

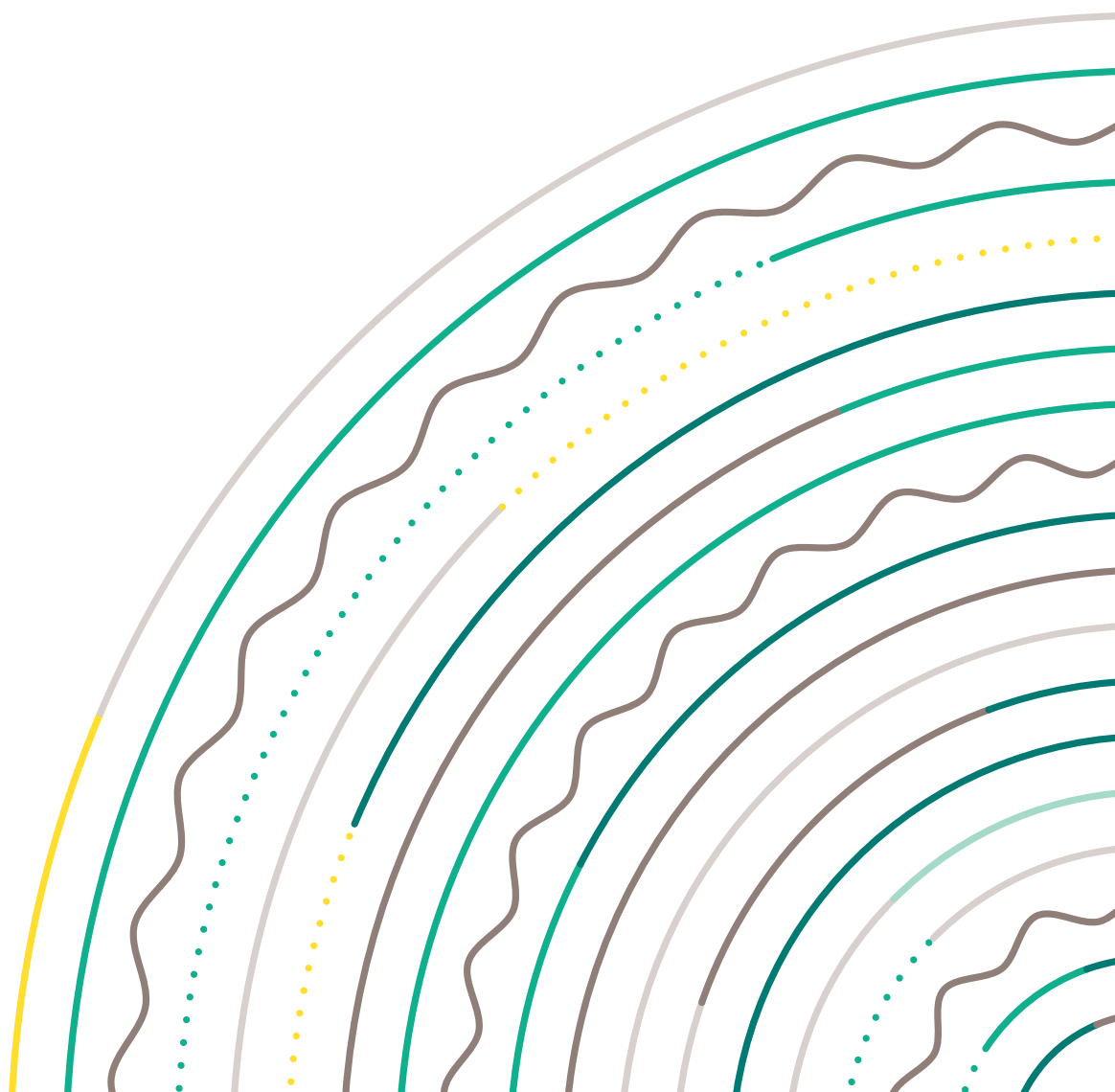


# Lifedomus

# EnOcean

31/01/2018

Version 1.4



# EnOcean protocol

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# 1 Prerequisites and important information

To fully understand this documentation, a few prerequisites are necessary:

- ✓ Addition, configuration and use of a connector in the 'Config Studio'.
- ✓ Basic knowledge of the EnOcean protocol, including *EEPs*.
  
