

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:



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.

www.circutor.com





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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.

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	Structure	Filters	Select an option	*	Edit 1	lew Search 🕨							New company
u ≝Q,		Actions	Name	VAT number	Туре 🕴	Partner 0	Administrator	Address	City	Postal code	State 🕴	Country	Groups
Analysis	Companies		Asepeyo	A08513178	Partner	Circutor Sistemas	Alexandre Pineau					Spain	Default
	Facilities		Asepeyo Cataluña	A08513178	Partner	Asepeyo	Gestor Asepeyo					Spain	Default
Company			Circutor Sistemas	21099	Partner	Circutor	Planta 2	Vial Sant Jordi S/N	Viladecavalis	08232	Barcelona	Spain	Default
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Hardware			KEISY	A08513178	Partner	Circutor Sistemas	Alexandre Pineau	Calle Consell de Cent, 438	Barcelona	08013	Barcelona	Spain	Default
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			Prologis	A08513178	Partner	Circutor Sistemas	Alexandre Pineau					Spain	Default
Reports			Prologis - Cuenca	A08513178	Customer	Prologis	Ángel Ovejas					Spain	Default
Settings		Search:										First Previous 1	2 Next Last
Q													

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.

New company	
New company Name Name Vat number Customer Parent company	Address Postal code City
Aspeyo • * Administrator	State Country Spain
Logo Seleccionar archivo Ningún archivo seleccionado You cant use a gri mages, piesase use " jog or " prig images	Groups (g) Default
	Create company Back

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.

New company		
* Name		
	Data pricing	Address
* Vat number	Price (eur €) Price (eur €) 0.50 1000	ŕ
* Type	VPN	
	Transmission and processing of any variable captured from VPN gateway	
Customer	Price (eur €) Price (eur €)	
* Parent company	0.35 1000	
Asepeyo	Variables reads from	
	Internet	
* Administrator	Price (eur €) Price (eur €)	
Gestor Asepeyo *	500 total (all 4)	
Web address	Alarms from VPN	
here if	Transmission and processing of the conditions evaluated by the VPN gateway	
Http://	Price (eur €) Price (eur €)	
	3.50 1000	
Logo	Alarms from Internet	
	Transmission and processing of the conditions evaluated by the Internet gateway	
	Price (eur €)	
Seleccionar archivo Ningun archivo seleccionado	Actuators from V/PM	
You can't use a gif images, please use *.jpg or *.png images	Transmission and processing of the actions stabilished in actuator services by the VPN gateway	
	Price (eur €) Price (eur €)	
	Crea	te company Back

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.

	I frank - All II	Circutor > Ci	ircutor Sistemas > Company > Structure	> Companies								Admin DataBox -	Languages 🗸 🖾 🤶
CIRCUTOR	/// 7 🕤												
G Home	General	Listin	ng companies for Circutor Sistema	S									10 🔻
10.2	Structure	Filters	Select an option	Ŧ	Edit	lew Search 🕨							New company
u <u>≡</u> Q,		Actions	s Name	VAT number	Туре 💧	Partner	Administrator	Address	City	Postal code	State	Country	Groups 0
Analysis	E Companies		Asepeyo	A08513178	Partner	Circutor Sistemas	Alexandre Pineau					Spain	Default
	(Facilities		Asepeyo Cataluña	A08513178	Partner	Asepeyo	Gestor Asepeyo					Spain	Default
Company	•		Circutor Sistemas	21099	Partner	Circutor	Planta 2	Vial Sant Jordi S/N	Viladecavalls	08232	Barcelona	Spain	Default
	Activity		Gil & Ortiz Instalaciones s.c.p.	J62848163	Customer	KEISY	Planta 2	Calle Pedrell, 137	Barcelona	08032	Barcelona	Spain	Default
Hardware			KEISY	A08513178	Partner	Circutor Sistemas	Alexandre Pineau	Calle Consell de Cent, 438	Barcelona	08013	Barcelona	Spain	Default
r A 1			MONTAJES ELECT. GAS AGUA S.A.	A08513178	Customer	Tesla Motors	Jorge Milburn	C/ LA FABRICA S/N	Les Franqueses del Vallès	08520	Barcelona	Spain	Default
			Piloto Circutor	A08513178	Customer	Circutor Sistemas	Alexandre Pineau	Vial Sant Jordi s/n	Viladecavalls	08232	Barcelona	Spain	Default Prueba
Services		Cor	nnect to	A08513178	Customer	Circutor Sistemas	Alexandre Pineau					Spain	Default
∎e		Edi	t	A08513178	Partner	Circutor Sistemas	Alexandre Pineau					Spain	Default
Reports		Del	lete	A08513178	Customer	Prologis	Ángel Ovejas					Spain	Default
Settings		Search	n:									First Previous 1	2 Next Last
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2													
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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.

