Databox solution

Procedure for the creation of a new Single-Company, multi-user project



TUTORIAL

(M121E01-03-16A)

CE

SAFETY PRECAUTIONS

Follow the warnings described in this manual with the symbols shown below.

	**DANGER** Warns of a risk, which could result in personal injury or material damage.

	**ATTENTION** Indicates that special attention should be paid to a specific point.

If you must handle the unit for its installation, start-up or maintenance, the following should be taken into consideration:

	Incorrect handling or installation of the unit may result in injury to personnel as well as damage to the unit. In particular, handling with voltages applied may result in electric shock, which may cause death or serious injury to personnel. Defective installation or maintenance may also lead to the risk of fire. Read the manual carefully prior to connecting the unit. Follow all installation and maintenance instructions throughout the unit's working life. Pay special attention to the installation standards of the National Electrical Code.
	**Refer to the instruction manual before using the unit** In this manual, if the instructions marked with this symbol are not respected or carried out correctly, it can result in injury or damage to the unit and /or installations.

CIRCUTOR, SA reserves the right to modify features or the product manual without prior notification.

DISCLAIMER

CIRCUTOR, SA reserves the right to make modifications to the device or the unit specifications set out in this instruction manual without prior notice.

CIRCUTOR, SA on its web site, supplies its customers with the latest versions of the device specifications and the most updated manuals.

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REVISION LOG

Table 1: Revision log.

Date	Revision	Description
06/17	M121E01-03-16A	Initial Version

Note: *Images of the devices are for illustrative purposes only and may differ from the actual device.*

1.- INTRODUCTION

This manual describes the steps that must be followed to create a project with the **Circutor Databox** web platform for a single client-type Company with various users.

It is important to follow the steps indicated in this manual in order. Otherwise, the project might not be created correctly.

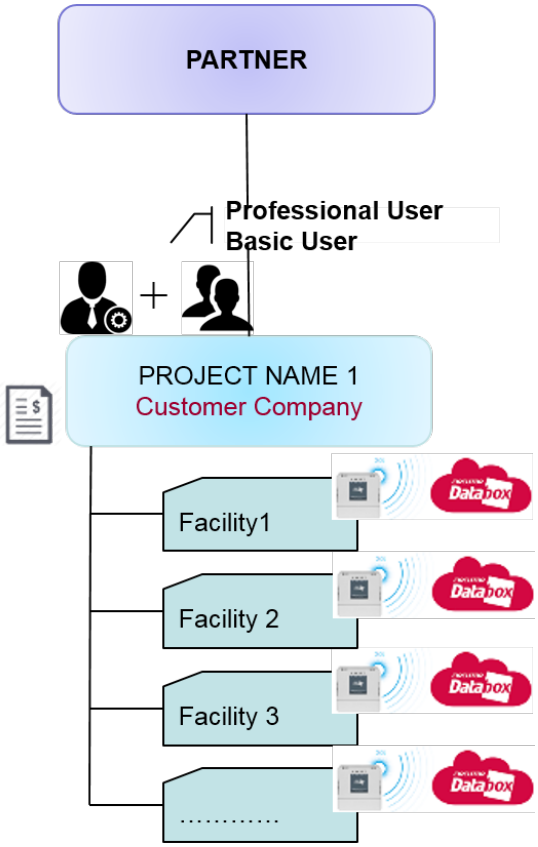


Figure 1:Example of a Single-Company project.

2.- CREATING A NEW CLIENT-TYPE "COMPANY"

	The following is required before creating a project: ✓ A professional account on the **Databox** platform ✓ The **SBOX** gateway device

Follow these steps to create a new client-type company:

1.- Access the **Circutor Databox** web platform, **https://databox.circutor.com/,** with Professional User credentials.

2.- Create a new client-type "Company" by clicking on the ***New Company*** button in the ***Company →Structure*** sub-menu in the ***Company*** section.

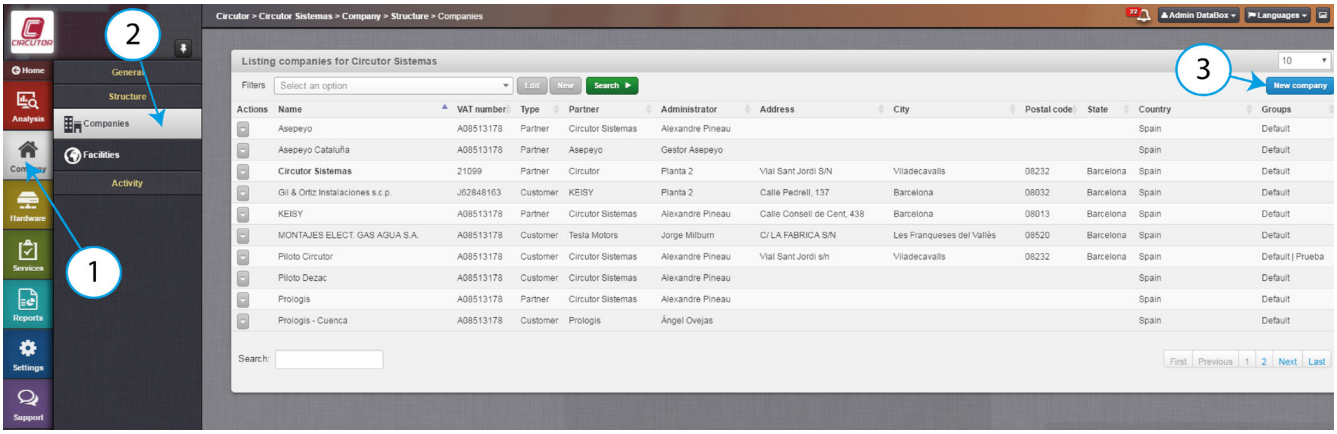


Figure 2: Create New Company

3.- Fill in the form shown in **Figure 3** with the company details, selecting:

✓**Type of Company: Client** (no additional Companies can be created under this company).

✓**Parent Company:** Company from which the new "Company" of the client type being created will hang.

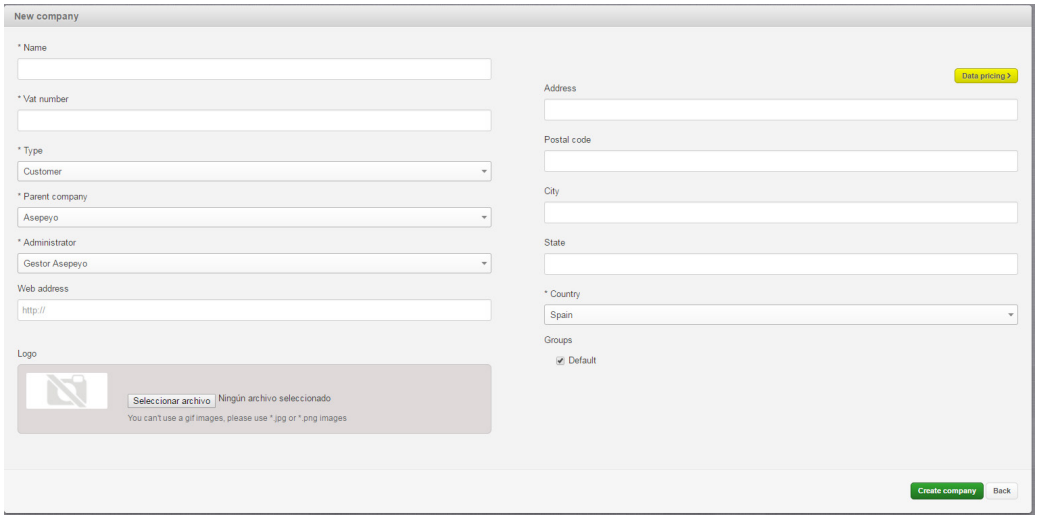


Figure 3: New Company Form

4.- Allocate the consumption costs (periodic readings, alarms, configurations, Gateway active, user account) by clicking on the ***Data pricing in*** **Figure 4.**

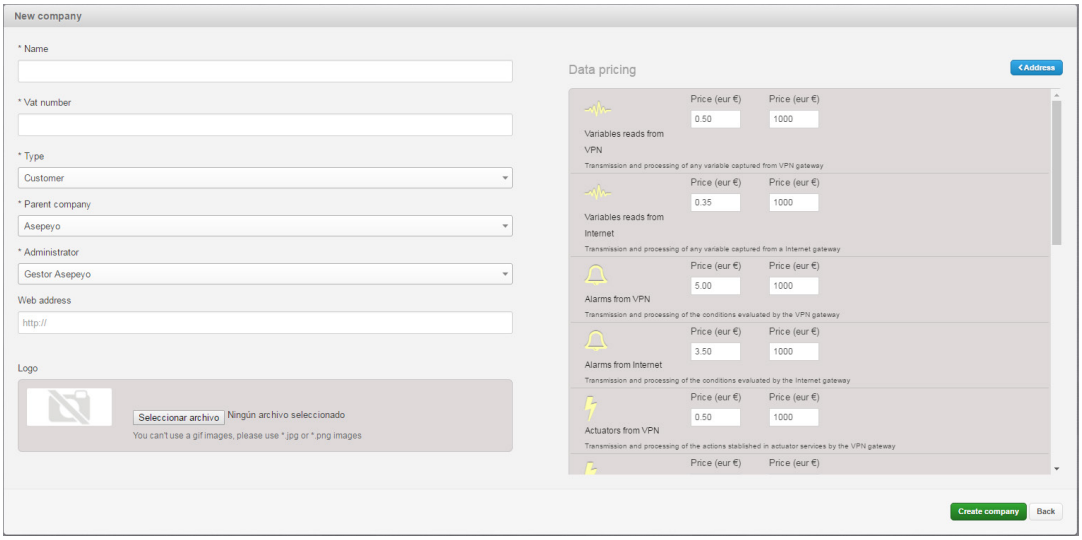


Figure 4:Data pricing

5.- Create the new "Company" by clicking on the ***Create Company*** button.

3.- CONNECTING TO THE "COMPANY" THAT HAS BEEN CREATED

You must connect to the company after it has been created by following these steps:

1.- Search for the "Company" you just created in the **List of Companies** and once you have selected the ***Actions*** button, click on the ***Connect to*** option.
Connecting to a Company allows you to create facilities, register a Gateway, add connections and devices, etc.

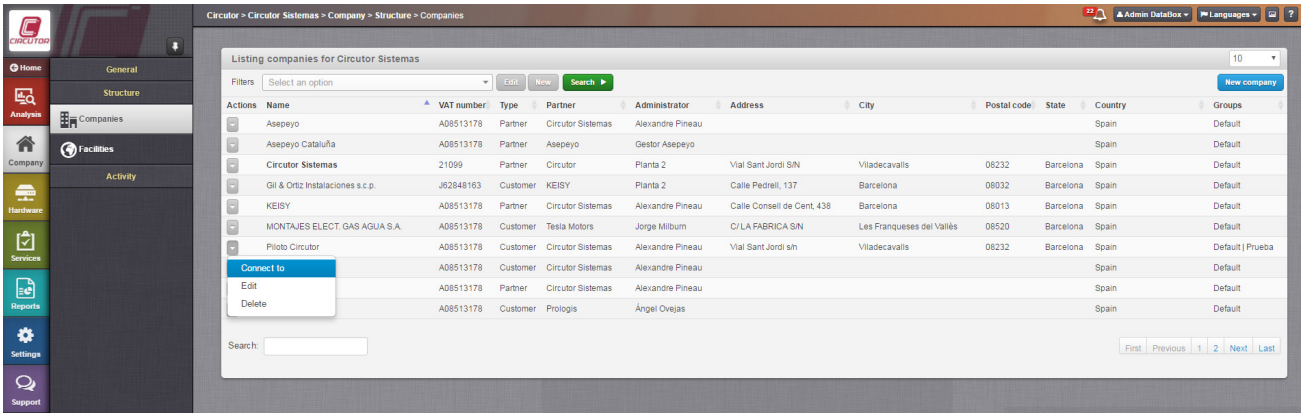


Figure 5:Connect to a company

2.- Click on the ***Accept*** button in the pop-up window, **Figure 6**, to confirm the connection to the selected "Company".

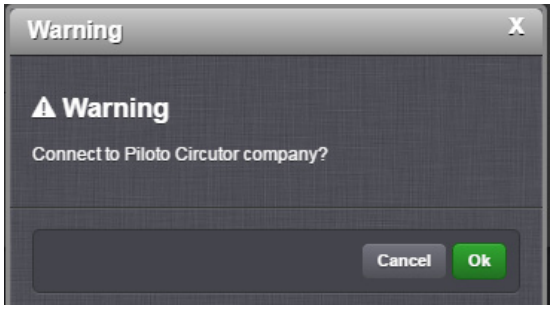


Figure 6: Connection confirmation window.

3.- Check that the connection to the "Company" is correct by clicking on the ***Home*** button on the ***Analysis*** section**, Figure 7.** This button allows you to return to the "Company" of origin.

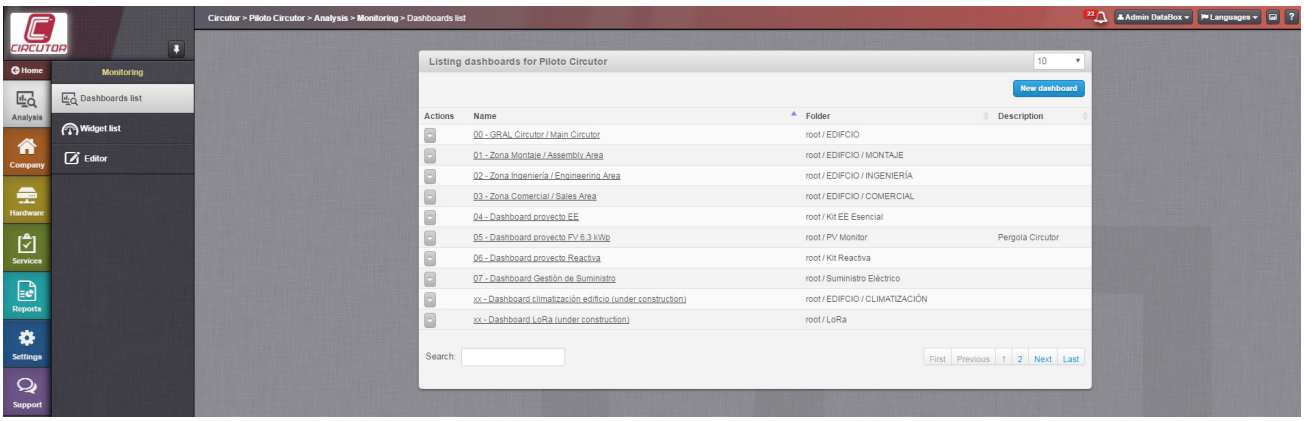


Figure 7:Verification of the connection to the company that has just been created.

4.- CREATING A "BASIC" USER

Follow these steps to create a basic user:

1.- Create a new user by clicking on the ***New User*** button in the ***Users→ Users list*** sub-menu in the ***Settings*** section.

