

Graphic controls

PPL7

V0.1

PROGRAMMING MANUAL



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1 GENERAL DESCRIPTION

PPL7 is a colour touch screen, size 7". It allows monitoring and control of the BUSing[®] home automation system. It is simple, quick and intuitive thanks to the icons on 3D drawings or photographs.

It has a configurable Wi-Fi connection which makes it possible to connect to the net for different purposes such as live updating of the software version or showing the weather information of previously configured locations.

It incorporates events' edition, allowing the user to add new events/scripts to the already existing ones (included in SIDE) by using the status of the different nodes associated to the icons of the installations' drawings.

It also allows to control the technical alarms of the installation such as flood, gas, fire, etc., as well as the management of the intrusion alarm by a 4 characters code. It also can simulate real presence, program yearly temporizations, graphic whiteboard for notes, etc.

2 TECHNICAL DESCRIPTION

- Resolution: 800 x 480 pixels
- Colours: 18 bits
- Power Supply: 12 Vdc (BUS)
- Power Consumption: 380 mA @ 12 Vdc
- Size: 212 x 120 x 15 mm
- Assembly on a universal instrumental box, screwed to wall.

3 WORKING MODE

The graphic interface is divided in three zones:

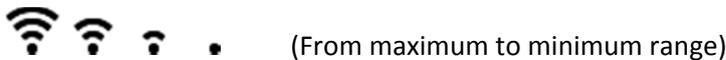
- A central zone where you can find the installation's drawings. On these drawings we can find the icons for the control of the diverse devices.
- An upper rail that we will see if we shift downwards the main screen (the one with the drawings). On this rail we can activate programmed events as well as create new ones. After having created events, we will be able to delete or edit the programmed events by means of the screen. We will not be able to delete or edit the events that have been programmed in SIDE.
- A lower rail that we will see if we shift upwards the main screen (the one with the drawings). On this rail we can access to the whiteboard, technical alarms, yearly temporizations, intrusion alarm, and presence simulation as well as access to the weather forecast.

You will find below a detailed explanation of each of the zones of this graphic interface.

3.1 MAIN SCREEN

This screen is composed of the drawings of the project and icons. The icons correspond to the devices or to the devices' outputs of the installation. These icons allow us to monitor and to control the associated devices.

Besides the drawings and icons, the range level of the wireless net to which the installation is connected, is permanently shown on the upper right corner.



3.1.1 NAVIGATION FROM ONE DRAWING TO ANOTHER

If the project has more than one drawing you can move from one to another by shifting your finger to the right or to the left, depending of which drawing you would like to see.

If you shift your finger from right to left, the interface will change to the next drawing.



If you shift from left to right the interface will change to the previous drawing.

3.1.2 USUAL ICONS ON THE DRAWING

3.1.2.1 LIGHTS

To switch on or off each lighting point (one per one), you only need to click on the bulb on the drawing. If the bulb is yellow, the light is on and if the bulb is blue, the light is off.

Once you have clicked the system will address the command and the associated status of the output will change.



3.1.2.2 BLINDS

The blinds icons on the drawings will graphically and numerally indicate the status of the window.



Once you have clicked on a blind icon, a window will drop down, giving us information about the window's status and a value in %.



In this new window you can shift with your finger on the blind and adjust the level of the blind (raising or lowering it, just by the contact to the screen and the movement of your finger). When the user lifts his finger from the screen, the level is set, the window will close and the actuator will act on the corresponding output.

3.1.2.3 LIGHTING REGULATION

The regulation icons on the drawings indicate graphically as well as numerically the value (in percentage) of the lighting.



100%



60%



0%



30%

By clicking on a regulation icon, a box will appear where you can see the status of the associated circuit.

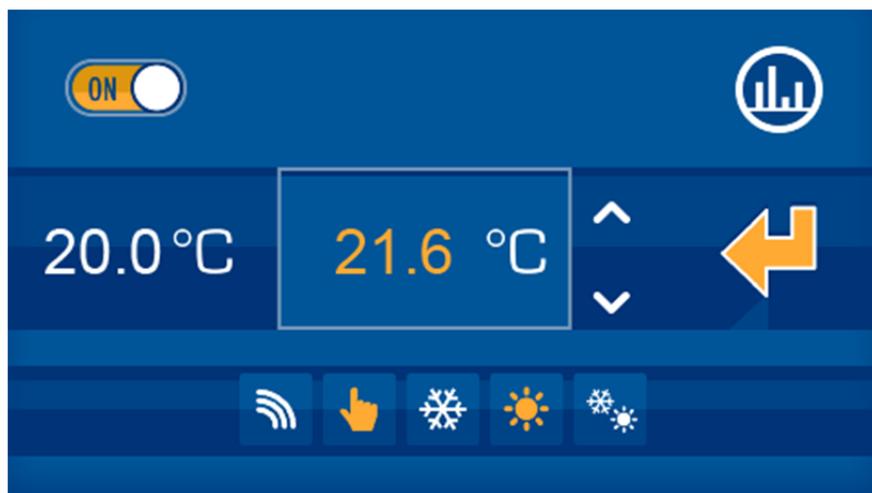


On this new box you can adjust the light intensity. You only need to shift your finger upwards or downwards on the screen. Once you lift your finger the light intensity is set, the window will close and the regulator will show the changes just done.

3.1.2.4 THERMOSTAT (KT)



By clicking on the thermostat icon a box will appear. You can adjust the temperature on this box.



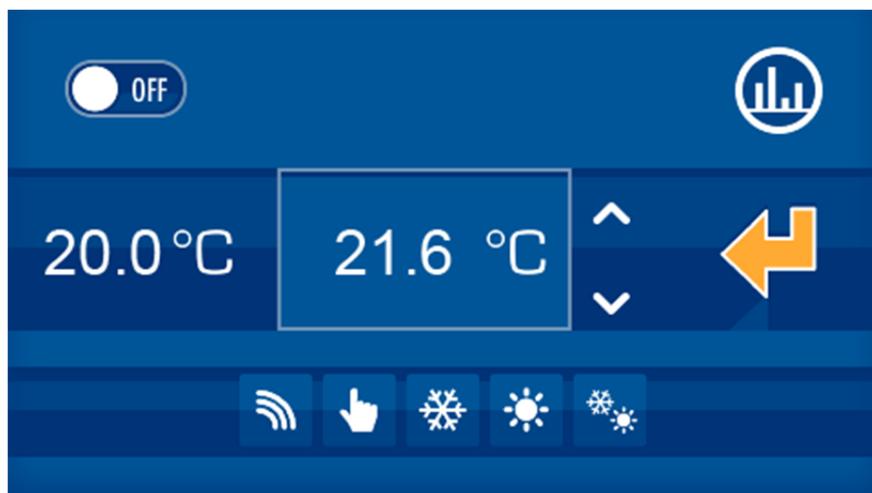
In the middle part of the box you will see two values. On the left part the current measured temperature and on the right part the set-point. This set point can be modified by pressing on the arrows (up and down).

On the upper part of the box, you can put on or off the thermostat. The thermostat is controlled by following moving icon:



If the thermostat is off, all the configurable options of the thermostat remain deactivated (White icons). It would also be impossible to modify the temperature set point. If you wish the settings to be edited (yellow icons) you only need to switch on the thermostat by moving the icon to the ON position: 

Thermostat off, example:



On the upper right part the icon  gives us access to temperature historical data (measured by the thermostat). These data are presented in a new dropdown window. We can visualize the information on a daily, weekly or monthly base (we should select the base in the lower part of the graph)

On the lower part, we can configure if the control of the thermostat is in

- Local mode  
- Remote mode  

And the operating mode:

- Summer (Cold is demanded)  
- Winter (Heat is demanded)  
- Mixture  

If the images on the icons are white it means that the function is deactivated. If they are yellow, it means that the function is active and it is working in this moment.

3.1.2.5 FLOOD

The working mode for the flood detector is as follows:

Whenever a water leak happens, it is indicated by showing the icon in yellow. In neutral position the icon is off (blue colour)



Stand by (no leakage)



Active position (leakage)

It is not possible modify the status of the icon by pressing on it; the icon will not change its status. It will only change its status if it detects leakage or not.



Stand-by

Active detector

This icon is used to show the status of the presence detectors of the installation.



Switch on detector : This icon is used to switch on manually the detector. It means that if you press on this icon the SRBUS will detect any movement and will work normally.



Switch off detector : This icon is used to switch off manually the detector. It means that if you press on this icon the SRBUS will not detect any movement and consequently will not work.

3.1.2.6 GAS, FIRE OR SMOKE

The working mode of the gas/fire/smoke detector is as follows:

When gas or smoke is detected in the house, it is indicated by a yellow extinguisher. In neutral position the extinguisher is blue.



Stand-by position.



Active position (gas or smoke detected)

NOTE: FOR GAS/FIRE DETECTORS IT IS NECESSARY TO PROGRAM THE RELEASE AND THE END OF DETECTION IN THE ACTIVATION AND DEACTIVATION SCRIPTS IN ORDER TO ENSURE THAT THE ICON WILL CHANGE ITS STATUS WHEN IT DETECTS. FOR LEAK AND BUS DETECTORS THIS PROGRAMMING IS NOT NEEDED.

3.1.2.7 CONSUMPTION MEASURING DEVICE (METERBUS)

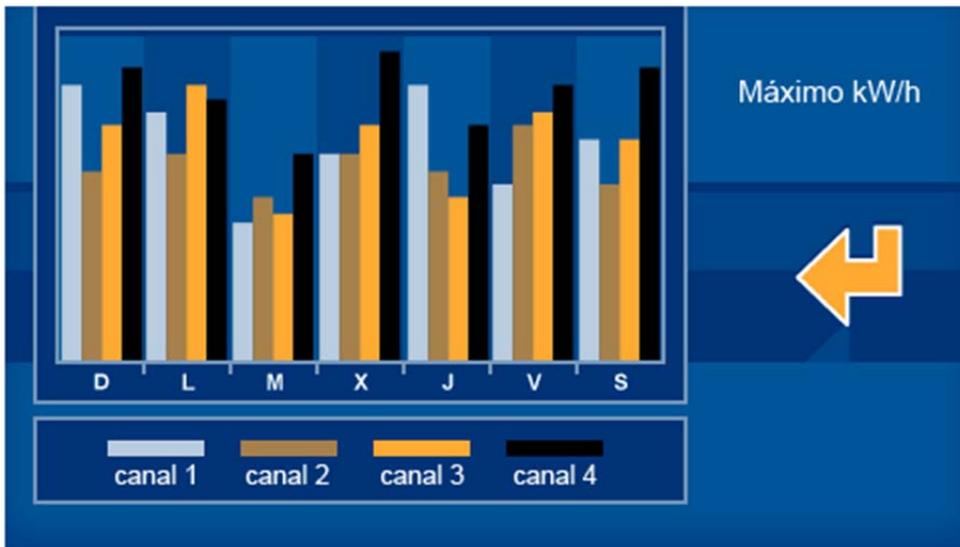


By clicking on the shown icon, we will access to a drop-down display. This display gives us information about the consumptions of every channel connected to METERBUS in real time. On the left column consumptions in real time are shown, on the right column you can see the consumption limit for each channel.



As mentioned for each channel we can set an upper limit. The real consumptions should remain below this value. In case the limit is exceeded, the installation will launch a serial of actions in order to correct this excessive demand, always in accordance with the configured settings. The limits for each channel are established by clicking on the lateral arrows of each value. The left arrow serves to reduce the limit and the right one to increase it.

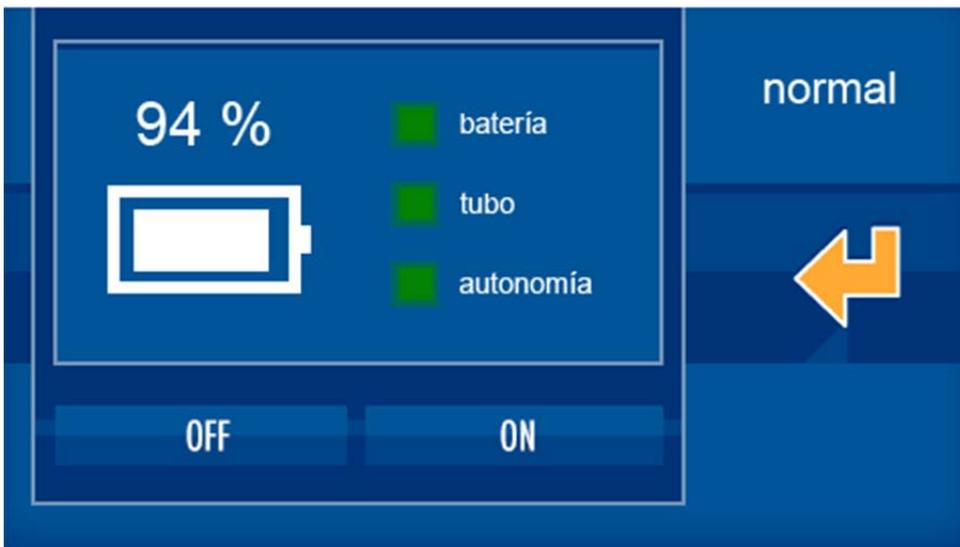
If you click on this button , you will see a graphic of the consumption data of the last 7 days for each of the channels.



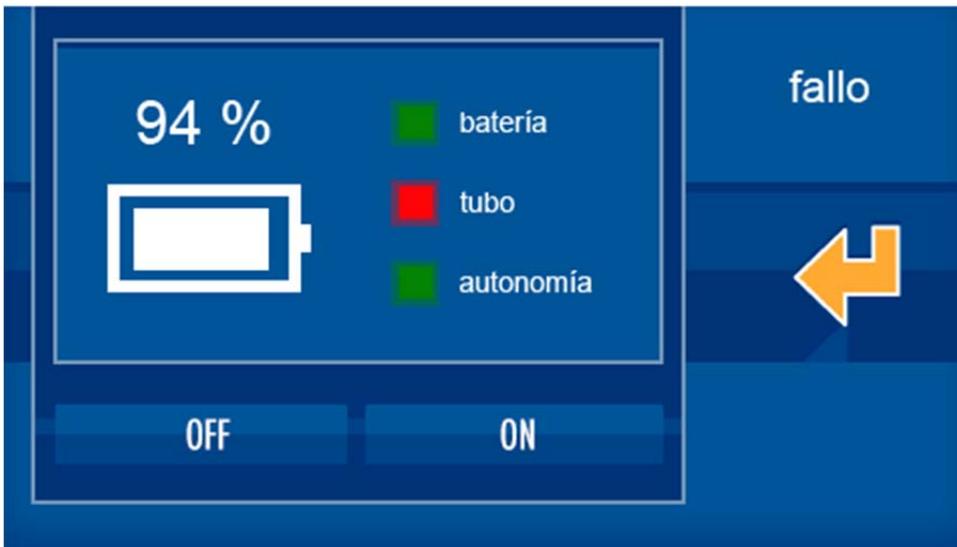
3.1.2.8 EMERGENCY LIGHTS



By clicking on the icon shown above, you will access to the information about the emergency light linked to the icon on the drawing. A window will appear with the light's data, such as status of the battery (an indication about the remaining charge expressed in % is included), status of the tube or device's autonomy. You can also switch on or off the light in order to verify if it is working properly.