		Circutor > Piloto Circutor > Analysis > Monitoring > Dashboards	list		22	🔺 Admin DataBox 👻 🍽 Languages 👻 🖼
CIRCUI @ Home	Monitoring	Listin	g dashboards for Piloto Circutor		10 •	
₫.Q	La Dashboards list				New dashboard	
Analysis	Midget list	Actions	Name	Folder	Description	
	(*)		00 - GRAL Circutor / Main Circutor	root / EDIFCIO		
Company	📝 Editor		01 - Zona Montaje / Assembly Area	root / EDIFCIO / MONTAJE		
			02 - Zona Ingenieria / Engineering Area	root / EDIFCIO / INGENIERÍA		
-			03 - Zona Comercial / Sales Area	root / EDIFCIO / COMERCIAL		
Hardware			04 - Dashboard proyecto EE	root / Kit EE Esencial		
[^]			05 - Dashboard proyecto FV 6.3 kWp	root / PV Monitor	Pergola Circutor	
Services			06 - Dashboard proyecto Reactiva	root / Kit Reactiva		
			07 - Dashboard Gestión de Suministro	root / Suministro Eléctrico		
≣ @			xx - Dashboard climatización edificio (under construction)	root / EDIFCIO / CLIMATIZACIÓN		
Reports			xx - Dashboard LoRa (under construction)	root/LoRa		
•						
Settings		Search		First Pre	vious 1 2 Next Last	
0						
2						

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.

Circulor > Noto Circulor > Settings > Users >	22 🔔 🔺 Adm	nin DataBox 👻 🍽 Languages 👻 🖾 🤶
Currentian Configuration Listing users for Piloto Circutor		10 •
Users Files Select an option		New user
Analysis 🛕 My account Actions Enabled Name Acompany 👌 E-mail 👌 Telephone	Profiles	🕴 Language 👘 🕴
Admin Demo Circulor Piloto Circulor demo databox@circutor.com	Advanced	Español
Company Piloto Circubr demo@databox.en	Basic	English
Carl Carl Carl Carl Carl Carl Carl Carl	Basic	Español
Groups / Rights Groups / Rights / E On Demo Dezac Piloto Circubr dezac@databox.es	Basic Dezac	Español
Demo efin-pixar Piloto Circubr efin-pixar@piloto.es	Basic Pérgola	5 Español
Demo Intercap Piloto Circutor intercap@databox.es	Basic	Español
Services (2)		
Search		First Previous 1 Next Last
Kepath and a second sec		

Figure 8: Create a new User

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

New Piloto Circutor user	
Enabled	* Email
Piloto Circutor *	* Password
*Language English *	* Password confirmation
* First name	
Last name	Telephone
	Fax
* User type	
Advanced Basic Professional Groups	
No groups available. Follow this link to create a group before continue	
	New user Back

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.

 \checkmark **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* submenu 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.

Piloto Circutor New facility				
* Company				
Piloto Circutor	•	Address		Show features >
* Name				
		Postal code		
* Type				
Select a facility type	•	City		
* Administrator		City		
Demo DataBox ES	T			
Telephone		State		
Fay		* Country		
		Spain		•
Groups		Facility map file		
V Default 🔄 Editicio Social 🔄 General 🔄 Pergola		Seleccionar archivo Ningún archivo selec	cionado	
		Latitude	Longitude	
		* Timezone		
		Select a timezone		· ·
		Search coordinates and timezone by given a	address	
				New facility Back
				Dack

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)

Company			
Piloto Circutor	- Features		
Name	Surface	m2	
Type	Number of workers	s	
Select a facility type	* Number of floors		
Administrator	Check in time		
Jephone	Check out time		
			Ad
ax	* Country Spain		
roups	Facility map file		
Ø Default Edificio Social General Pérgola	Seleccionar archi	ivo Ningún archivo seleccionado	
	Latitude	Longitude	
	* Timezone		
	Select a timezon	e	
	Search coordinate:	s and timezone by given address	

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



CIRCUTOR

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:

You will found serial number and security code of your gateway on the side of the device, at the bottom part of the label.	Databox
Name	88888888
Facility	Market Market SOCIAL Usayly ISO 250 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control (apr. 102.300 Warm SAL 320 (apr. 102.300 Warm Image: Control (apr. 102.300 Warm Image: Control
General Circutor 👻	
Serial number	Single Solds Model: SBOX 3G Code: Code Code <thcode< th=""> <thcode< td=""></thcode<></thcode<>
Security code	MAC: 00:28:45:XX:XX:XX Based on the second s
	Register

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* submenu from the *Hardware* section, Figure 15.

