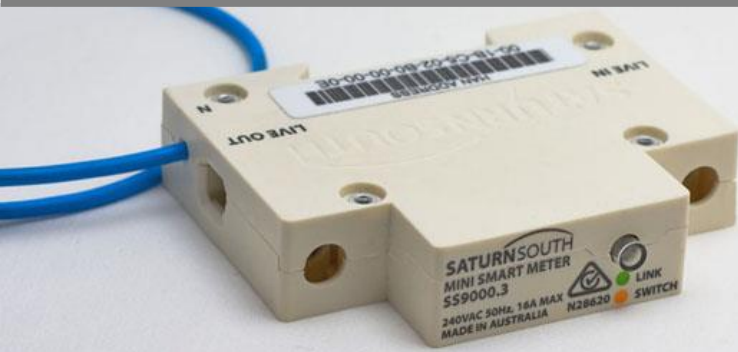


# Mini Smart Meter

## SS9000



## Product Brief

### Ubiquitous Measurement and Control

The SS9000 Mini Smart Meter is a compact power metering and load switching device that can be used to monitor and control individual electrical circuits. Designed to sit on a standard switchboard DIN rail, the SS9000 has the same form factor as a standard Miniature Circuit Breaker.

The SS9000 Mini Smart Meter is suitable for a range of applications including sub-metering, distributed demand management, electric vehicle charge monitoring, site automation, and integration of renewable generation sources into electrical networks.

The SS9000 Mini Smart Meter is designed to meter and switch loads up to 16A at 240VAC. Load switching is performed by an integrated relay rated for more than 50000 switch cycles at maximum load.<sup>[1]</sup>

Designed to function in all major electrical networks, the Mini Smart Meter boasts high measurement accuracy (Class 0.5) with a customizable reporting frequency of up to 1Hz and powerful on-board averaging and accumulation capabilities. Import/export energy accumulations and true signed power measurements make the SS9000 the ideal choice for monitoring renewable generation sources and energy storage devices.

High-resolution waveform sampling features provide a unique insight into the behavior and condition of monitored loads, yielding detailed information for load profiling and classification purposes.

Once installed, the Mini Smart Meter can receive important software updates over the network, reducing the cost of network maintenance and guaranteeing an up-to-date feature set for all devices in the field.

The SS9000 Mini Smart Meter communicates to other Saturn Energy devices using the ZigBee communications standard in the 2.4GHz ISM band. All wireless communications to and from the device are secured with AES-128 encryption using standards based technologies to ensure privacy and data integrity.

### Applications

- Energy Efficiency
- Sub-metering
- Demand Management
- Network Support
- Frequency and Voltage Control
- EV Charge Management
- Building Automation
- Load Classification

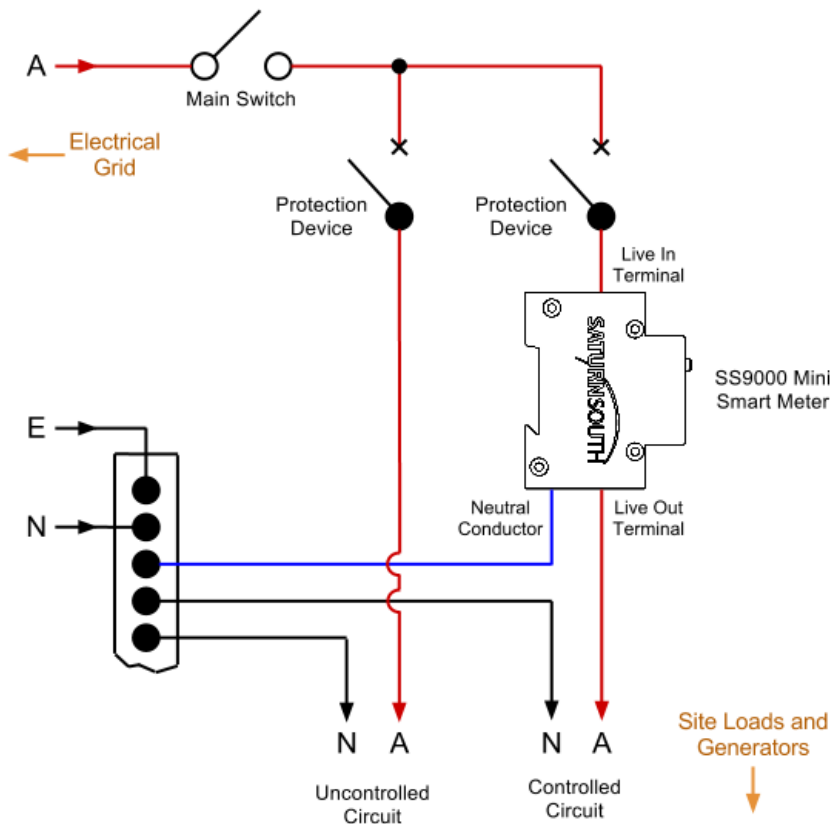
### Features

- Detailed metrics (RMS Voltage, RMS Current, Power Factor, Frequency, Accumulated Energy Import and Export)
- Compact 1U DIN mount package
- ZigBee Home Automation
- Front panel button for manual activation and opt-out of dispatch events
- Over-the-air software upgrading capability
- Supplied with 60cm neutral cable
- 4096Hz waveform sampling and reporting for voltage and current
- Co-branding options available

## Reportable Metrics

Attribute Name	Unit
Accumulated Energy Active Import	Wh
Accumulated Energy Reactive Import	varh
Accumulated Energy Active Export	Wh
Accumulated Energy Reactive Export	varh
Voltage RMS	V
Current RMS	A
Power Active	W
Power Reactive	var
Frequency	Hz
Temperature	°C
Power Factor	-

## Wiring Diagram for Typical Switchboard Installation



Ordering Code: SS9000.4.0

## About Saturn South

Saturn South is an electronics manufacturer specializing in circuit and appliance-level switching and metering solutions.

Based in Tasmania, Australia, Saturn South works closely with its Industry and Government Partners to develop energy management products for the national and global market.

Visit us at [www.saturnsouth.com](http://www.saturnsouth.com).

## Technical Specifications

- Operational Voltage Range: 70 – 240VAC, 50/60Hz
- Internal Power Consumption: Less than 1W
- ZigBee (IEEE 802.15.4) Radio in the 2.4000-2.4835 GHz unlicensed ISM band
- 93dBm receiver sensitivity
- 4.5dBm transmit power
- Tested range of 150m+ in free space
- AES-128 Encryption
- Can switch inductive loads up to 16A @ 240VAC
- Mass: 105g
- Zero-cross switching for prolonged life
- Waveform sampling and reporting capability at up to 16bit resolution, 4096s/s
- Internal switching components rated for more than 50000 switching operations.<sup>[1]</sup>

[1] Assuming a 16A load at 240VAC, PF = 1.0

## Standards

- AS/NZS 3100
- AS/NZS 61000.6.3
- AS/NZS 4268
- Certificate of Suitability
- C-Tick

## Availability

- Available Now