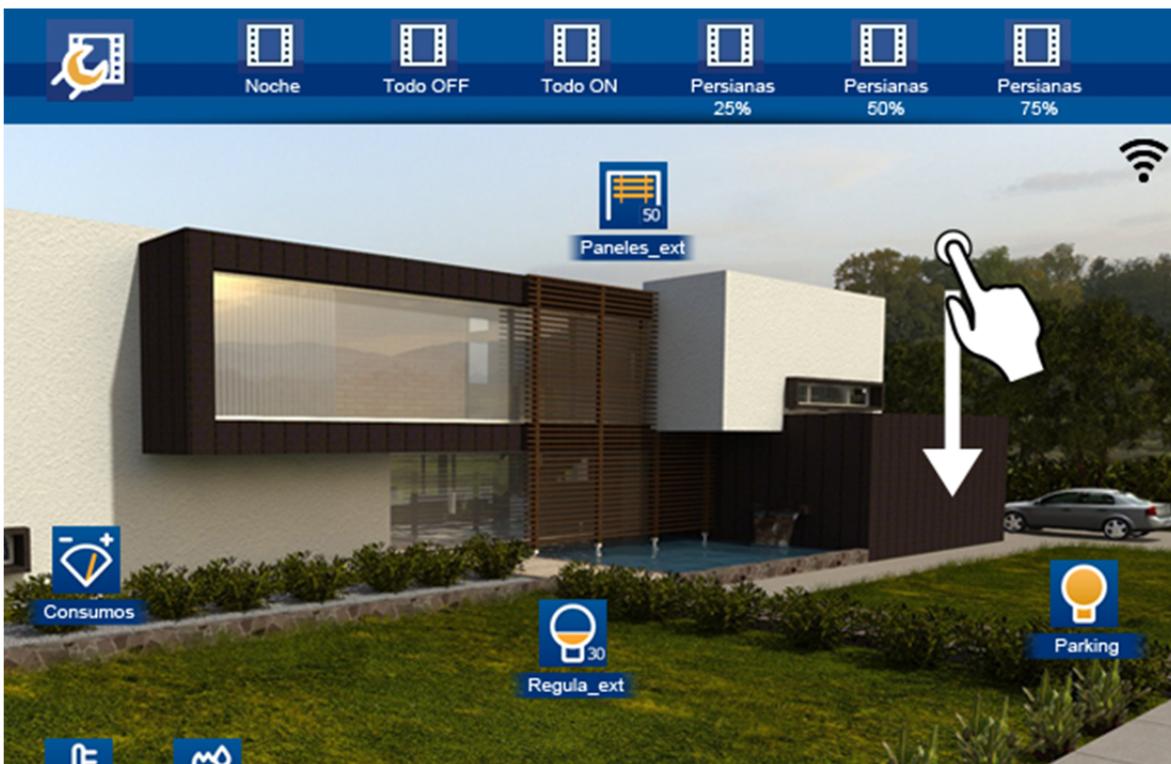


As you can see above, on the central part the status of the lighting is shown; % of its battery, tube status and autonomy. In case any of these elements did not worked, it would be graphically shown on the screen as you can see on next image:



As already said it is also possible to switch on/off the light by means of the ON, OFF buttons, so that we can check the correct function of the light.

3.2 UPPER EVENTS RAIL



The upper rail will be visible if you shift the main drawings screen downwards. This rail shows all events that have been configured in the project by means of SIDE. This rail also has an icon on the left border (always visible) that allows you to create new events as well as edit or delete the ones that have been created on the screen. The events that have been imported from SIDE cannot be edited.

3.2.1 RUN AN EVENT

To run an event that have been imported from SIDE, you only need to scroll to it on the upper rail and click on the icon that is associated to the event.

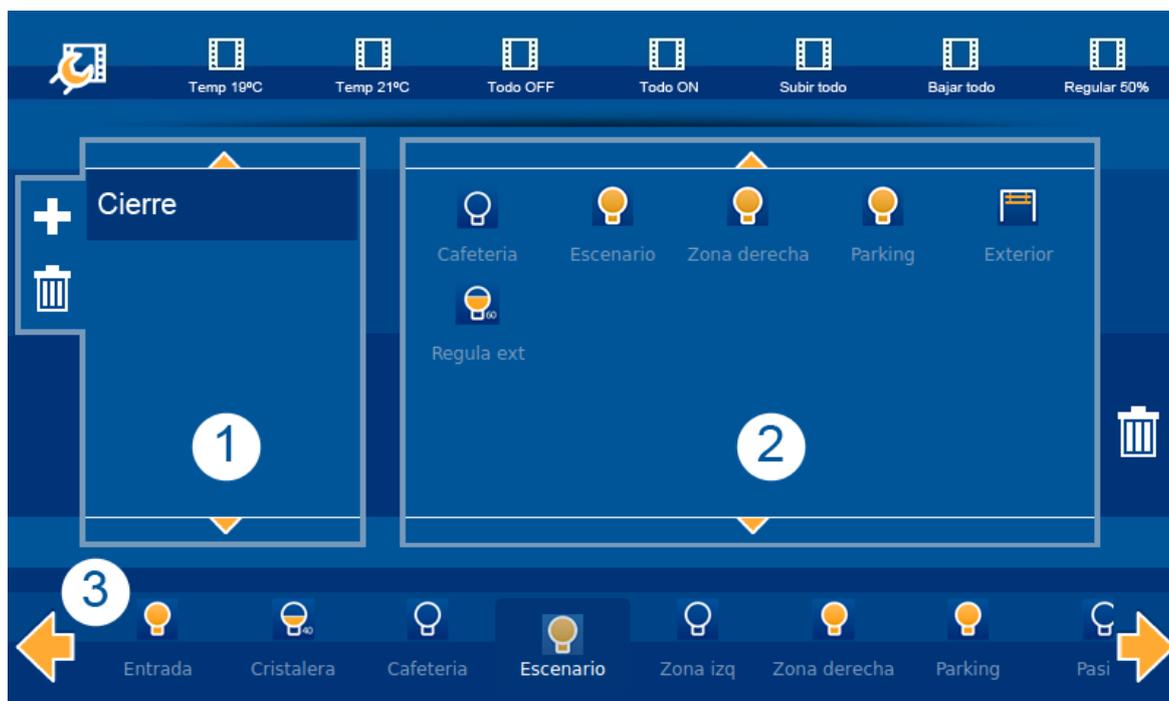
To run an event that have been edited on the screen you will need to go to the last positions (on the right) of the rail. That is where you can find the events that have been programmed by the user. Once you have found it, you only need to click on the icon.

3.2.2 EVENT CONFIGURATION



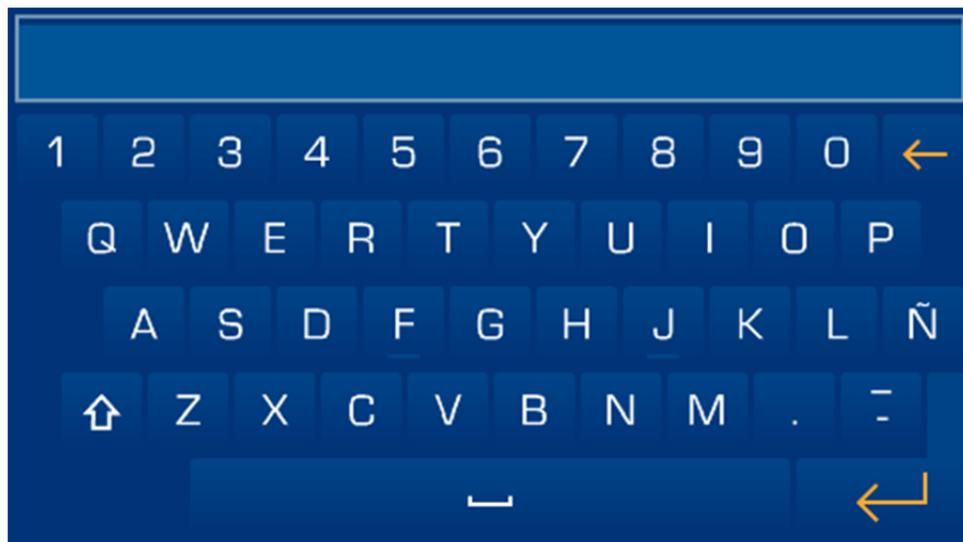
To edit a new event we should click on the following icon (left on the upper rail) , a new window will open. This window serves to configure events. The window is divided in three parts:

A first zone (1) on the left side containing the list of the already generated events. A second zone (2) on the right part containing the icons associated to these events and their status and a last zone (3 – lower horizontal rail) with icons that can be added to the event we are editing.



3.2.2.1 ADD AN EVENT

Clicking on the icon for adding a new event , a keyboard will be shown on the screen. We should use this keyboard to name the new event. Afterwards we will be able to link the event with icons and the corresponding status.

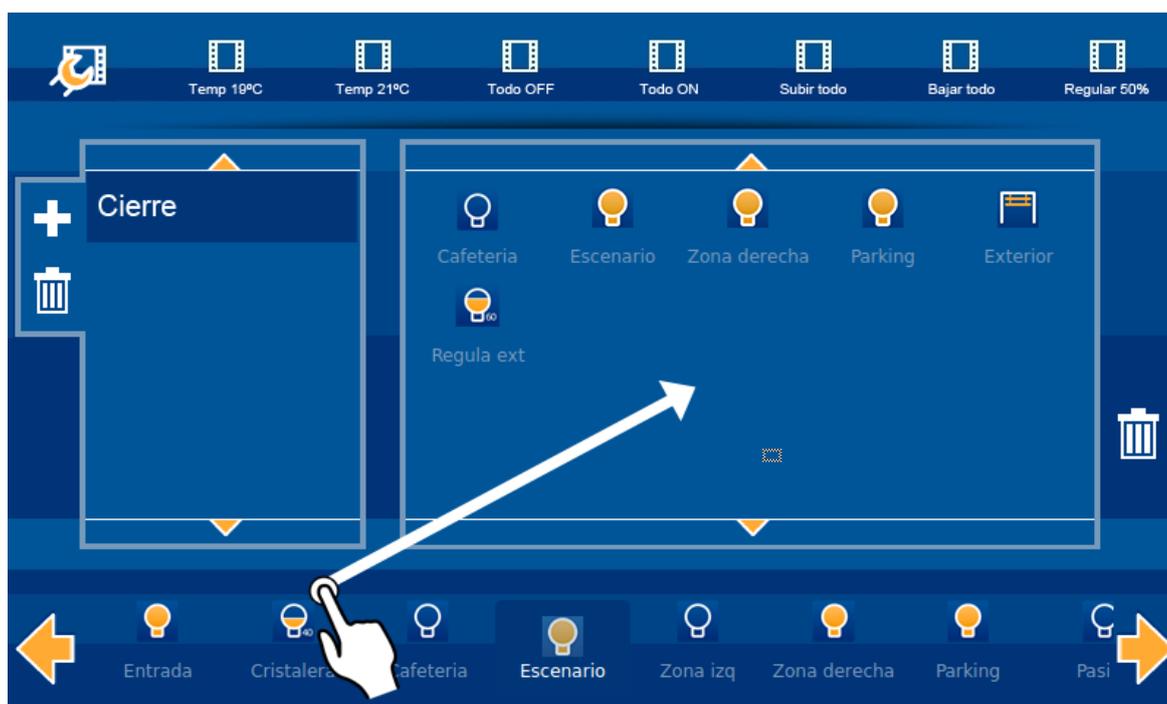


3.2.2.2 DELETE AN EVENT

By clicking on the delete icon , we can delete the selected event (only those events that have been configured on the screen)

3.2.2.3 EDIT AN EVENT

Through this icon we will access to the events configuration of our PPL7 , we will be able to modify those events that have been previously created on the graphic interface. The events list appears on the left side of the screen. We only need to click on it. On the lower horizontal rail the icons are shown. Once we are in the event we will be able to add or eliminate icons.



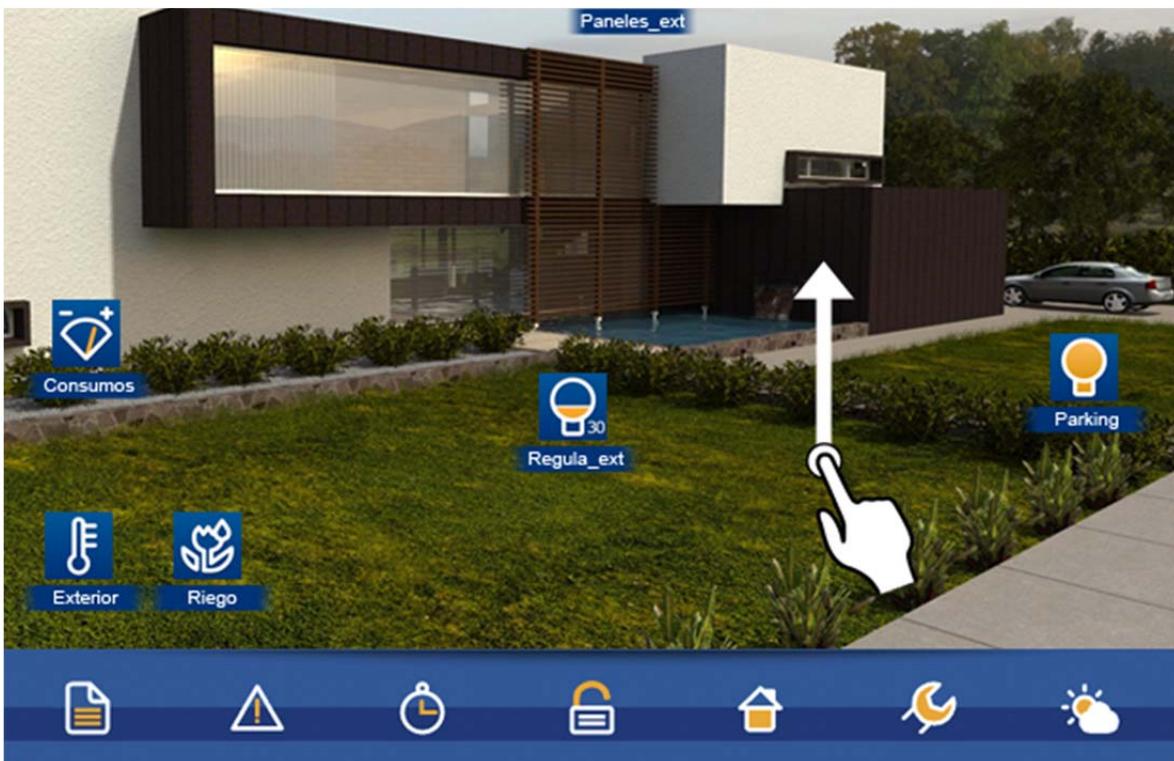
If you wish to add scripts to an event, you only need to shift the corresponding icons from the lower rail to the icons box in the upper right part. If you are interested in deleting a script, you will only need to click on the icon and then press on the delete button (right side of the screen) .

If you add icons, the status of the output connected to the icon will be linked to the event. It means that in case the event is executed, the devices will adopt the status they had in the moment that the event was edited.

During the events' edition, PPL7 will only allow to add icons that are represented on the drawings as mentioned in section 3.1 of this manual and only in the status they had when they were linked to the event.

3.3 LOWER CONTROL RAIL

You will see the lower rail if you click and shift upwards the main drawings' screen. So you will be able to access to all functionality described in this section.



Clicking on the available icons on the lower rail, new windows will drop down with its own functionality. If you wish to close the window you only need to confirm the actions in the drop down window or you can click again on the same icon you used to open.

3.3.1 WHITEBOARD FOR NOTES

PPL7 has a touch whiteboard that allows you to draw or to take notes. If you have used the whiteboard you will see a notice on the main users' screen.





