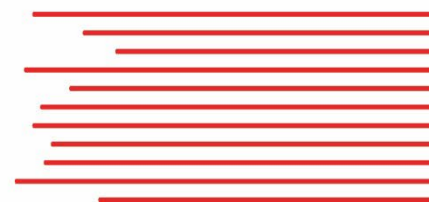


SMARTENERGY

Configuration Guide





SMARTENERGY – SACI

Configuration guide

Index

Configuration guide.....	1
Introduction	2
Displays	4
Space - Consumption.....	4
Space - Tariff.....	5
Space - Measurements.....	6
Devices	8
Device - Consumption	8
Equipment - Tariff	9
Equipment - Measurement	9
Additional information	10
Notifications, Permissions and Settings	10
Notifications	10
Permissions	12
Configuration.....	12



Introduction

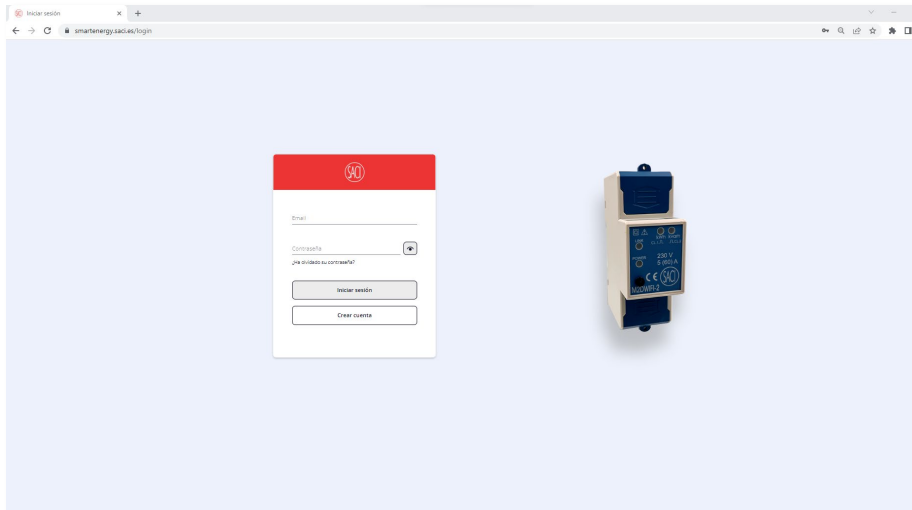
SACI SmartEnergy is a software platform that allows the monitoring of electrical installations thanks to the integration of M2DWIFI-2 devices in the electrical panel.

The following is a quick guide to the different screens in the software and their functions.

The web access to the system is <https://smartenergy.saci.es/>

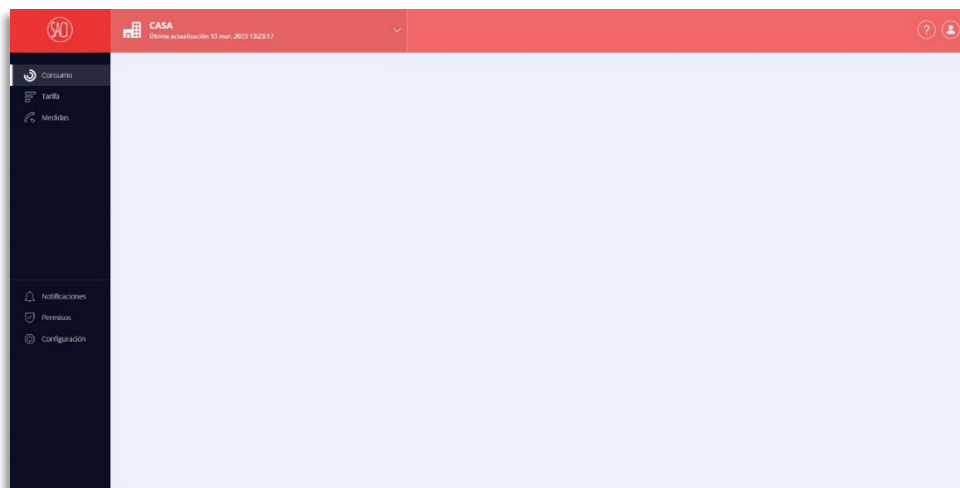
The first time you access it, you will need to create an account in order to access the system, following the steps indicated.

The account will be validated by email.



Platform access

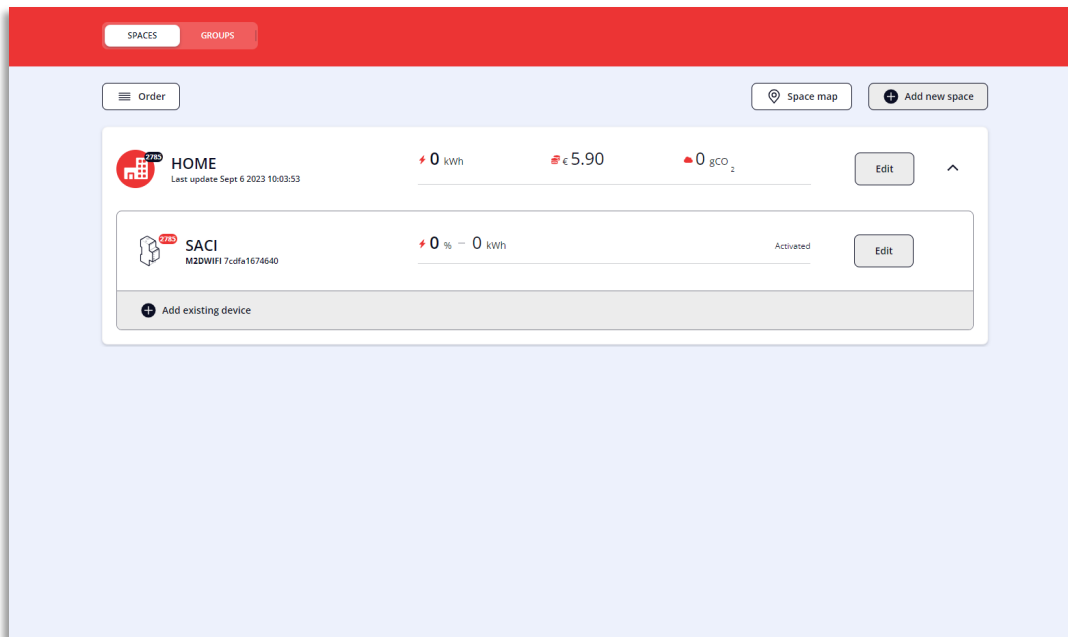
Once logged in, the first Space must be configured. Each Space consists of 1 or more M2DWIFI-2 devices.



First screen



Note: The data provided by the Space group is different from the data displayed for the devices within the Space. For example, the Cost info applies to the whole Space, but not to each individual device.



Display of the elements already configured

The following parameters can be viewed on this screen:

- **Space**
 - kWh consumed in the current billing period.
 - Estimated cost of the bill for the current billing period.
 - Grams of CO2 emitted into the atmosphere during the current billing period.

- **Device**
 - Percentage of energy consumption in relation to the defined target.
 - kWh consumed in the current billing period.

