

Smappee Infinity

Introducing the next revolution
in smart energy technology.



Whilst every effort has been made to ensure the accuracy of this specification, we cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

For pricing or any further information, please contact Omni Instruments Ltd.



Measurement and data acquisition solutions

Contact Details:
Tel: +44 1382 443000
Email: info@omni.uk.com

Website: www.omniinstruments.co.uk

Mailing Address: Unit 1, 14 Nobel Road,
Wester Gourdie Industrial Estate,
Dundee, DD2 4UH.

Smappee, the world's smartest energy management system.

Smappee Infinity provides Energy Service Companies with the most comprehensive, future-proof, smart energy offering on the market that can be tailored to suit your needs. The modular and global solution delivers increased energy efficiency thanks to detailed, real-time energy consumption data with not just one, but three methods for submetering electricity. Add solar, gas and water for a complete overview of all your energy flows at a glance. Smappee Infinity is easy to install and to integrate with IoT services, and features optimised self-consumption and smart charging, delivering exceptional value both for your residential and business customers.



Fast, accurate energy data tailored to your needs.

Smappee collects real-time production and consumption data down to the appliance level. By combining traditional submetering clamps, our smart Smappee Switch and our patented appliance recognition technology, Smappee offers the most complete and comprehensive set of submetering options available on the market. Not only does this provide a large amount of highly valuable, actionable data but providers and users can also access this data in multiple ways. Smappee incorporates an API for integration with HEMS/BMS systems, a flexible professional dashboard for in-depth analyses, and a user-friendly app for consumers.

Fast, low-cost installation.

Thanks to its quick and easy installation and low maintenance costs, Smappee Infinity's total cost of ownership compares favourably with other competing solutions. This compact plug-and-play system is robust and reliable, with hubs connecting current clamps (CTs) or Rogowski coils. That way you spend less time on the setup and more time on saving energy for you and your customer.

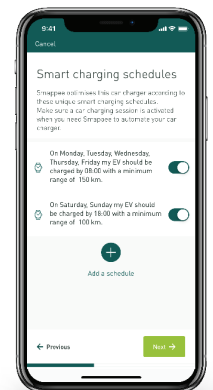


Modular and comprehensive.

We know every customer is different. Which is why we've developed Smappee Infinity with flexibility in mind. Our comprehensive offering allows you to select only the features and services you need in order to deliver a solution that is tailored to your customer's needs. Do you need more control, data or services over time? No problem! Thanks to the modularity of Smappee Infinity, you can always build on the existing solution to meet your changing needs.

IoT-enabled control and dynamic load balancing.

Smappee Infinity can easily pair with IoT products and platforms such as Nest, Amazon Alexa, Home Assistant and OpenHab and uses the MQTT and EEBUS communication protocols for even more integrations. Or simply add a Smappee Switch or Output module to manage any appliance. Discover pre-defined automations for self-consumption, smart EV charging and overload protection. Our dynamic load balancing technology directs energy to the HVAC and home battery to provide additional energy efficiency and peace of mind for you and your customer.



The ingenuity of Smappee technology.



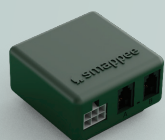
Smappee Infinity is an all-in-one energy management system that offers detailed real-time and historical energy data as well as IoT-enabled control and dynamic load balancing. It monitors solar PV, home storage, individual or groups of appliances and complex energy consumers such as heat pumps, air conditioning or electric cars. In addition, it offers intelligent automations that enhance security, comfort and cost savings. The system is future-proof and can adapt to any scenario, allowing over-the-air updates and extra modules to be added at any time.

Smappee Infinity is a global solution that is compatible with all inverters and almost any electrical installation worldwide. Thanks to the compact hardware, it fits easily into almost any distribution panel. Once the system is up and running, maintenance requires little effort, resulting in a low TCO. The two-step installation process consists of the physical installation in the distribution panel followed by configuration via the installation wizard in the Smappee App. The Smappee Dashboard also allows further configuration. Preparing the set up at your premises prior to carrying out the physical installation for your customer, saves valuable time.