		Circutor :	> Piloto Cir	cutor > Hard	ware > Gateways								2	Admin DataBo	c 🕶 🏴 Lan	guages 🗕 🖬 🤶
CIRCUT																
G Home	Gateways		Listing g	gateways fo	or Piloto Circu	tor									1	• 0
Analysis	Devices		Filters	Select an o	option		Ŧ	Edit New Search							New	gateway
	🚓 Register			Actions	Enabled	Company		Serial Number	Name	Facility	Model	Version	Status	Notification	s	RSSI 🔶
Company				•		Piloto Circutor		H1608000200038	CIRCUTOR 3G	General Circutor	SBOX 3G NET	1.2.1	Active	Activated		÷
company				Control p	anel	Piloto Circutor		H1608000200044	Gateway	General Circutor	SBOX 3G NET	1.2.1	Active	Activated		÷
.				Connecti	ons & devices	Piloto Circutor		H1608000190031	Pruebas 3G VPN	General Circutor	SBOX VPN	1.2.1	Active	Not activate	t	?
Hardware				Variables	anvis on											
[\$]			Search:	Raw data	1									First Previo	us 1 N	ext Last
Services			_	Edit						 						
				Details												
Reports				SUGAR												
*																
Settings																
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Settings																

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:



	Cercular > Polska Cercular > Hadware > Calloware > CREATION 30 > Edit	22 Admin DataBox • P Languages • 🖬
	🖀 Control parel 🖉 Connections & devices 🔹 Autrine services 📾 Rem data 🗾 📧 🕹 Databa	
C Home Gateways	Edit galrewy H16000020038	
Avalysis Company	Model SDCK SDTRT devort 12.1 Setal number (HISSIDDDDDDB) Sex.	
Hardware	Exhibits areal reflections	
Services	* Consum Perio Cinutar •	
Reports	* Facily # • General Circuitor # •	
Q		
	entuga Ø Default Default	
	Limit of satures by Month T Limit of satures by Month T	
	0 1000 100 0 100 100 100 100 100 100 10	300
	Limit of data storage (years)	
	0 000 0000 100	
		Upstate gateway Back

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.

 \checkmark 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.

 \checkmark 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.

	Circutor > Piloto Circut	tor > Hardware > Gateways > CIRCUTOR 3G > Connections &	devices		🕰 🛕 🛦 Admin DataBox 👻 🍽 Languages 👻 🖬 💡
	🚔 Control panel 📿 🖸	Connections & devices 🗈 Active services 💷 Raw data 🔒	Edit B Dotails		
O Home Gateways		K K			
	CIRCUTOR	R 3G (H1608000200 pections			
Analysis Register	1000	(1)			New connection
	Actions	Name	Connection string	Gateway	🕆 Timeout (milliseconds) 🔶
Company		(Automático) LORA Gateway LoRa	LORA:Gateway LoRa:1	CIRCUTOR 3G (H1606000200038)	0 ms
		Prueba LoRa	RS:1:19200:8:n:1	CIRCUTOR 3G (H1608000200038)	999 ms
Hardware		TCP1RS+ PICKDATA	GMBTCP:192.168.1.204:502	CIRCUTOR 3G (H1608000200038)	999 ms
		TCP1RS-01	GUDP:10.0.124.111:10001	CIRCUTOR 3G (H1606000200038)	999 ms
		TCP1RS-02	GMBTCP:10.0.124.105:502	CIRCUTOR 3G (H1608000200038)	999 ms
Services		TCP1RS-03	GMBTCP:10.0.124.102:502	CIRCUTOR 3G (H1606000200038)	999 ms
		TCP1RS-04	GMBTCP:10.0.124.116:502	CIRCUTOR 3G (H1606000200038)	999 ms
Reports		TCP1RS-05	GMBTCP:10.0.124.113:502	CIRCUTOR 3G (H1608000200038)	999 ms
and the second second second second		TCP1RS-06	GMBTCP:10.0.124.115:502	CIRCUTOR 3G (H1608000200038)	999 ms
*	8	TCP1RS-07	GMBTCP:10.0.124.114:502	CIRCUTOR 3G (H1608000200038)	999 ms
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	TCP1RS-01	1 Devices			10 💌
					New device
	Actions	Name	Device address	Model	Version 🔶
		Circutor Laboratorio	5	CIRWATT	B 1.1
	and the second se				
	Search:				First Previous 1 Next Last

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.