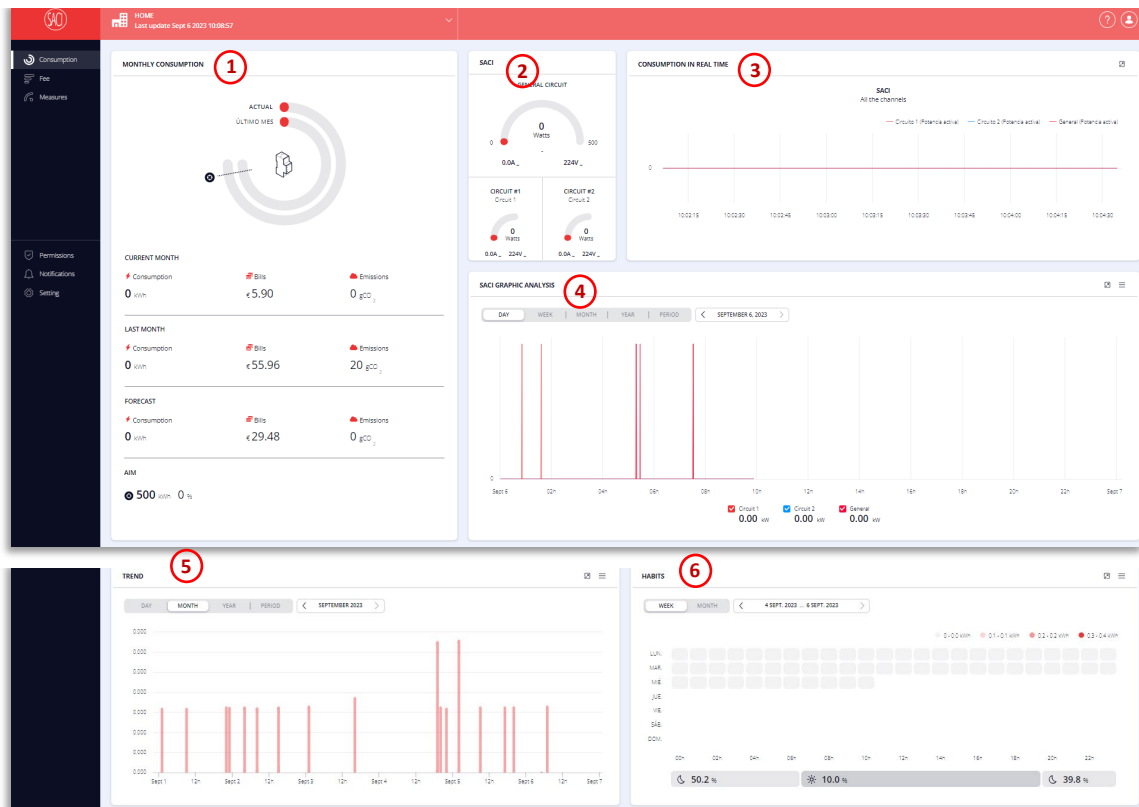


Displays

Once you have configured Spaces and Devices, you will see the following screens:

Space - Consumption

1. **Monthly consumption.** Shows the parameters of the current and previous period's energy consumption, as well as a forecast of consumption and the amount of the next bill. A monthly consumption target can be set.
2. **SACI.** Real time consumption display in speedometer format.
3. **Real time consumption.** Graphs shows the value of active power consumed in real time.
4. **SACI graphic analysis.** Graphs in which historical values can be viewed by selecting the active power consumption per day, week, month, year or between 2 specific dates.
5. **Trend.** Bar graph where data relating to the consumption trend of the installation can be viewed. It is possible to select by day, week, month, year or a specific period.
6. **Habits.** Visualization by week or month according to consumption habits and the times at which they are carried out. This graph tells the user which are the times of the period when there is a higher energy consumption.

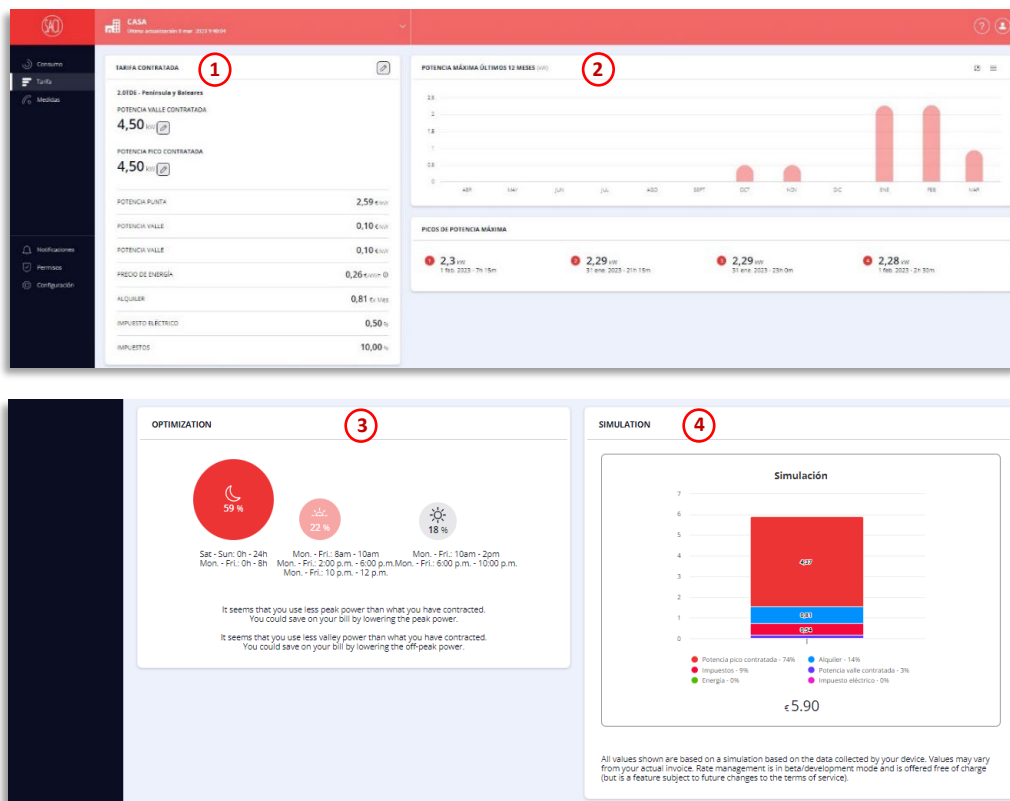


Screen Consumption, in the group Space

Space - Fee

To view the data corresponding to the tariff, it is necessary to select a Space. The tariff applies to all the devices in the Space.