- ✓ Pay extra caution when pairing your modules, because a message sent by a module can disrupt the pairing procedure.
- ✓ When you delete a module from Config Studio, remember to delete the pairing operations with Lifemodus and the module to delete.
- ✓ Room thermostat management with Lifemodus can only switch to Comfort or Absence mode.
- ✓ As the EnOcean solution does not query devices about their states, inconsistencies may appear between the device state display and reality. Synchronisation is restored on the first command.
- ✓ The state of devices connected to motor and dimmer modules can be desynchronised if you perform too many actions on these devices from Lifemodus.
- ✓ VMC and HVAC Heater and Cooler types are not supported by Lifemodus' current version.

## 2 EnOcean connector

### 2.1 Gateway

Communication between Lifedomus and an EnOcean device requires the use of an EnOcean gateway.

Lifedomus currently manages wireless gateways connected to a USB port. The gateway must be unique and cannot be changed because Lifedomus uses its *BaseID*.


An EnOcean connector can be added in the same way as any other connector.



### 2.2 Properties

Clicking on the  icon brings up the connector's configuration properties.

Configuration elements for an EnOcean connector are as follows:

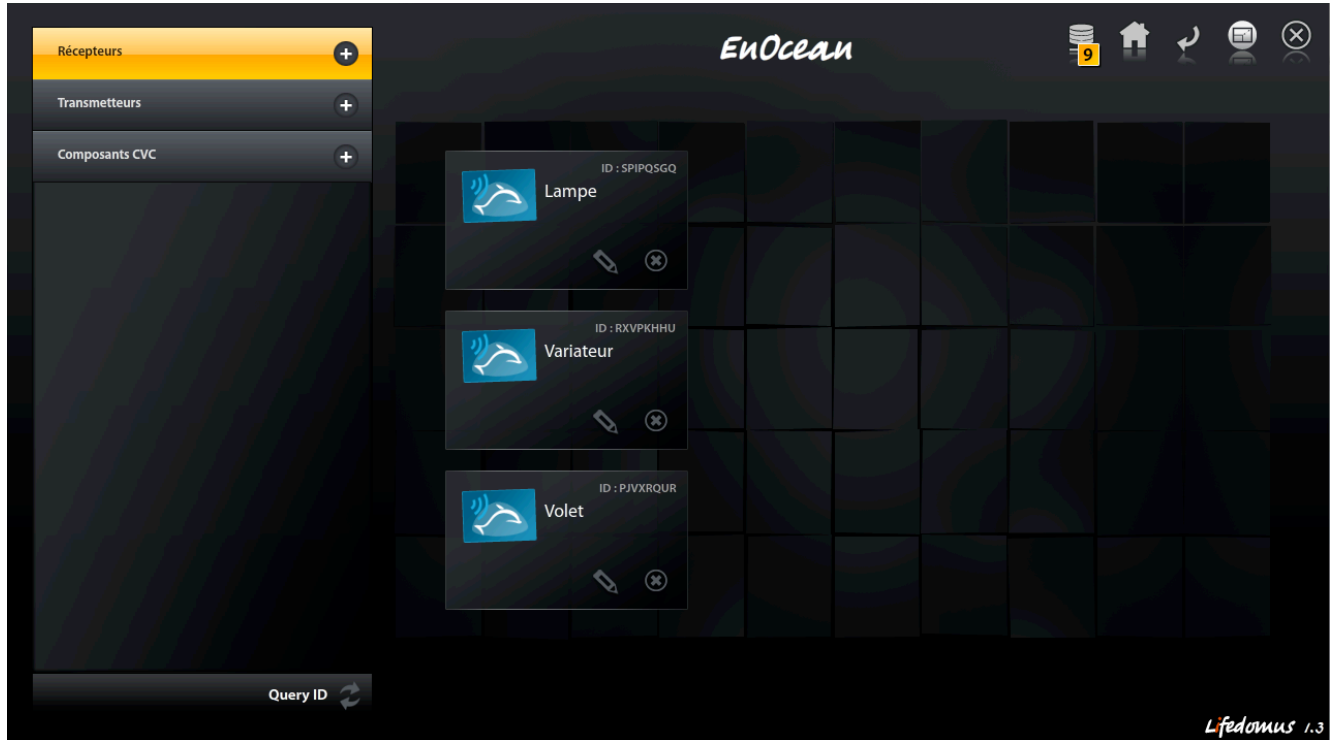
- Transmission speed: 9600 for ESP2 and 57600 for ESP3.
- Number of data bits: 8 by default.
- COM port: use the  icon to automatically recover the selected Com port.
- Parity: None by default.
- Number of stop bits: 1 by default.
- Serial protocol: ESP2 or ESP3.
- Repeater: Indicate whether or not your gateway integrates the repeater mode.