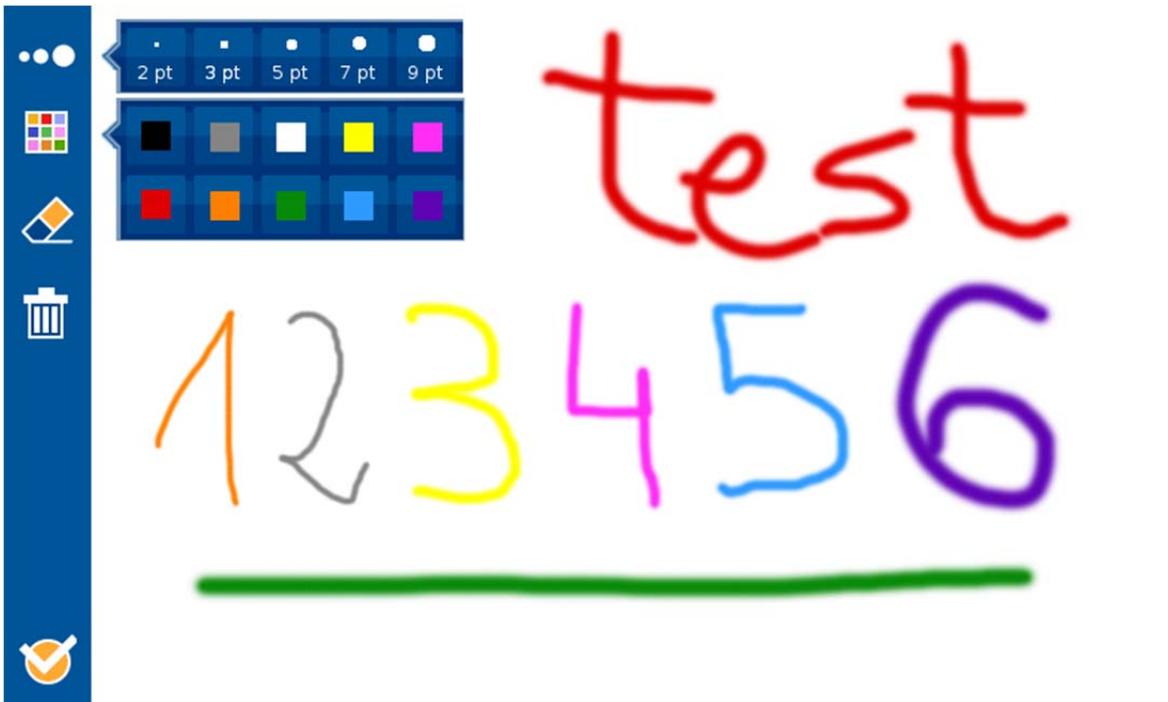
To access to the whiteboard you should click on the icon located on the lower rail of the screen.

To draw or to take a note you only need to shift the finger on the screen. If you wish to erase, you should select the eraser, see icon on the left side . To erase the whole whiteboard please select the bin icon (located below the eraser) .

To validate the note and return to the main screen please press on the tick icon located in the lower left corner of the screen .

If there is a note on the whiteboard the system will always show a notice on the main screen.

The graphical whiteboard also allows to choose the width and the colour of the line to get a more graphical and attractive result.

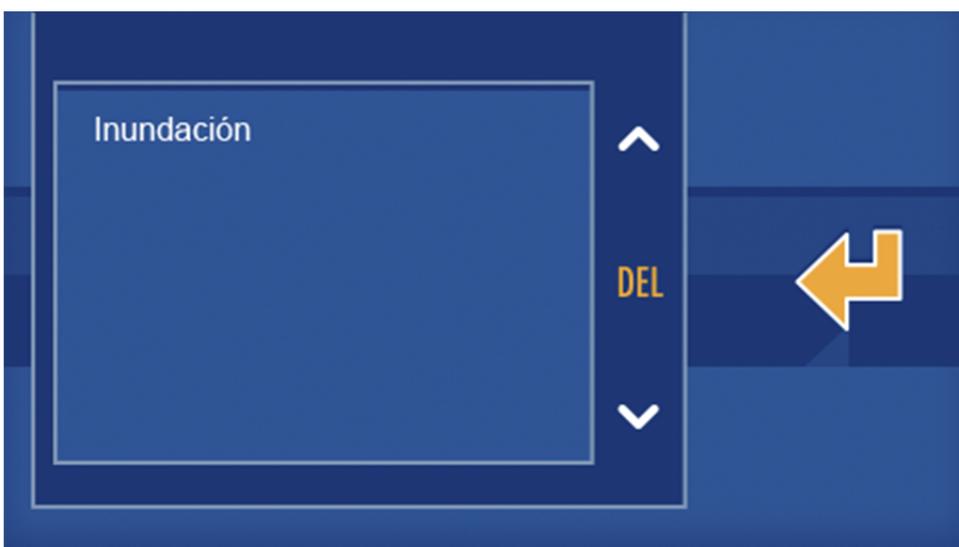


3.3.2 TECHNICAL ALARMS WARNINGS

The PPL7 screen can show up to 5 different technical alarms that could have happened in the installation such as flood, gas, fire, etc.



Whenever a technical alarm is triggered in the installation, the appropriate warning icon on the main screen will blink. If you wish to know which alarm is concerned, you should click on the warning icon or on the concerned icon on the lower right bar of the screen.



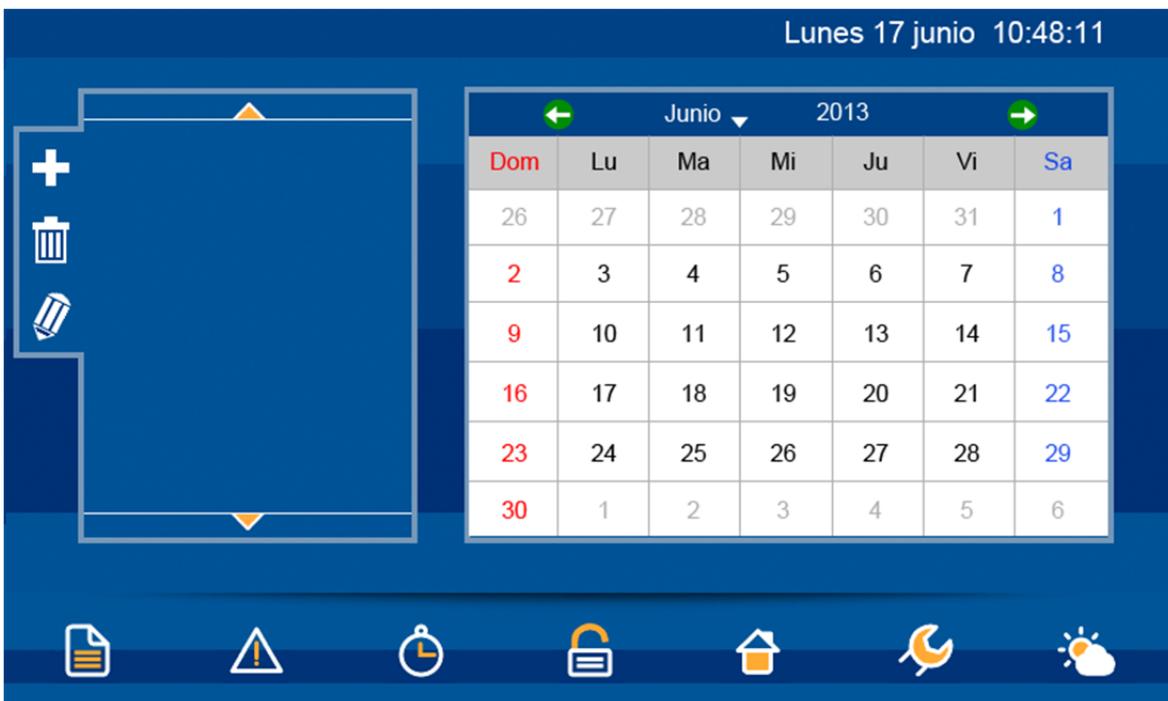
To confirm that we have been made aware of the alarm's warning and to stop the icon to blinker, you should press on the delete button of the central part , located between the alarms' arrows in the vertical rail. If you do not want to delete the warning you should press on the confirmation icon located on the right side .

3.3.3 TIMINGS

The timings allows you to program date and hour you wish the PPL7 to execute some of the events from its memory. The timings can be programmed yearly. To access to the timings menu press on the icon shown below. This icon is located in the lower right bar of the screen.

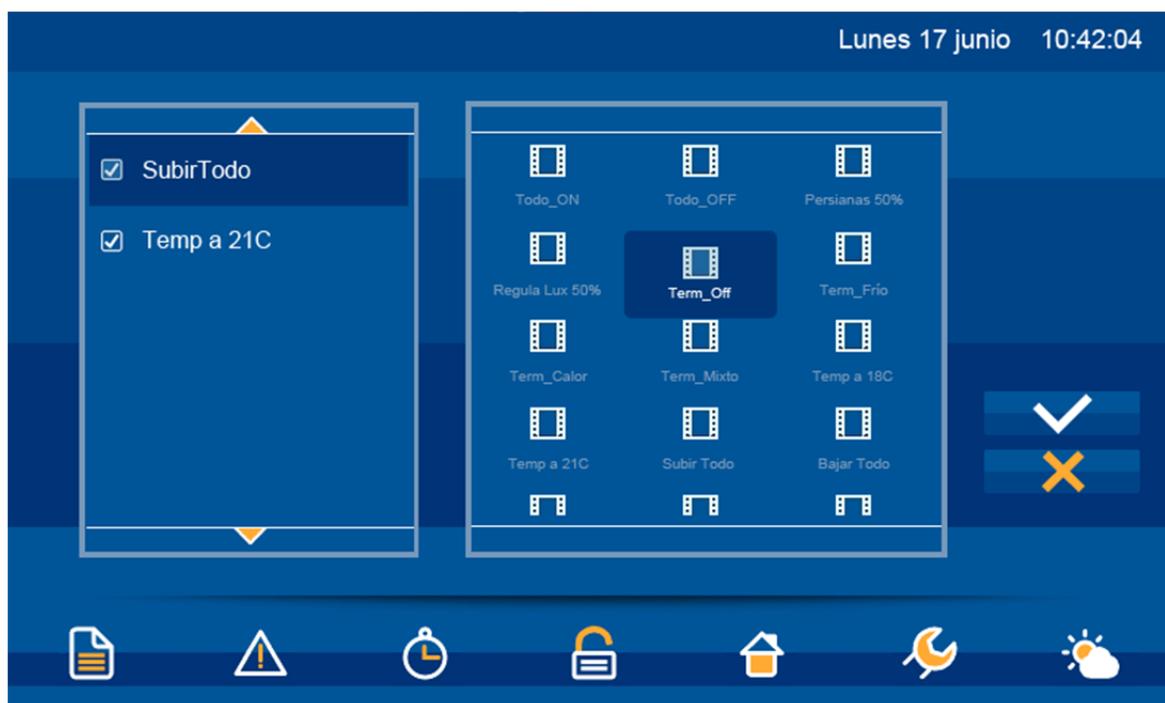


The initial timings screen is divided in two zones. On the left one all programmed events are shown. On the right you will see a calendar where the programmed dates for each event are marked.



3.3.3.1 ADD A TIMING

On the left side a list with all programmed events is shown. To add a timing you only need to click on the icon  and a new window will drop down to let you select the event. This window has got two columns, the one of the left has all created timings and on the right you will see all available events to be timed. On this second column you should select the event you wish and press on the tick button .



After the selection of the event we will go to the next window, where we will find again both columns. The column of the left allows you to select the level of repetition for an event and the calendar on the right lets you select the date to be linked with the repetition. The two boxes on the right let you choose the time at which you would like the selected event to be run.

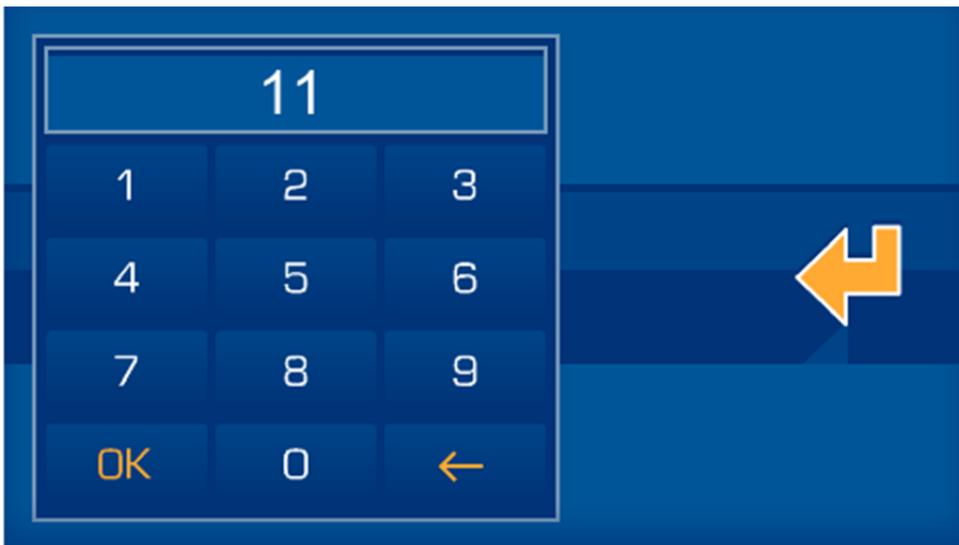


Some more information about the repetition levels of this screen:

- **Add year:** The event will be executed every day of the year.
- **Add month:** The event will be executed all days of the month selected on the calendar on the right side. For instance if we have chosen the May 21st, PPL7 will configure the timing for all days from the 1st to 31st of May.

- **Add week day:** The event will be executed on a certain day (the one chosen on the calendar on the right). For instance if we have selected a Wednesday in May, PPL7 will configure the timing for every Wednesday of the year.
- **Add a certain date:** Using this option the timing will be executed only on the date we have selected. For instance if we have selected May 21st, PPL7 will configure the timing only the 21st of May.
- **Delete year:** Deletes the timing of all days of the year. Borra la temporización de todos los días del año.
- **Delete month:** Deletes the timing from all days of the month we have selected on the calendar on the right. For example if we have selected May 21st, PPL7 will eliminate the timing for all days from the 1st till the 31st of May.
- **Delete day of the week:** With this option we delete the even on a certain day of the week throughout the year. For example if we have selected a Wednesday in May, PPL7 will delete the timing for every Wednesday of the year.
- **Delete date:** We delete the event only for the selected date. For instance if we have selected May 21st, PPL7 will delete the timing only for the 21st of May.

On the right part of the screen there is a text field with a time data . This allows us to establish the time we would like the event to be executed. This will be the value linked to the selected dates, as explained before. To introduce the values you only need to click on the box and a numerical keyboard will drop down to let you introduce the data.



Once we have edited the time on the boxes and the date on the calendar, you will only need to click on the options of the left side explained before. As we assign the timing to the wished dates, on the calendar you will see the time assigned to each date. Some examples below:

Example 1

Add a certain date -> Timing for 13:50 hours June 27th 2013. It would be as follows:



Example 2

Add week day -> Timing for 10:45 hours, the day selected is June 17th, 2013.



Example 3

Add month and delete week day-> Firstly we add the month. Timing for 09:15 hours, the day selected is June 19th, 2013.



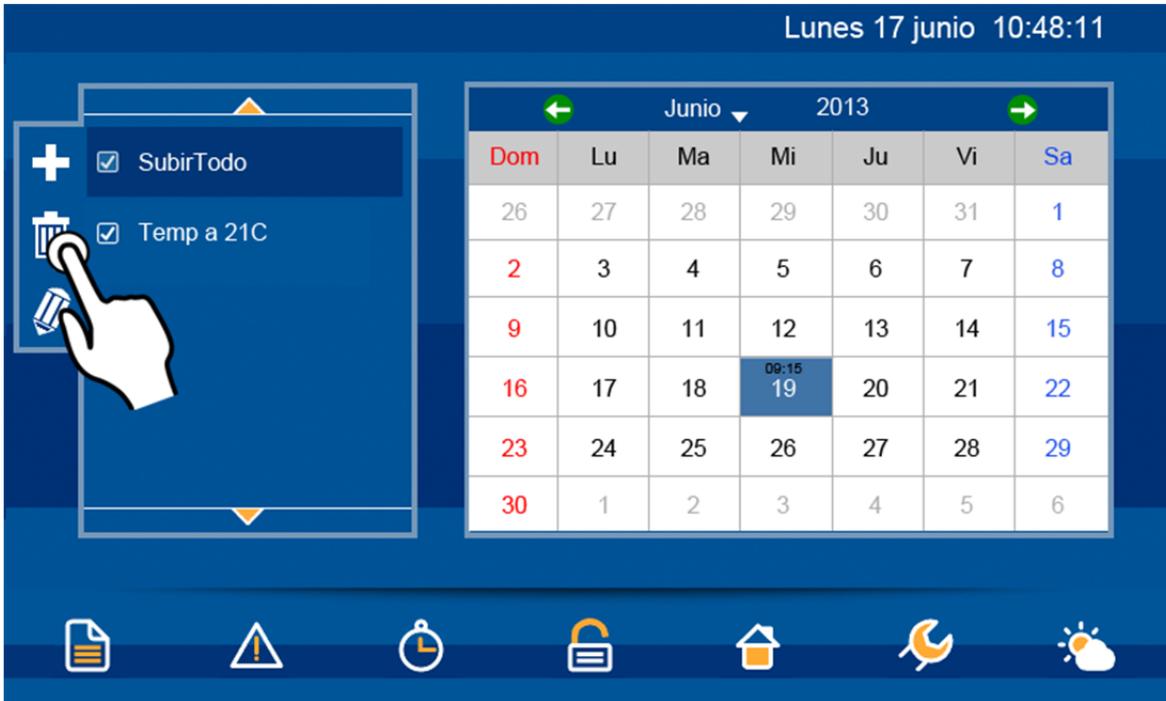
Now that we have included the month, we will delete the week day (remember that the select date is June 19th 2013) in order to verify this functionality. The result would be as follows:



Once we have the configuration we wished we only need to confirm it by pressing on the tick icon  to save the configurations. To discard the whole configuration please press on the icon .