connection	
* Name	
* Protocol type	
Modbus	•
* Inteface	
Ethernet: generic Modbus TCP	*
* lp	
* Port	
* Timeout (milliseconds)	
0	
Allows to manage the wait time to receive the answer from devices	
	New connection Bac



* Protocol type Modbus * Inteface COM Serial * Serial port COM 1 * Serial port COM 1 * Bits per second Select an option * Data bits 8 * Parity Select an option * Parity Select an option * Timeout (milliseconds) 0		
Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous Nodous	Protocol type	
Inteface COM Serial * Serial port COM 1 * * Bits per second Select an option * • Data bits 8 * * Parity Select an option * * farity Select an option * * farity Select an option * * Stop bits 1 *	Modbus	
COM Senal Serial port COM 1 COM 1 COM 1 Bits per second Select an option Pathy Select an option Select an option Tanty Tanty Tanty T	Inteface	
* Serial port COM1 COM1 * Bits per second Select an option * Data bits 8 * Parity Select an option * * Solp bits 1 * Timeout (milliseconds)	COM Serial	
selan poin COM1 * * Bits per second Select an option * * bata bits 8 * * * Parity Select an option * * Stop bits 1 *	1 Padd and	
Bits per second Belect an option bits bits Parity Select an option for the second sec	COM1	· ·
Select an option Data bits 8 9 arity Select an option Select an option * Stop bits 1 * Timeout (milliseconds) 0 	* Bits per second	
Data bits 8 Party Selectan option * * Stop bits 1 * * Timeout (milliseconds)	Select an option	•
8 • * Parity Selectan option * Stop bits • 1 • * Timeout (milliseconds) •	* Data bits	
Parity Selectan option * Stop bits 1 * "Timeout (milliseconds)	8	
Select an option Stop bits Timeout (milliseconds) O	* Parity	
* Stop bits 1 * Timeout (milliseconds)		*
* Timeout (miliseconds)	* Stop bits	
* Timeout (milliseconds)	1	*
0	Timeout (milliseconds)	
	0	

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.



	Circutor > Piloto Circ	utor > Hardware > Gatewaya > CIRCUTOR 3G > Connections &	devices		🕰 🛓 🛦 Admin DataBox 👻 🏴 Lar
	🖴 Control panel	Connections & devices 🗈 Active services 💷 Raw data	Edit B Details		
Gateways					
Devices	CIRCUTO	R 3G (H1608000200038) Connections			10
	1000				New conn
Register	Actions	Name	Connection string	Gateway	Timeout (milliseconds)
		(Automático) LORA Gateway LoRa	LORA:Gateway LoRa:1	CIRCUTOR 3G (H1608000200038)	0 ms
		Prueba LoRa	RS:1:19200:8:n:1	CIRCUTOR 3G (H1608000200038)	999 ms
		TCP1RS+ PICKDATA	GMBTCP:192.168.1.204:502	CIRCUTOR 3G (H1608000200038)	999 ms
		TCP1RS-01	GUDP:10.0.124.111:10001	CIRCUTOR 3G (H1608000200038)	999 ms
		TCP1RS-02	GMBTCP:10.0.124.105:502	CIRCUTOR 3G (H1608000200038)	999 ms
		TCP1RS-03	GMBTCP:10.0.124.102:502	CIRCUTOR 3G (H1608000200038)	999 ms
		TCP1RS-04	GMBTCP:10.0.124.116:502	CIRCUTOR 3G (H1608000200038)	999 ms
		TCP1RS-05	GMBTCP:10.0.124.113:502	CIRCUTOR 3G (H1608000200038)	999 ms
		TCP1RS-06	GMBTCP:10.0.124.115:502	CIRCUTOR 3G (H1608000200038)	999 ms
		TCP1RS-07	GMBTCP:10.0.124.114:502	CIRCUTOR 3G (H1608000200038)	999 ms
	and a				
	Search.				First Previous 1 2 Next
	Summer States				
	And in case of the local data of the	and the local division of the local division			10
	TCP1RS-	01 Devices			
	TCP1RS-	01 Devices			News
	TCP1RS-	01 Devices Name	Device addres	s 🔷 Model	Version
	Actions	01 Devices Name Circutor Laboratorio	Device addres 5	s Model CIRWATT B	New of Version
	Actions	01 Devices Name Circutor Laboratorio	Device addres S	s 🕴 Model Cirwatt B	Version 1.1

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.

CP1RS-01: New device	
Brand	
Select an option	
Product	
Select a product	
'Model version	
Select a firmware	•
Serial Number	
Name	
Device address	
Ex."1"	
	New device Back

Figure 21:New Device Form

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



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

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



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



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).