## 3 EnOcean modules

### 3.1 'Modules' screen

Clicking on the  icon when your connector is on opens the EnOcean module screen.



On the left hand menu you will see three categories:

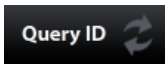
- Receivers
- Transmitters
- CVC components

You then have the list of your EnOcean modules for each category, each represented by a thumbnail.

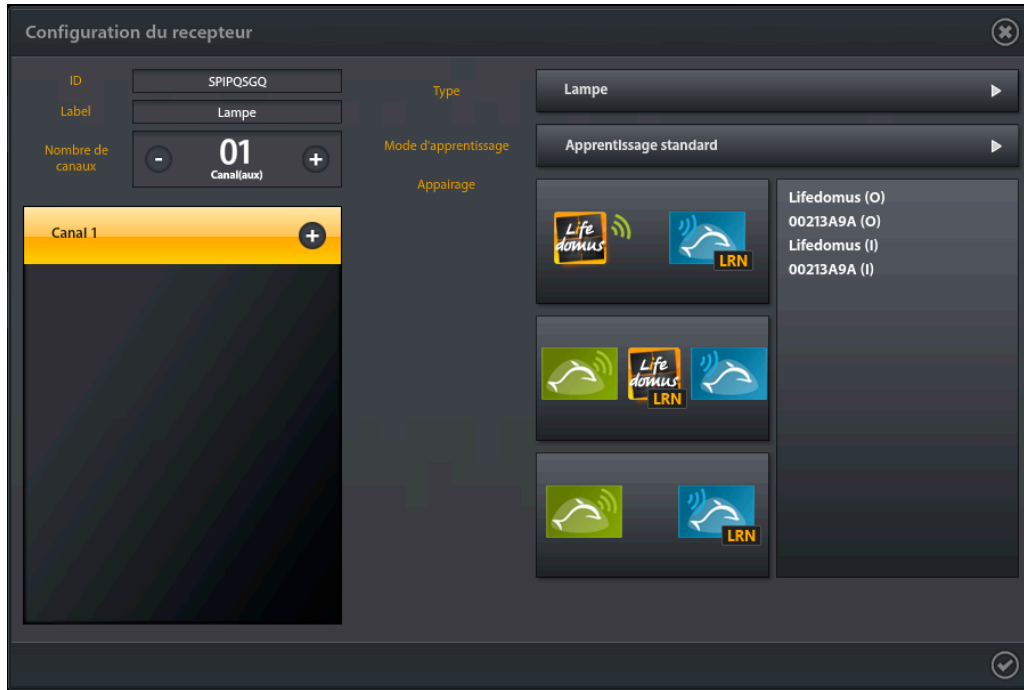
Clicking on the  icon in the thumbnail brings up the module's properties.

### 3.2 Receivers

#### 3.2.1 Query ID

By clicking on the  option, Lifedomus can automatically detect and add EnOcean receiver modules supporting the 'Remote Management' feature.

## 3.2.2 Properties



### 3.2.2.1 Number of channels

Some EnOcean modules have several channels. You can also group several EnOcean physical devices under the same Lifemodus receiver.

Each channel has its properties (type, teach mode, pairing, etc.) that appear on the right hand side of the properties pane when you select a channel.

### 3.2.2.2 Type

#### 3.2.2.2.1 Light

- Teach mode: *Standard, personalised On Off, Reversed* (Refer to chapter 3.2.2.7).

#### 3.2.2.2.2 Dimmer

- Cycle time: Time for switching from 0% to 100%.
- Time: The EnOcean protocol covers the concept of simple or long press on a switch. This property shows the period of time when the action is considered a long press. On a dimmer, a simple press commands On/Off and a long press commands dimming.
- Dimmer type: *direct dimming, timed dimming*. With *direct dimming*, dimming begins when the user presses the switch, whereas with the *timed dimming* option, dimming only starts when you press the switch for a certain amount of time (refer to *Time* above).
- Teach mode: *Standard, personalised On Off, Reversed* (Refer to chapter 3.2.2.7).