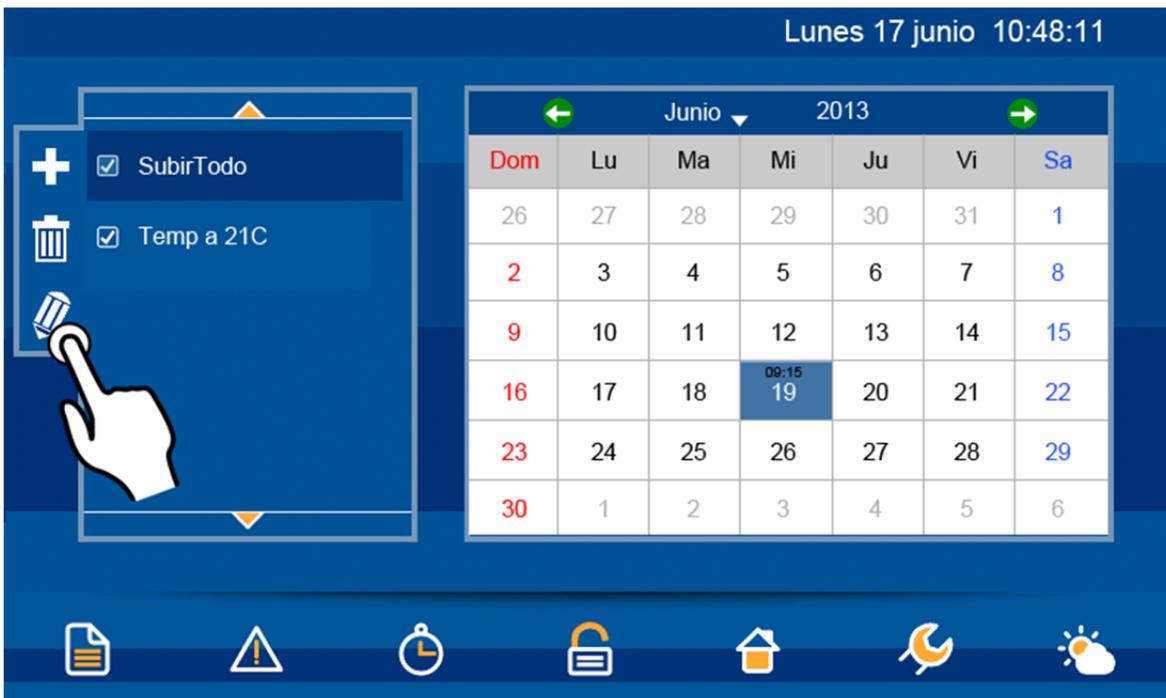
3.3.3.2 ELIMINATE A TIMING

To eliminate an existing timing on the PPL7, it is necessary to select it from the vertical list on the left side of the screen. Once it is selected we press the icon , a confirmation message will appear. We should confirm if we want to delete the timing  or cancel the action .



3.3.3.3 EDIT A TIMING

To edit an existing timing on the PPL7, it is necessary to select it from the vertical list on the left side of the screen.



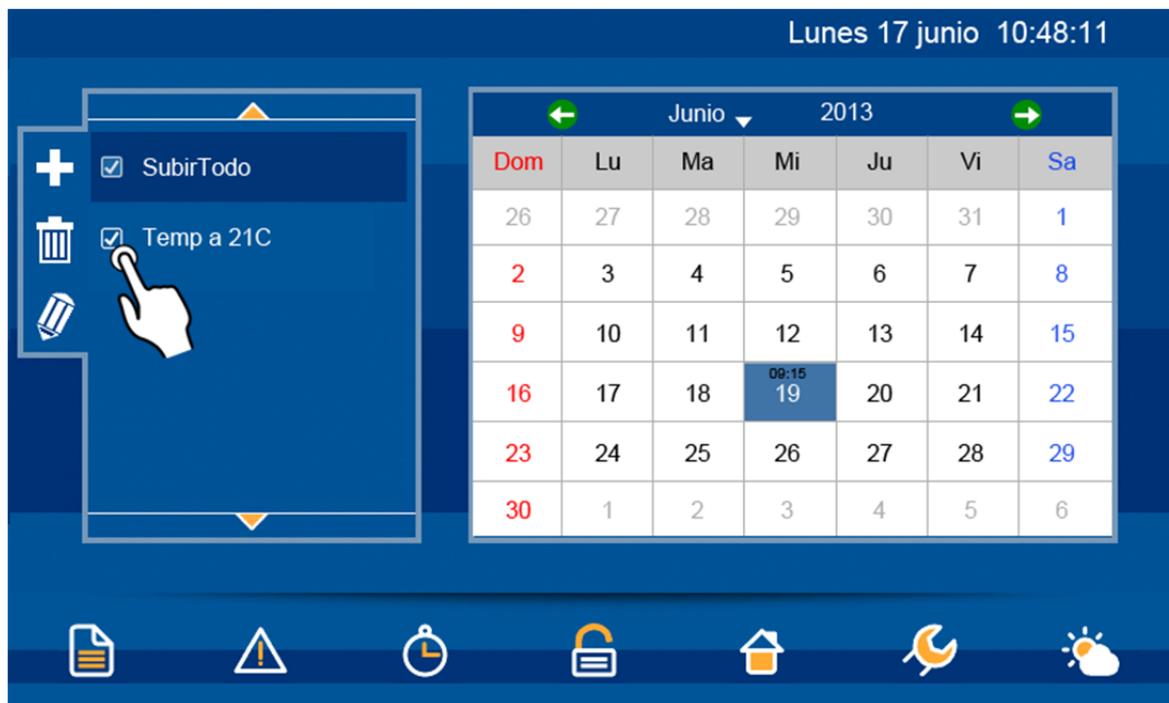
Once it is selected, if we press the icon , the same window we use to add a timing will drop down. On this screen we can add or delete timings for the previously selected event by means of the repetition levels as explained in section "3.3.3.1 Add a timing". To accept changes press  or  to discard them.

3.3.3.4 ACTIVATE/DEACTIVATE A TIMING

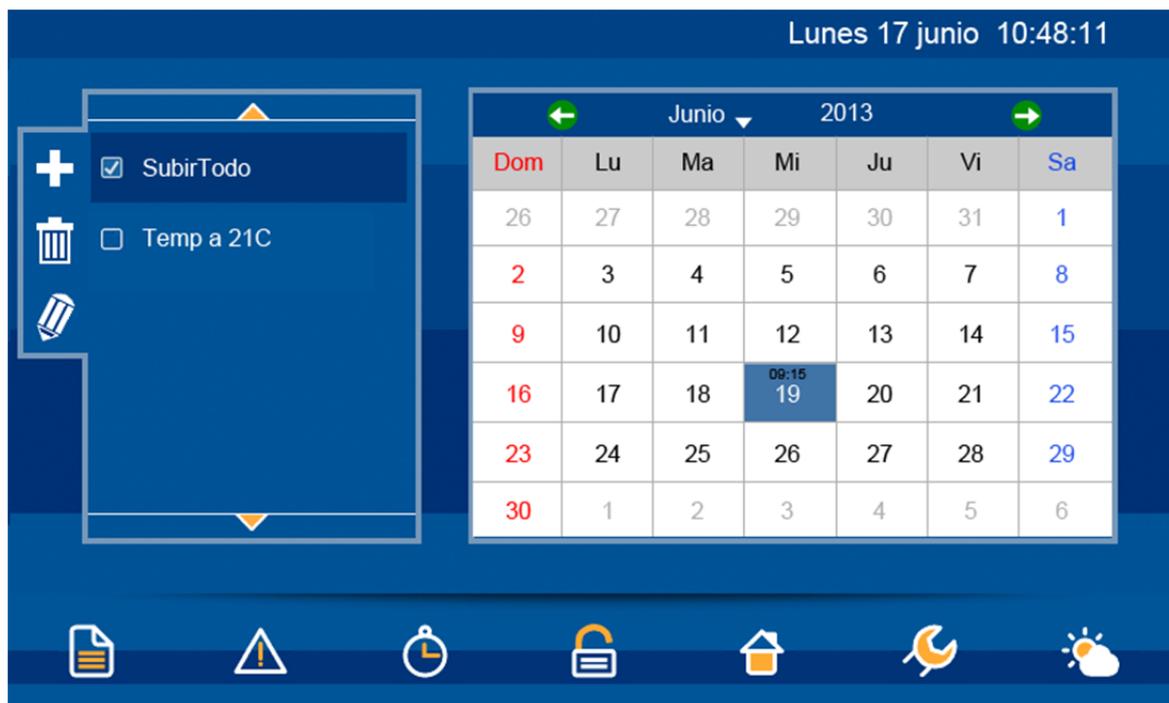
The PPL allows to activate/deactivate a timing without deleting it. This option is interesting when you need a timing not to be temporary executed, but you would like to keep the configuration to recover it afterwards without having to edit all steps mentioned before.

To do it, you only need to check or uncheck the icon left to the timing on the vertical timing list. To change the status of the icon you just need to press on it. The status would be:

- Timing active 
- Timing deactivated 



On the previous example if we press on the icon, the status of the timing would be the one shown on the next image. The timing would rest deactivated and would not be executed till we would press again on the icon to activate it.

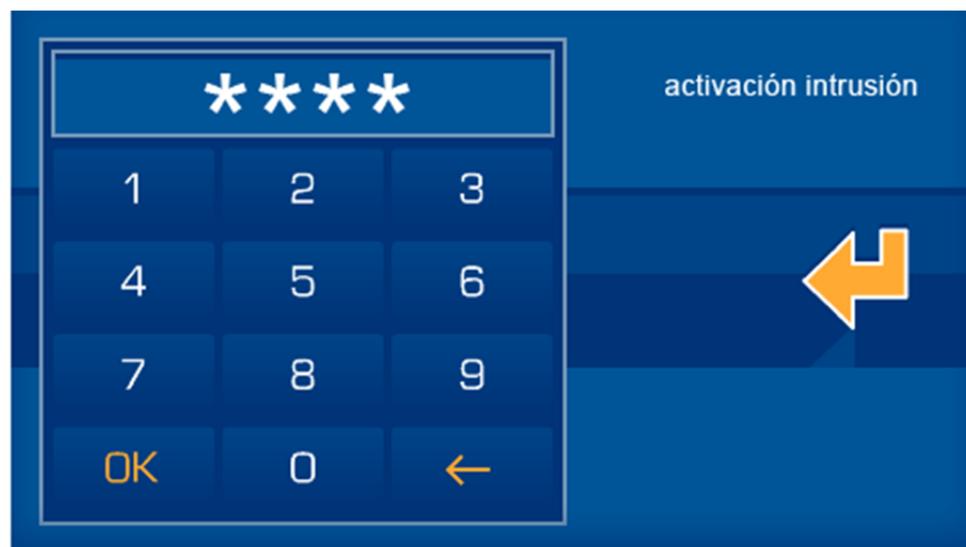


3.3.4 INTRUSION ALARM

The intrusion alarm icon, see marked icon below, allows us to set/disable the intrusion alarm.



Once we have pressed the icon, a numerical keyboard is shown in order to let you introduce the users' password: 1234 (by default)



After having introduced the 4-character password, you only need to press Ok to confirm and set/disable the intrusion alarm. The system will change its status; if it is disabled, it will be set and if it is set, it will be disabled.



When the intrusion is disabled the icon  is statically shown on the lower horizontal rail. Once the alarm is set the icon  will continuously blink.

3.3.5 PRESENCE SIMULATION

The marked icon below allows us to activate/deactivate the presence simulation in the house.



After having clicked on it, a message will be shown asking if you want to confirm or cancel the activation/deactivation of the presence simulation. It is shown here below:

To activate:



To deactivate:



To accept press  or otherwise press  to cancel the activation/deactivation.

When the presence simulation is deactivated, the icon  is statically shown on the lower horizontal rail.

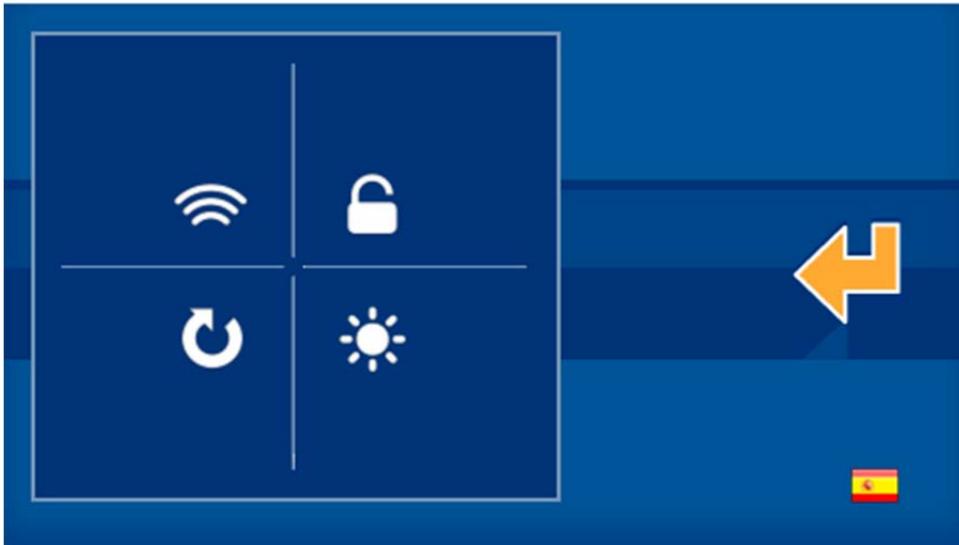
When the presence simulation is active, the icon  will continuously blink.

3.3.6 PPL7 CONFIGURATIONS

In this section, you can edit different editable settings of PP7, as for instance the internet connection data or the brightness of the screen.

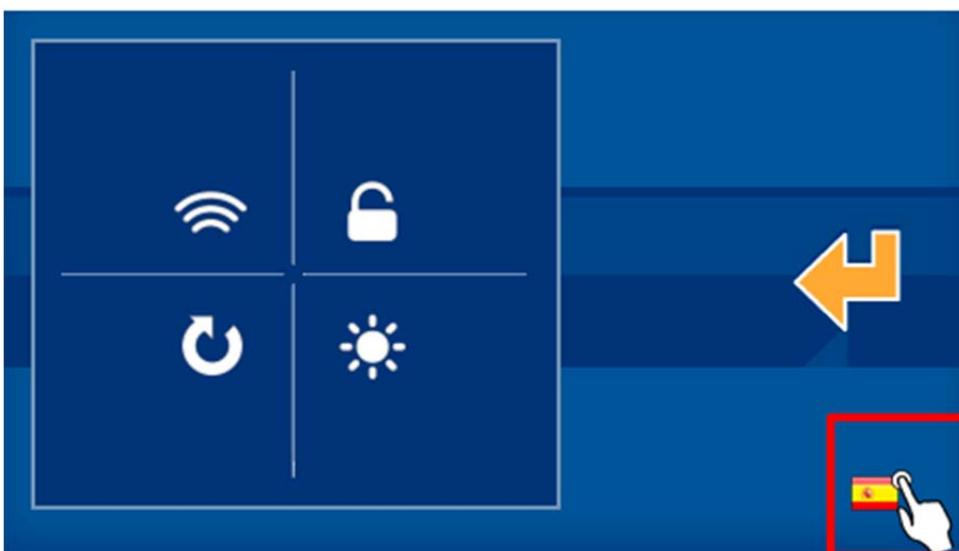


Once you have pressed the configuration button, a window will open. You will find 4 different options.