1. **Contracted rate.** Selection of the tariff agreed with the supplier. This option allows the user to choose from among the standard tariffs in force on the electricity market. There are different options between regulated tariffs (e.g. 2.0TD) and others that can be customised.
2. **Maximum power in the last 12 months and maximum peak power.** Graph showing the maximum values of active power measured in the room. In the lower part of the graph the same data but in numerical value can be seen.
3. **Optimization.** Suggestions for modifying the contracted power based on the consumption of the installation.
4. **Simulation.** Breakdown of the various terms that make up the electricity bill and suggestion of the approximate cost based on the consumption obtained in the current billing period. **Data based on the chosen tariff.**



Tariff screen, in the group Space

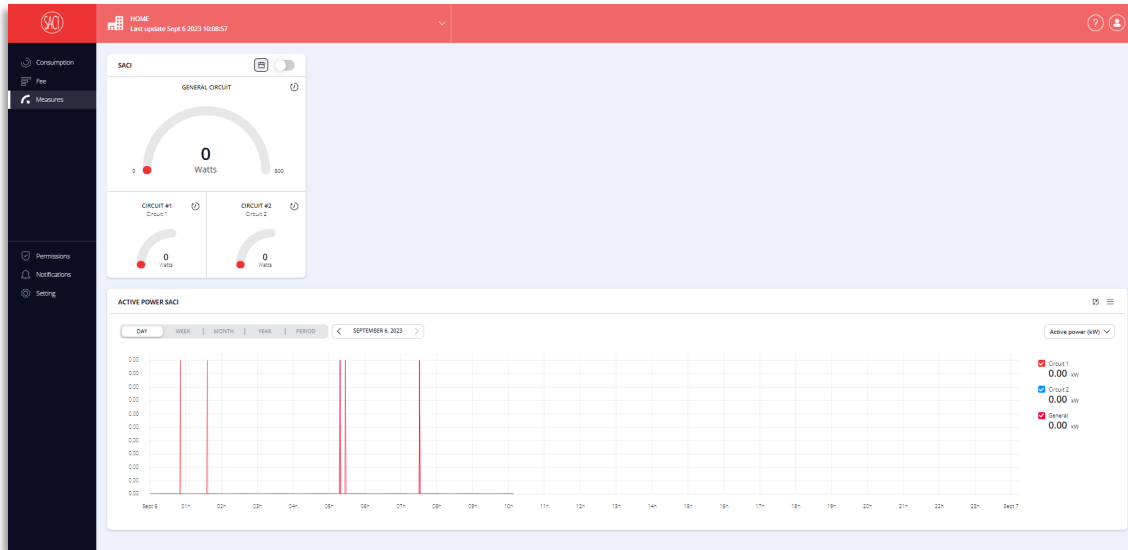


Space - Measurements

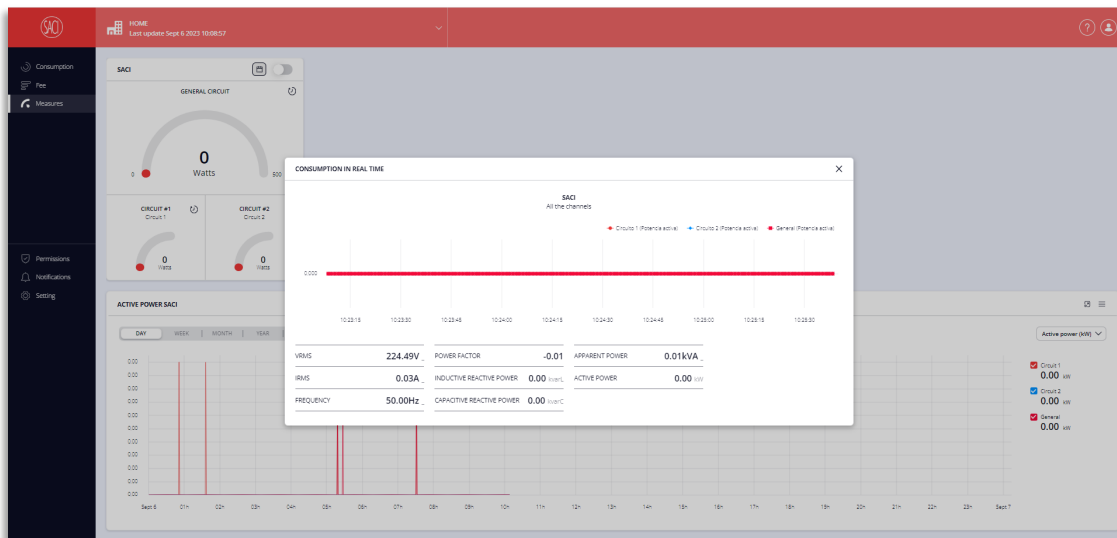
The upper part of this screen shows the devices that makes up the Space. To view the electrical parameters of each device in real time, click on the graph you wish to consult.

The graph at the bottom shows the data of the first device by default and this graph allows you to select the type of variable you wish to consult.

This visualisation can be by day, week, month, year or specific period.



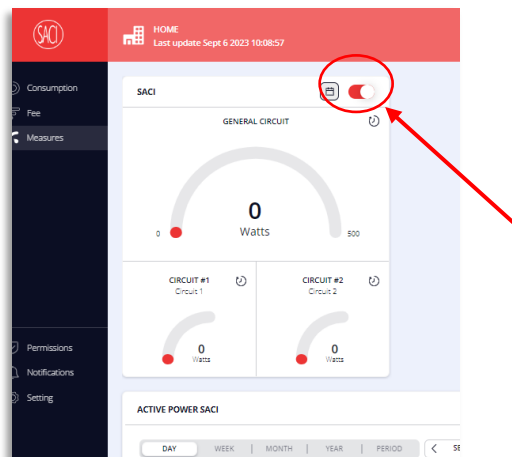
Measurements screen, in the group Space




Detail of circuit parameters



Attention. From this screen the user can remotely activate or deactivate the electrical panel.

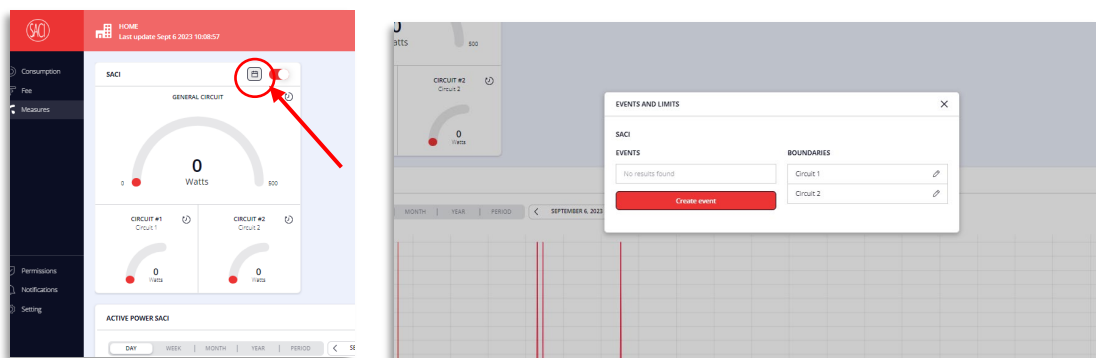


Control detail of electrical panel

By pressing the  button, limits and events can be set in the installation parameters, with the aim of limiting consumption or avoiding electrical risks in the installation itself.

By setting consumption limits, if these are exceeded, a warning will be sent to the owner. If a protection limit is established, the electrical panel is deactivated and a warning is also sent.

In the events option, the switching on and off of the electrical panel can be programmed automatically.



Detail of access to event creation and limits in the table

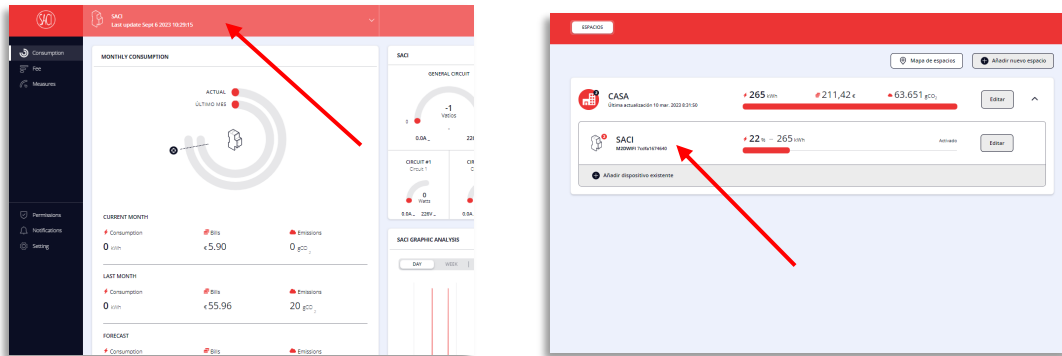
So far we have seen the screens and options that correspond to the Spaces element.