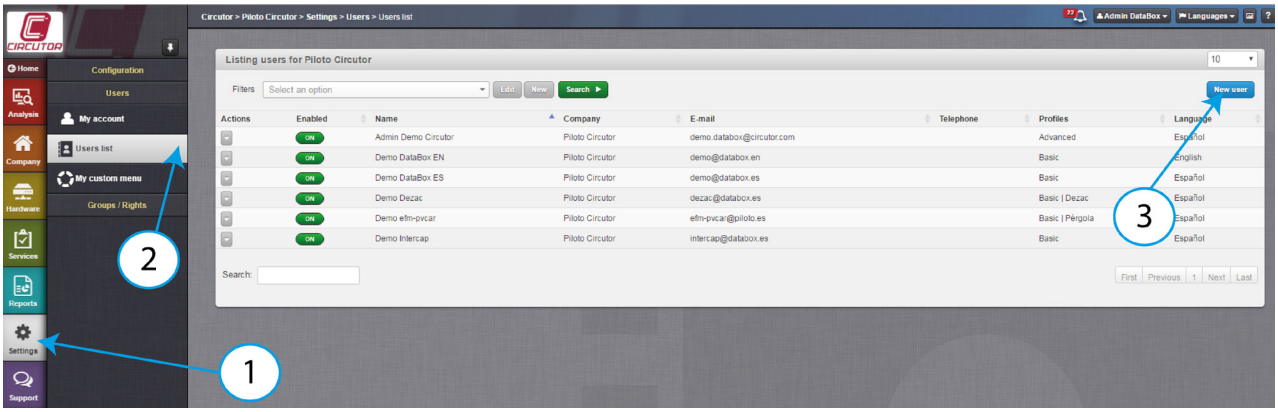


Figure 8: Create a new User

1.- Fill in the form shown in **Figure 9** with the details of the user, in particular:

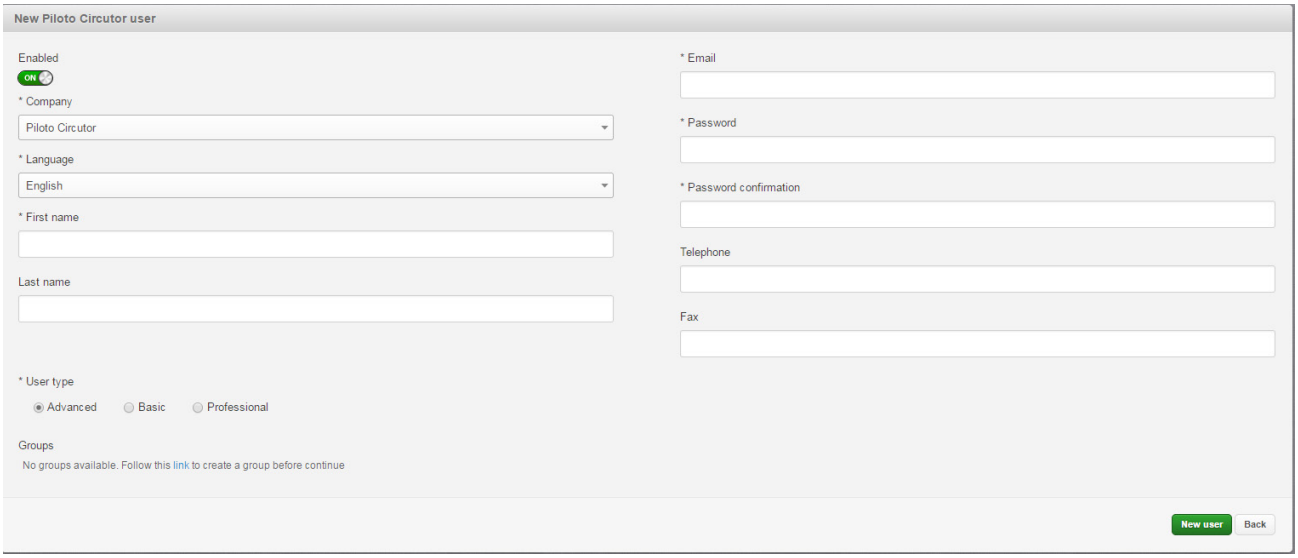


Figure 9:New User Form

✓ **Enabled,** In this case, the enabled user will have access to the **Databox** platform after entering the correct e-mail address and password. Users that have been disabled will not be granted access.

✓**Company,** The Companies that have already been created will appear in this section.

Note: *The user is linked to a Company and not to a facility or to an* ***SBOX****, as shown in* ***Figure 1.***

✓**User type,** Select a Basic user.

A **Basic** user only has viewing permissions, i.e., the user cannot create, edit or delete any items from the **Databox** platform.

An **Advanced** user has viewing permissions and can also create, edit or delete the Dashboard and/or Widgets. However, the Advanced user cannot create, edit or delete a periodic reading, alarm, Gateway or any other type of service associated with a modification of the service tariff of the **Databox** platform.

A **Professional** user has administrator permissions, i.e., this user can create, edit, delete and carry out any other action on the **Databox** platform.

✓**Groups,** This section shows all of the user groups that have been custom-created for the "Company". These user groups are used to, for example, customise the viewing permissions of **Basic** users.

2.- Create a new User, by clicking on the ***New user*** button.

3.- Create as many **Basic** users as the number of centres integrated in a multi-point project, with the purpose of creating a personalised viewing access point to all centre supervisors later on.

5.- CREATING NEW "FACILITIES"

Follow these steps to create a new facility:

1.- Create a new facility by clicking on the ***New Facility*** button in the ***Facility→ Structure*** sub-menu of the ***Company*** section.

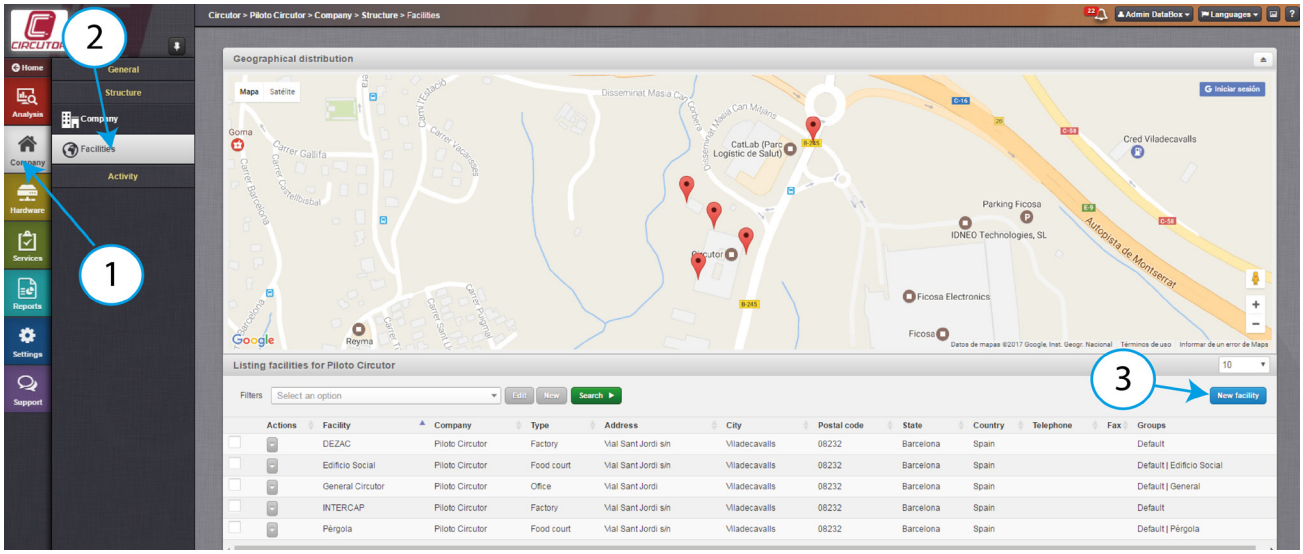


Figure 10:New Facility

2.- Fill in the form shown in **Figure 11** with the details of the facility being created.
Warning: the user selected as the ***Administrator*** will receive the notifications associated with the consumption, communication errors, etc. of the facility.

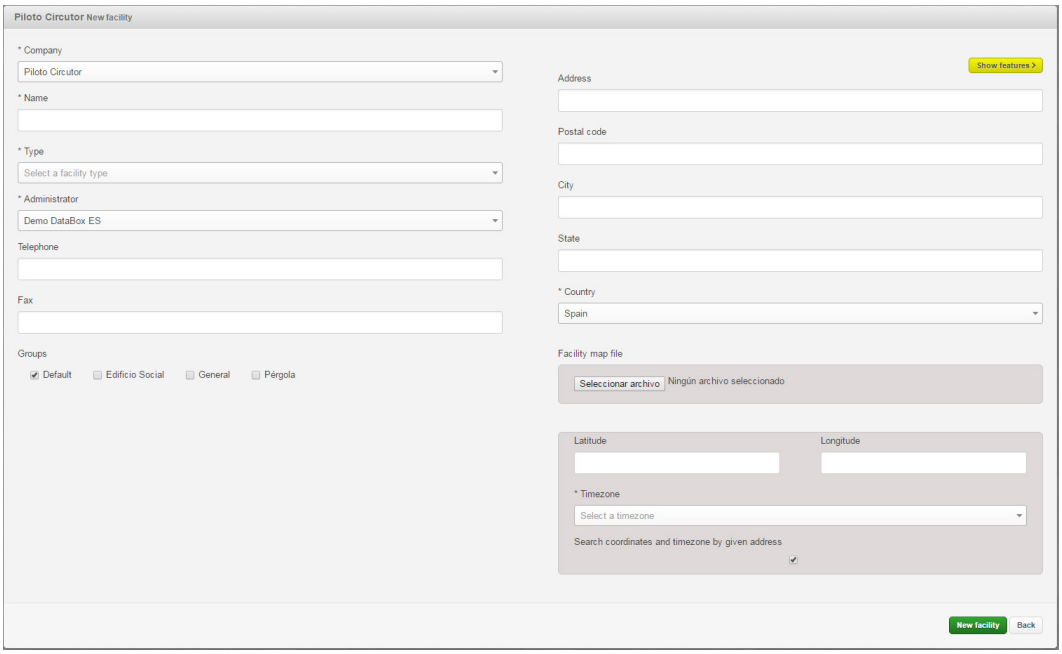


Figure 11:New facility form.

	The **Administrator** is the person with a **Basic**, **Advanced** or **Professional** user. See section ***"4.- CREATING A "BASIC" USER*** to create a new user if this option does not appear in the drop-down list.

3.- Optionally, click on the ***Show features*** button to enter the features of the facility, such as surface area, number of workers, number of plants, timetables, etc. This information can be used to create KPIs in the KPIs and formulas menu.

	If needed, click on the ***Add feature*** button to add a personalised attribute for this facility. (**Figure 12**)

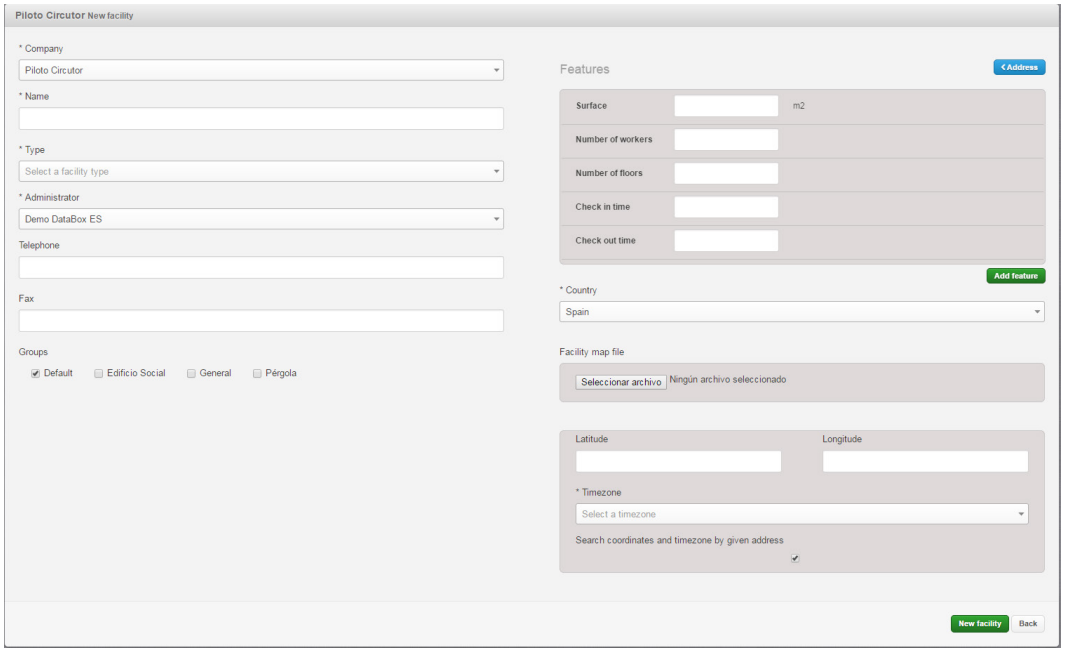


Figure 12:New facility form, Add feature.

4.- Create the new Facility by clicking on the ***New Facility*** button.

5.- Create as many facilities as needed for the project.

6.- REGISTERING THE SBOX GATEWAYS

⚠	The device is required to register the **SBOX Gateway**.

Follow these steps to register an **SBOX Gateway**:

1.- Register the Gateway in the ***Register*** sub-menu of the ***Hardware*** section.

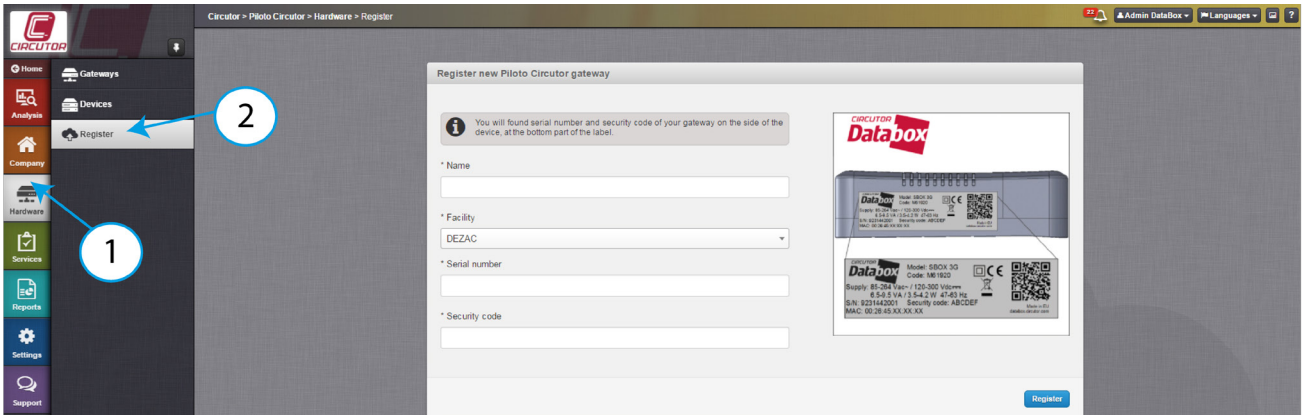


Figure 13:Register Hardware Screen

2.- Fill in the form shown in **Figure 14** with the data of the **SBOX Gateway** that will be registered:

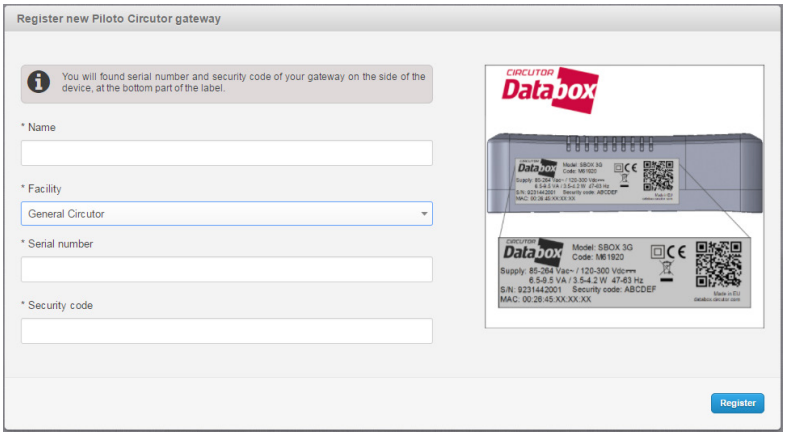


Figure 14:SBOX Gateway Registration Screen.

