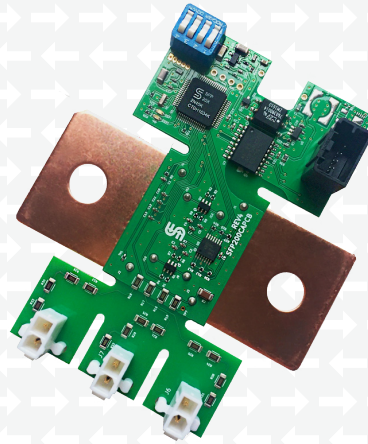
The Sendyne SFP200MOD is a shunt-based, automotive grade precision module capable of measuring currents from mA up to 600 A continuous. The module incorporates Sendyne's SFP200 IC with the Sendyne SFP 18 $\mu\Omega$ shunt, and achieves an accuracy of better than $\pm 1.0\%$ (typically $\pm 0.5\%$) over the entire operating temperature range of $-40\text{ }^\circ\text{C}$ to $+125\text{ }^\circ\text{C}$.

The module simultaneously measures bi-directional DC current through the shunt and three high voltage channels (800 V nominal, 1000 V / channel max), as well as providing separate charge, discharge and total Coulomb output. The module is fully isolated and capable of attachment onto either the high side or low side of a battery.

The module can be powered from a voltage supply rail of nominal +5 V or +5 V to +53 V. The module automatically compensates for the shunts varying resistance relative to temperature. With the exception of connectors, all components on the module are AEC-Q100 compliant. The module is an implementation of the SFP200 IC reference design. Communications are achieved via an isolated CAN 2.0B interface (500 kbaud).

Applications

- Battery monitoring for automotive applications
- Grid energy storage
- Home energy storage



Features

- Achieves better than $\pm 1.0\%$ (typically $\pm 0.5\%$) accuracy for current measurement
- Measures three high-voltage potentials (800 V nominal, 1000 V / channel max)
- Resolves currents from mA to 1250 A
- Continuous current 600 A
- Peak current 1250 A for 220 s
- Communications via an isolated CAN2.0B interface (500 kbaud)
- Automotive temperature range $-40\text{ }^\circ\text{C}$ to $+125\text{ }^\circ\text{C}$
- Low power consumption
- Isolated front end for “high” or “low” side current sensing and attenuation of system-induced noise
- Utilizes Sendyne’s patented zero offset functionality
- Automatically compensates for the shunt’s varying resistance relative to temperature (Gain error)
- Built-in calibration for voltage measurements
- Separate Charge, Discharge, and Total Coulomb counters
- All components except connectors are AEC-Q100 compliant
- Implementation of SFP200 IC reference design

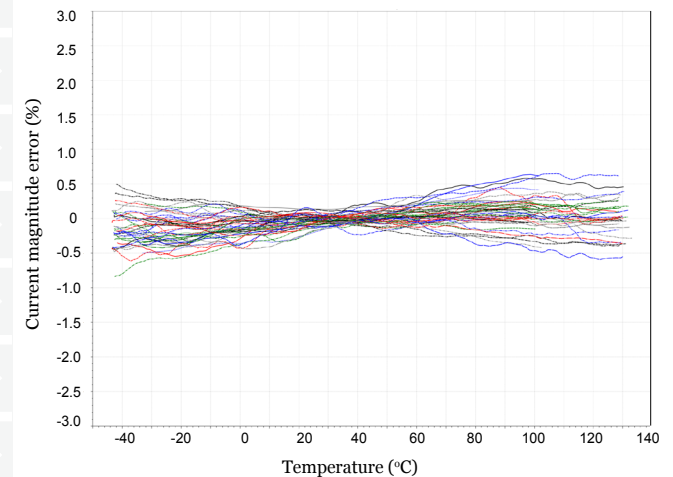
Sendyne®

Sendyne® Sensing Products Family

SFP200MOD

*Automotive grade,
precision current and high
voltage measurement
module, operating over
the entire operating
range of $-40\text{ }^\circ\text{C}$ to $+125\text{ }^\circ\text{C}$*