3.3.6.1 LANGUAGE

On the configuration panel of PPL it is possible to select the language for the screen. So that the texts shown in the different menus will be translated into the chosen language. To choose the language please press on the flag icon you can see on the lower right part of the screen. You will then see different flags representing the different languages. Choose the one corresponding to the language you wish.



Once you have selected the language for the screen, you only need to press  to confirm.

3.3.6.2 WI-FI

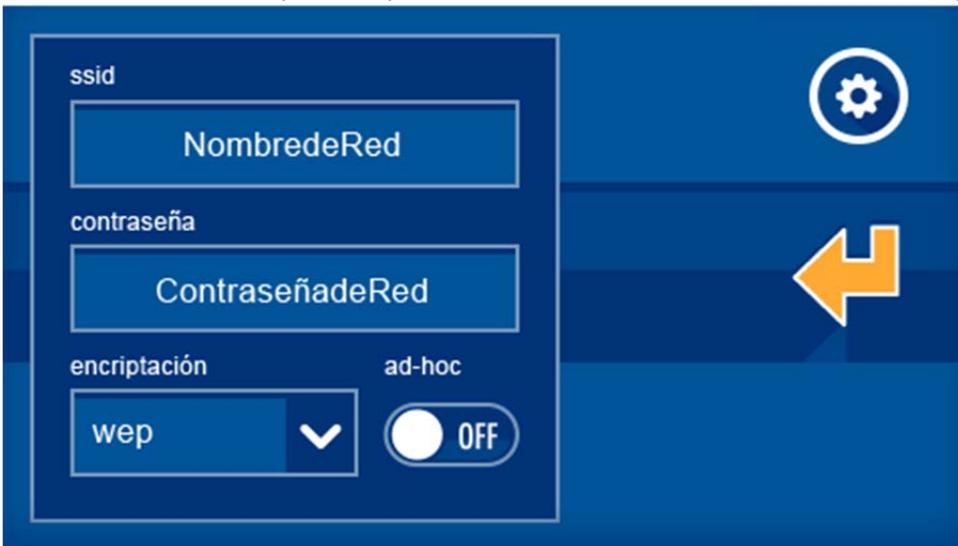
The WiFi option allows you to edit the name of the wireless net and the access password. In addition it allows to establish the IP address of the screen, the subnet mask and the gateway.

To access press on the following menu option:



In the first screen of the WiFi edition you will see the text fields to configure the local net. To this local net the screen will be connected. The text fields are: net name, password and encryption type. You can also tick an AdHoc field to create an own wireless net for the screen and so devices as PCs, tablets or Smartphones can connect directly to the screen without an access point.

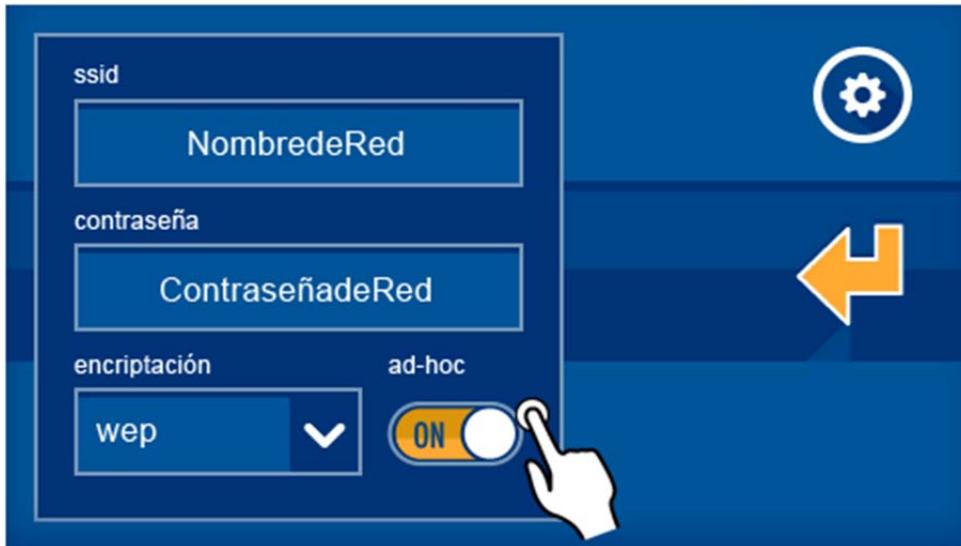
To edit the fields you only need to click on it and use the keyboard that will drop down.



Editable settings:

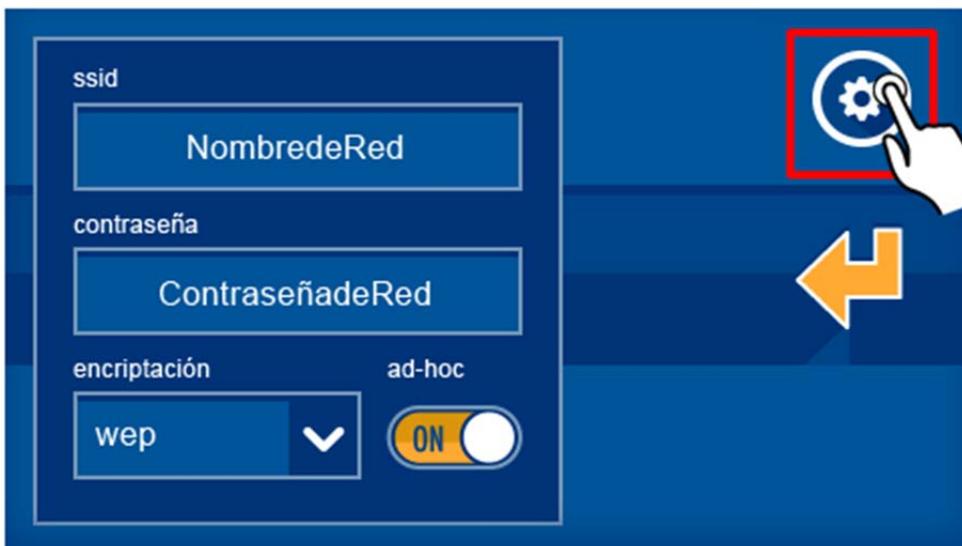
- **SSID:** Public name of the Wireless net to which the PPL will be connected. In case you select AdHoc, it will be the name of the own net generated by the screen to which the devices will connect in order to communicate with the screen.

- **Pass:** Password of the wireless net. Leave “none” if you do not want any password. In case you have selected AdHoc (and WEP or WPA) it will be the password of the net generated by the screen and that you will need to introduce when you wish to establish communication.
- **Encryption type:** It allows to select the characteristics of the encryption to connect to the local net through WiFi: WEP and WPA...



If you select the option **AdHoc**, the PPL allows you to create an own wireless net (no need to have an access point). All devices (PCs, tablets, Smartphones, etc.) that want to control the installation will connect to this net. The wireless net will have visible the name indicated in the field SSID and the password from the field password. Concerning the password, the encryption type will be the one selected: WEP, WPA or without encryption if we have selected none.

If you click on the icon on the upper right side of the screen, you will access to the settings configuration in the local net:



This option allows to set the IP address of the screen, subnet mask and the gateway.



The screenshot shows a configuration screen with three input fields on the left and a large blue arrow pointing left on the right. The fields are labeled 'ip', 'máscara de red', and 'pasarela', each containing the placeholder text '192.168.XXX.XXX' or '255.255.255.0'.

Some more details about these parameters:

- **IP Address:** The IP address that the screen will have in the local net.
- **Subnet mask:** the one corresponding to the local net where the PPL is installed.
- **Gateway:** This is the gate used by the screen to access outside.

To validate the data and return to previous screen (data are not saved yet) press .

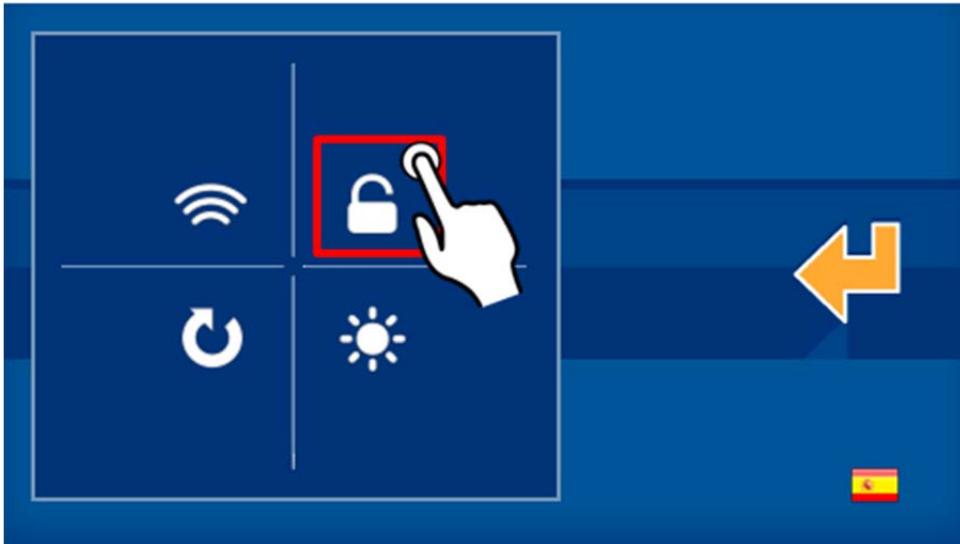
Once all the edition is finished, when you click the button  on the SSID edition screen, following message will appear:



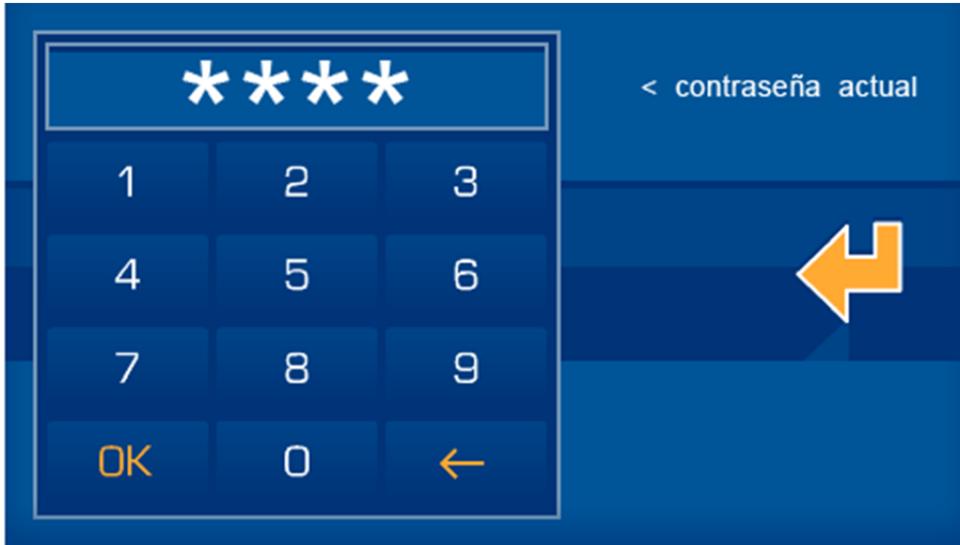
To confirm that we want to save the changes click on , to discard them .

3.3.6.3 PASSWORD

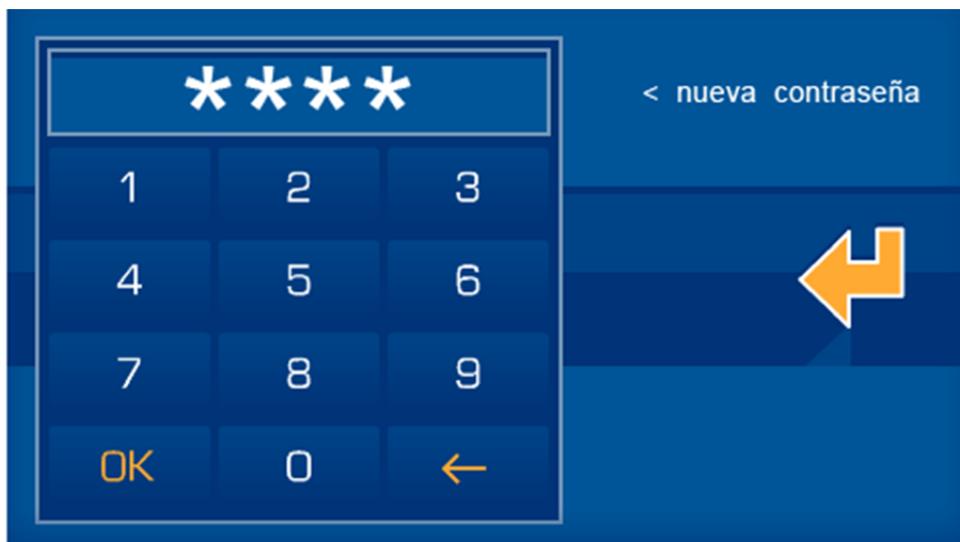
In this option from the menu, the user can modify the screen administrator's password. This password is used for action like activate/deactivate the intrusion. To manage this administrator's password it is necessary to access to the marked menu option (see below):



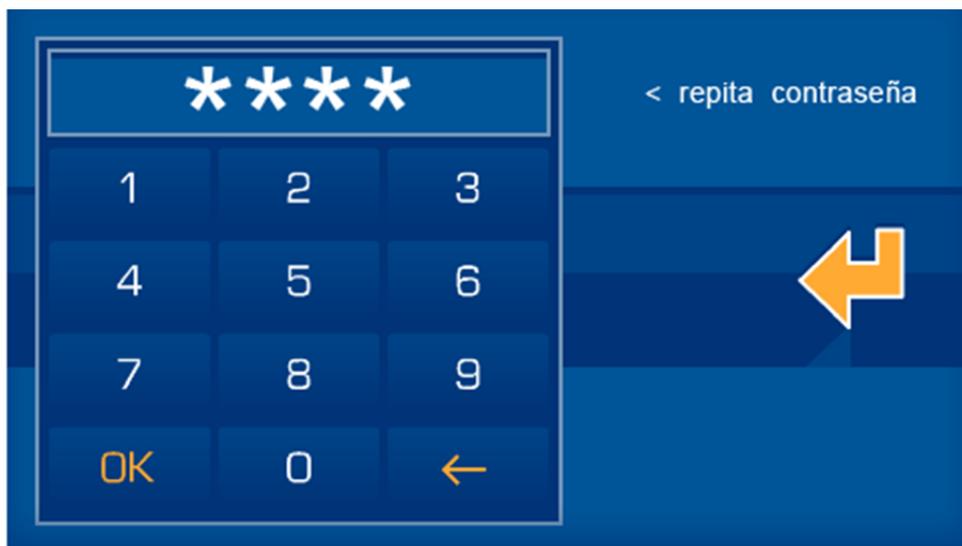
Firstly the system demands the current password. This is an imperative step to continue with the process.



Once the password is introduced press **OK**. If this password is correct, the systems will ask for the new password (4 characters).



In order to ensure that the password is correctly written and avoid mistakes due to the use of the touch keyboard, the system will demands to write the password a second time for comparison.



If the new password is introduced wrongly or two consecutive trials do not match, the screen will show the corresponding error message. If it is correctly introduced, it will show an OK message on the screen and this new password will be the one in use to set/disable the intrusion alarm.