The platform also allows the visualization of individual device data through the Devices element. How to access this information is described below.



Devices

To view the data recorded by a device, return to the Spaces section and select the device you wish to view.

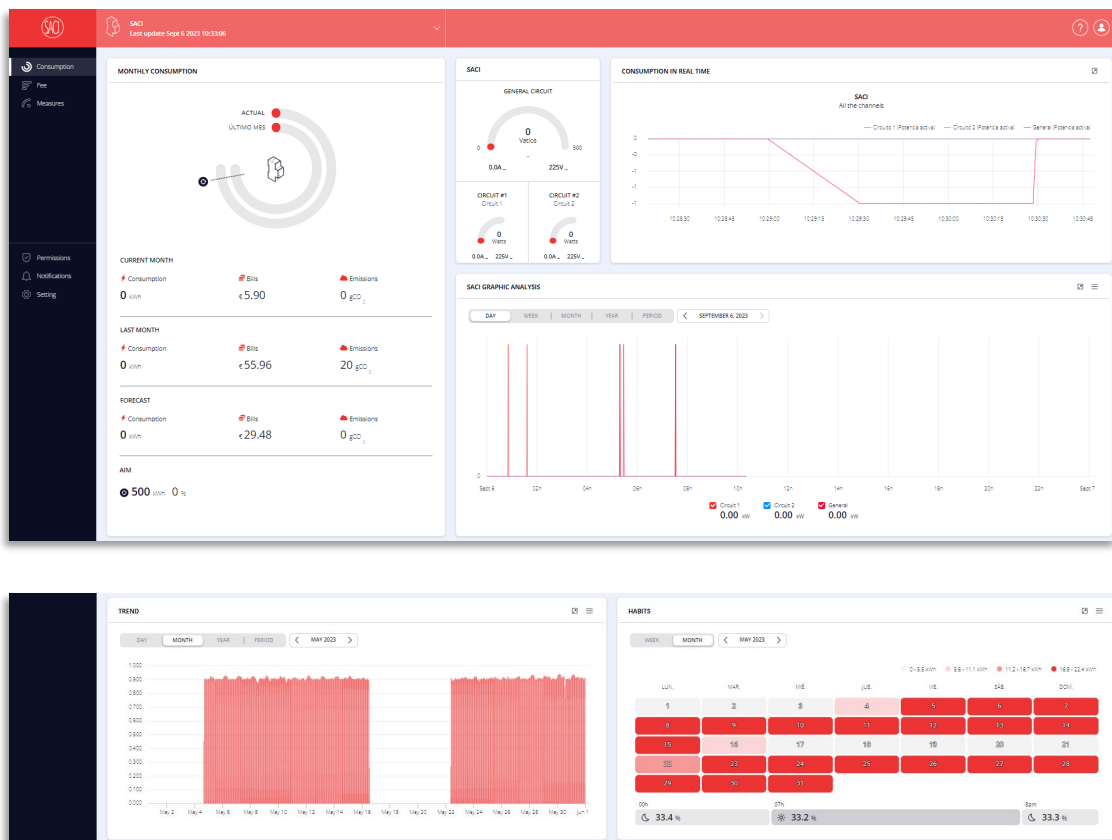


How to access to the Devices group

Device - Consumption

Once the device has been selected, the individual device data can be viewed.

The data is similar to that displayed on the Space tab, but in this case individualized by the installed device.

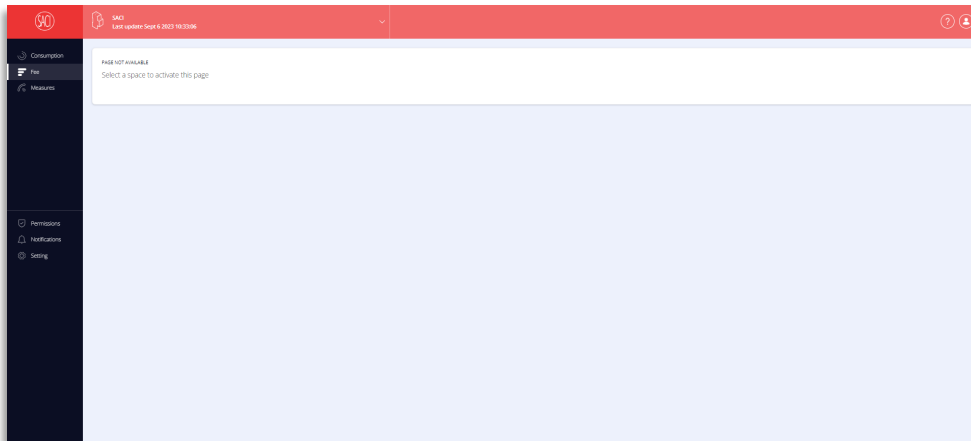


Consumption screen, in the Device group



Equipment - Tariff

This screen is disabled. Tariffs are only accessible from the Space screen.



Tariff screen, in the Device group

Equipment - Measurement

As in Space, the several electrical parameters of each circuit can be observed in real time. To view them, click on the graph you wish to consult.



This tab also contains the options for remote control of the panel and for creating events and consumption limits.

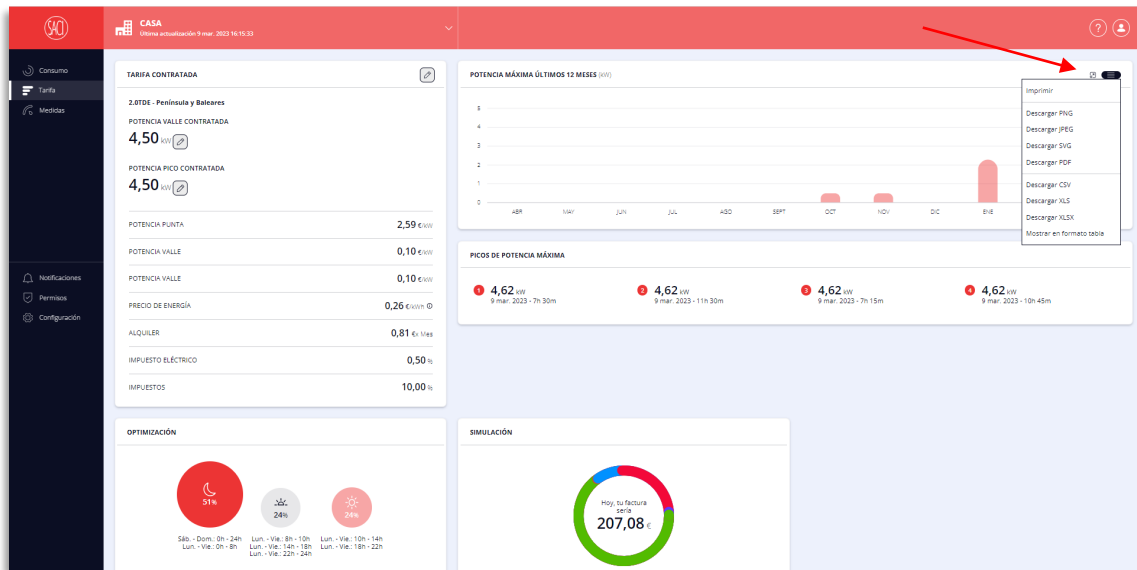


Measurement screen, in the Device group



Additional information

All graphs on the platform can be enlarged using the  button or exported to multiple formats using the  button.