A modular solution for every energy need.

The strength of the Smappee Infinity system lies in its modularity, allowing you to mix and match according to your energy needs. Depending on the set-up, Smappee Infinity will gather energy data, communicate that data to a data platform and, if desired, control the energy flows in the building.

Power supply

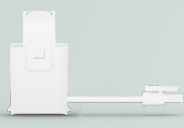


Smappee Power Box

Data gathering



Smappee CT Hub



Split core CTs
50 A - 400 A



Rogowski coil
400 A - 10.000 A



Smappee Solid
Core 3-Phase CT



Smappee Input
module



Smappee
Gas & Water

Communication



Smappee Genius



Smappee Wi-Fi Connect

Control



Smappee Switch



Smappee Output
module

1

Smappee Power Box measures the line voltage of the connected phases, the currents from the CTs and calculates active/reactive power and other energy and power quality data.

2

Monitor a single appliance or group accurately with the Smappee CT Hub. It gathers energy data by measuring different currents with up to 4 CTs or Rogowski Coils. Use the Smappee Solid Core 3-phase CT as a simple and cost-efficient alternative. Or add a Smappee Input module to count pulses or monitor input status with up to 4 digital inputs. Add Smappee Gas and Water for detailed data on gas and water consumption.

3

The Smappee Genius is the gateway between the Smappee modules and the Smappee Cloud and ensures secure data storage. It also interacts with Smappee's controlling modules and 3rd party components, enabling automations and dynamic load balancing. Use the Smappee Wi-Fi Connect as a cost-efficient way to add communication to the Smappee Infinity.

4

Automatically manage energy supply and demand in the best possible way by adding smart control to the Smappee Infinity. Control (a group of) appliances remotely with the Smappee Switch or Smappee Output module. The Output module can also be used as a control signal for smart devices. On top of that, you can integrate third party IoT products via the Smappee App. Finally, set up rules to connect and control these smart devices with the Smappee Automations in the App.

Tailored data access and visualisation.

Smappee offers a full range of interface options, with data visualisation tailored to your needs.



Dashboard

This comprehensive web-based tool can be used for graphic and numerical analysis, to track data on a periodic basis (regular intervals: 5-minute, hourly, daily, monthly and yearly). Add the 'Cards' to visualise the data for each site according to your preference, easily compare results and export the required data as a .csv file, using the download button. The dashboard includes a first-line support functionality, allowing you to do the configuration and help your customers remotely.

Mobile App

Our user-friendly consumer app is available both for iOS and Android. It visualises real-time energy data and graphs with historical overviews by day, week, month and year. Consumers can detect always-on power and energy guzzlers while learning about their energy consumption and how much it is costing them. The app also allows them to control connected appliances and to set automations that optimise energy efficiency. The app offers different levels of branding and customised messaging options for our partners.

API

Our well-documented API facilitates easy integration with other HEMS/BMS systems. This allows Energy Service Companies to combine Smappee data with other data, so creating added value for their business and their customers.



Gateway to a world of IoT solutions.



Interconnectivity for optimised energy efficiency.

Smappee is continuously expanding its ecosystem with compatible third party products and services. Smappee uses Ethernet, Wi-Fi, 2G/4G, IP-based connections and standards such as Modbus RTU and IoT communication protocols MQTT and EEBUS to facilitate speedy development of new use cases and speed up integrations. On the other hand, Smappee works with third parties to integrate its technology in their products or services such as EV charging stations, smart thermostats, home assistants or home batteries.

Infinite possibilities.



Transparent energy use and costs.

Smappee offers users insights into energy consumption and costs, down to the appliance level, so avoiding surprises on energy bills, including where a heat pump, AC or EV charger is in use.



Dynamic load balancing.

Smappee automatically manages energy flows in the most efficient way using integrated third party systems, the Smappee Switch, the Output module and automations.