3.3.6.1 UPDATING

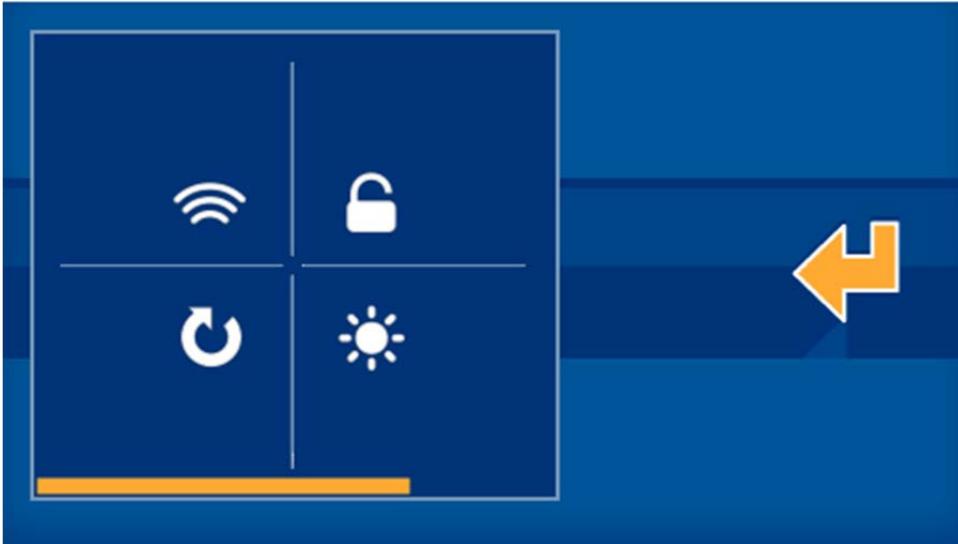


This option automatically downloads from Ingenium server the latest available software version for PPL7 equipment (only if it is different from the one in use and the PPL7 is connected to Internet). The updating will be fully automatic and the equipment will also automatically reboot. If you choose this option, the screen will show following message on the screen:



To accept, press , to exit without having updated press .

If you accept a yellow bar below the menu's icons will show the progress of the software updating. When this bar reaches the end, the process will have ended.



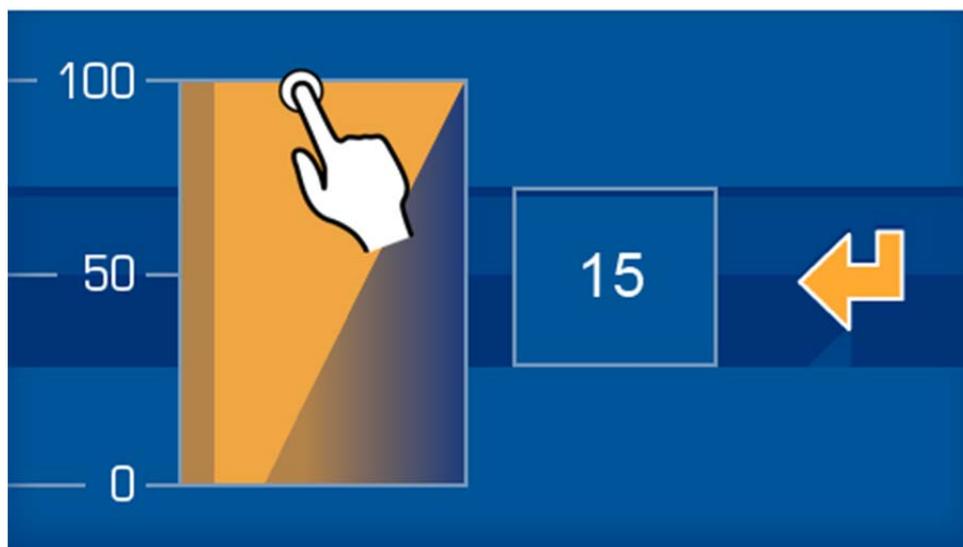
If a new software version exists, the screen will finish the process and will reboot automatically. If after having been updated the screen does not reboot it means that the screen already had the last software version installed.

In a brief delay the screen will have the latest software version and will have kept the same BUSing project it had before starting the updating.

3.3.6.2 BRIGHNESS



This option of the menu let us establish the brightness level of the touch screen. Therefore we will have a vertical slide bar, values go from 0 (minimum) to 15 (maximum). As we shift our finger, the yellow area increases or decreases, allowing us to control graphically the brightness level. The numerical value (0min-15max) on the screen will also change accordingly.



Dragging the finger vertically on the yellow area, we can increase (upwards) or decrease (downwards) the brightness level of the screen.

3.3.7 WEATHER FORECAST

The weather forecast allows us to consult the weather forecast for those places we have previously configured. We will get information about rain forecast, maximum and minimum temperatures, etc.



Pressing on the indicated icon, a window will drop down showing the weather forecast for today and the following three days for the place we have previously configured. The upper arrows allow us to go to other locations and their weather forecasts. These locations must have been previously added to the screen.

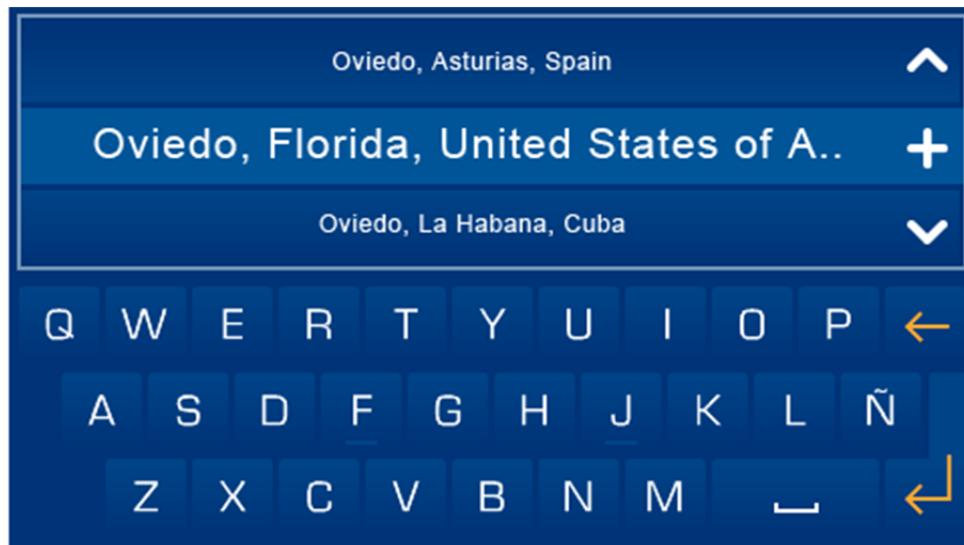


3.3.7.1 LOCATIONS EDITION

The screen allows us to add or delete locations for further enquiries. By pressing the button  we will add a new city and the button  is used to delete the city where we are at the moment.



To add a city, a touch keyboard will be shown on the screen. As we introduce the characters in the text field, the list will shorten till we see the one we are looking for. We can use the vertical arrows to shift from one to another available city.

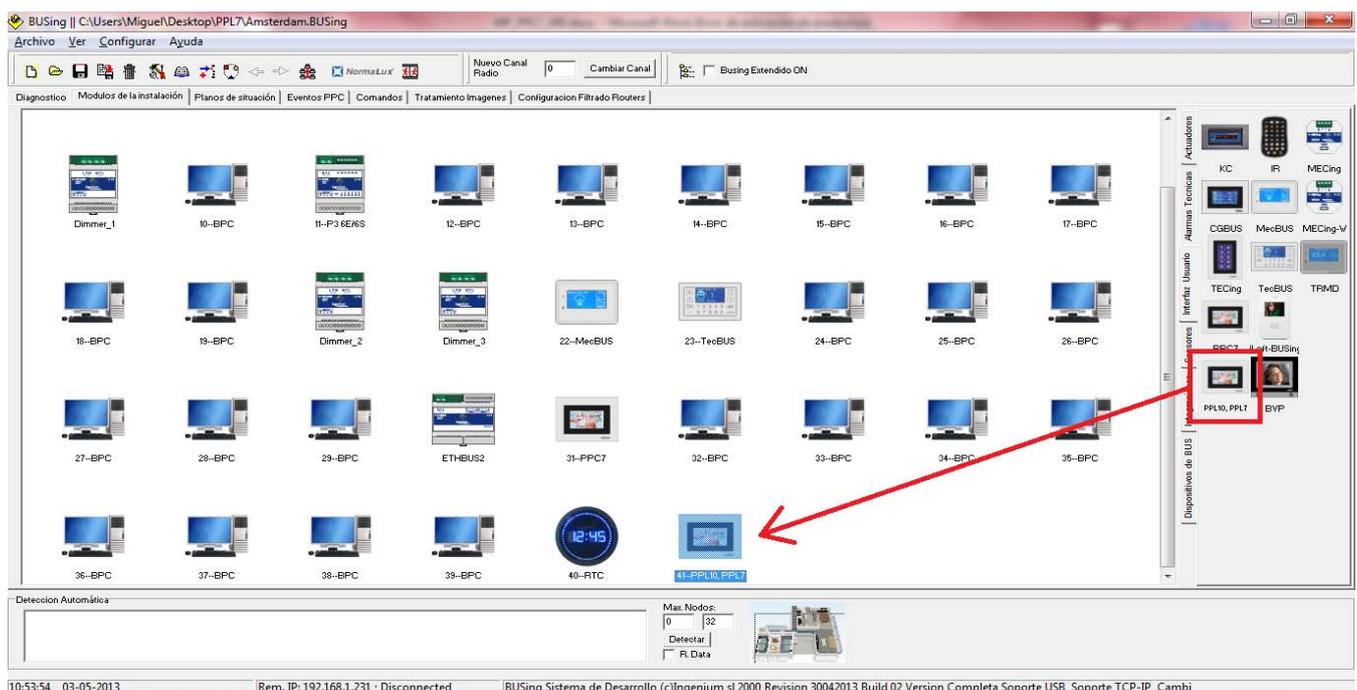
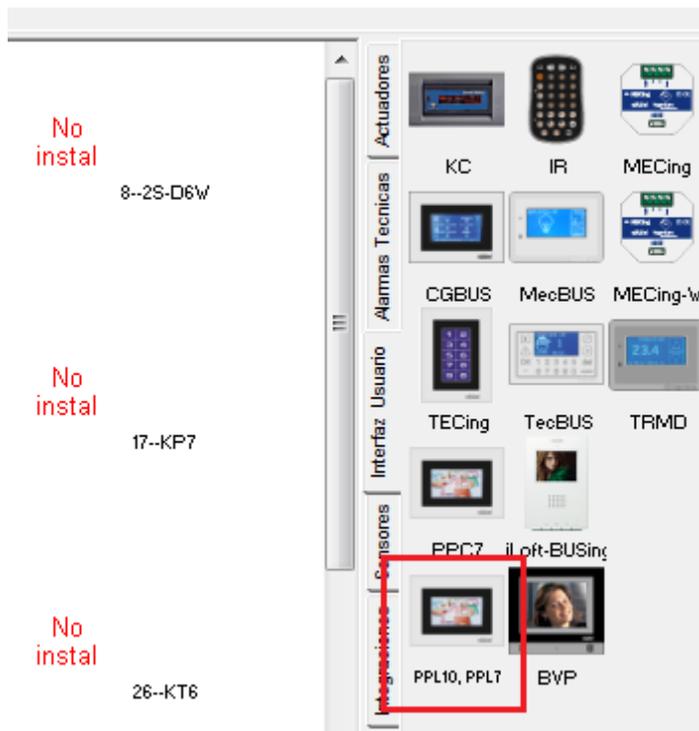


Once the city we want to add is in the middle of the vertical list, we should press on the icon  located between both vertical arrows. The city will be added to the PPL7 memory. This new city will be added in the last position of the list of configured cities. To access to its weather forecast we only need to use the horizontal arrows to the end of the list on the initial screen.

4 DEVICE PROGRAMMING

To configure a PPL we should use three tabs of the working area of SIDE: “Installation modules”, “Situation drawings” and “PPC Scripts”.

First step is to insert the PPL7 node in the “Installation modules” tab. Just remember that we only need to press on its icon in the drop-down menu of the right (in the “Users interface” tab) to get it inserted in the “Installation modules” tab.



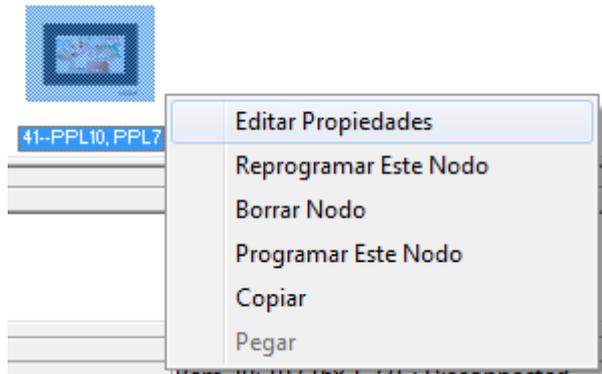
On the “Installation modules” tab, this is the image for this equipment, see below:



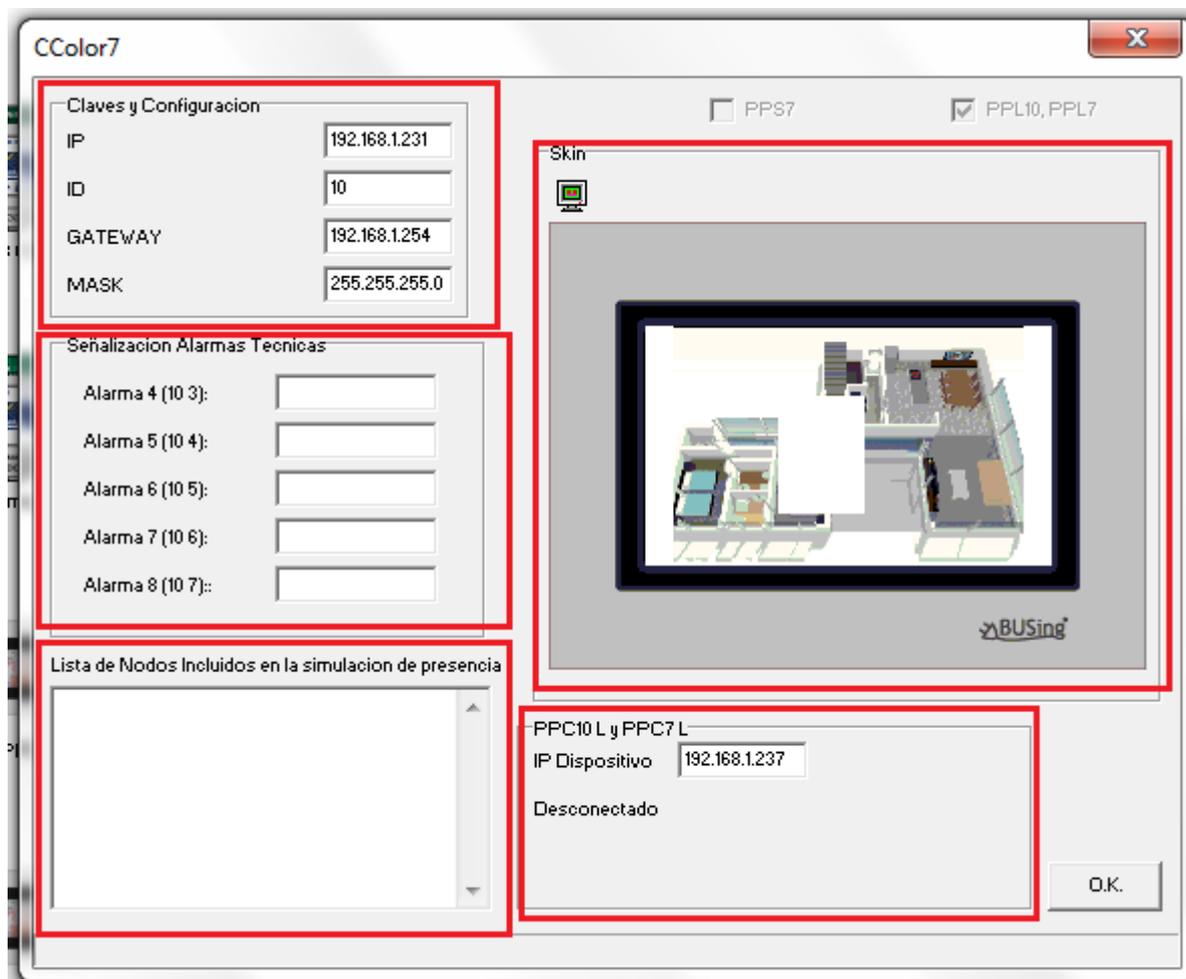
41-PPL10, PPL7

4.1 EDIT PPL7 PROPERTIES FROM SIDE

The PPL has a certain number of settings that can be configured since the beginning. Press on the right button of the mouse and choose “Edit Properties”.