✓**Name,** Enter the name of the **SBOX Gateway.**
✓**Facility,** Select the facility where the **SBOX** will be hosted.
✓**Serial number,** Enter the serial number of the **SBOX.**
✓**Security code,** Enter the security code of the **SBOX.**

⚠	The **Serial number** and **Security Code** can be found on the label attached to the device.

3.- Complete the registration of the **SBOX Gateway** by clicking on the ***Register*** button.

7.- CONFIGURING THE GATEWAYS

To configure an **SBOX Gateway,** access the list of Gateways by selecting the ***Gateways*** sub-menu from the ***Hardware*** section**, Figure 15.**

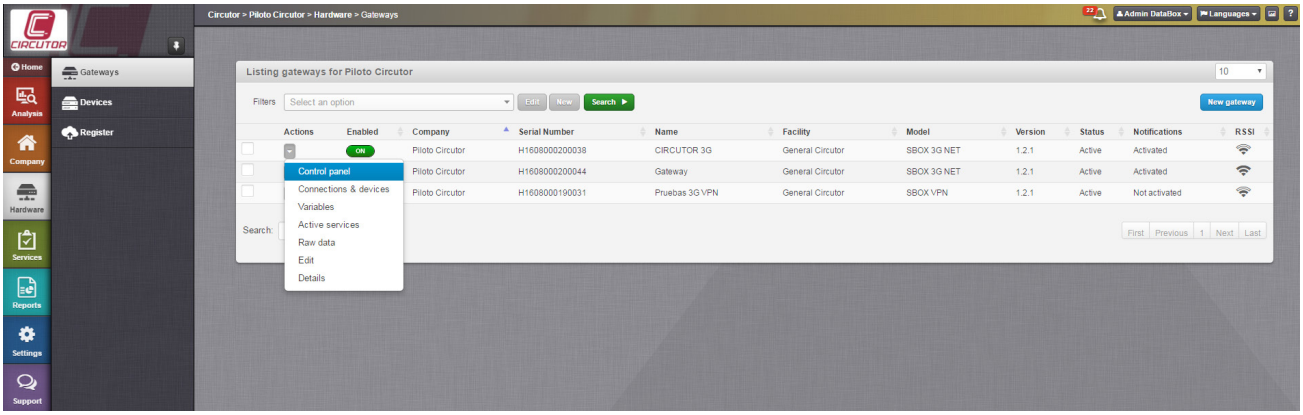


Figure 15:List of SBOX Gateways.

Click on the ***Actions*** button to access the different options of the Gateway: ***Control panel, Connections & devices, Variables, Raw data, Edit*** and ***Details***.

	Select the following options to configure an **SBOX Gateway**: ***Edit*** and ***Connections & devices.***

7.1.- CHECKING THE PARAMETERS OF THE GATEWAY

Follow these steps to check the parameters of the **SBOX Gateway**:

1.- Click on the ***Actions*** button in the list of Gateways and select the ***Edit*** option.

2.- Enable the ***E-mail notifications*** so the Administrator of the facility can receive the notifications associated with consumption, communication errors, etc.

	Communication alarms of the **SBOX Gateway** and its devices are programmed at the factory free of charge. However, the e-mail notifications must be enabled to receive them.

3.- Check the data on the edit form of the **SBOX Gateway**, **Figure 16**:

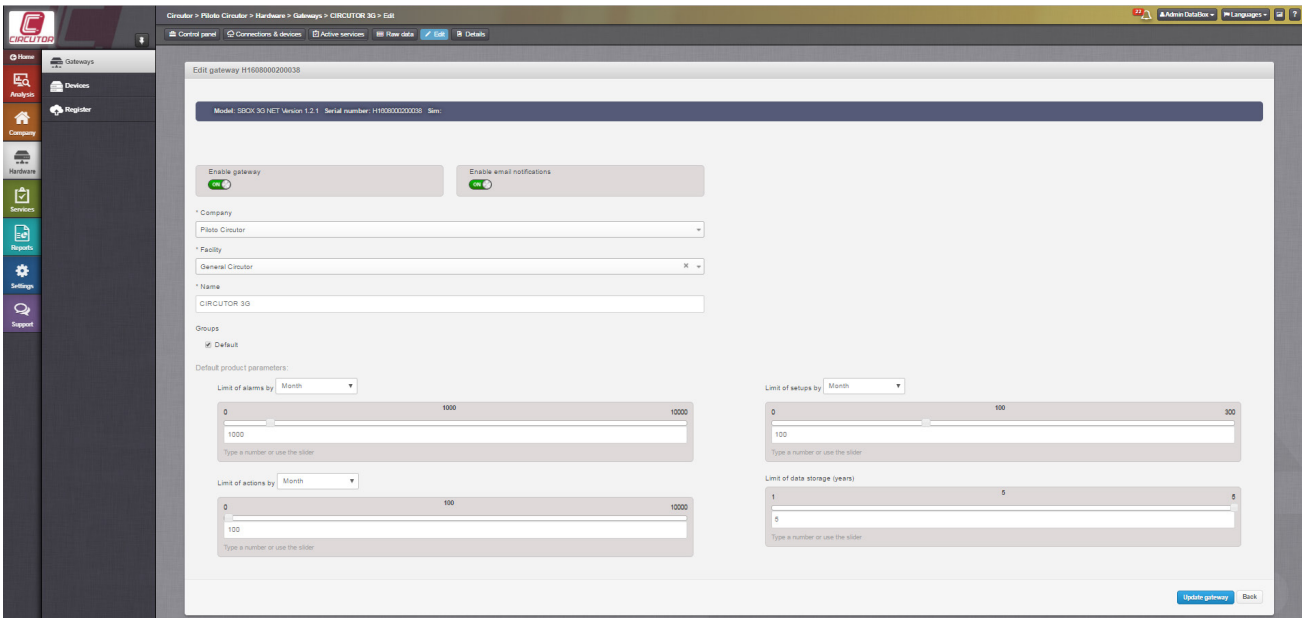


Figure 16:SBOX Gateway edit form.

✓**Enable Gateway,** When the Gateway is enabled, the device starts to upload the data of the facility to the **Databox** platform. If the Gateway is disabled, it will be disconnected from the **Databox** platform and the facility data will not be updated.

✓**Limit of data storage (years),** limit the storage of data in years.

✓**Limit of setups,** The number of configurations can be limited to control the service tariff costs, in addition to notifying the administrator of the facility when 70% and 100% of the configured limit is reached.

✓**Limit of alarms,** The alarms can be limited to control the service tariff costs, in addition to notifying the administrator of the facility when 70% and 100% of the configured limit is reached.

	Each new configuration and alarm activation generates an additional Service Tariff cost, as indicated in the ***Data Plan*** of the Company. The **setups** and **alarm limits** can be configured to notify the administrator of the facility when 70% or 100% of the limit is being reached. However, when these limits are exceeded, the Gateway will not stop sending alarms if the activation conditions are met.

7.2.- REGISTERING THE DEVICES

⚠	Devices can and should be registered in the **DataBox** platform before travelling to the facility and before its start-up. The devices must feature a display to configure the electrical parameters and/or communications manually, since this procedure cannot be carried out from the **DataBox** platform.

Follow these steps to register the devices:

1.- Click on the ***Actions*** button in the list of Gateways and select the ***Connections & Devices*** option. Next, click on the ***New connection*** button.

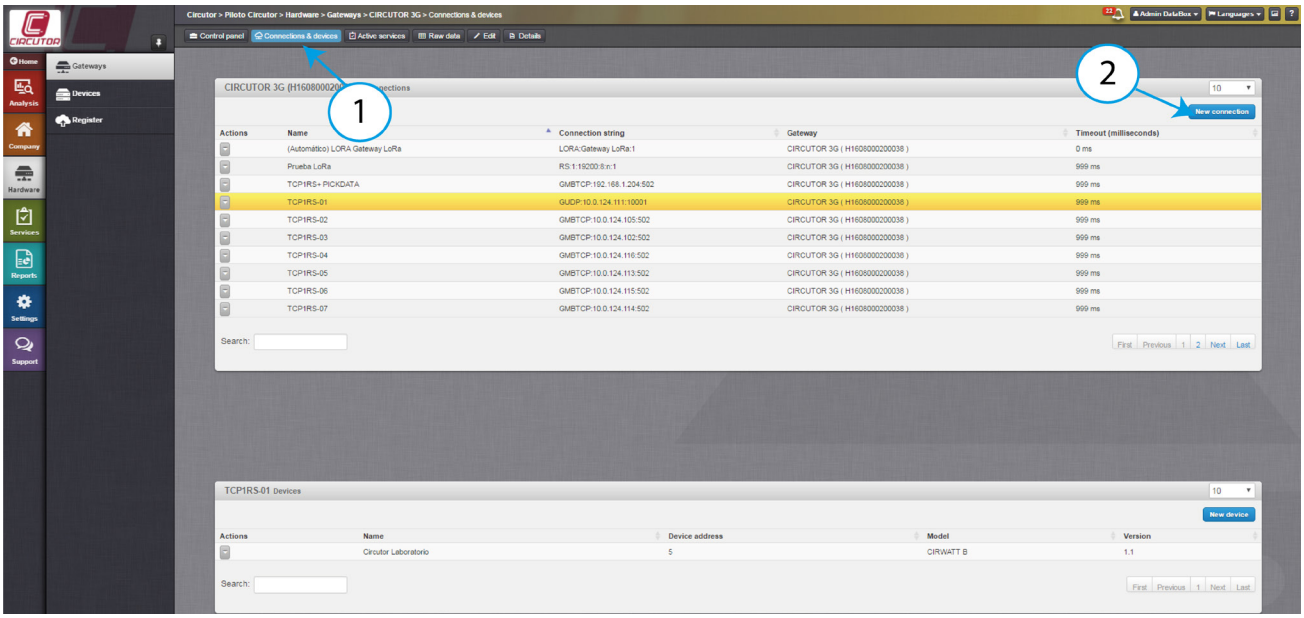


Figure 17:Make a new Connection.

2.- Select one of the four types of connections and fill in the form with the information associated with each type of connection (Example: **Figure 18** and **Figure 19)** :

Protocol:

✓**Generic Modbus TCP,** Enter the IP address and the converter port or gateway.
✓**Generic TCP,** Enter the IP address and the converter port or gateway.
✓**Generic UDP,** Enter the IP address and the converter port or gateway.
✓**Serial port,** Enter the communication speed of the DataBox serial bus

⚠	The **serial port** option refers to the RS-485 serial port of the Gateway. To communicate via RS-485, connect a braided communication cable between terminals A+ and B- following the standard for facilities based on RS-485 communications.

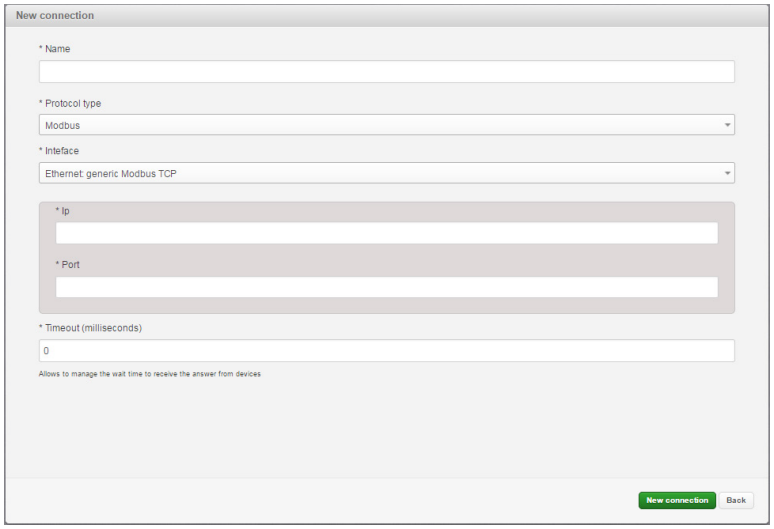


Figure 18:New connection with the generic Modbus TCP

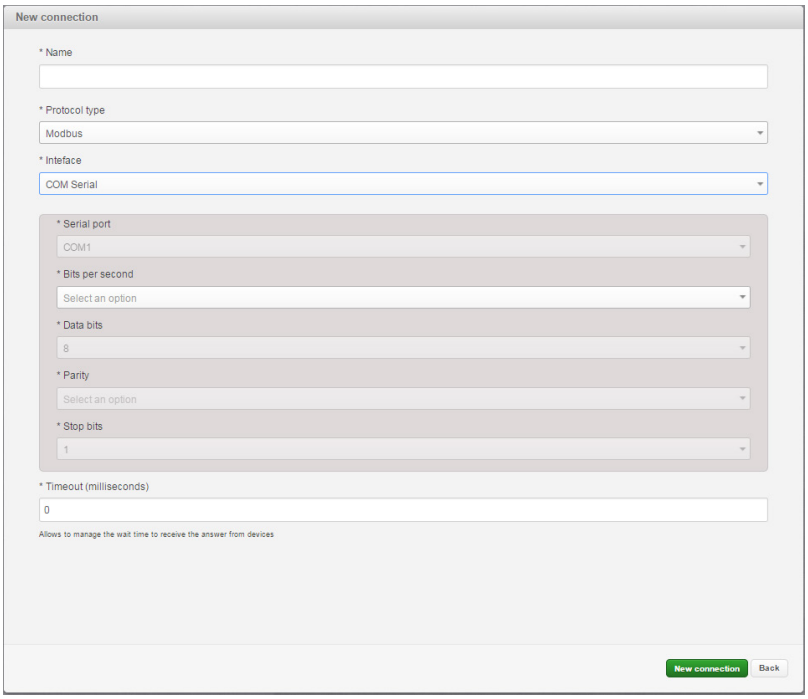


Figure 19:New connection with the Serial Port

3.- Create a new connection by clicking on the ***New Connection*** button.

4.- Select the connection you have created (underlined in yellow in **Figure 20**) and add a new device by clicking on the ***New device*** button.