		Circutor > Piloto Circuto	or > Services > Supplies & contracts > Contracts				Admin DataBox -	🏲 Languages 🔻 🖬 🚺
CIRCUT		Listing contra	cts for Piloto Circutor					10 •
	Veneral							New contract
l≣Q,		Actions	Name	Calendar	Start date	Valid until	Power penalty	- -
Analysis	Control & actuation		Circutor	3.1A Península	2016-05-01		85-105% Rule	/
	Supplies & contracts		Contrato 6 periodos	6.X Península	2016-05-01			
Company	🔉 Supplies	Search:					Circl Devices	
Hardware	Contracts							I Wext Last
[\$]	III Tariff tables							
Services								
Reports							3	
S ettings	1							
Q Support								

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.

New contract		x
Empty contract		
Based on existing contract	Select a company	
	Begin Can	cel

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 (\in /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.

New contract						
Basic	>	Additional costs				
Consumption	>	Concept		Name	Value	
Power	>	Total discount before TAX (%)	Ŧ	Total discount before TAX (%)	0.0	
Taxes	>	Fixed charge (€/day)	Ŧ	Fixed charge (€/day)	0.0	
		Tax after adding power and energy (%)	•	Tax after adding power and energy (%)	5.1127	
		VAT (%)	•	VAT (%)	21.0	
						Add cost
						Back Create contract

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.

		Circutor > P	iloto Circut	or > Services	> Supplies & contracts > Supplies						Admir	DataBox 👻 🏴 La	nguages 🗸 🖼 🤅
CIRCUT	2 🗉	Listi	ng suppli	es for Piloto	Circutor								10 •
G Home		Filters	Select	an option	Test New	Search 🕨							New supply
E.a	Alert		ocicer	E the the				Post in					
Analysis	Control & actuation		Actions	Enabled	Name 🖓	Type Description	Facility Circutor	Device	Contract	Supplier	Start date	- End date	Signed
	Supplies & contracts				Australia Edita Auto	Electricity	General Circulor	ophi Stitul Audul	Circular	Endesa	2010-05-01	2020-12-51	Organitad
Company	No. 1			OFF	Suminitro Edificio Social ANT	Electricity	General Circutor	GRAL Editicio Social	Circutor	Endesa	2010-05-10	2016-12-3	Cancelled
Company	Supplies			ON	Suministro Laboratorio Circutor	Electricity	General Circutor	Circutor Laboratorio	Circutor	Endesa	2016-06-01	2020-12-31	Signed
	E Contracts		-	ON	Suministro CT Computer Smart III	Electricity	General Circutor	CSIII	Circutor	Endesa	2016-06-01	2020-12-31	Signed
Hardware				OFF	Suministro CT Cirwatt ANT	Electricity	General Circutor	GRAL Circutor Cirwatt	Circutor	Endesa	2016-06-06	2020-12-31	Signed
[^]	Tariff tables			OFF	Suministro CT Circutor k2	Electricity	General Circutor	GRAL Circutor k2	Circutor	Endesa		2016-12-31	Cancelled
Services			-	ON	Suministro Edificio Social	Electricity	General Circutor	GRAL Edificio Social	Circutor	Endesa	3)	2020-12-31	Signed
	<			OFF	Suministro Dezac BIS	Electricity	General Circutor	DEZAC GRAL 2CR01-1	Circutor	Endesa	2 01	2018-01-01	Signed
=e				OFF	Suministro Laboratorio Circutor BIS	Electricity	General Circutor	CIR LAB GRAL 2CR11-1	Circutor	Endesa	2016-08-01	2018-01-01	Signed
Reports			-	OFF	Suministro Intercap bis	Electricity	General Circutor	Intercap GRAL	Circutor	Endesa	2016-08-01	2018-12-01	Signed
•		100											
Settings		Search	τ.								First	Previous 1 2	Next Last
0	1												
Support													

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.

New supply					
* Name		Description			
* Facility					
Select a facility	•				
* Device					
Choose a device	•	Comments			10
* Contract		Date	🗸 User	Comment	÷
Select a contract	•	No data available in table			
* Supplier					First Previous Next Last
Select a supplier	•				
* Start date	End date	Add comment			
* Supply type	🗷 Indefinite				
Select an option	•				
					Create supply Back

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)