Data export detail

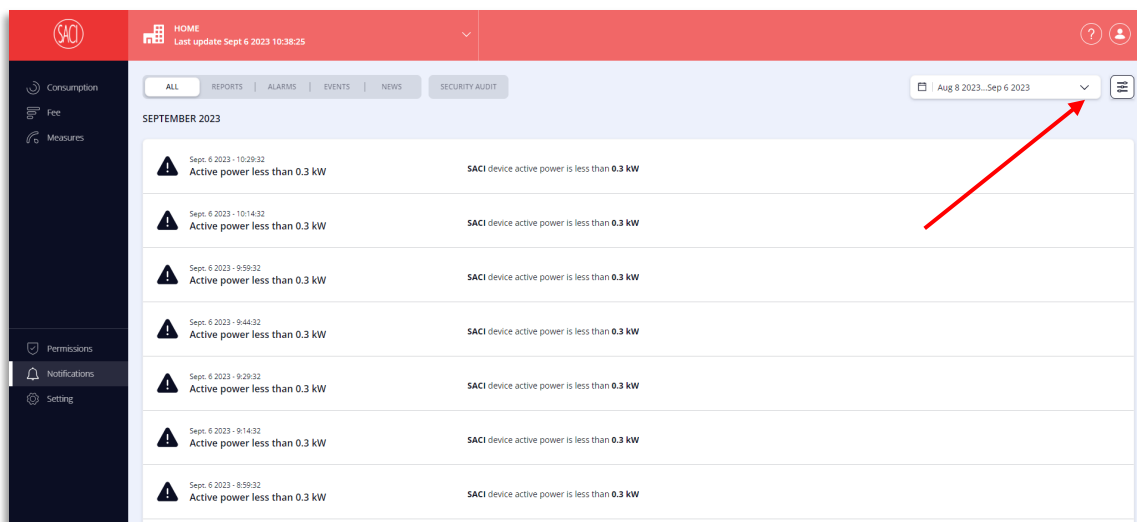
Notifications, Permissions and Settings

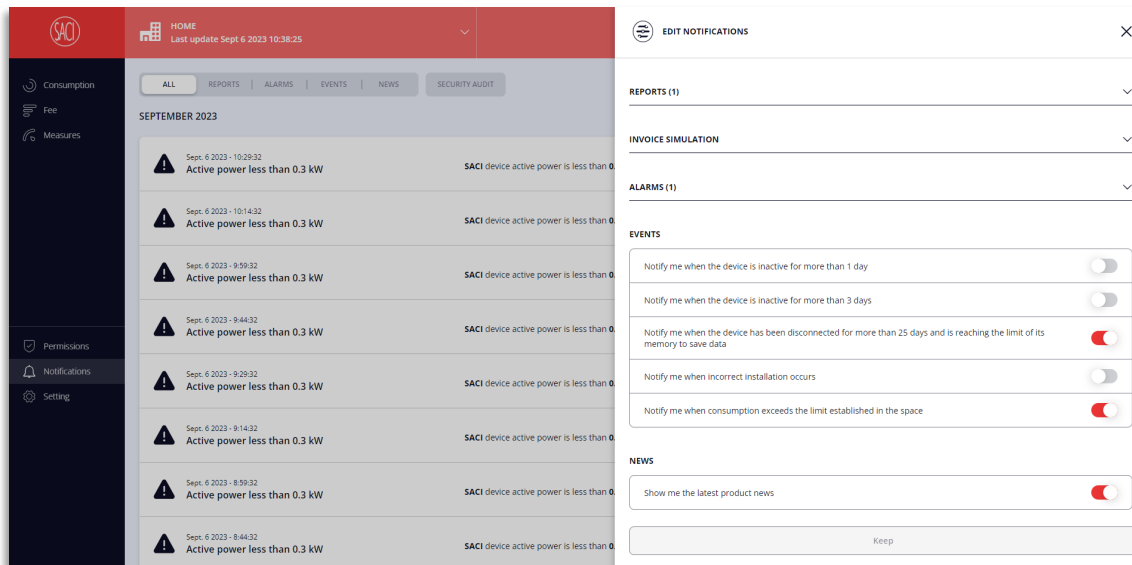
These 3 sections are common to Spaces and Devices. A Space must be selected to view or change the options.

Notifications

In this section you can configure and view reports, alarms, events and messages. It is necessary to select the required Space.

The configuration of these notifications is done in the  button.





Detail of notification settings

Reports can be customised with several elements such as:

- Selection of report display with data in table, bar or row format.
- Report name.
- Periodicity for report extraction by day, week, month or billing period.
- Selection of data extraction: by hour, day, week or month.
- Selection of dates.
- Types of parameters to be extracted.
- You can select the entire Space or individual Devices.

The Security Audit tab provides information on failed accesses to the platform to detect possible computer attacks.



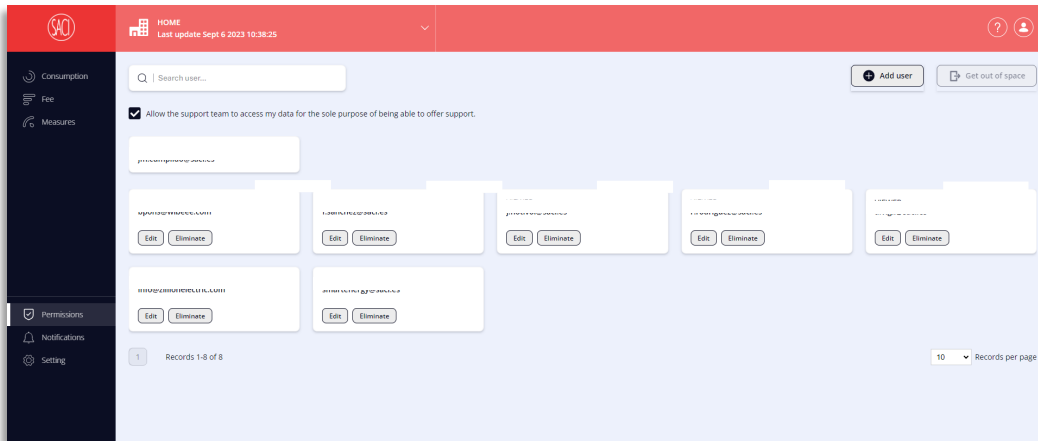
Permissions

Shows the 2 types of profiles that the software can handle.

- **Owner.** With the ability to configure all the variables of the platform.
- **Viewer.** Able to visualize the platform.

The owner can add as many viewers as he wishes.

There is a temporary option "Allow the support team to access my data for the sole purpose of providing support". Checking this box will allow SACI technical support access to monitor any incident.