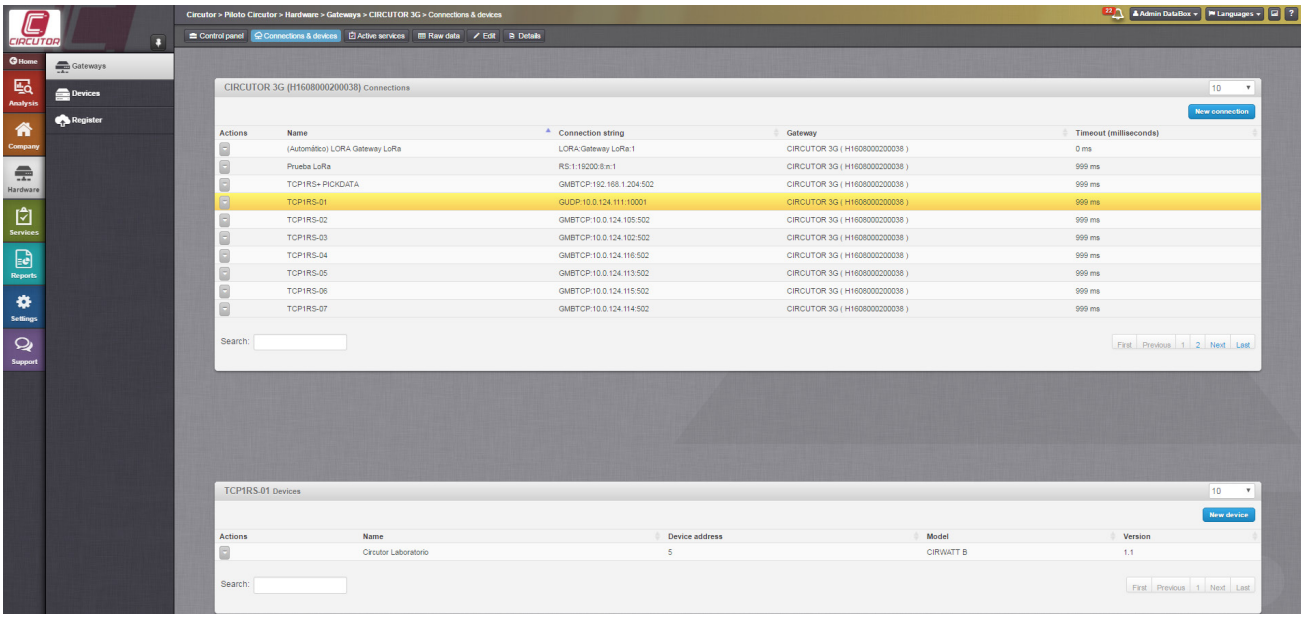


Figure 20:Add a new device to a connection.

4.- Fill in the form shown in **Figure 21** with the information of the device:

✓**Brand,** Select the brand of the device.
✓**Product,** Select the model of the device.
✓**Model version,** Select the version of the device.
The last version of the driver of the device appears by default.
✓**Name,** Name of the device, as it will be shown in the **Databox** platform.
✓**Device address,** Peripheral number of the device.

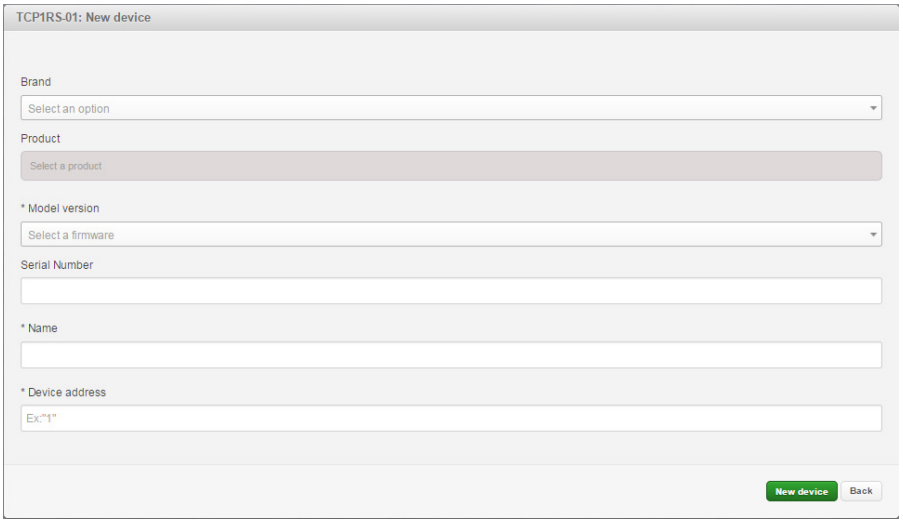


Figure 21:New Device Form

Table 2 shows a list of devices registered in the **Databox** platform, with ModBus communications.

Table 2: List of devices registered in the Databox platform.

Device	Brand	Device	Brand
CDP-0	Circutor	**CVMk2**	Circutor
CDP-G	Circutor	**DH96 CPM**	Circutor
CIRWATT B	Circutor	**LM25-M**	Circutor
CVM-1D	Circutor	**LM4I-4O-M**	Circutor
CVM-BD	Circutor	**ReadWatt**	Circutor
CVM-C10	Circutor	**TH-DG-T/H**	Circutor
CVM-C5	Circutor	**TR16-RS485**	Circutor
CVM-MINI	Circutor	**TR8-RS485**	Circutor
CVM-NET	Circutor	**RVE X2**	Circutor
CVM-NET4	Circutor	**MR44-PARK**	Circontrol
CVM-NET4+	Circutor	**146 68**	Legrand

8.- ADDING SERVICES

⚠	Registering a new service generates an additional cost in the Service Tariff, as explained in the **Data Plan** of the Company.

8.1.- CREATING CONTRACTS AND SUPPLIES

⚠	Registering a **Supply** is required to prepare an invoice report or to use the following Widgets: ✓Reactive energy term Widget. ✓Fixed charge Widget. ✓Invoicing Widget for excess reactive energy penalties. ✓Active energy term invoicing Widget. ✓Fixed charge invoicing Widget.

Follow these steps to create a new contract:

1.- Create a new contract selecting the ***Services*** section, ***Supplies & contracts→ Contracts*** sub-menu, and clicking on the ***New Contract*** **button (Figure 22).**

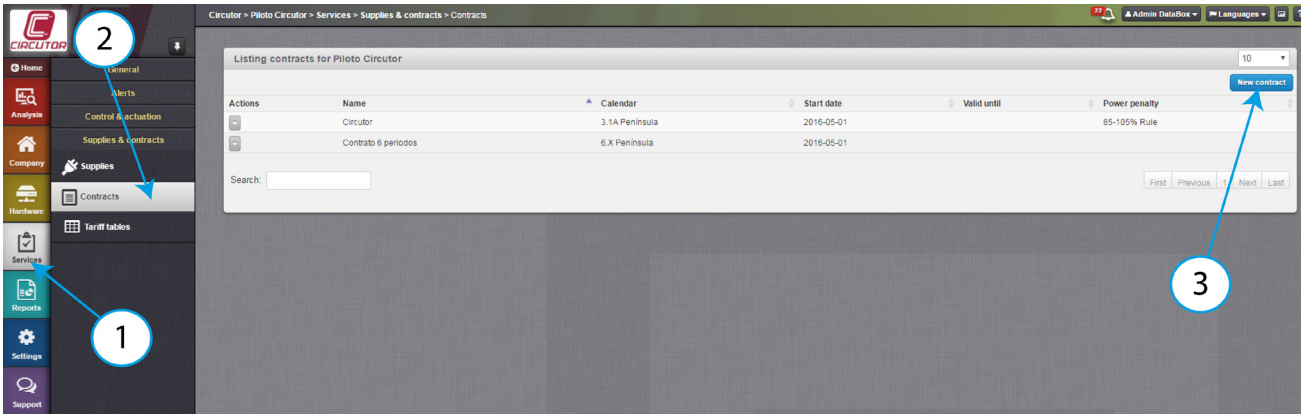


Figure 22:Create a new contract.

2.- Select the option to create a contract from scratch or from an existing contract and click on the ***Begin*** button**, Figure 23.**

✓***Empty contract,*** allows you to create a contract from scratch.
✓***Based on existing contract,*** allows you to create a new contract using an existing contract.



Figure 23:Select the type of contract.

3.- Fill in or modify the form shown in **Figure 24** with the corresponding data of the current supply contract in which the Gateway is hosted. Click on the ***Next*** button to access the four sections of the form.

Enter the following information in each section:

✓**Basic,** Select the tariff structure .
✓**Consumption,** Indicate the fixed charge price (€/kWh) and the additional costs.
✓**Power,** Indicate the fixed charge price (€/kW), the type of penalty for consuming Excess power, Excess reactive power and the additional costs.
✓**Taxes,** Indicate the additional costs plus VAT.

	The VPSC option (Voluntary Price for the Small Consumer) is included in the **Basic** section. This option is reserved for household facilities or facilities of the tertiary sector with low power ratings. The price can be downloaded from the website of the REE **https://www.esios.ree.es/es/pvpc** every day, which is compared with the consumption.

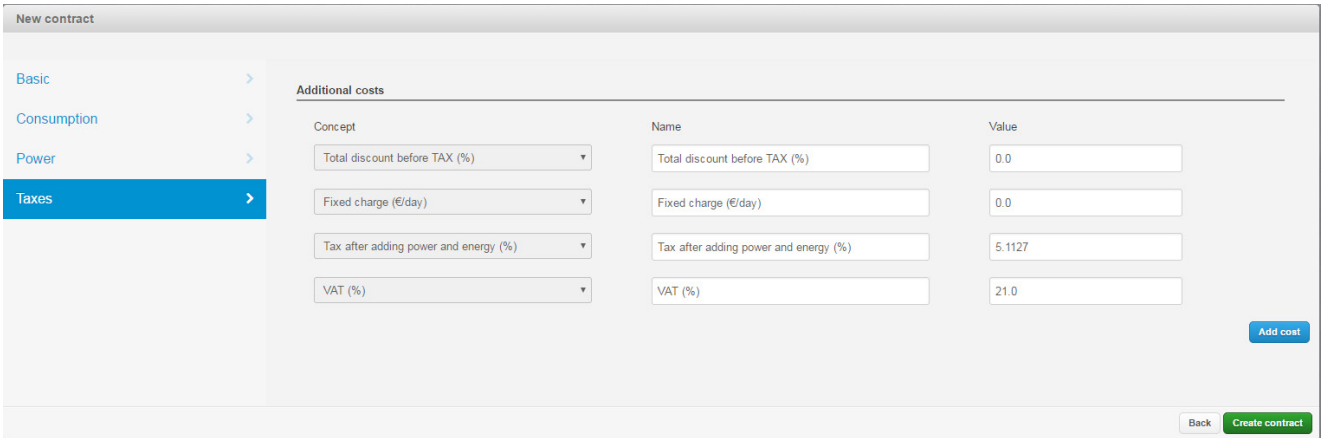


Figure 24:Contract Fees Screen

4.- Create the new contract by clicking on the ***Create Contract*** button.

5.- Create a new Supply by clicking on the ***New Supply*** button in the ***Supplies & contracts*** → ***Supplies*** sub-menu of the ***Services*** section.

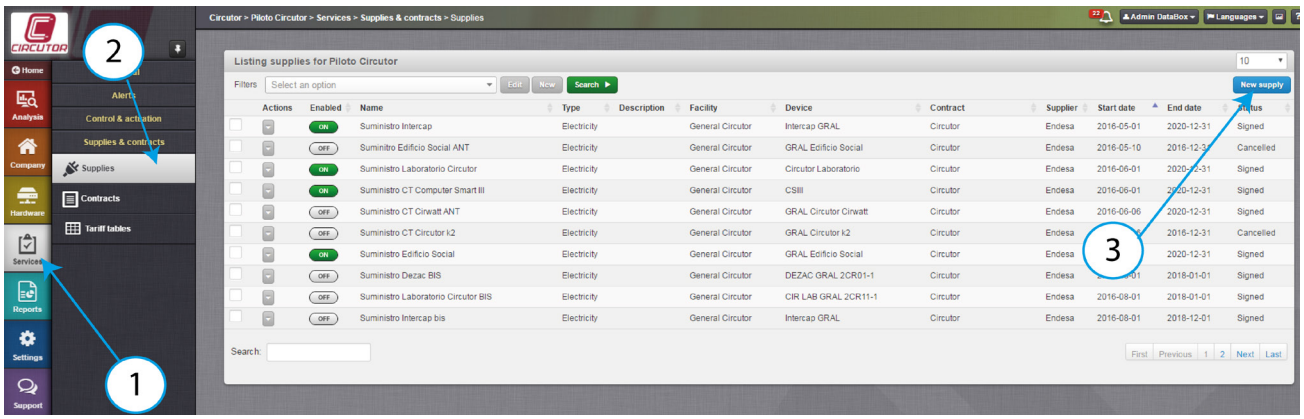


Figure 25:Create New Supply.

6.-Fill in the form shown in **Figure 26** with the details corresponding to the new supply that has been selected:

✓**Facility,** Select the facility that has been created.
✓**Device**, Select the header device.
✓**Contract,** Select the contract that has been created.
✓**Supplier ,** Select a Distribution company
✓**Supply type,** Select the type of supply: Water, Electricity or Gas.

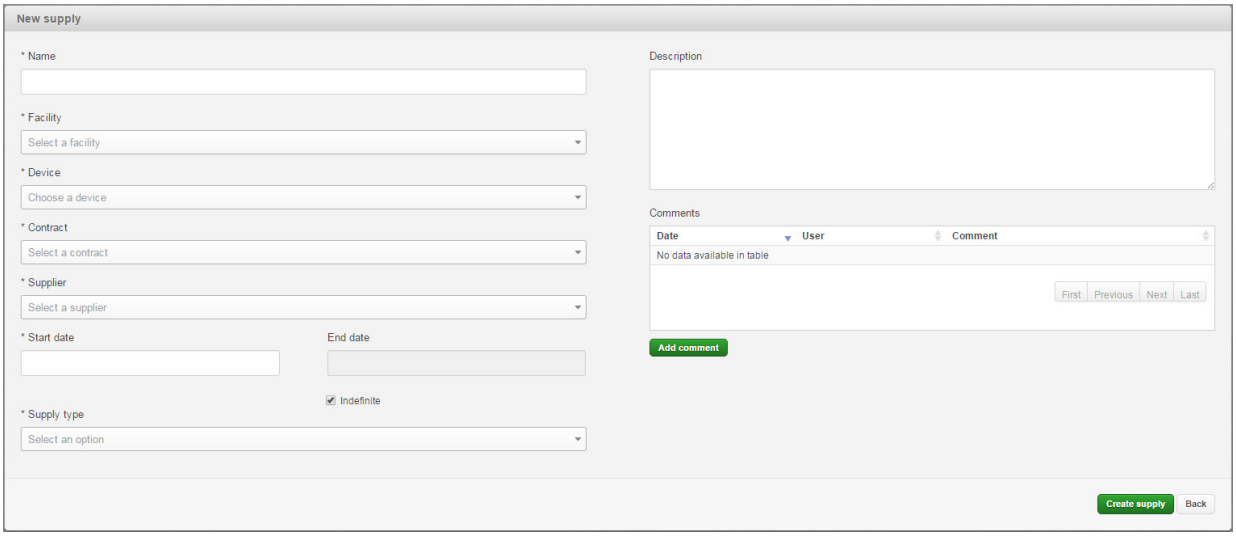


Figure 26:Create New Supply Form

7.- Create the new Supply by clicking on the ***Create Supply*** button.