#### 3.2.2.2.3 Motor

- Motor type: *Shutter, Shutter with direct position reverse, Shutter with long press management, Blind*. With EnOcean a shutter can behave differently with respect to the switches that control it. If you have to press and hold the switch to raise/lower the shutter and release it to stop, select the *Blind* option. If you have to press and hold the switch to raise/lower the shutter and press again to stop, select the *Shutter* option. Modules running based on the *Shutter* model can have two additional options. In the standard *Shutter* mode, to reverse the shutter's travel direction, press the switch twice: once to stop and again to start the reverse travel. If your shutter travels in the opposite direction when you first press, select the option *Shutter with direct position reverse*. The second option, *Shutter with long press management* applies to modules that operate like the *Shutter* option and also manage the long press.
- Open cycle time (in ms): Shutter travel time for transitioning from position 100% to position 0%.
- Close cycle time (in ms): Shutter travel time for transitioning from position 0% to position 100%.

- Actual duration of the open command (in ms): the EnOcean modules automatically stop the shutter's travel after a given period of time. This property corresponds to this feature. The value entered for this property must be greater than the *Open cycle time* property
- Actual duration of the close command (in ms): see *Actual duration of the open command*.
- Teach mode: *Standard, personalised On Off, Reversed* (Refer to chapter 3.2.2.7).

#### 3.2.2.2.4 HVAC Thermostat

- Programmed temperature: programmed comfort temperature in the module.
- Temperature adjustment: Comfort temperature adjustment interval.
- Minimum temperature: Lowers the comfort temperature in absence mode.
- Fan speed number: This property is not used for the current version.
- Number of heating systems: This property is not used for the current version.
- *Energy Stop* function time (in ms): Some modules implement the *Energy Stop* feature that switches the heating off in some cases. Refer to the manufacturer's manual to check for this value.

#### 3.2.2.3 Pairing

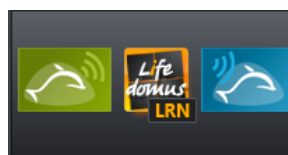


This section of the property pane is dedicated to EnOcean module pairing.

The right hand section displays the list of devices associated with your module and the left hand section displays the three pairing options:

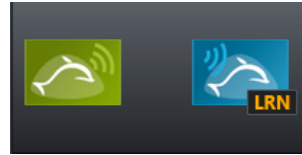


This option is used for pairing Lifedomus with your module. Lifemodus will act like a switch. Lifemodus **must** be paired to be able to associate your module with a device (see chapter 4).



This option is used for declaring which other EnOcean modules are already associated with your module in Lifemodus.

 **IMPORTANT:** This does allow for pairing operations. To pair, follow the manufacturer's instructions.



This option is exclusive to EnOcean modules that implement the *Remote Management*. It allows you to pair your module with other modules.

#### 3.2.2.4 Teach mode

Pairing is directly connected to the teach mode.

- Standard teach mode: pairing with a module is done according to EnOcean standards.
- Reversed teach mode: The associated module's ON commands the OFF and conversely.
- Personalised On Off teach mode: When you select this mode, an ON/OFF control is added to the three pairing options. This will allow you to pair the ON and OFF separately.



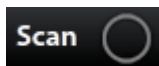
### 3.3 Transmitters

**Important:** EnOcean switches do not appear in the Lifemodus configuration.

When a module sends a message, the associated thumbnail has a yellow frame.



#### 3.3.1 Scan

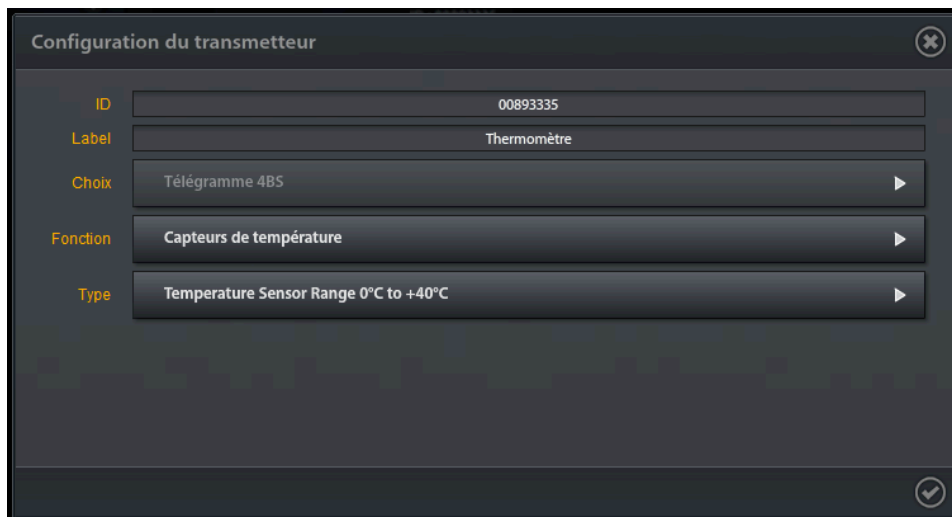


When the **Scan** option is active, Lifedomus will automatically add the EnOcean transmitter modules, provided they communicate when the option is enabled.