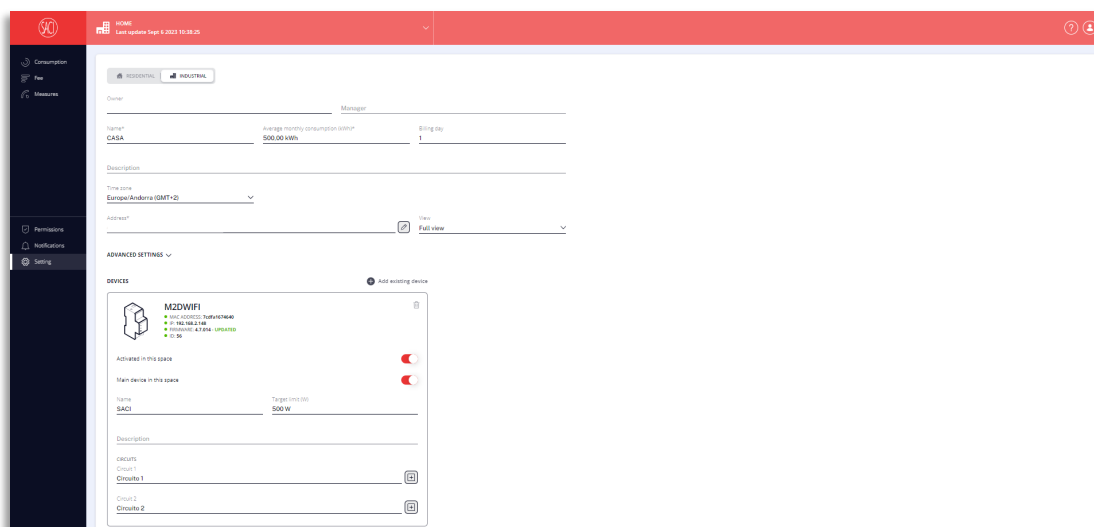


Detail of the Permissions screen

Configuration

Allows you to select a residential or industrial installation, modify Space data and add new M2DWIFI-2 devices to a Space.

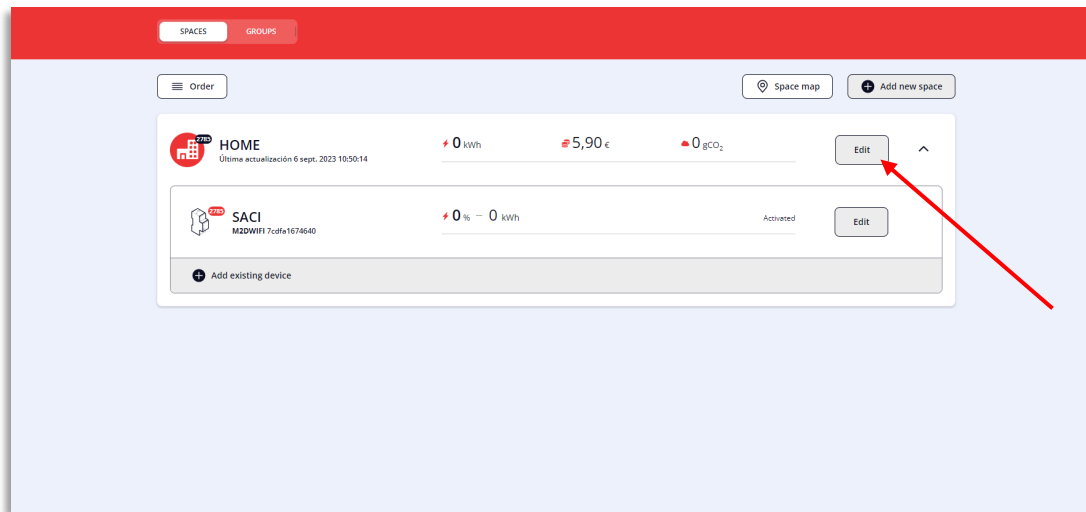
From this tab you can view the device configuration and set consumption targets.



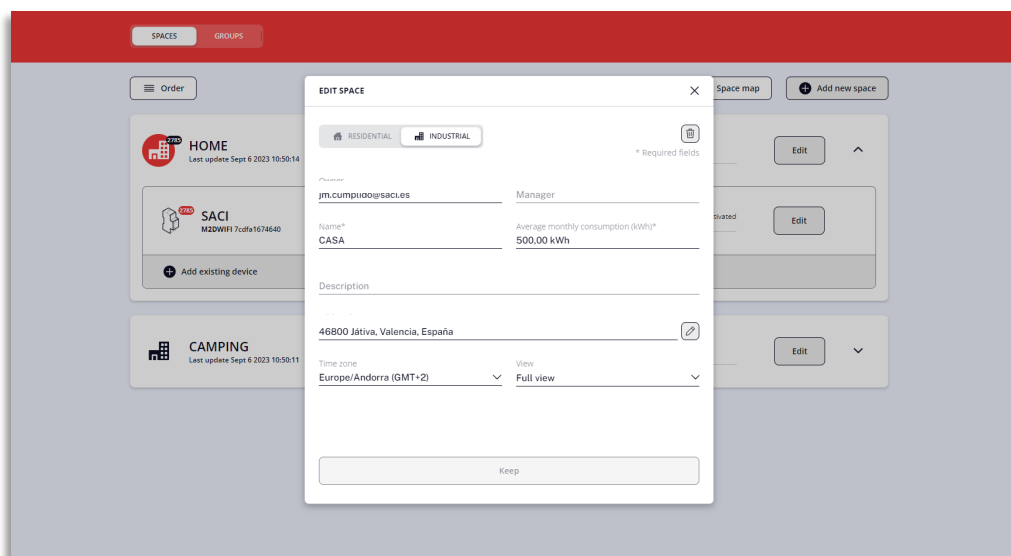
Detail of the Settings screen

Adding or removing devices

To add or remove a device from the platform, you must do so from the Spaces section by clicking on the Edit button.



Space Screen



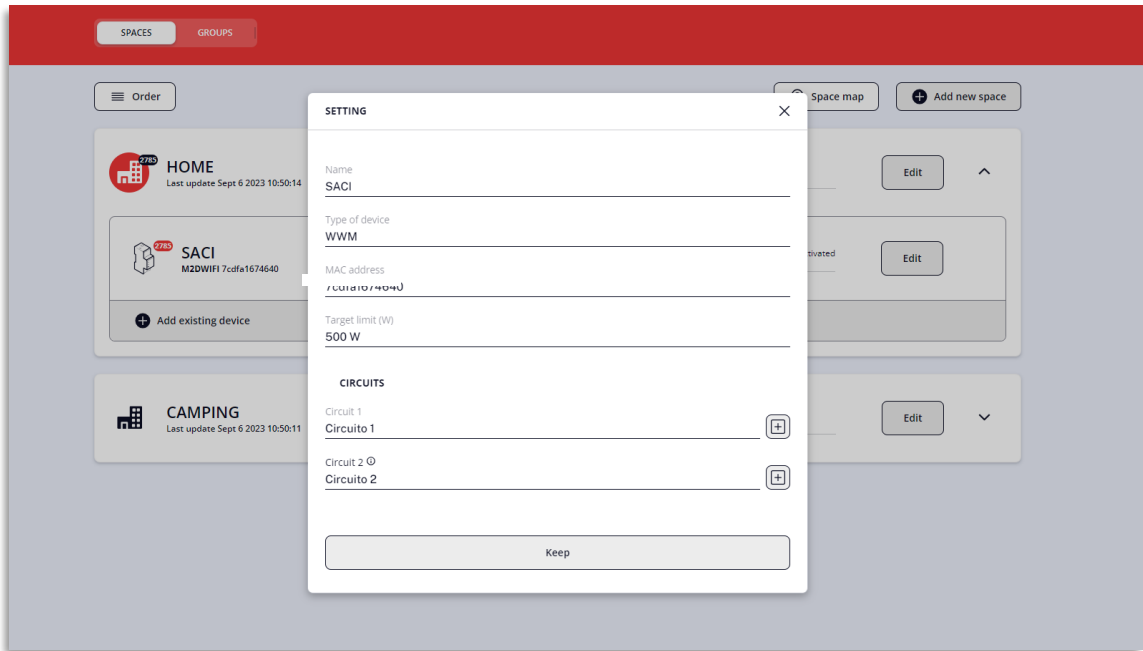
Edit Space screen

From the *Edit* button in the Space, it is possible to make configurations such as

- Select the type of installation, residential or industrial.
- Complete the Space information.
- Add devices.