	If you cannot register the new supply: ✓ Check the configuration of the ***Contract*** you have created. ✓ Check whether the header device of the facility has been registered as a ***Supply*** or not in **Table 3**.

Table 3: List of facility header devices.

Device	Brand	Device	Brand
CVM-1D	Circutor	CVM-NET4	Circutor
CVM-C10	Circutor	CVM NET4+	Circutor
CVM-C5	Circutor	CVMk2	Circutor
CVM-MINI	Circutor	146 68	Legrand

8.- Check the registered services by locating the ***Supply*** created in the ***List of Supplies*** and clicking on the ***Actions*** button to select the ***Services*** option. (**Figure 27**)

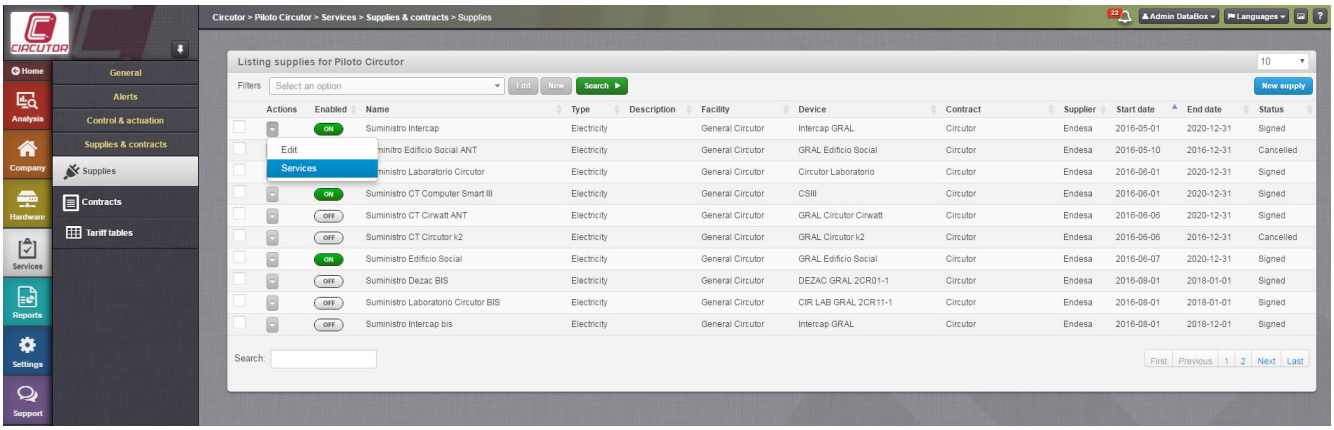


Figure 27:List of Supplies

9.- Open the screen shown in **Figure 28** and identify the ***Services*** in the Gateway column. Three services have been registered automatically in this example:

✓**Circutor Energía activa (INCR),** Periodic hourly reading
✓**Circutor Energía reactiva inductiva (INCR),** Periodic hourly reading
✓**Circutor Máxima demanda (MAX),** Periodic quarter-hourly reading

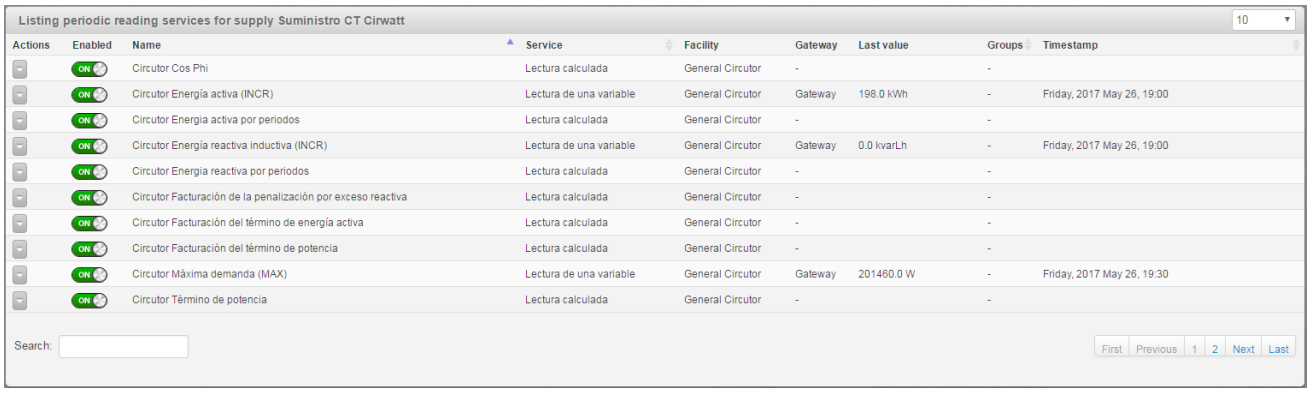


Figure 28:List of services derived from the Supply.

	The services generate an additional cost in the Service Tariff, as explained in the ***Data plan*** of the Company.

10.- Identify other ***Derived services***, i.e., services derived from the supply, as a result of the internal formulas that use the configured contract and supply data. Unlike the Periodic readings services, these do not generate an additional cost.

	When the new Supply has been registered, the variables required to manage the supply will start to be automatically read, according to the device, type of penalty for consuming Excess power and Excess reactive energy. It is not necessary to proceed to the next step if there are no more devices in the facility, "***8.2.- CREATE PERIODIC READINGS***"

8.2.- CREATING PERIODIC READINGS

Follow these points to create a periodic reading:

1.- Create a periodic reading by selecting the ***Services*** section, ***General→ Periodic readings*** sub-menu and clicking on the ***New Periodic Reading*** button. (**Figure 29**)

⚠	The services generate an additional cost in the Service Tariff, as explained in the ***Data plan*** of the Company.

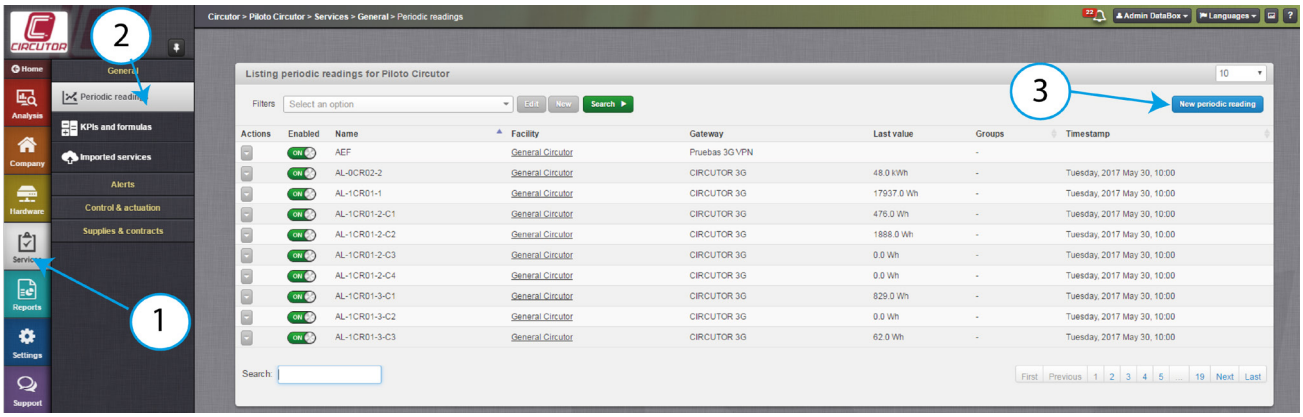


Figure 29:Create New Periodic Reading

⚠	The ***Periodic readings*** can access any record of any device with a Modbus map.

2.- Fill in the form shown in **Figure 30** with the details of the new periodic reading:

✓**Enable service,** if the service is enabled, the variable will start to be read, according to the configured reading periods and configured information delivery intervals. The variable will stop being read if it is disabled.
✓**Read period,** Period during which information will be read in the **Gateway** / **Databox** Platform.
✓**Send period,** Period during which information is uploaded to the **Databox** platform.
✓**Facility,** Select the facility that has been created.
✓**Gateway,** Select the Gateway that has been registered.
✓**Device,** Select the device.
✓**Variables,** Select the variable to be read.

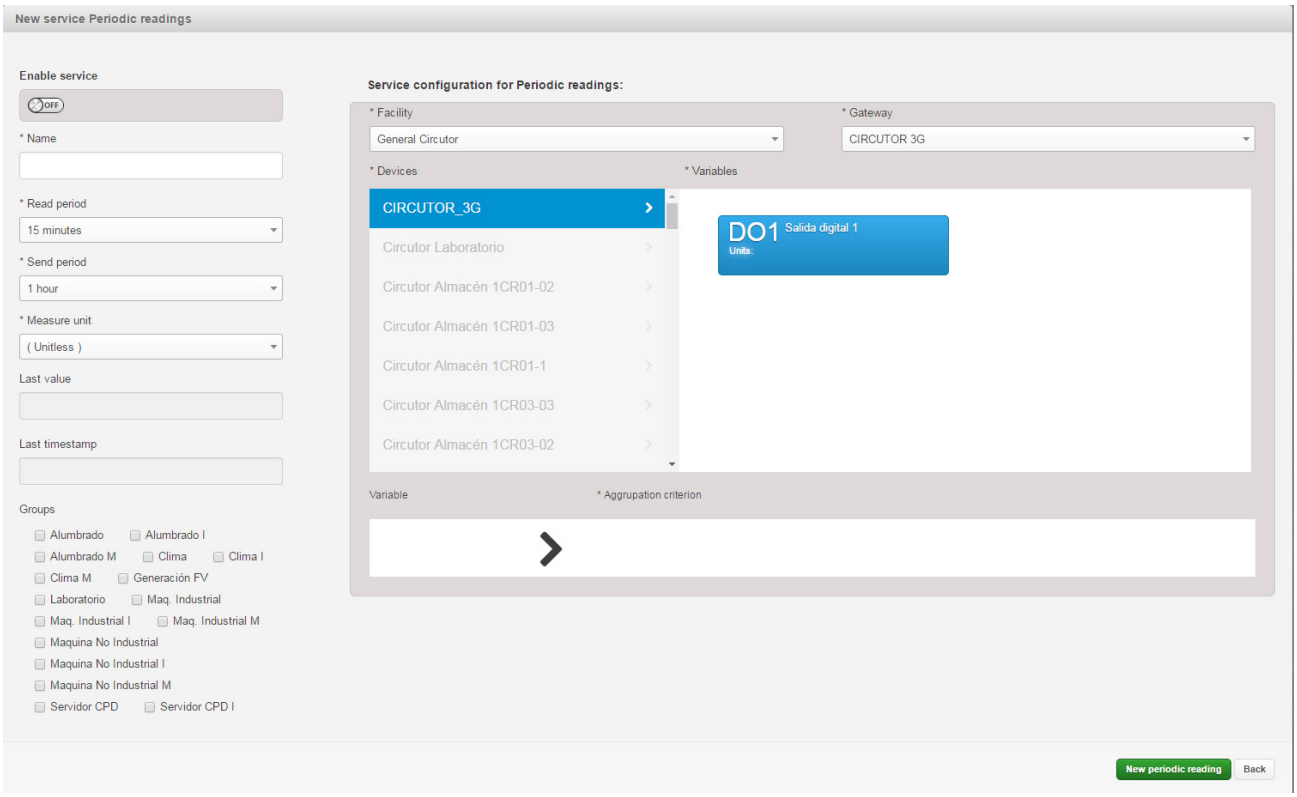


Figure 30:New Periodic Reading Form

3.- Create the new "Periodic reading" by clicking on the ***New Periodic Reading*** button.

4.- Create as many "Periodic Readings" as needed to create the project.

	If the ***Read Period*** (period during which the information is read in the **Gateway**) is 15 min and the ***Send period*** (period during which the information is uploaded to the **Databox** platform) is 1 hour, the platform will receive 4 values from each upload and 4 ***Periodic readings*** will be charged.

8.3.- CREATING ALARMS

Follow these points to create an alarm:

1.- Create a new alarm by clicking on the ***New Alarm*** button in the ***Alerts→ Alarms*** sub-menu of the ***Services*** section (**Figure 31**).

	The services generate an additional cost in the Service Tariff, as explained in the ***Data plan*** of the Company.
	**Alarms** are used to send a notification of an anomalous operation of the facility. An activation and deactivation condition must be defined for each **Alarm**, generating two different alerts. Each alert generates a cost for each reported alarm. If a deactivation condition is not configured, twice the cost of the reported alarm will be charged.

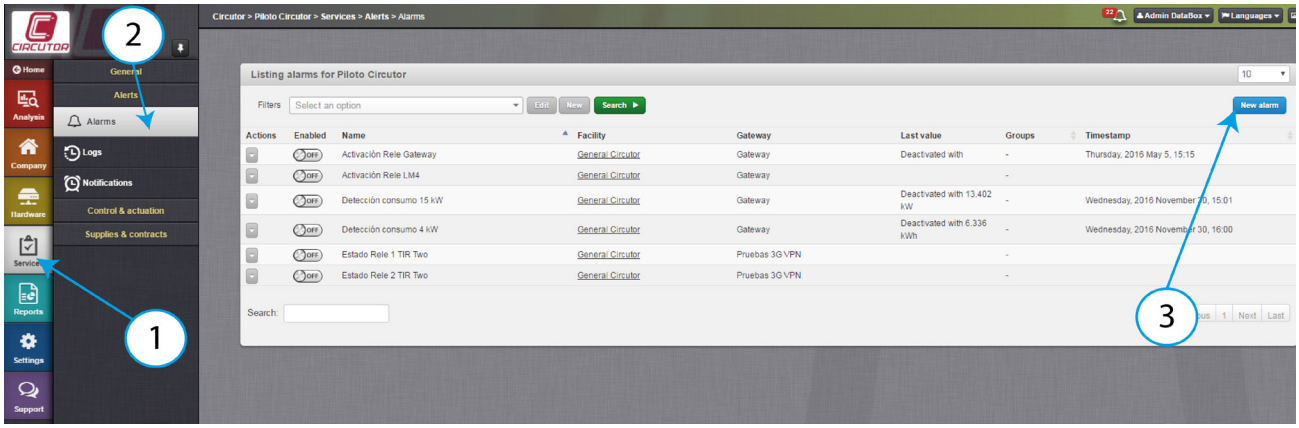


Figure 31:Create New Alarm.

2.- Fill in the form shown in **Figure 32** with the details of the new alarm:

✓**Enable service,** If the service is enabled, the configuration of the **Gateway** will be updated and a notification will be received when the alarm condition is met. If it is disabled, no notification of the alarm will be received.

✓**Type,** Select one of the following three types: **Event**, **Alert** and **Alarm**.
The difference between them is the display colour: yellow, orange and red, respectively.

✓**Facility,** Select the facility that has been created.

✓**Gateway,** Select the gateway that has been created.