C		Circutor > Pilot	o Circutor > Se	rvices > Supplies & contracts > Supplies						22	n DataBox 👻 🏴 La	inguages 🗸 🖬 🤶
G Home	General	Listing	supplies for	Piloto Circutor								10 •
Eq	Alerts	A	ctions Enal	on bled 🔶 Name	type Desc	ription 🔶 Facility	Device	Contract	🔶 Supplier 🔶	Start date	End date	Status
	Supplies & contracts		E dit	Suministro Intercap	Electricity	General Circutor	Intercap GRAL	Circutor	Endesa	2016-05-01	2020-12-31	Signed
Company	💕 Supplies		Services	ministro Laboratorio Circutor	Electricity	General Circutor	Circutor Laboratorio	Circutor	Endesa	2016-06-01	2020-12-31	Signed
-	Contracts			Suministro CT Computer Smart II	Electricity	General Circutor	CSIII GRAL Circular Cinwatt	Circutor	Endesa	2016-06-01	2020-12-31	Signed
r ^ 1	I Tariff tables			Suministro CT Circutor k2	Electricity	General Circutor	GRAL Circutor k2	Circutor	Endesa	2016-06-06	2016-12-31	Cancelled
Services				Suministro Edificio Social	Electricity	General Circutor	GRAL Edificio Social	Circutor	Endesa	2016-06-07	2020-12-31	Signed
				Suministro Laboratorio Circutor E	BIS Electricity	General Circutor	CIR LAB GRAL 2CR01-1	Circutor	Endesa	2016-08-01	2018-01-01	Signed
Reports			OF	Suministro Intercap bis	Electricity	General Circutor	Intercap GRAL	Circutor	Endesa	2016-08-01	2018-12-01	Signed
Settings		Search:								First	Previous 1 2	2 Next Last
Q												
Support			State of the local division of the local div									

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

Listing periodic reading services for supply Suministro CT Cirwatt 10										
Actions	Enabled	Name	Service	Facility	Gateway	Last value	Groups	Timestamp		
	ON 🔗	Circutor Cos Phi	Lectura calculada	General Circutor	-		-			
	ON 🔗	Circutor Energía activa (INCR)	Lectura de una variable	General Circutor	Gateway	198.0 kWh	-	Friday, 2017 May 26, 19:00		
-	ON 🚷	Circutor Energia activa por periodos	Lectura calculada	General Circutor	-		-			
-		Circutor Energía reactiva inductiva (INCR)	Lectura de una variable	General Circutor	Gateway	0.0 kvarLh	+	Friday, 2017 May 26, 19:00		
-	ON 🛞	Circutor Energia reactiva por periodos	Lectura calculada	General Circutor	-		-			
-		Circutor Facturación de la penalización por exceso reactiva	Lectura calculada	General Circutor	-		-			
-	ON 🛞	Circutor Facturación del término de energía activa	Lectura calculada	General Circutor	-					
-		Circutor Facturación del término de potencia	Lectura calculada	General Circutor	-		+			
-	ON 🛞	Circutor Máxima demanda (MAX)	Lectura de una variable	General Circutor	Gateway	201460.0 W	-	Friday, 2017 May 26, 19:30		
-		Circutor Término de potencia	Lectura calculada	General Circutor	-		-			
Search:								First Previous 1 2	Next L	Last

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.

C		ircutor > Piloto Ci	rcutor > Ser	vices > General > Period	c readings				22 Admin DataBox - 🕨 Lange	suages - 🖾
© Home	General General	Listing	periodic re	eadings for Piloto Ci	cutor			(3	
Analysis	E KPIs and formulas	Filters	Select an	Name	Edit New Search Facility	Gateway	Last value	Groups	Timestamp	reading
Company	A Imported services		ON 🚱	AEF	General Circutor	Pruebas 3G VPN				
Company	Alasta		ON 🛞	AL-0CR02-2	General Circutor	CIRCUTOR 3G	48.0 kWh	-	Tuesday, 2017 May 30, 10:00	
-	AICITS		ON 🍪	AL-1CR01-1	General Circutor	CIRCUTOR 3G	17937.0 Wh	-	Tuesday, 2017 May 30, 10:00	
Hardware	Control & actuation		ON 🛞	AL-1CR01-2-C1	General Circutor	CIRCUTOR 3G	476.0 Wh	-	Tuesday, 2017 May 30, 10:00	
[^]	Supplies & contracts		ON 🛞	AL-1CR01-2-C2	General Circulor	CIRCUTOR 3G	1888.0 Wh	-	Tuesday, 2017 May 30, 10:00	
Service			ON 🛞	AL-1CR01-2-C3	General Circutor	CIRCUTOR 3G	0.0 Wh		Tuesday, 2017 May 30, 10:00	
			01	AL-1CR01-2-C4	General Circutor	CIRCUTOR 3G	0.0 Wh		Tuesday, 2017 May 30, 10:00	
≡ĕ			ON 🚱	AL-1CR01-3-C1	General Circutor	CIRCUTOR 3G	829.0 Wh	-	Tuesday, 2017 May 30, 10:00	
Reports			ON 🛞	AL-1CR01-3-C2	General Circutor	CIRCUTOR 3G	0.0 Wh		Tuesday, 2017 May 30, 10:00	
•			ON	AL-1CR01-3-C3	General Circutor	CIRCUTOR 3G	62.0 Wh	12	Tuesday, 2017 May 30, 10:00	
Settings		-								
		Search:							First Previous 1 2 3 4 5 19 Ner	xt Last