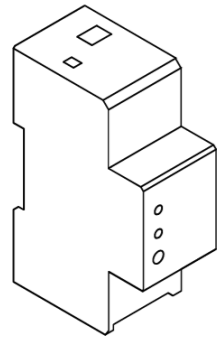


Caution. To delete the Space, it is necessary to first delete all the devices connected to it.



Edit Space screen

The Edit button on the device allows you to customise the device and set consumption targets.



M2DWIFI-2 SMART PLUGGING



(E)

¡IMPORTANTE!

Antes de efectuar cualquier operación de instalación, reparación o manipulación de cualquiera de las conexiones del equipo debe desconectar el aparato de toda fuente de alimentación. Cuando sospeche un mal funcionamiento del equipo póngase en contacto con el servicio postventa.

El fabricante del equipo no se hace responsable de daños cualesquiera que sean en caso de que el usuario o instalador no haga caso de las advertencias y/o recomendaciones indicadas en este manual ni por los daños derivados de la utilización de productos o accesorios no originales o de otras marcas.

1. DESCRIPCIÓN

M2DWIFI-2 es un método nuevo para la adquisición de datos eléctricos a fin de facilitar la toma de decisiones a la hora de comprender el uso de la energía eléctrica.

A través de la aplicación móvil, de la página web energy.saci.es o del **servidor Web interno** del equipo, se accede a los datos medidos por el equipo.

2. INSTALACIÓN

¡IMPORTANTE!

Tener en cuenta que con el equipo conectado, los bornes pueden ser peligrosos al tacto, y la apertura de cubiertas o eliminación de elementos puede dar acceso a partes peligrosas al tacto. El equipo no debe ser utilizado hasta que haya finalizado por completo su instalación.

Los pasos a seguir para realizar la instalación del equipo son:

- 1.- Apertura del cuadro eléctrico. Tras cortar la corriente general retira el panel de protección del cuadro eléctrico (Fig.1).
- 2.- Conecte el **M2DWIFI-2** en la toma de corriente (Fig. 2).
- 3.- Pinza adicional. Conecta primero la pinza al **M2DWIFI-2** y luego acopla la pinza al cable que lleva el consumo total de la instalación (Fig.3).
- 4.- Comprobar que el LED rojo está encendido y parpadea (Fig. 4).
- 5.- Tras unos segundos, el LED Azul empezará a parpadear (Fig. 5).
- 6.- Para iniciar las comunicaciones con el **M2DWIFI-2**, descargar la aplicación móvil a partir de la dirección energy.saci.es. Abrir la aplicación y seguir los pasos indicados en la misma.

(GB)

IMPORTANT!

The unit must be disconnected from its power supply sources before undertaking any installation, repair or handling operations on the unit's connections. Contact the after-sales service if you suspect that there is an operational fault in the unit.

The manufacturer of the unit is not responsible for any damage resulting from failure by the user or installer to heed the warnings and/or recommendations set out in this manual, nor for damage resulting from the use of non-original products or accessories or those made by other manufacturers.

1. DESCRIPTION

M2DWIFI-2 is a new method for electrical data acquisition, to ease your decision making when understanding the use of electrical energy.

You can access the data measured by the device via mobile application, the website energy.saci.es or the device's **internal web server**.

2. INSTALLATION

IMPORTANT!

Take into account that when the device is connected, the terminals may be hazardous to the touch, and opening the covers or removing elements may provide access to parts that are dangerous to the touch. Do not use the device until it is fully installed.

To install the device, carry out the following steps:

- 1.- Opening of the electrical panel. After cutting off the general current, remove the protection panel from the electrical panel (Fig.1).
- 2.- Plug the **M2DWIFI-2** into the power outlet (Fig. 2).
- 3.- Additional clamp. First connect the clip to the **M2DWIFI-2** and then couple the clip to the cable that carries the total consumption of the installation (Fig.3).
- 4.- Check that the red LED is on and blinking (Fig. 4).
- 5.- After a few seconds, the Blue LED will start to flash (Fig. 5).
- 6.- To start communications with the **M2DWIFI-2**, download the mobile application from the address energy.saci.es. Open the application and follow the steps indicated in it.

(F)

IMPORTANT!

Avant d'effectuer toute opération de installation, réparation ou manipulation de l'une quelconque des connexions de l'équipement, vous devez déconnecter l'appareil de toute source d'alimentation. Lorsque vous suspectez un mauvais fonctionnement de l'équipement, contactez le service après-vente.

Le fabricant de l'équipement ne se rend pas responsable de tous dommages qui se produiraient dans le cas où l'utilisateur ou l'installateur n'aurait pas respecté les avertissements et/ou recommandations indiqués dans ce manuel ni des dommages dérivés de l'utilisation de produits ou d'accessoires non originaux ou d'autres marques.

1. DESCRIPTION

M2DWIFI-2 est une nouvelle méthode de collecte de données électriques qui permet de prendre des décisions en facilitant la compréhension de l'usage de l'énergie électrique.

À travers l'application mobile, du site web energy.saci.es ou du **serveur web interne** de l'équipement, on accède aux données mesurées par l'équipement.

2. INSTALLATION

IMPORTANT!

Prendre en compte que, avec l'équipement connecté, les bornes peuvent être dangereuses au toucher, et l'ouverture de capots ou l'élimination d'éléments peut donner accès aux parties parties dangereuses au toucher. L'équipement ne doit pas être utilisé avant que son installation ne soit complètement terminée.

Les pas à suivre pour réaliser l'installation de l'équipement sont:

- 1.- Ouverture du panneau électrique. Après avoir coupé le courant général, retirer le panneau de protection du tableau électrique (Fig. 1).
- 2.- Branchez le **M2DWIFI-2** dans la prise de courant (Fig. 2).
- 3.- Pince supplémentaire. Connectez d'abord le clip au **M2DWIFI-2** puis coupez le clip au câble qui porte la consommation totale de l'installation (Fig.3).
- 4.- Vérifier que la LED rouge est allumée et clignote (Fig. 4).
- 5.- Après quelques secondes, la LED bleue commencera à clignoter (Fig. 5).
- 6.- Pour démarrer les communications avec le **M2DWIFI-2**, téléchargez l'application mobile à partir de l'adresse energy.saci.es. Ouvrez l'application et suivez les étapes qui y sont indiquées.

(PT-BR)

IMPORTANTE!