✓**onActivate Condition,** Click on the ***Edit condition*** button and select the desired variables and operators to generate an alarm activation condition.

✓**onDeactivate Condition**, Click on the ***Edit condition*** button and select the desired variables and operators to generate an alarm deactivation condition.

✓**OnActivate actions,** Click on the ***Edit expression*** buttons to select a value to return or act

on a modbus variable (***for example,*** *output relay*).

✓**OnDeactivate actions,** Click on the ***Edit expression***, buttons to select a value to return or act on a modbus variable (***for example,*** *output relay*).

✓**Email notification setting,** Independent module used to enable notifications, select the contact, configure the maximum threshold of alarms to ignore and waiting time between notifications.

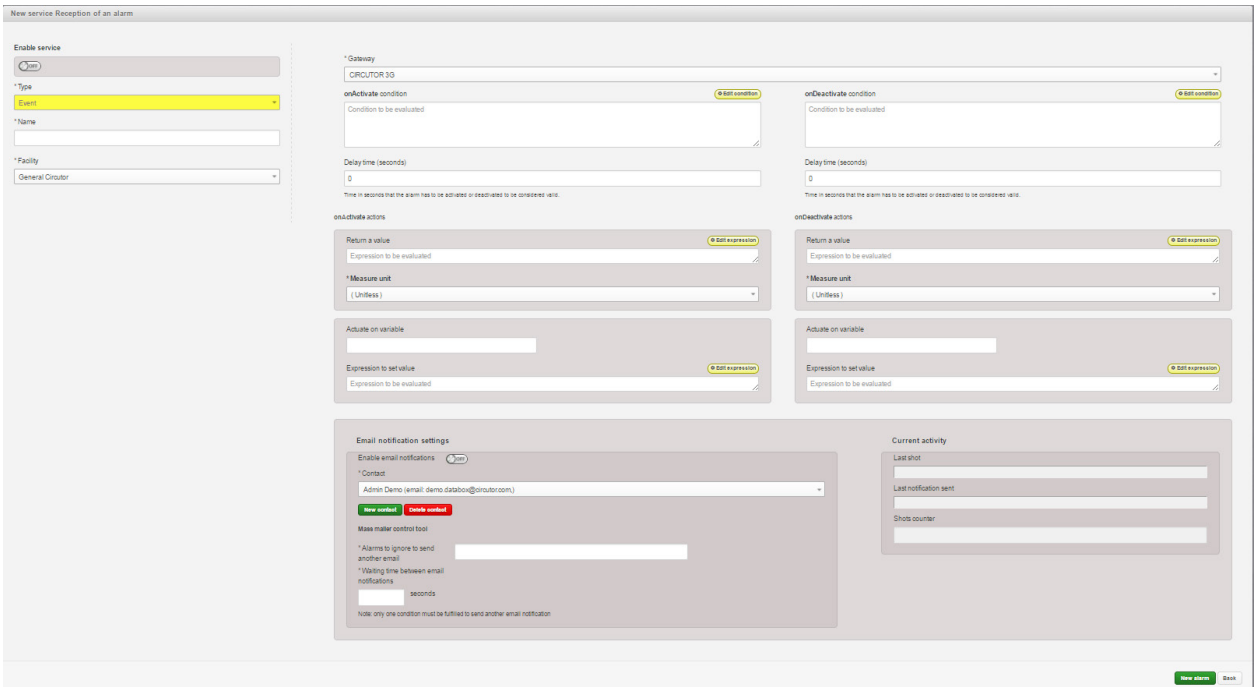


Figure 32:New Alarm Form

3.- Create the new Alarm by clicking on the ***New Alarm*** button.

	In the case of the **SBOX 3G NET** model, when remote actions are carried out (for example, activation of relays), port 5000 must be opened with the UDP protocol to access the network where the **Gateway** is hosted.

8.4.- CREATING KPIs & FORMULAS

Follow these points to create a KPI:

1.- Create a new KPI by selecting the ***Services*** section, ***General →KPIs and formulas*** sub-menu and clicking on the ***New Formula*** button (**Figure 33**).

	Unlike other **Services**, the ***KPIs & Formulas*** do not generate an additional cost in the Service Tariff.

	A ***KPI & formula*** is the calculation of an expression or ratio, based on periodic readings and operators.

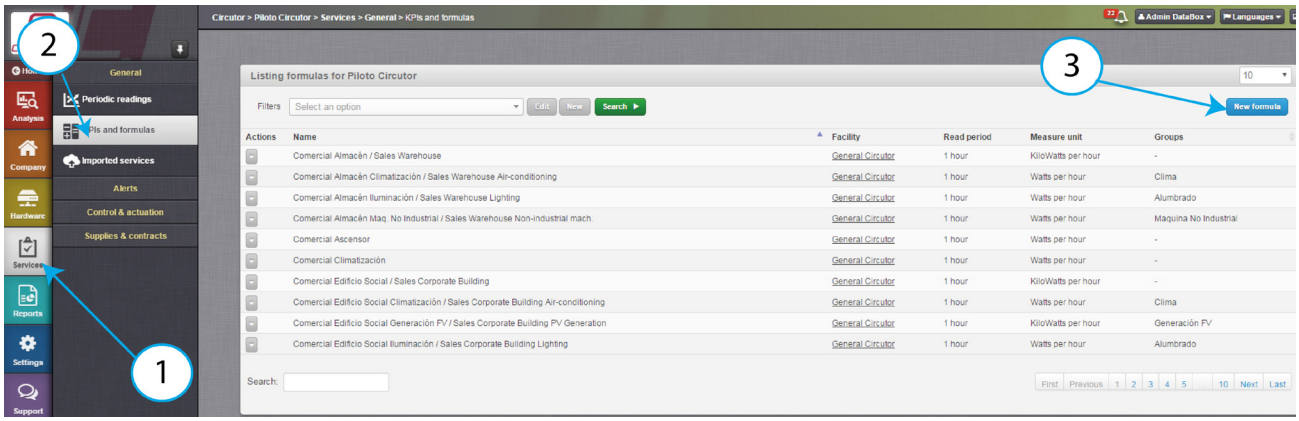


Figure 33: Create KPIs & Formulas.

1.- Fill in the form shown in **Figure 34** with the data of the new formula:

✓**Facility,** Select the facility that has been created.
✓**Select services with samples every..,** Select the reading period of the services.
✓**Formula to evaluate,** Select the desired variables and operators to generate the formula.
✓**Facility features,** This section will show all attributes of the selected facility, such as the surface area, number of workers, start time, etc. These attributes are defined in the facility creation form.

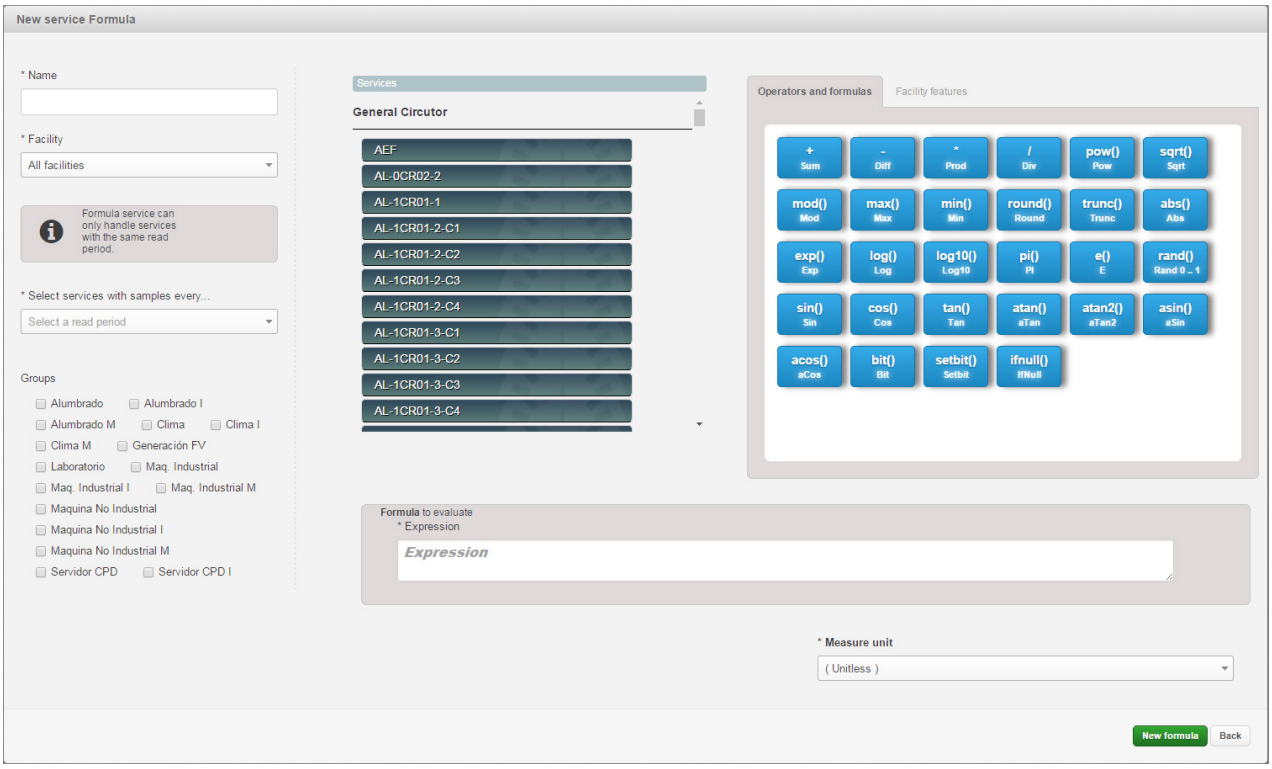


Figure 34:Form used to create a new Formula.

2.- Create a new Formula by clicking on the ***New Formula*** button.

9.- CREATING WIDGETS & DASHBOARDS

⚠	A **Widget** is a chart or table that displays the data stored in the periodic readings, an alarm or a formula calculation.

⚠	A ***Dashboard*** is a data visualization tool composed of one or more Widgets, which is used to monitor the consumption of an electrical facility. Various ***Dashboards*** can be created for the same facility.

9.1.- CREATING WIDGETS

Follow these steps to create a **Widget**:

1.- Create a new Widget by selecting the ***Analysis*** section, ***Editor*** sub-menu and then clicking on the ***New Widget*** button. (**Figure 35**).

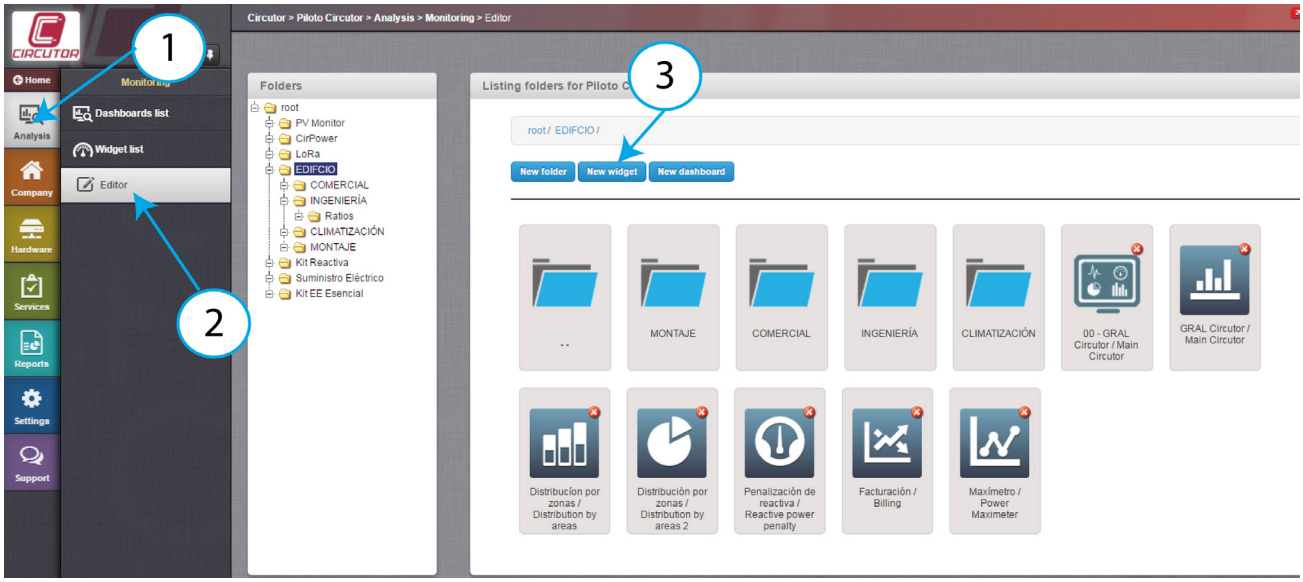


Figure 35:Create New Widget.

⚠	Click on the ***New Folder*** button to create a folder tree and organise the Widgets by type, project, etc. The folder tree is shown on the left side of the screen.

2.- Enter the name and type of Widget in the ***Configure*** tab, **Figure 36**:

The following types of Widgets can be created:

- ✓ Line chart.
- ✓ Table.
- ✓ Stacked columns.
- ✓ Pie chart.
- ✓ CosPhi.

- ✓ Basic colums.
- ✓ Dynamic meter.
- ✓ Value comparison.
- ✓ Variable list.
- ✓ Temperature.
- ✓ Budget.
- ✓ Supply management.
- ✓ Remote control.



Figure 36:Configure tab.

3.- In the ***Properties*** tab and, according to the type of Widget that has been selected, fill in the specific fields indicated in **Table 4**, **Figure 37**.

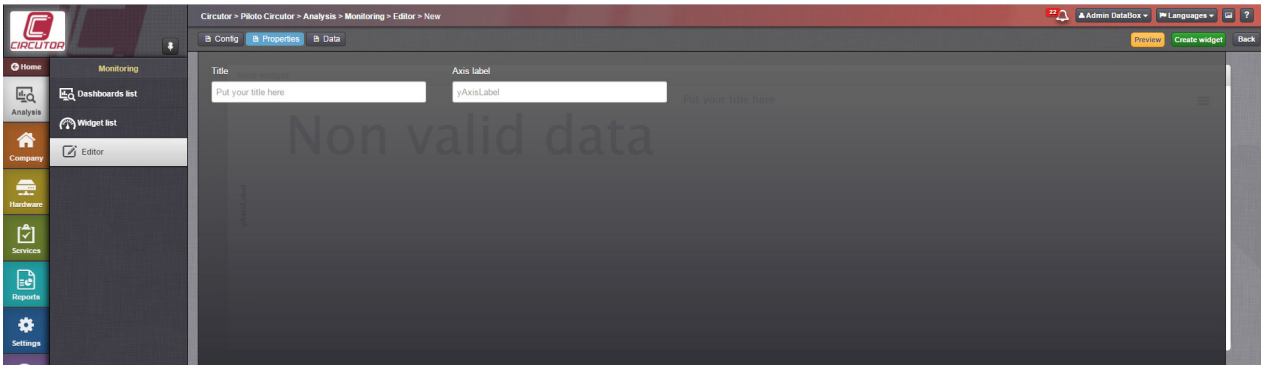


Figure 37:Properties Tab.

