Description
The Sendyne SIM100MOD is the first high voltage isolation monitoring device for EV/HEVs capable of operating correctly even when the battery is active, and experiencing large voltage variations.

The SIM100MOD continuously monitors the isolation resistance between a vehicle’s IT (Isolated Terra) power system and chassis for deterioration of insulation and potentially dangerous levels of leakage current. The SIM100MOD detects not only resistive leakages but also capacitively stored energy that could be harmful to human operators.

Due to a proprietary, patented and patent-pending advanced algorithm, the module is capable of detecting all sources of leakage, including multiple, simultaneous symmetrical and asymmetrical faults, as well as resistive paths between the chassis and points in the battery with the same potential as the chassis. In the case of an insulation fault, the unit identifies the relative position of the fault in relation to the battery’s terminals.

Battery-connected $V_{x1}$ (Vp) and $V_{x2}$ (Vn) voltage inputs can measure ±1500 V in reference to Chassis (0 V). Communications are achieved via an isolated CAN 2.0B interface (250 or 500 kbit/s). Power supply input voltage range is 5 V to 53 V, and the unit operates in a wide temperature range of −40 °C to +105 °C.

Applications
- Monitoring HEV and EV power systems
- DC Charging stations
- Battery packs

Features
- Automotive rated
- Isolation monitoring uncertainty ±5 %
- Isolated CAN2.0B interface (250 or 500 kbit/s)
- Reports battery voltage
- Measures voltage for each battery terminal to chassis
- Measures and reports value of capacitance from each battery terminal to chassis
- Measures and reports modeled leakage resistance per model adapted by safety standards
- Calculates and reports energy stored by total capacitance between battery and chassis
- Reports calculated isolation resistance in Ω/V
- Continuously measures voltage lines to battery; reports inadequate connections
- Continuously monitors connection to chassis; reports inadequate connections
- Built-in galvanically isolated and intrinsically leakage-safe excitation source
## Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SIM100MOD-XXX</td>
<td>SIM100MOD module</td>
</tr>
<tr>
<td>SIM100KIT-XXX</td>
<td>SIM100MOD module, CAN to USB protocol converter for PC communications, Windows software and cables</td>
</tr>
</tbody>
</table>

### CAN bus
- **A** - 500 kbit/s
- **B** - 250 kbit/s
- **L** - 100 V
- **M** - 960 V
- **N** - 1500 V

### Voltage Connectors & CAN termination
- **A** - All connectors, termination
- **B** - All connectors, no termination
- **C** - No connectors, termination
- **D** - No connectors, no termination

## Product Documentation

- **SIM100MOD Datasheet**
- **SIM100 CAN2.0B Protocol Document**
- **SIM100MOD Safety Manual**

## Contact

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