Following screen will appear. We can distinguish 5 sections: “Passwords and configuration”, “Technical alarms notices”, “Nodes list included in the presence simulation”, “Skin” and “PPC10-L PPC7-L”.



4.1.1 PASSWORDS AND CONFIGURATIONS

IP: It allows to introduce the IP address of the PPL device in the local net in order to communicate with the ETHBUS device integrated in the screen, allowing us to upload the project (drawings, scripts, icons, etc.) through IP from SIDE.

ID: Identifier of the installation. It is needed for the remote communications through the web server. It must have 7 alphanumeric characters, capital or lower case letters and underscore (characters from “a” to “z”, from “A” to “Z”, numbers and “-”).

Gateway: Value of the gateway in the IP configuration of the PPL.

Mask: Value of the subnet mask in the IP configuration of the PPL.

4.1.2 TECHNICAL ALARMS WARNINGS

In this section we can see 5 different alarms, each of them referenced to a particular position. As we can see next to the alarm number there are some number in brackets. These number in brackets are the alarms of the KCTR (KA + KTF).

ALARM 4 (10 3). On this field we should write the name of the technical alarm we wish to see on the screen when the command “WRITE 253 10 3” is sent through the bus.

ALARMA 5 (10 4). On this field we should write the name of the technical alarm we wish to see on the screen when the command “WRITE 253 10 4” is sent through the bus.

ALARMA 6 (10 5). On this field we should write the name of the technical alarm we wish to see on the screen when the command “WRITE 253 10 5” is sent through the bus.

ALARMA 7 (10 6). On this field we should write the name of the technical alarm we wish to see on the screen when the command “WRITE 253 10 6” is sent through the bus.

ALARMA 8 (10 7). On this field we should write the name of the technical alarm we wish to see on the screen when the command “WRITE 253 10 7” is sent through the bus.

4.1.3 LIST OF NODES INCLUDED IN THE PRESENCE SIMULATION

On this field we should introduce the addresses of the devices that will take part in the presence simulation. It means that these devices will execute commands wished by the user as switch on/off lights, raise or lower blinds, etc. during the owner’s absence.

Also if the user of the house wishes that some devices execute events in the presence simulation, the addresses of the devices should be introduced in this field.

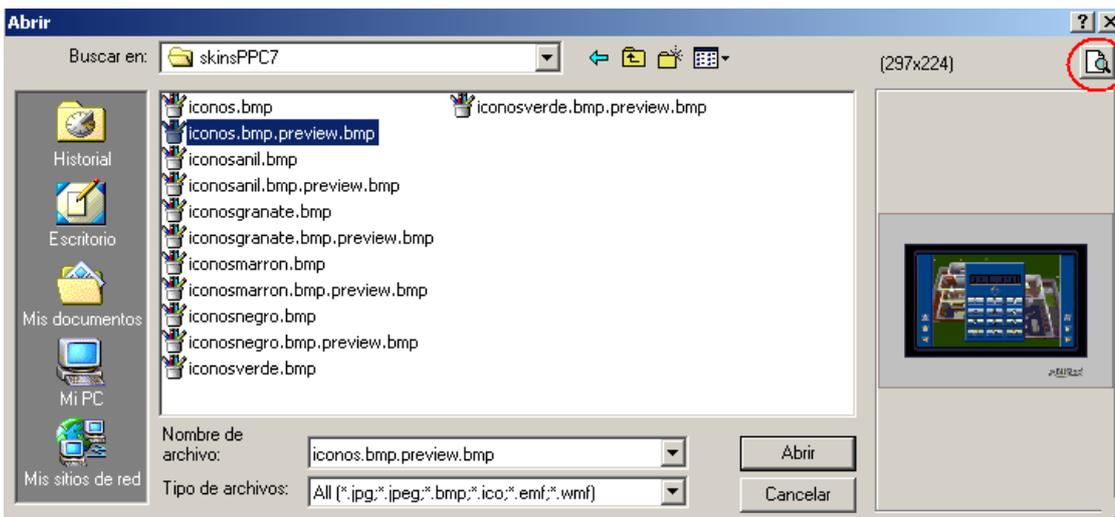
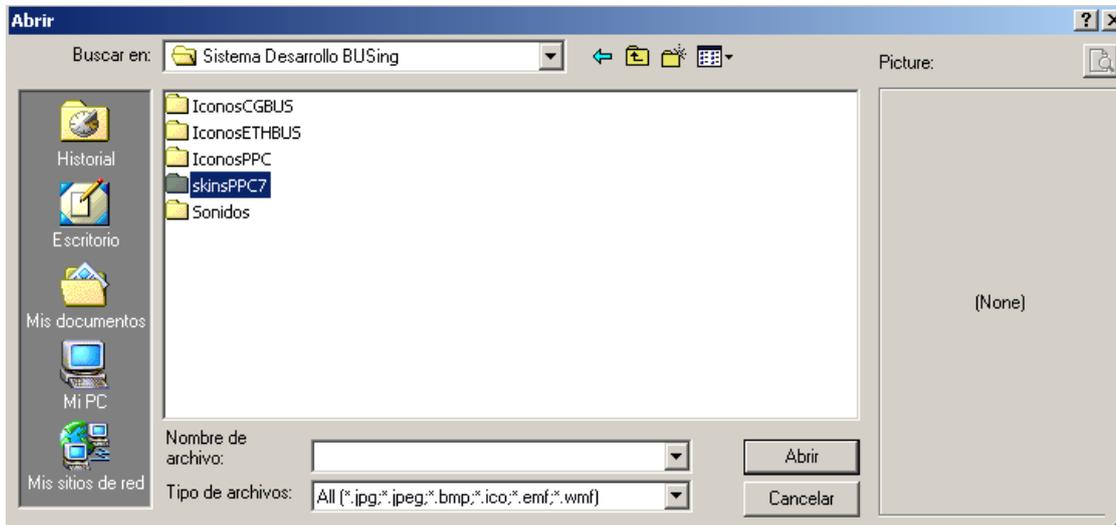
NOTE: THE MAXIMUN NUMBER OF DEVICES THAT CAN BE INCLUDED IN THE PRESENCE SIMULATION OF THE PPL7 IS 256.

4.1.4 SKIN

In this field we configure the appearance (colour) that the PPL7 is going to have. Depending on the customer’s likings we can choose different colours (blue, indigo, brown, deep red, green or black).



We should press on the icon a new Windows screen will open where we can search for the skin we wish. The folder “skinPPL7” (this folder have got the skins) should be located in C: / Program files/Ingenium/Development System Kits Busing/skinPPL7. We choose this folder and we open it:



In this window we will select the wished skin. As you can see there are two different types of names “icons.bmp” and “icons.bmp.previw.bmp”. We should select the icons.bmp, iconsindigo.bmp, iconsdeepred.bmp...etc. Then we should press on Open and save our project.

4.1.5 PPC-L10 Y PPC-L7

In this field we can indicate the IP address of the PPL. This IP address is the one we will use to upload the installation project. This value will also be editable when we reprogram the PPL7.

4.2 SCREEN AND RESOLUTION SELECTION

We will now go to the “Situation drawings” tab in order to begin to work with the graphical elements of the PPL.



Firstly the programmer should choose the size of the panel or the screen resolution that is going to be used. This option is in the upper left corner menu. Below you will find the size of the drawing in pixels that should be used.

Depending on the panel or on the screen the standard size of the drawings to be uploaded to a PPL7 would be:

- PPL7: resolution 640 x 480 (drawings: 623 x 405)

4.3 DRAWINGS AND ICONS

We can configure the drawing or drawings we are going to use as background, as well as the transition of pictures used as screensaver for PPL7 if it is in stand-by mode and also the icons that will represent the controlled elements of the installation.

On the right part of the image we can see two different sections: “Elements” and “Drawings/Screensaver”.

4.3.1 SECTION “DRAWINGS AND SCREENSAVERS”

It has 2 tabs with 4 different buttons. Find below their description:

4.3.1.1 TAB DRAWINGS



Upload a drawing: It makes it possible to add a background image. A Windows dialogue window will appear to select a BMP format image.

The size of the image is important and should be different in accordance to the screen resolution of the end user:

- Screen or panel 640 x 480: Image size 623 x 405.
- Screen or panel 800 x 600: Image size 783 x 525.
- Screen or panel 1024 x 768: Image size 1010 x 684



Delete a drawing: It deletes a background image.

<<Previous

Next>>

Next / Previous: To shift from one to another drawing of the project.

If you need more than one image to represent the house, it is important that we use a number of drawings that make the mosaic attractive. Number of drawings to be used: 1, 4, 9, 16, 25...It is advisable in case we do not need so many drawings to fill with pleasant images or the company logo.

On the bottom of this section you can see “Current drawing”, which tells you on which drawing number are you in this moment.

4.3.1.2 TAB SCREENSAVER

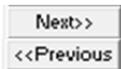
Upload an image: It makes it possible to add a background image to the screensaver. A Windows dialogue window will appear to select a BMP format image.

The size of the image is important and should be different in accordance to the screen resolution of the end user:

- Screen or panel 640 x 480: Image size 623 x 405.
- Screen or panel 800 x 600: Image size 783 x 525.
- Screen or panel 1024 x 768: Image size 1010 x 684.



Delete image: To delete an image on the screensaver.



Next / Previous: To change an image and add as many as you wish.

On the bottom of this section you can see “Current image”, which tells you on which image number you are at the moment. Another data is “Interval” to establish (in seconds) the transition time from one image to another.

Last option with a selectable button is activate/deactivate the screensaver. If the option is selected, the screensaver will work and if the box is not selected, the screensaver will remain inactive.

4.3.2 SECTION “ELEMENTS”

On the upper part there are two buttons:



Selection tool: You can select, shift and put the elements in place on the drawing. You only need to click on them and shift them.



Delete tools: You can delete and eliminate the inserted elements on the drawing by just doing click on them.

Under these two icons you can see some tabs. Using following arrows you can access to the tabs:



NOTE: THE ICONS CAN BE USED FOR OTHER FUNCTIONS. THE ONES EXPOSED HERE BELOW ARE THE MOST COMMON.

The tabs are the following:

- Standard
- PPC10
- Multimedia
- Inverted

Standard TAB



Add light point



Add pushbutton



Add detector



Add BPC



Add an engine or pump



Add thermostat



Add air conditioning



Add blind:



Add emergency light



Add flood detector



Add fire detector



Add gas detector



Add thermostat or boiler



Add irrigation



Add smoke detector

TAB PPC10



Add blind or canopy



Add outside light point



Add videointercom



Add siren



Add audio



Add multimedia devices



Add garage gate



Add entry gate



Add door



Add rain sensor



Add a light level sensor



Add clima script



Add antipanic device



Add an engine/MeterBUS



Add smart card reader

TAB MULTIMEDIA



Add a controlled socket



Add play



Add stop



Add forward



Add backward



Add previous script



Add next script



Add turn up volume



Add turn down volume



Add pause



Add IP camera

TAB INVERTED

They are the same icons as the ones in the standard tab but they are inverted, that is if for instance in the standard tab you put the icon “Add thermostat or boiler”, this icon will appear on the drawing in yellow (simulating that the device is switched on) and if we include the same icon on the inverted tab the icon will appear in blue (switched off). See the difference on the following image.



4.4 PROGRAMMING EXAMPLE

We would like to add a drawing to the PPL7 and include a blind icon (raise/lower the blind), lighting (switch on/off a light), intrusion (detection), fire (detection) and flood (detection). We would like to verify their status and to act on them.

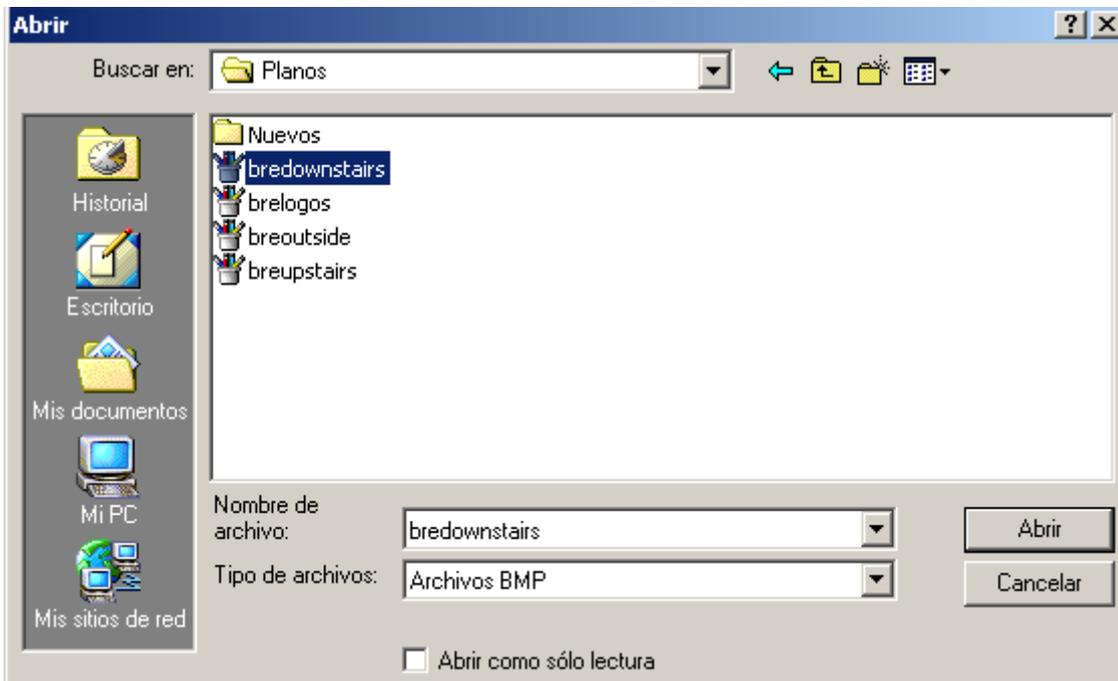
We should go to the programming window, tab “Situation drawings”, we press on the icon “Upload a drawing”.



A drawing (according to the size chosen on the upper left side of the screen) will be uploaded. For the PPL7, the correct size is **623x405 pixels**.

To add more drawings you should press on “Next” and upload the next drawing. Next to **Current Drawing** it is indicated which drawing we are. The first drawing is number 1.

Then a Windows screen appears. Choose the drawing.



Press on “Open”. The drawing will appear in the central part of programming screen of the PPL7.



Once the background image has been uploaded it is possible to add icons and assign them to the outputs or memories. To add a new icon you only need to select it from the available elements' range and shift the cursor till the position where you would like to place it. Then click on the position.