4.- In the ***Data*** tab and, according to the type of Widget that has been selected, fill in the specific fields indicated in **Table 4**, **Figure 38**.

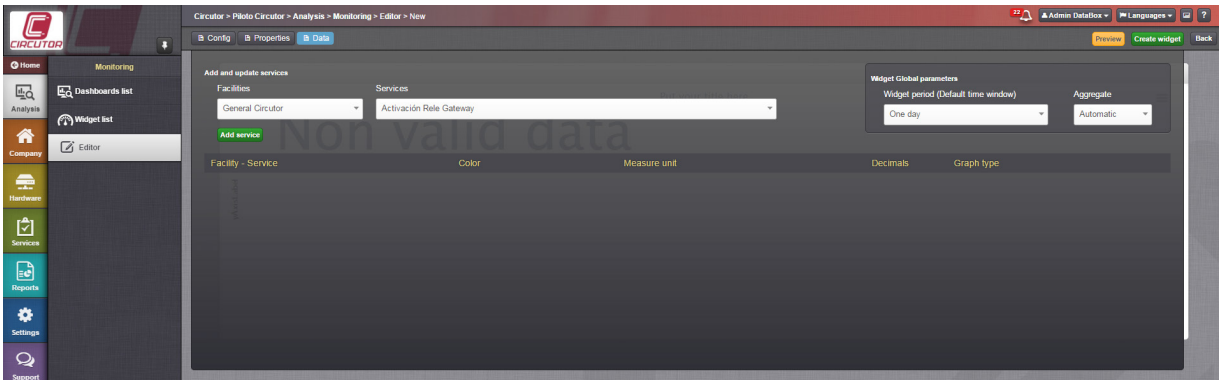


Figure 38:Data tab.

5.- Add a service by clicking on the ***Add Service*** button and configure the colour, unit of measurement and decimals of the service that will be represented, **Figure 39**.



Figure 39:Add Service.

6.- Add as many services as needed to finish creating the Widget.

7.- You can preview the Widget (optional) and create the new Widget by clicking on the ***Preview*** and ***Create Widget*** buttons, respectively, **Figure 40**.

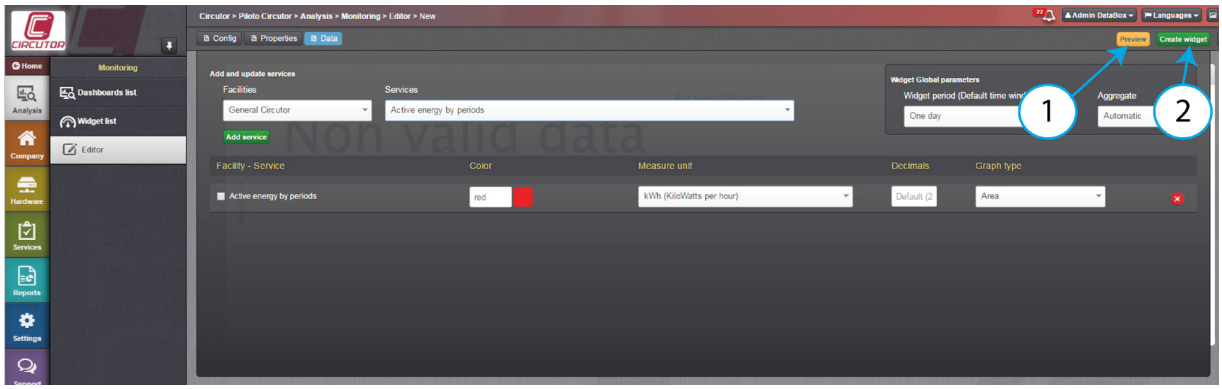


Figure 40:Preview and create a Widget.

Table 4: Fields of the different Widgets.

Configure Tab: Type of Widget	Properties Tab: Fields	Data Tab: Fields
Line chart. **Basic columns.** **Stacked columns.** **Pie chart.**	✓**Title of the chart** ✓**Information text on the Y-axis** ✓**Colour of the Y-axis** (only in the bar chart) ✓**Text that will appear in front of the percentage of each section** (only the pie chart)	✓**Facility** ✓**Service** ✓**Default Widget period:** - One day -Last 24 hours -One week -Last 7 days -One month -One year ✓**Group:** - Automatic -Reading period -Day -Week -Month
CosPhi.	✓**Title of the Widget** ✓**Limit value of the red zone** ✓**Limit value of the yellow zone**	✓**Facility** ✓**Service** ✓**Default period of the Widget** - Last value - Last day ✓**Group** - Automatic
Gauge.	✓**Title of the Widget** ✓**Minimum chart value** ✓**Maximum chart value** ✓**Background chart colour** ✓**URL of the chart background image** ✓**% start of the green zone** ✓**% end of the green zone** ✓**% start of the yellow zone** ✓**% end of the yellow zone** ✓**% start of the red zone** ✓**% end of the red zone** ✓**Angular chart start position** ✓**Angular chart end position** ✓**No. spacers between labels**	✓**Facility** ✓**Service** ✓**Default Widget period:** -One day -Last 24 hours -One week -Last 7 days -One month -One year **Group:** -Automatic -Reading period -Day -Week -Month
Temperature.	✓**Title of the Widget** ✓**Maximum value of the Widget** ✓**Minimum value of the Widget**	
Target.	✓**Title of the Widget** ✓**Target value of the Widget**	✓**Facility** ✓**Service** ✓**Default Widget period:** -One week -One month -One year **Group:** -Automatic -Reading period -Day -Week -Month

Table 4 (Continuation): Fields of the different Widgets.

Configure Tab: Type of Widget	Properties Tab: Fields	Data Tab: Fields
Label comparison.	✓**Title of the Widget**	✓**Facility** ✓**Service** ✓**Default Widget period:** -One day -One week -One month **Group:** -Automatic
Variable list.	✓**Title of the Widget**	✓**Facility** ✓**Service** ✓**Default Widget period:** -Last values **Group:** -Automatic -Reading period -Day -Week -Month
Table.	✓**Title of the table** ✓**No. of columns in the table**	✓**Facility** ✓**Service** ✓**Default Widget period:** -One day -Last 24 hours -One week -Last 7 days -One month -One year **Group:** -Automatic -Reading period -Day -Week -Month

9.2.- CREATING DASHBOARDS

The following are required to create a **Dashboard**:

1.- Create a new Dashboard by selecting the ***Analysis*** section, ***Editor*** sub-menu and clicking on the ***New Dashboard*** button. (**Figure 41**)

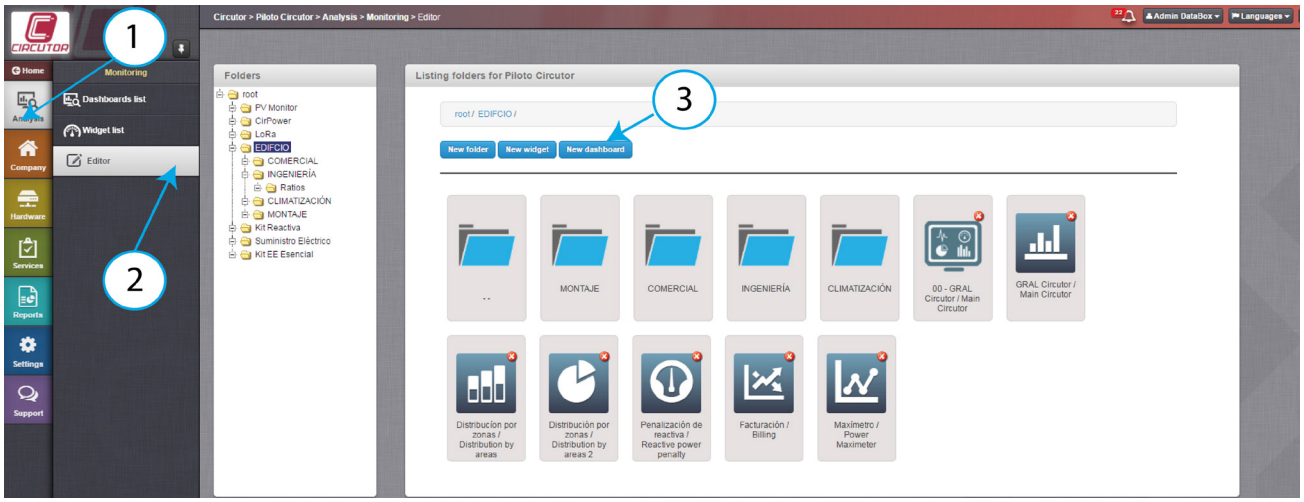


Figure 41:Create a New Dashboard.

2.- On the ***Properties*** tab, enter the following data, **Figure 42**:

✓**Columns,** Number of columns in the dashboard; a matrix will be created.
✓**Rows,** Number of rows in the dashboard; a matrix will be created.
✓**Gateway,** Select the gateway that has been created.
✓***Assign to*** …, Assign the Dashboard to a Company, facility, user or group of users.

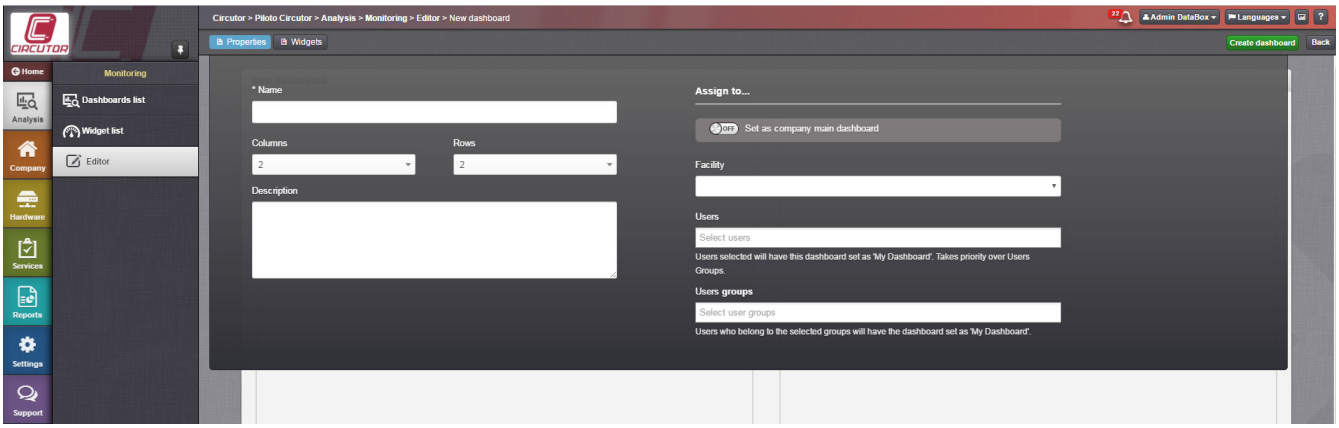


Figure 42:Dashboard Properties

3.- Add the Widgets you have created by simply clicking on them in the ***Widget*** tab, **Figure 43**.

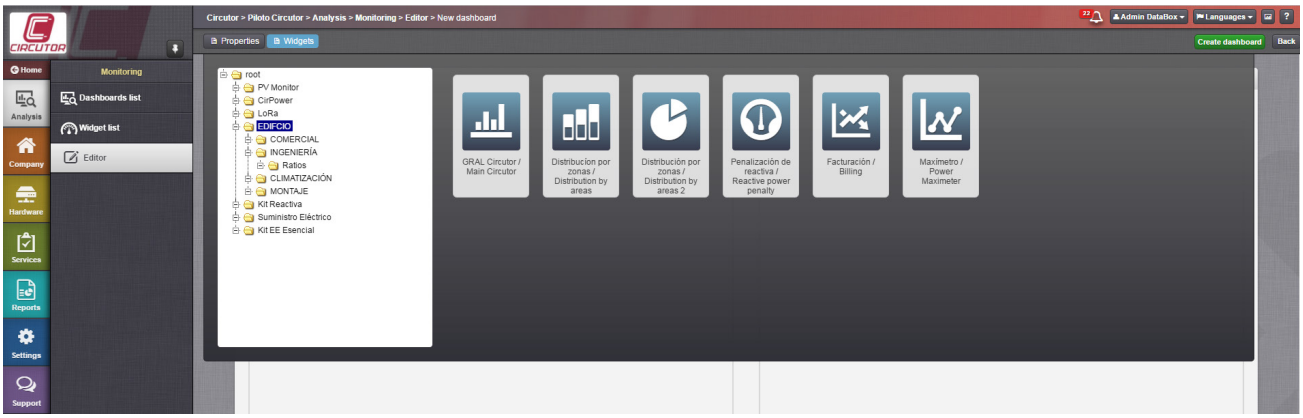


Figure 43:Add Widgets that have been created.

4.- Create a new Dashboard by clicking on the ***Create Dashboard*** button.

	To delete a Widget that has already been added, click on the X on the top right corner of each Widget. If no more Widgets can be added, return to the ***Properties*** tab and increase the number of columns and/or rows (a larger matrix will be created).

10.- START-UP

⚠	Please have the instruction manual of the **Databox** solution at hand before start-up, **M121B01-01-xxx**.

⚠	A SIM card is required before connecting the 3G communications of the **SBOX 3G NET**, which is **not** supplied with the **Gateway**. A SIM data card with a fixed IP and the following features is required: ✓Data traffic of 512 kbps/month→ Supply ✓Data traffic of 1 Mb/month→ Supply + 4 energy variables ✓Data traffic of 5 Mb/month→ from 30 variables ✓Reduction of the data transmission speed in case the Mb/month limit is exceeded

Follow these steps to start up the device:

1.- Follow each step of the instruction manual:

✓ Mount the **Gateway**.
✓ Power the **Gateway**
✓Connect the devices to the **Gateway**.
✓Connect the external antenna and change the switch from INT to EXT (if applicable).

2.- Check the status of the LEDs in the **Gateway**:

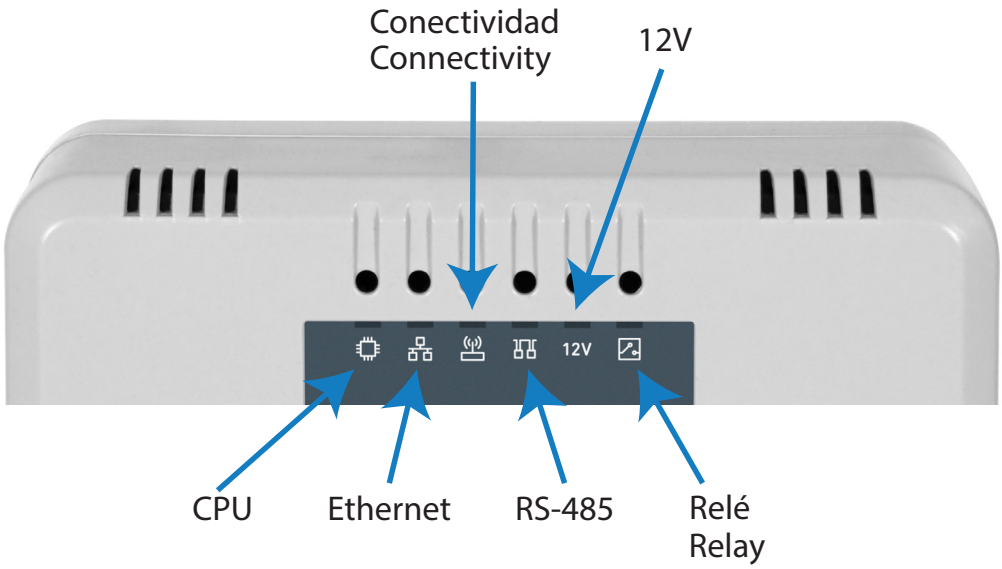


Figure 44: Gateway LEDs.