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.

ew service Periodic readings				
nable service	Convice configuration for Deviadio read			
OFF	* Eacility	ngs.	* Gateway	
Name	General Circutor		CIRCUTOR 3G	
	* Devices	* Variables		
Read period	CIRCUTOR_3G	> ^		
5 minutes 🔹	Circuter Laboratorio	DO1 sa	alida digital 1	
end period		Units:		
hour 👻	Circutor Almacén 1CR01-02			
leasure unit	Circutor Almacén 1CR01-03			
Unitless)				
t value	Circutor Almacen 1CR01-1			
	Circutor Almacén 1CR03-03			
it timestamp	Circutor Almacén 1CR03-02	> _		
	Variable	* Aggrupation criterion		
Alumbrado 🔲 Alumbrado I				
Alumbrado M Clima Clima I	>			
Clima M Generación FV				
Laboratorio 🦳 Maq. Industrial Mag. Industrial I 🦳 Mag. Industrial M				
Maquina No Industrial				
Maquina No Industrial I				
Maquina No Industrial M Servidor CPD Servidor CPD I				
				New periodic reading

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.



CIRCUTOR

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).





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.

		Circutor > Piloto Ci	rcutor > Ser	rvices > Alerts > Alarms					22 🔺 Admin DataBox 👻 🕅 Languages 👻 🖬
CIRCUT									
(Home	General	Listing	alarms for	r Piloto Circutor					10 •
<u>∎_</u> Q	Alerts	Filters	Select an	option	✓ Edit New Search ►				New alarm
Analysis	🗘 Alarms 💙	1.0	Franklad	Name	A. 5-171	6-t	1 and and an	0	
*	:D1005	Actions	Enabled	Name Activación Role Cotevery	Facility	Gateway	Last value	Groups	Timestamp Thursday 2018 May 5 15-15
Company	9		(Dore)	Activación Rele I Má	General Circulor	Gateway	Deacuvated with		Huisuay, 2010 May 5, 15,15
				Automittere care	CATERIE OTCORE	Cuteway	Deactivated with 13.402		
Hardware	Control & actuation		()OFF)	Detección consumo 15 kW	<u>General Circutor</u>	Gateway	kW	-	Wednesday, 2016 November 70, 15:01
<u></u>	Supplies & contracts		OFF	Detección consumo 4 kW	General Circutor	Gateway	Deactivated with 6.336 kWh	-	Wednesday, 2016 November 30, 16:00
Service			OFF	Estado Rele 1 TIR Two	General Circutor	Pruebas 3G VPN			
			Ooff	Estado Rele 2 TIR Two	General Circutor	Pruebas 3G VPN		-	
≣ @		0.1							
Reports		Search:							3 Jus 1 Next Last
•									
Settings									
0									
Support									

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.

The difference between them is the display colour. yellow, orange and red, respec

✓ **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.

ew service Reception of an alarm				
inshis consists				
	* Gateway			
(Jon)	CIRCUTOR 3G			
Type	onActivate condition	(Edit condition)	onDeactivate condition	G Edit condition
Event	Condition to be evaluated		Condition to be evaluated	
Name				
		1		
Facility	Delay time (seconds)		Delay time (seconds)	
3eneral Circutor	- 0		0	
	Time in seconds that the alarm has to be activated or deactivated to be considered valid.		Time in seconds that the alarm has to be addivated or deaddivated to be considered valid.	
	onActivate actions		onDeactivate actions	
	Return a value	(0 Edit expression)	Return a value	O Edit expression
	Expression to be evaluated		Expression to be evaluated	
	* Measure unit		* Measure unit	
	(Unitess)		(Unitiess)	
	Actuate on variable		Actuate on variable	
	Expression to set value	(9 Edit expression)	Expression to set value	(Dat expressio
	Expression to be evaluated		Expression to be evaluated	
	Email notification settings		Current activity	
	Enable email notifications (Torr)		Last shot	
	*Contact			
	Admin Demo (email: demo databox@circutor.com,)		- Last notification sent	
	New context Dates context			
	Mass maller control tool		Shots counter	
	"Alarms to janage to send			
	another email			
	"Walting time between email notifications			
	seconds			
	Note: only one condition must be fulfilled to send another email notification			

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** \rightarrow **KPIs and formulas** submenu 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.