**Important:** for efficiency reasons, we recommend disabling this option.



### 3.3.2 Properties



The screenshot shows a configuration window titled "Configuration du transmetteur". It contains five rows of configuration options, each with a label on the left and a value in a text box on the right. The labels are in orange: ID, Label, Choix, Fonction, and Type. The values are: 00893335, Thermomètre, Télégramme 4BS, Capteurs de température, and Temperature Sensor Range 0°C to +40°C. Each text box has a right-pointing arrow. The window has a close button (X) in the top right and a checkmark button in the bottom right.

Label	Value
ID	00893335
Label	Thermomètre
Choix	Télégramme 4BS
Fonction	Capteurs de température
Type	Temperature Sensor Range 0°C to +40°C

The *Choice*, *Function* and *Type* options correspond to your module's EEP (refer to the manufacturer's documentation). This is the data that will decrypt the messages sent by your module.

## 3.4 CVC components

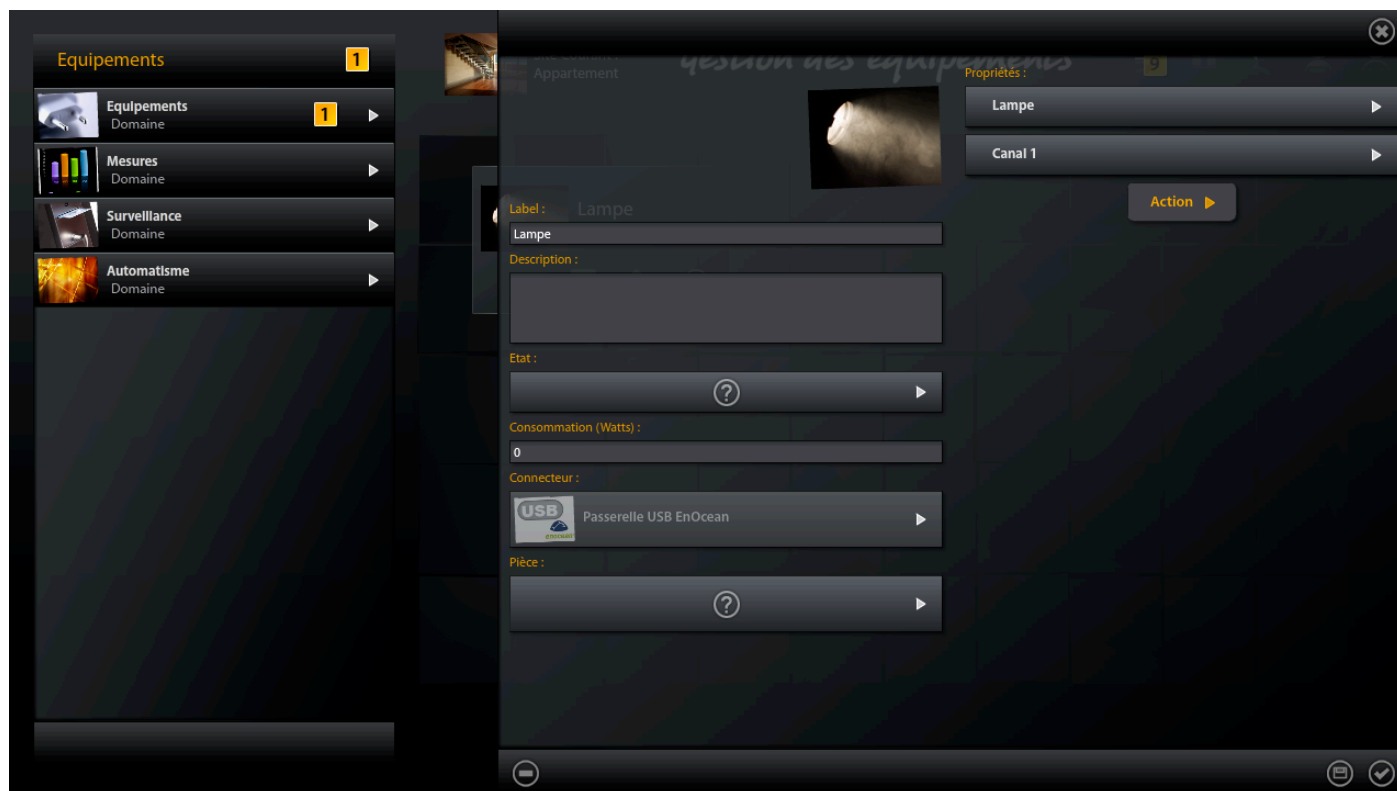
This category is dedicated to the Kieback and Peter actuator.