*Sendyne® SFP200MOD measured performance data
for current magnitude error ($-40\text{ }^\circ\text{C}$ to $125\text{ }^\circ\text{C}$)*



Ordering Information

Part Number	Description
SFP200CA-MOD-MP1	SFP200MOD module with +5 V power supply
SFP200CA-MOD-MP2	SFP200MOD module with +5 V to +53 V power supply
SFP200KIT-MP1	SFP200MOD module with +5 V power supply, CAN to USB protocol converter, Windows software and cable
SFP200KIT-MP2	SFP200MOD module with +5 V to +53 V power supply, CAN to USB protocol converter, Windows software and cable

Product Documentation

SFP200MOD Datasheet

Detailed description of SFP200MOD functionality; operational, technical and electrical specifications; connector information & mechanical specifications.

CAN2.0B Protocol Document

Detailed description of CAN2.0B protocol registers, message frames, register map and data format and examples.

Packaging

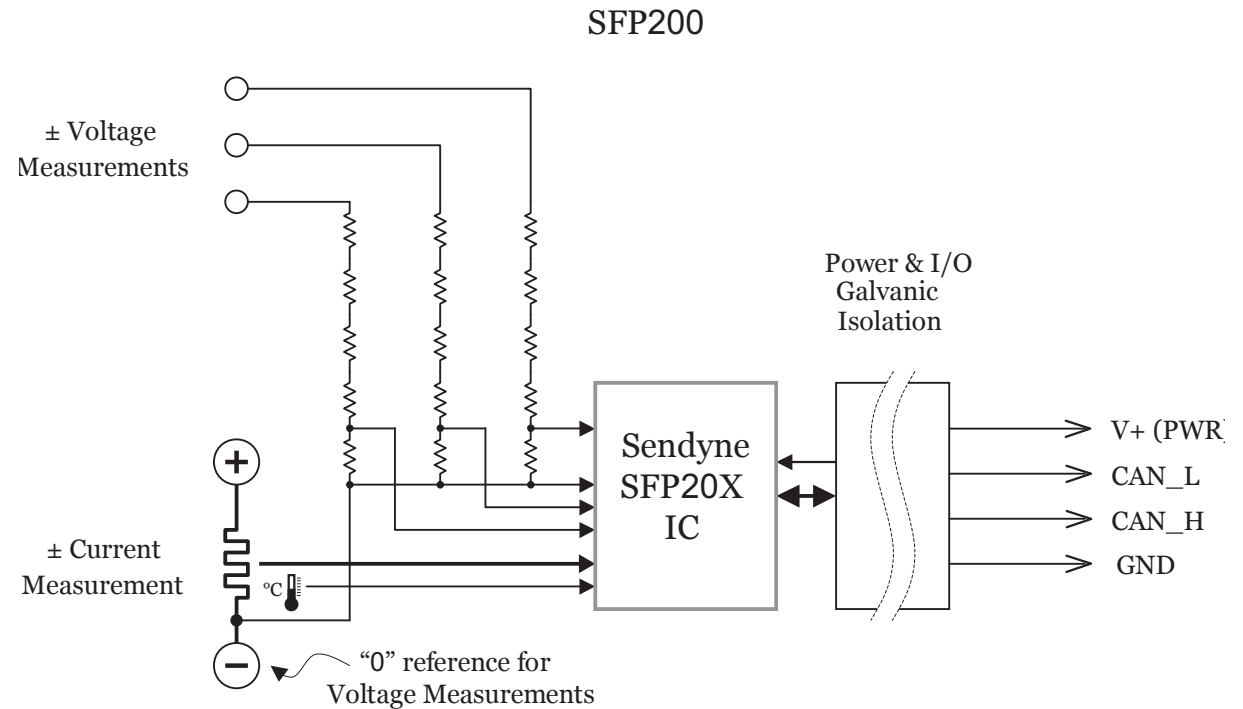
Assembled circuit board module.

Kit includes CAN to USB protocol converter, Windows software and cable.

Contact

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Sendyne SFP200MOD Block Diagram



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