		Circutor > Piloto C	ircutor > Services > General > KPis and formulas			22 <u>)</u>	🛋 Admin DataBox 👻 🏁 Languages 👻 🕯
C Z	2 Final Contract of Contract o	Listing	formulas for Piloto Circutor.			3	10 •
Analysis	Periodic readings	Filters	Select an option				New formula
~	PIs and formulas	Actions	Name	Facility	Read period	Measure unit	Groups
	A Imported services		Comercial Almacén / Sales Warehouse	General Circutor	1 hour	KiloWatts per hour	
Company			Comercial Almacén Climatización / Sales Warehouse Air-conditioning	General Circutor	1 hour	Watts per hour	Clima
-	Alerts		Comercial Almacén Iluminación / Sales Warehouse Lighting	General Circutor	1 hour	Watts per hour	Alumbrado
Hardware	Control & actuation		Comercial Almacén Maq. No Industrial / Sales Warehouse Non-Industrial mach.	General Circutor	1 hour	Watts per hour	Maquina No Industrial
[≜]	Supplies & contracts		Comercial Ascensor	General Circutor	1 hour	Watts per hour	-
Services			Comercial Climatización	General Circutor	1 hour	Watts per hour	
	$\overline{\mathbf{X}}$		Comercial Edificio Social / Sales Corporate Building	General Circutor	1 hour	KiloWatts per hour	
≣ف≣			Comercial Edificio Social Climatización / Sales Corporate Building Air-conditioning	General Circutor	1 hour	Watts per hour	Clima
Reports			Comercial Edificio Social Generación FV / Sales Corporate Building PV Generation	General Circutor	1 hour	KiloWatts per hour	Generación FV
•			Comercial Edificio Social Iluminación / Sales Corporate Building Lighting	General Circutor	1 hour	Watts per hour	Alumbrado
Settings	1						
Q		Search:				First Previous 1	2 3 4 5 10 Next Last

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.

CIRCUTOR



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.

		Circular > Piloto Circular > Analysis > Monitoring > Editor > New	22 🛆 🔺 Admin DataBox 👻 🖆 Languagea 👻 🖉 📍
		Config & Properties & Data	Preview Create widget Back
O Home Monito	pring	*Name	
EQ Dashboards	s list	Put your title here	H
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-			
Hardware		Line chart Table Stacked columns Pie chart CostPiel Basic columns Oynamic meter Value companion Variable list Temperature Budget	Supply management Remote control
Services			
Reports			
¢ Settings			
The second			

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**.

		Circutor > Piloto Circutor > Analysis > Monitoring > Editor	> New	4 "	Admin DataBox + Hanguages + 2
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G Home	Monitoring	Title	Axis label		
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Company	Editor				
Hardware		and the second sec			
Services		N.			
Reports					
Settings					

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.



Configure Tab:	Properties Tab:	Data Tab:		
Type of Widget	Fields	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 red zone ✓ % end of the red zone ✓ % end of the red zone ✓ Magular chart start position ✓ Angular chart end position ✓ No. spacers between labels ✓ Title of the Widget 	 ✓ 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 		
Temperature.	 ✓ Maximum value of the Widget ✓ Minimum value of the Widget 	-Month		
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 		



Configure Tab:	Properties Tab:	Data Tab:		
Type of widget	Fields	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 		

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



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.

		Circutor > Piloto Circutor > Analysis > Monitoring > Editor > New dashboard	22 🗘 🔺 Admin DataBox 🔹 🍽 Langu	iages 🕶 🖬 📍
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Analysis	(n) Widget list		Set as company main dashboard	
Company	Editor	2 v 2 v	Facility	
Company		Description	· · · · · · · · · · · · · · · · · · ·	
Hardware			Users	
[\$]			Select users	
Services			Users selected will have this dashboard set as 'My Dashboard'. Takes priority over Users Groups.	
			Users groups	
Reports			Select user groups Users who belong to the selected groups will have the dashboard set as "My Dashboard",	
Setungs				
Support				

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 ex- ceeded

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:



✓ 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
- \checkmark 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.

	Circu	Circuitor > Noto: Circuitor > Hardware > Calcungra > CIRCUTCRI 30 > Control panel							
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G Home Gateways									
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	100	- Alarms - Setups - Alarms limit	Setups limit	and the second se					

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 **Gate-way**, 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 **Data-box** 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 **Gate-way** 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 lack of maintenance; Buyer repairs or modifications without the manufacturer's authorisation.
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