Overload protection.

Smappee prevents fuses from blowing by managing energy flows in such a way that less power goes to e.g. EV chargers when users start cooking or when a production line is running at full capacity.



Optimised self-consumption.

Instead of returning excess energy to the grid, Smappee's dynamic load balancing technology ensures that 100% of the generated solar power is used by sending it to smart devices, HVAC or batteries.



Smart EV charging.

Smappee ensures you have the charge you need, when you need it. Benefit from autonomous overload protection, optimised self-consumption and tailored smart EV schedules. With Smappee, commercial buildings can also install more charging stations with their existing infrastructure.



Add intelligence to smart meters.

Smappee's smart meter module reads the smart meter and offers consumers valuable insights into their energy consumption allowing them to save energy and money. Utilities can custom-create the Smart meter module, app, dashboard and packaging.



Grid monitoring.

Use Smappee to monitor the energy flows in the transformer cabins. Based on Smappee's insights, energy flows can be shifted to different phases or a battery or larger transformer can be installed to restore the balance and thus safeguard the grid's proper functioning.

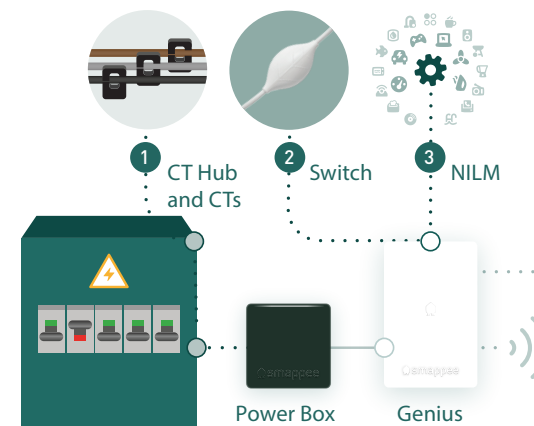
Fully integrated development.

Smappee is your one-stop-shop, with a suite of vertically- and horizontally-integrated solutions. Smappee monitors not just consumption but also production, providing granular real-time, historical and projected data down to the appliance level. In addition to a full range of data options, we also help facilitate control over appliances to further optimise energy usage. If you want a complete vertically-integrated solution, we can help with hardware design, embedded systems, UI/UX, interoperability, artificial intelligence and cloud connectivity.



Complete submetering.

Smappee offers the most complete and comprehensive set of submetering options available on the market allowing your company to lock in the level of accuracy, installation requirements and budget that best fits your specific needs.



- 1 Either submeter right at the source by attaching current clamps to the distribution panel. This way of submetering offers the most accurate results.
- 2 Or, use the Smappee Switch, our genuinely intelligent smart plug which is also a single phase submeter when connecting it between the power outlet and the appliance or power strip.
- 3 Or, use Smappee's patented NILM (Non-Intrusive Load Monitoring) as a cost-efficient way to detect appliances and their estimated consumption.

Dynamic load balancing for optimised self-consumption and overload protection - all in one single system.



- Suitable for any building, residential and commercial.
- Smart EV charging with overload protection.
- Verify the impact of energy-saving measures.
- Interoperable with IoT products and services.
- Easy installation, low maintenance, over-the-air updates.
- Tailored dashboard with real-time and historical data.
- Protects your data and your privacy.
- Modular, future-proof.
- CE/UL certified and IEC 62053-21 active E class 1 compliant.

Whilst every effort has been made to ensure the accuracy of this specification, we cannot accept responsibility for damage, injury, loss or expense from errors or omissions. In the interest of technical improvement, this specification may be altered without notice.

For pricing or any further information, please contact Omni Instruments Ltd.



Measurement and data acquisition solutions

Contact Details:
Tel: +44 1382 443000
Email: info@omni.uk.com

Website: www.omniinstruments.co.uk

Mailing Address: Unit 1, 14 Nobel Road,
Wester Gourdie Industrial Estate,
Dundee, DD2 4UH.