You can refer to the Lifedomus documentation '*KP EnOcean Actuator Configuration*' for this device.

## 4 Devices

To save an EnOcean device, select the EnOcean connector.

The list of modules associated with this connector appears in the right hand pane.



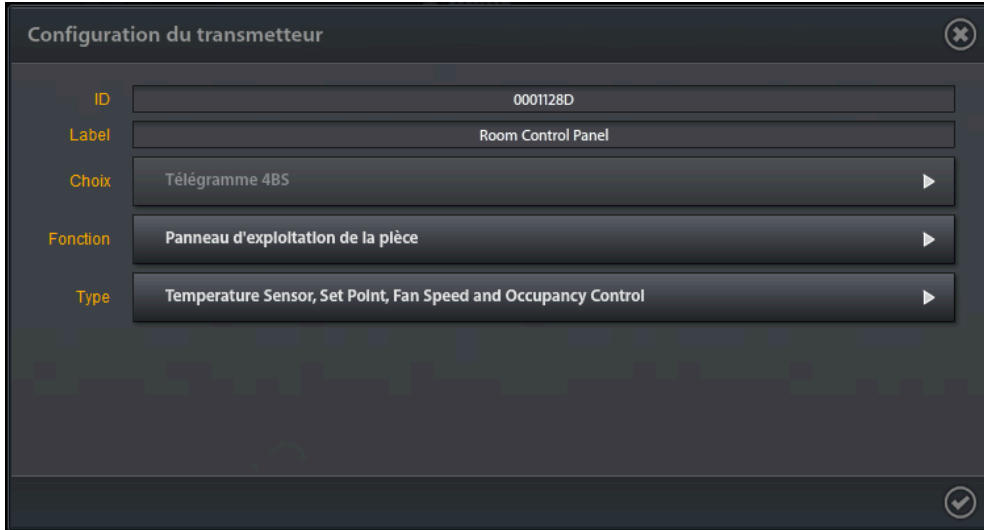
Now, select the required module.

For receivers, you must also select the channel.

The *Action* option triggers an action (e.g. ON for a light) for the selected receiver module. This only applies to EnOcean modules that implement the *Remote Management* feature.

## 5 Room thermostat setup example

First, after creating and starting the EnOcean connector, add a transmitter that corresponds to your system's room thermostat.



Configuration du transmetteur	
ID	0001128D
Label	Room Control Panel
Choix	Télégramme 4BS
Fonction	Panneau d'exploitation de la pièce
Type	Temperature Sensor, Set Point, Fan Speed and Occupancy Control

Then add the receiver that corresponds to your system's actuator.



Configuration du receveur	
ID	UWGKINYJ
Label	Chauffage
Nombre de canaux	01 Canal(aux)
Type	HVAC Thermostat
Température programmée	21
Ajustement de la température (thermostat)	3
Température minimum (mode absence)	4
Nombre de vitesses du ventilateur	4
Nombre de circuits de chauffage	2
Délai de la fonction energy stop	2700000
Appairage	<div>   </div> <div>   </div> <div>   </div>
	00213A9A (O) Lifedomus (O) Room Control Panel (O) 00213A9A (I) Lifedomus (I) Room Control Panel (I)

In this example, the actuator has a comfort temperature of 21°C, with an adjustment of 3°C adjustable from the transmitter and a decrease of 4°C when in absence mode.

Lifedomus manages the change to absence or comfort mode. The 00213A9A can also manage this. The associated device list also features the transmitter (Room Control Panel), which will display the room temperature and allow for the adjustment of the required temperature (more or less 3°C in this case).

A Room thermostat device can now be created and associated with the previously created receiver (see chapter 4).