

SMART CHARGING

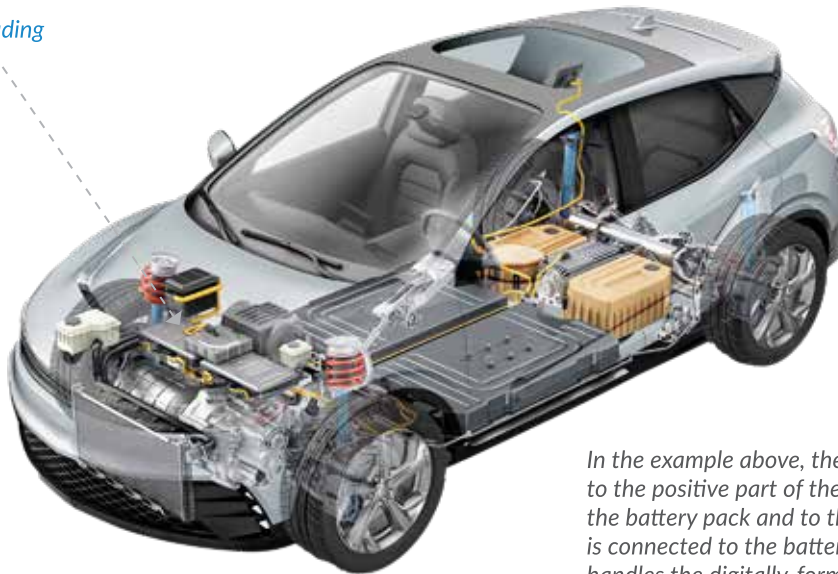
SH Series

SH20000F8536 and SH8000M6918 current sensors are current sensing modules which can be used to measure bidirectional DC current. The sensor design is based on low-TCR shunt, adopts 16-bit ADC, M0-architecture MCU core and communicates through CAN2.0 A/B protocol.

Highlights

- High accuracy
- Low power consumption
- Wide operating temperature range and stability
- Excellent response speed
- Anti-interference ability

SH Series are used in high current applications including the automotive industry.



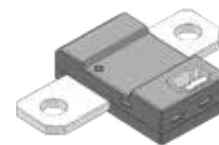
In the example above, the Smart Shunt connects to the positive part of the high-voltage electrode of the battery pack and to the CAN interface which is connected to the battery management unit that handles the digitally-formatted current data readings.

SH20000F8536



Resistance: 25, 50uΩ •
Continuous Current: 600A •

SH8000M6918



Resistance: 50, 100uΩ •
Continuous Current: 350A •

Features

- Current Measurement Range: $\pm 20000A$
- Overcurrent: $\pm 1800A @ 15s$; $\pm 22400A @ 50ms$
- Measurement Accuracy: $\pm 0.1\%$
- Current Offset Error: $\leq \pm 30mA$
- Supply Voltage: 6V – 18V
- Operating Temp. Range: $-40^{\circ}C \sim +105^{\circ}C$
- Storage Temp. Range: $-40^{\circ}C \sim +125^{\circ}C$
- Power Consumption: $\leq 384mW @ 12VDC$

Features

- Current Measurement Range: $\pm 8000A$
- Overcurrent: $\pm 600A @ 15s$; $\pm 1400A @ 10ms$
- Measurement Accuracy: $\pm 0.5\%$
- Current Offset Error: $\leq \pm 60mA$
- Supply Voltage: 6V – 18V
- Operating Temp. Range: $-40^{\circ}C \sim +105^{\circ}C$
- Storage Temp. Range: $-40^{\circ}C \sim +125^{\circ}C$
- Power Consumption: $\leq 216mW @ 12VDC$

Benefits

Accurate DC current monitoring is critical in increasing efficiency, reducing operational costs and contributing to ecological sustainability in high power applications. The ability to monitor current values, functions and processes in real time facilitates the management of electricity consumption costs, energy wastage and enables manufacturers to adhere to environmental guidelines.



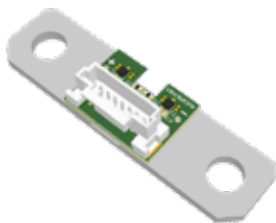
Applications

- EV car battery charging and monitoring
- Electric truck manufacturing
- Hydrogen fuel cells for cars
- Electric bus
- Uninterruptible Power Supply Systems
- Battery-powered trains
- Motor control for current limitation



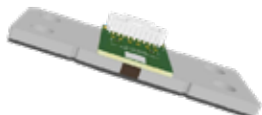
SHUNT BASED CURRENT SENSING WITH PCB

6918PCBSMB100



- Resistance: $100\mu\Omega$
- Continuous Operating Current: $\pm 350A$

8436PCBSMP025



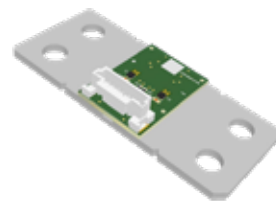
- Resistance: $25\mu\Omega$
- Continuous Operating Current: $\pm 800A$

8518PCBSMA050



- Resistance: $50\mu\Omega$
- Continuous Operating Current: $\pm 350A$

8536PCBSMP050



- Resistance: $50\mu\Omega$
- Continuous Operating Current: $\pm 600A$

Features

- High Accuracy Current Measurement Connector
- Horizontal 4, 9 PIN Connector
- Applicable to High Pulse
- Current Real-Time Temperature Measurement
- Low TCR, Low Inductance, Low Thermal EMF
- Excellent Long-Term Stability

Applications

- Automotive current monitors
- Battery management systems
- Uninterruptible Power Supply Systems
- EV charging stations
- Motor control
- Electric motorcycles
- Over current protection
- Power Distribution Unit (PDU) current measurement
- Fuel cells