✓**CPU**: Flashing green.
✓**Ethernet**: Flashing green (if applicable).
✓**Connectivity** : Fixed green (if applicable).
✓ **RS-485**: Fast flashing Green and Red.
✓**12V**: Fixed green.
✓**Relay**: Off.

3.- Check the following points if one or more of the above checks do not show the expected results:

- ✓ **Check the quality of the RSSI coverage signal**
- ✓ **Check the date of last connection**
- ✓ **Reset the system to download a new configuration**
- ✓ **Check the notifications of the Gateway**

	Bear in mind that the **DataBox** solution is an Energy Management System and not a monitoring and control platform: instantaneous data cannot be viewed.

10.1.- CHECKING THE QUALITY OF THE RSSI COVERAGE SIGNAL

1.- Access the control panel of the **Gateway** from the ***Hardware*** section, ***Gateways*** sub-menu. Click on the ***Actions*** button in the list of Gateways and select the ***Control panel*** option. (**Figure 45**)

2.- Check the colour of the icon .
If it is red or orange, change the location of the **Gateway**, or connect an external antenna (change the switch from INT to EXT).

3.- Check that the RSSI signal is between the bottom and top limits of the chart on the right side of the screen.

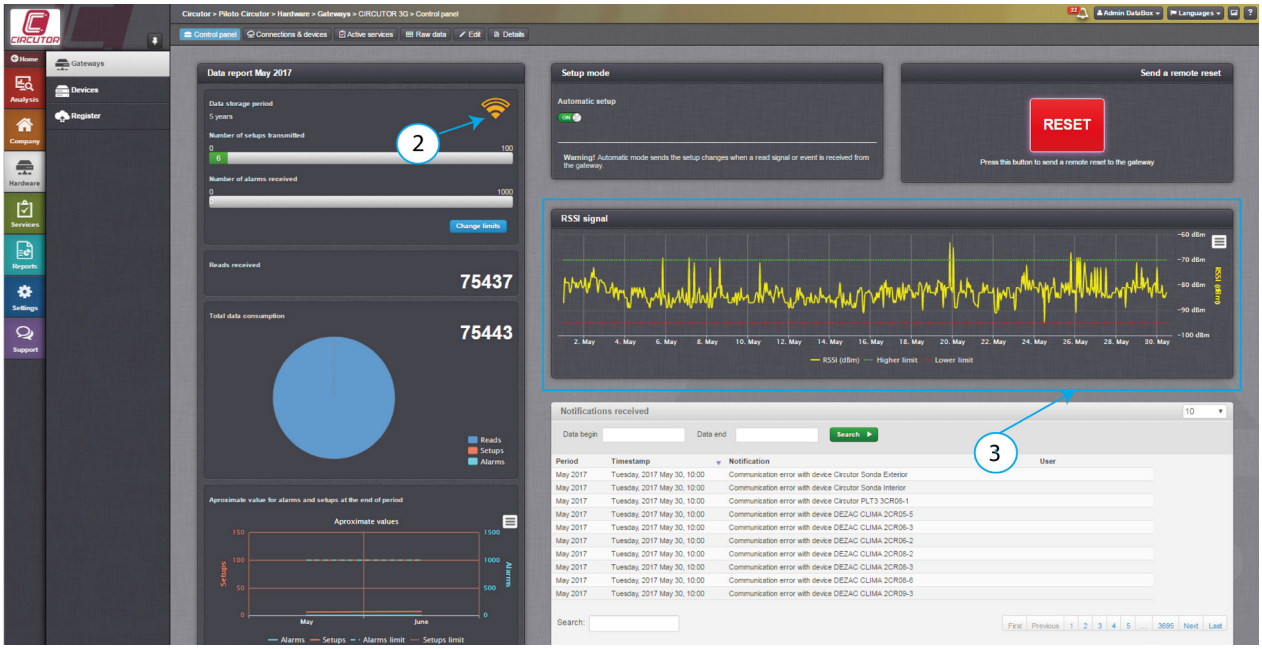


Figure 45:Check the RSSI coverage signal

10.2.- CHECKING THE DATE OF LAST CONNECTION

1.- Open the control panel of the Gateway from the ***Hardware*** section, ***Gateway*** sub-menu and click on the ***Actions*** button in the list of Gateways and select the ***Details*** option. (**Figure 46**)

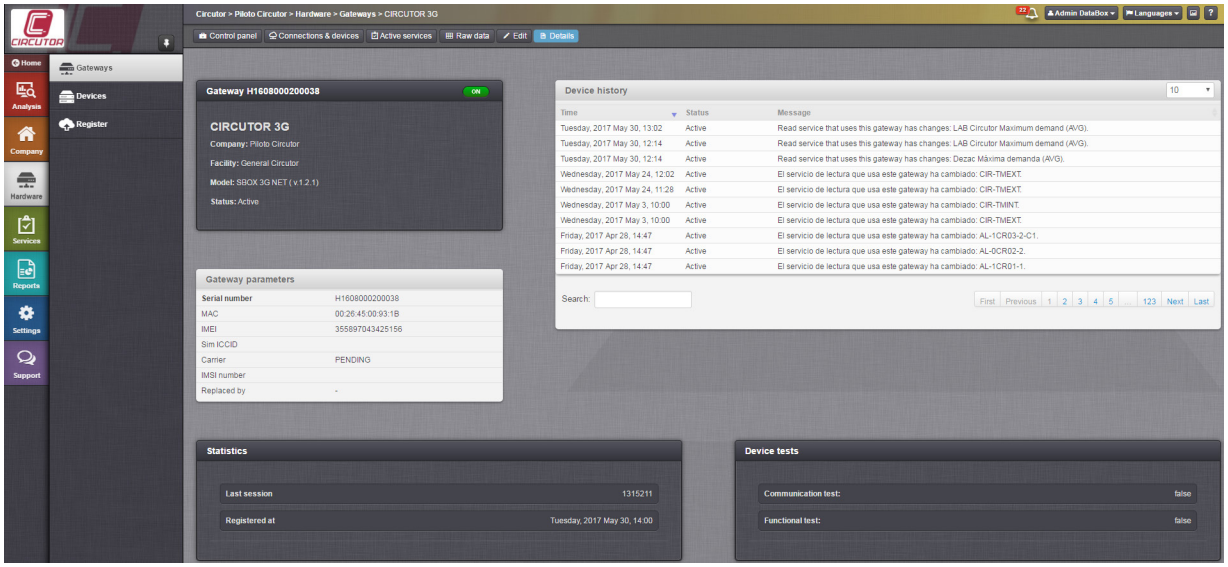


Figure 46:Details Screen.

2.- Check that the date of last connection corresponds to the start-up date.

	When the **Gateway** is powered, it will connect to the platform and check whether there is a new configuration. When it is powered for the first time, and having previously registered the **Gateway**, the setup will be automatically downloaded.

3.-If this is not the case, reset the **Gateway** to force the configuration to be downloaded (see ***"10.3.- RESETTING THE SYSTEM TO DOWNLOAD A NEW CONFIGURATION"***).

	When the **Gateway** is powered for the first time, it will be connected to the **Databox** web platform every hour to upload the data.

10.3.- RESETTING THE SYSTEM TO DOWNLOAD A NEW CONFIGURATION

1.- Open the control panel of the Gateway from the ***Hardware*** section, ***Gateway*** sub-menu and click on the ***Actions*** button from the list of Gateways and select the ***Control panel*** option. (**Figure 47**)

2- Click on the **Reset** button.

	Forcing a reset avoids having to wait one hour for the **Gateway** to connect to the **Databox** web platform and download the new setup available.

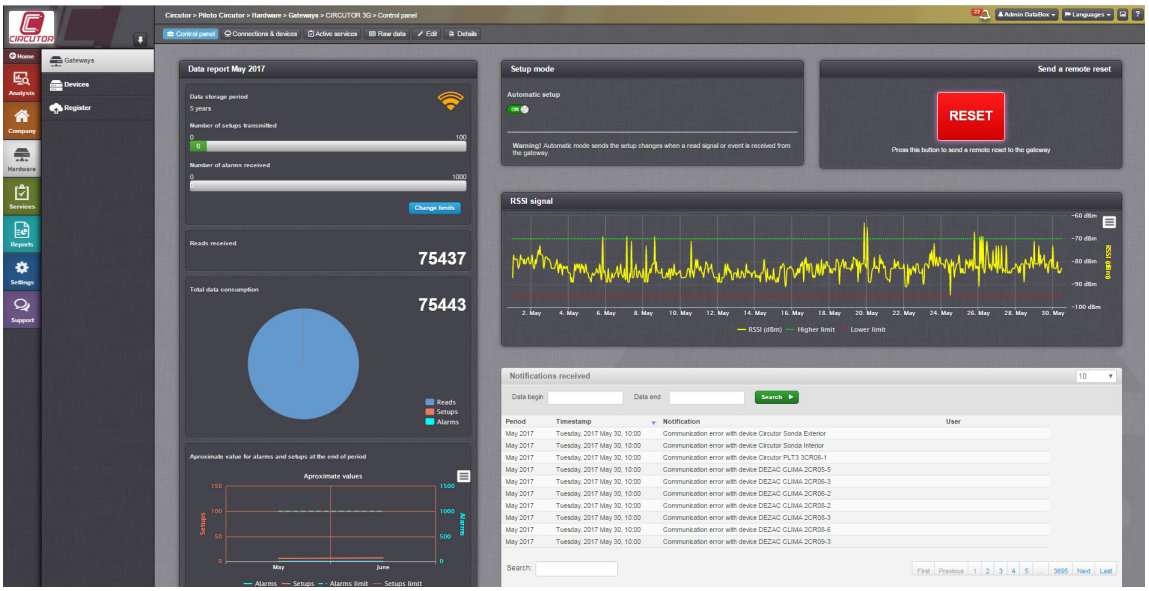


Figure 47:Reset the system to download a New Configuration

	In the case of **SBOX 3G NET** models, to force reset, open port 5000 with the UPD protocol and access the network where the **Gateway** is hosted.

10.4.- CHECKING THE NOTIFICATIONS OF THE GATEWAY

1.- Access the Gateway control panel from the ***Hardware*** section, ***Gateway*** sub-menu, click on the ***Actions*** button in the list of Gateways and select the ***Control panel*** option.

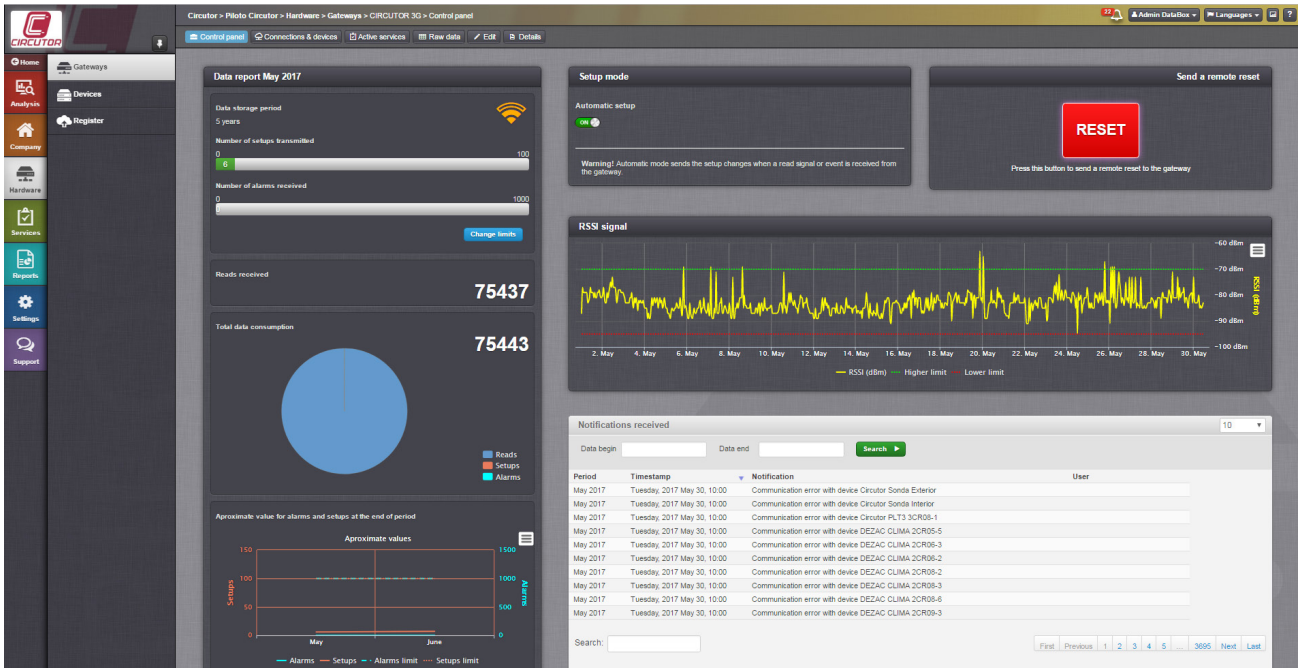


Figure 48:Gateway Notifications

	The notifications only show a communication error, they do not notify of correct configurations. If the notifications via e-mail have been enabled, ….
	The status of the RS-485 communications cannot be checked through the **Gateway** LED if no periodic reading service has been registered.

11.- MAINTENANCE AND TECHNICAL SERVICE

In the case of any query in relation to unit operation or malfunction, please contact the **CIRCUTOR, SA** Technical Support Service.

Technical Assistance Service
Vial Sant Jordi, s/n, 08232 - Viladecavalls (Barcelona)
Tel: 902 449 459 (España) / +34 937 452 919 (outside of Spain)
email: sat@circutor.com

12.- WARRANTY

CIRCUTOR guarantees its products against any manufacturing defect for two years after the delivery of the units.

CIRCUTOR will repair or replace any defective factory product returned during the guarantee period.



• No returns will be accepted and no unit will be repaired or replaced if it is not accompanied by a report indicating the defect detected or the reason for the return.
•The guarantee will be void if the units has been improperly used or the storage, installation and maintenance instructions listed in this manual have not been followed. “Improper usage” is defined as any operating or storage condition contrary to the national electrical code or that surpasses the limits indicated in the technical and environmental features of this manual.
• **CIRCUTOR** accepts no liability due to the possible damage to the unit or other parts of the installation, nor will it cover any possible sanctions derived from a possible failure, improper installation or “improper usage” of the unit. Consequently, this guarantee does not apply to failures occurring in the following cases:
- Overvoltages and/or electrical disturbances in the supply;
- Water, if the product does not have the appropriate IP classification;
- Poor ventilation and/or excessive temperatures;
- Improper installation and/or lack of maintenance;
- Buyer repairs or modifications without the manufacturer’s authorisation.

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