Antes de iniciar qualquer operação de instalação, reparação ou manipulação de qualquer uma das conexões do equipamento, deve-se desconectar o dispositivo de toda e qualquer fonte de alimentação. Em caso de mal funcionamento do equipamento, entre em contato com o serviço de pós-vendas.

O fabricante do equipamento não é responsável por quaisquer danos ocorridos quando o usuário e/ou o instalador não seguirem as advertências e/ou recomendações indicadas neste manual, nem pelos danos oriundos da utilização de produtos e acessórios que não são originais ou que sejam de outras marcas.

1. DESCRIÇÃO

O **M2DWIFI-2** é um novo método de aquisição de dados elétricos para facilitar a tomada de decisões na compreensão do uso de energia elétrica.

Através do aplicativo móvel, do site energy.saci.es ou do **servidor web interno** do dispositivo, os dados medidos pelo dispositivo são acessados.

2. INSTALAÇÃO

IMPORTANTE!

Lembre-se de que, com o equipamento conectado, os terminais podem ser perigosos ao tato e a abertura de tampas e a eliminação de elementos pode dar acesso a partes perigosas ao tato. O equipamento não deve ser utilizado até que sua instalação tenha sido completamente finalizada. O equipamento deve ser instalado após o imã térmico.

Os passos a seguir para instalar o equipamento são:

- 1.- Abertura do quadro elétrico. Após cortar a corrente geral, retire o painel de proteção do quadro elétrico (Fig. 1).
- 2.- Conecte o **M2DWIFI-2** na tomada (Fig. 2).
- 3.- Grampo adicional. Primeiro conecte o clipe ao **M2DWIFI-2** e depois acople o clipe ao cabo que suporta o consumo total da instalação (Fig.3).
- 4.- Verifique se o LED vermelho está aceso e piscando (Fig. 4).
- 5.- Após alguns segundos, o LED Azul começará a piscar (Fig. 5).
- 6.- Para iniciar a comunicação com o **M2DWIFI-2**, baixe o aplicativo móvel no endereço energy.saci.es. Abra o aplicativo e siga os passos indicados nele.

Alimentación		Power supply	
Tensión nominal	Rated voltage	M2DWIFI-2	
		180 ... 265 V ~	
Frecuencia	Frequency	50 ... 60 Hz	
Consumo	Power	1.5 ... 4.5 VA	
Circuito de medida de tensión		Voltage measurement circuit	
Margen de medida de tensión	Voltage measurement margin	M2DWIFI-2	
		180 ... 265 V ~	
Margen de medida de frecuencia	Frequency measurement margin	50 ... 60 Hz	
Tensión mínima de medida (Vstart)	Min. voltage measurement (Vstart)	180 V	
Categoría de la instalación	Installation category	CAT III 300 V	
Circuito de medida de corriente		Current measurement circuit	
Margen de medida de corriente	Current measurement margin	M2DWIFI-2	
		0,2 ... 63A	
Corriente mínima de medida (Istart)	Min. current measurement (Istart)	0,2 A	
Categoría de la instalación	Installation category	CAT III	
Precisión de las medidas		Measurement accuracy	
Medida de tensión	Voltage measurement	2% ⁽²⁾ (PF = 1)	
Medida de corriente	Current measurement	2% ⁽²⁾ (PF = 1)	
Medida de potencia	Power measurement	4% ⁽²⁾ (PF = 1)	
Variaciones en el rango de uso		Variations in range of use	
Magnitud de influencia	Magnitude of influence	Rango / Range	Normal / Typical
Temperatura	Temperature	-10°C ... +45°C	-
Humedad relativa	Relative humidity	10% ... 90%	-
Interferencias (corriente)	Crosstalk (current)	-	0.9%
Campo desmagnetizante externo (corriente)	External demagnetising field (current)	-	1%
Posición del conductor	Conductor position	-	2%
Ajuste	Adjust	Escala completa Full scale	0.2%
Distancia entre cable y sensor	Distance between wire and sensor	-	0.2% / 0.1mm
Comunicaciones		Communications	
Tipo	Type	Wi-Fi (IEEE 802.11)	RS485
Protocolo	Protocol	HTTP, Modbus/TCP, XML	Modbus
Rango frecuencia	Frequency range	2.405 - 2.480 GHz	
Cifrado	Encryption	AES128	
Certificación	Certification	FCC (USA), IC (CANADA), ETSI (EUROPE)	
Interfaz con el usuario		Interface	
Teclado	Keyboard	1 tecla/ key	
LED	LED	2 LED	
Aplicación móvil	Mobile app	iOS / Android	
Características ambientales		Environmental features	
Temperatura de trabajo	Operating temperature	-10°C... +45°C	
Temperatura de almacenamiento	Storage temperature	-40°C ... +85°C	
Humedad relativa	Relative humidity	10 ... 90% (sin condensación / non-condensing)	
Altitud máxima	Maximum altitude	2000 m	
Grado de protección	Protection degree	IP40	
Aislamiento	Insulation	Doble aislamiento / Double insulation	
Características mecánicas		Mechanical features	
Peso	Weight	M2DWIFI-2	
		87,5 g	
Envolvente	Enclosure	Plástico V0 autoextinguible / Self-extinguishing V0 plastic (UNE 21031 90°C)	
Normas / Standars			
UNE-EN 61010-2-030:2011, UNE-EN 61326-1:2006, EN 301 489-17 V2.2.1, UNE-EN 62053-21 Y -23			

LED

0s 1s 2s 3s 4s

Equipo no configurado / Device not configured

Equipo no configurado / Device not configured

Equipo configurado encendido / Device configured ON

Equipo configurado apagado / Device configured OFF

Encendido / ON Apagado / OFF Parpadeo rápido / Fast blinking

Equipo no configurado / Device not configured

Rojo Red	Parpadeo lento / Slow blinking (1s): Equipo alimentado / Powered device
Azul Blue	Indica el estado de conexión / Indicates the connection status: Parpadeo lento / Slow blinking (1s): Generando una red Wi-Fi / Generating a Wi-Fi network

Equipo configurado encendido / Device configured ON

Rojo Red	Encendido con breve parpadeo (apagado) cada 3s / ON with fast blink (off) every 3s
Azul Blue	Parpadeo rápido / Fast blinking (<1s): Conectado a una red Wi-Fi / Link to a Wi-Fi network Encendido fijo / Fixed on: Envío de datos a través de la red / Sending data over the network.

Equipo configurado apagado / Device configured OFF

Rojo Red	Apagado con breve parpadeo (encendido) cada 3s / OFF with fast blink (on) every 3s
Azul Blue	Parpadeo rápido / Fast blinking (<1s): Conectado a una red Wi-Fi / Link to a Wi-Fi network Encendido fijo / Fixed on: Envío de datos a través de la red / Sending data over the network.

Restaurar valores de fábrica / Restore factory defaults

Pulsador / Button	Mantener pulsado el botón de reset durante unos 10 segundos Press and hold the reset button for about 10 seconds
--------------------------	---

Dimensiones / Dimensions

mm

35.5 64 100

RS485 Pinza de corriente / Current Clamp

Instalación / Installation

Fig. 1

Fig. 2

Fig. 3

Fig. 4

Fig. 5

⁽¹⁾ Las especificaciones metrológicas dadas son siempre con ajuste de campo. / The metrological specifications given are provided with adjustable field.

⁽²⁾ + Variaciones en el rango de uso / + variations in range of use.