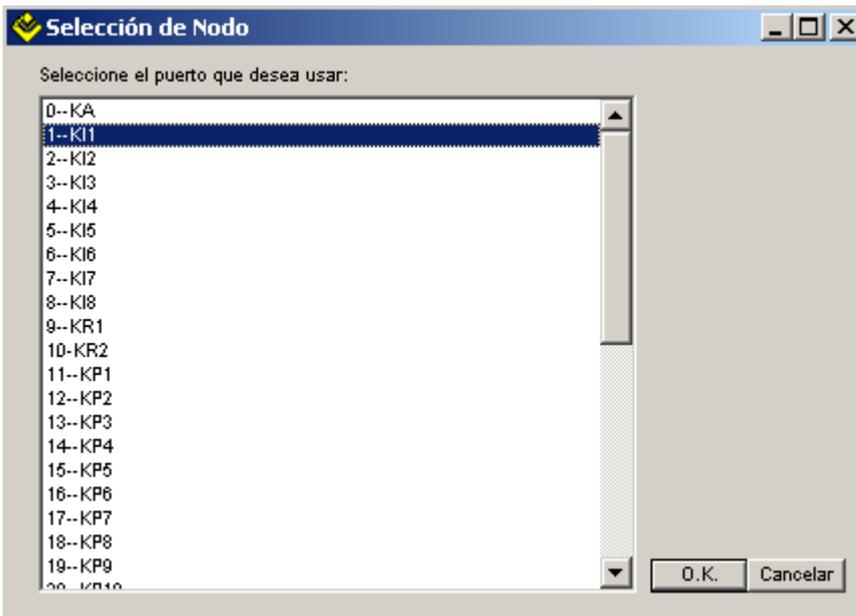
For this example we will use the blinds icons, light icons, intrusion, fire and flood and we will put them in the suitable places, for instance like this:



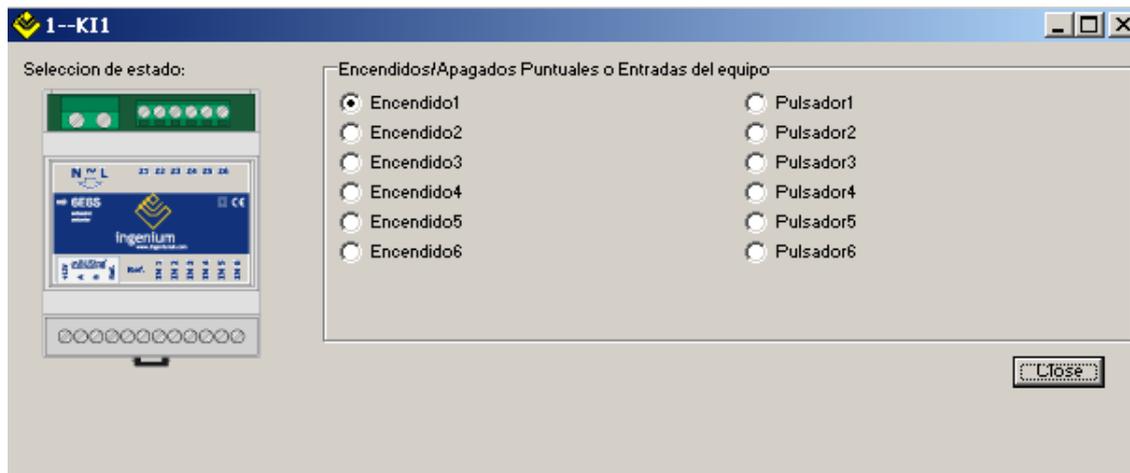
Once we have inserted the icons, we should assign the corresponding outputs of the actuator. For instance for the light icon we will assign output 1 (one light) of the KI1 by pressing on the right button of the mouse on the icon and selecting "edit properties".



Next screen will show up where we will select KI1 to act on the light to be controlled from PPL7.



When doing double click on the KI1, following screen will be shown. Click on the output "Light 1".

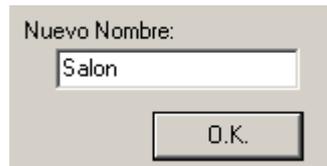
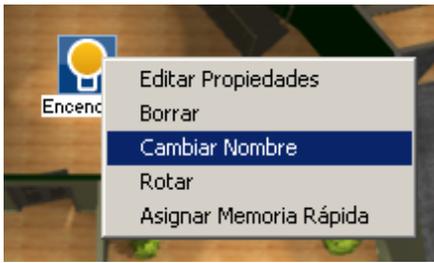


Click on “Close” and the icon will be assigned to the control of this output. If you put the mouse on the icon you will get the information about the assigned node and output. This information is shown on the left upper part of the screen. In this case it is Node 1 (KI1, because in the example it is in address 1) and output 0 (because “Light 1” is output 0).



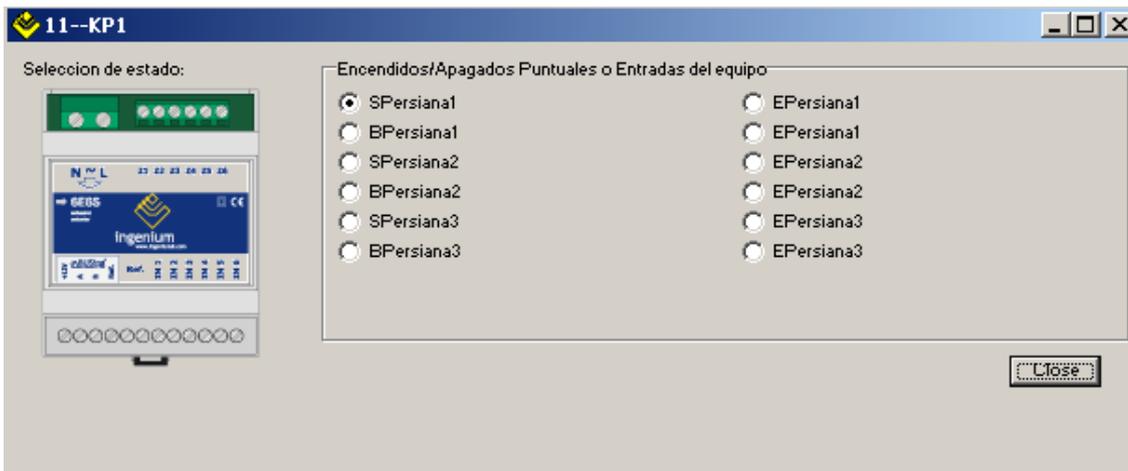
It is possible to execute the scripts from any of the inserted icons (for instance, to turn on more than one light form the same light icon) → See tab “PPC Script”.

We can also change the name of an icon, click on the right button of the mouse and choose the option “Name modify”. A screen will appear where you can enter the new name, for instance “Living room light”, click on OK and it is done.



If we wish the blind icon to have assigned the control of the blind we should follow the same procedure. We click on the right button on the icon and select “edit properties”. Then we choose for this case KP1, following window will appear where we will choose following configuration to raise and lower one blind (to raise/lower more of one blind or all the blinds, see tab “PPC events”. For more information about the configuration of the KP, please refer to the device’s Help.

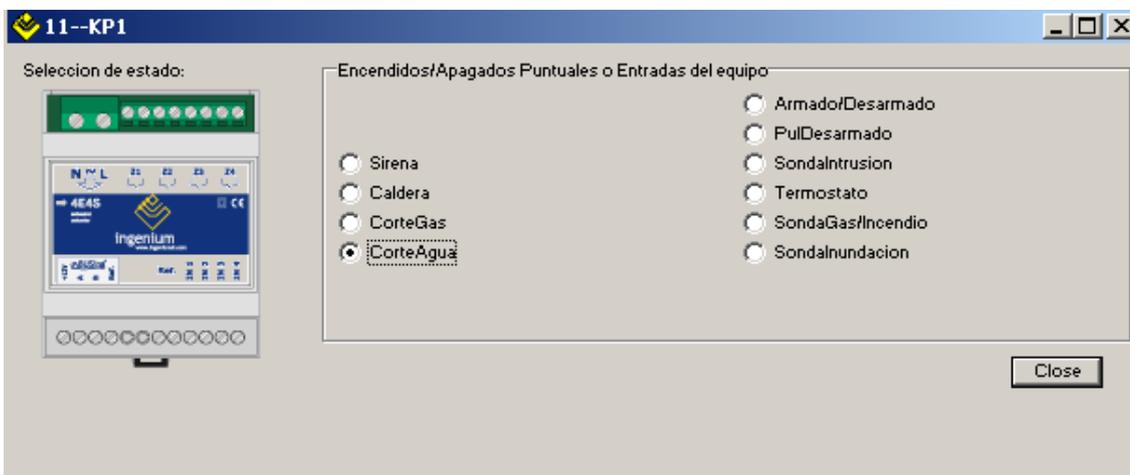
NOTE: BY AGREEMENT IT IS ALWAYS THE RAISE ACTION THE ONE CHOSEN TO LINK TO THE ICON.



Click on “Close”. The node and the corresponding output of KP1 are assigned to the blind icon.

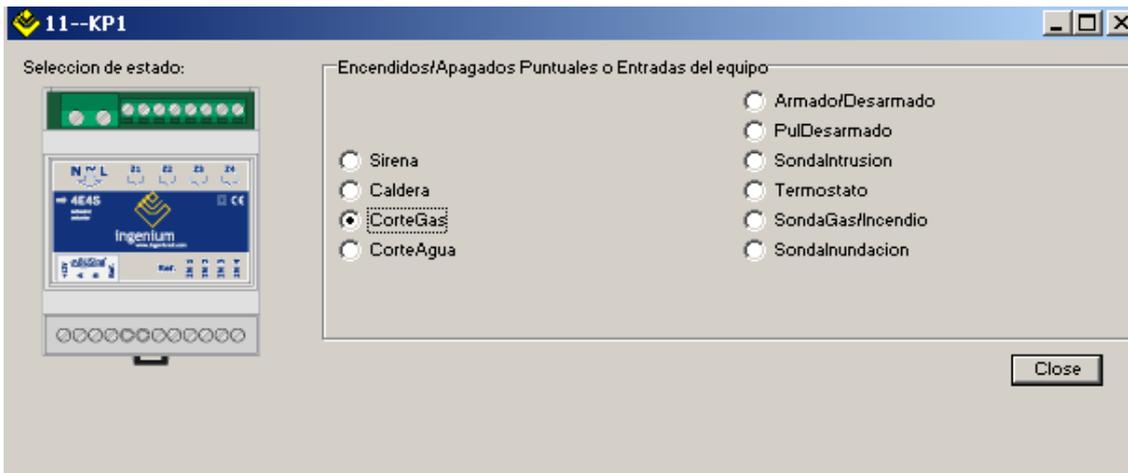


For the rest of the icons we should follow the same steps. For other sensors as the flood detection, we should click on the right button on the icon, select “edit properties” and double click on KA (Alarms Kit). Next configuration screen will appear. We should press on “turn off water”, so that when the sensor detects water, the system will turn off the water by means of an electro valve and will show this alarm on the screen (the icon changes). Besides we can also turn off the water whenever we wish, we only need to click on the icon.

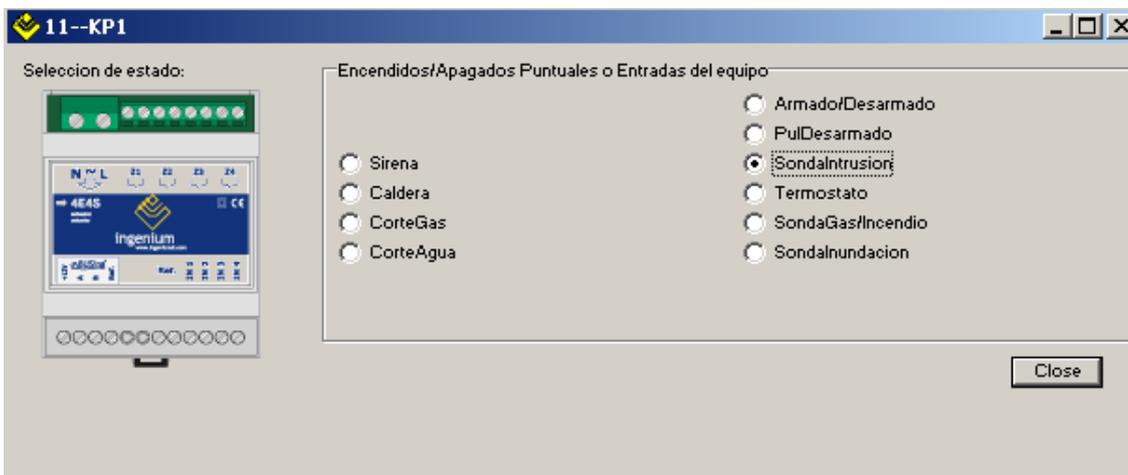


For fire and intrusion detection we should follow the same process. Once we are in the configuration screen we select the indicated outputs:

Fire detection:

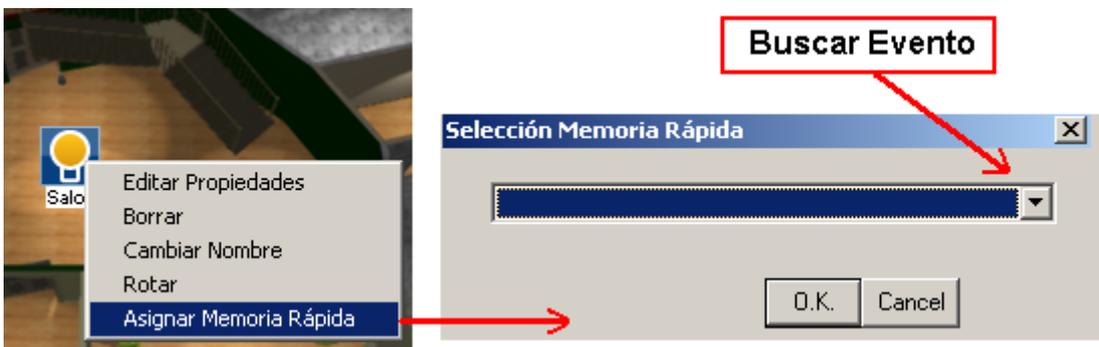


Intrusion detection:



4.4.1 ASSIGN EVENTS

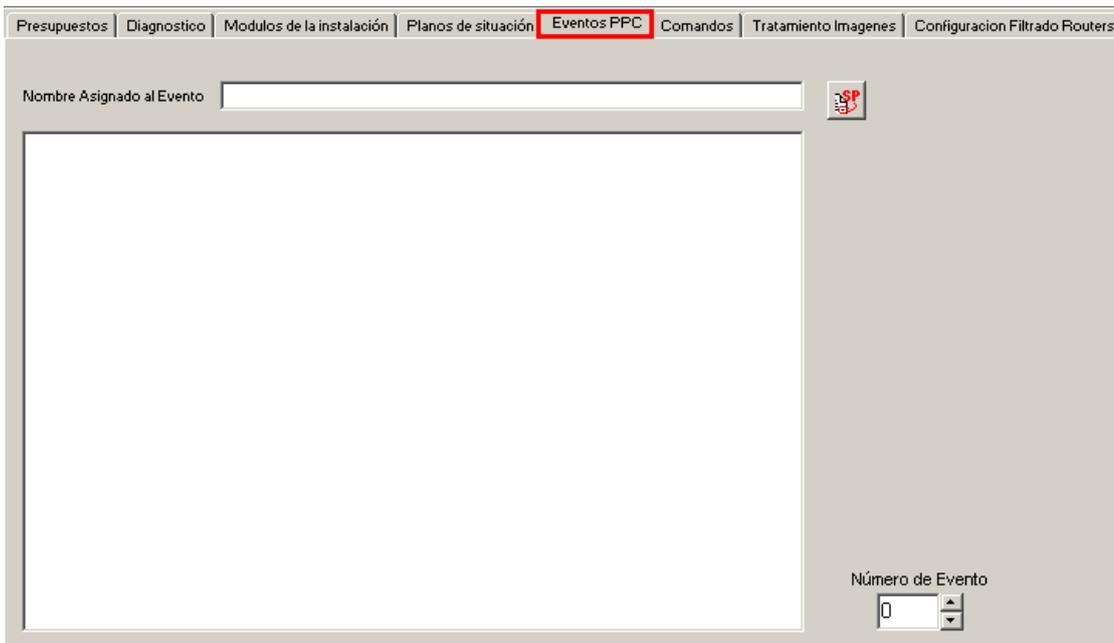
With this option we can associate to an icon one of the scripts. Click on the right button of the mouse on the icon. Once you have selected the option you can choose the script in the menu of the pop-up window. Press Ok.



The scripts must have been programmed in the tab "PPC Scripts", before being assigned to the icons. That is firstly we program them in the tab "PPC Scripts" and then we assign them to the icons by means of the "Situation drawings" tab, as mentioned before.

4.4.2 PPC SCRIPTS

In this tab it is possible to configure scripts. These scripts can be temporised afterwards by the user on the touch panel PPL7 and can be executed using the upper buttons for rapid access from the panel.



On the previous image we can distinguish:

Script Name: Here you should name the script (maximum 15 characters)

Script Number: We use the arrows to scroll within the programmed scripts. The scripts and their actions will be saved when changing the script number.

Programming field (White central box): Here you should configure the scripts by means of assisted programming or by means of scripts. It is possible to program up to 100 different scripts. Some scripts are already assigned by default, these are the following:

- Script 13 (Deactivate Intrusion), this script always corresponds to the deactivation of the intrusion. In the programming field you can program the scripts that PPL7 will execute when deactivating the intrusion alarm (by default it is 0 2 15, see further below programming using scripts)
- Script 14 (Active Intrusion): this script always corresponds to the activation of the intrusion. In the programming field you can program the scripts that PPL7 will execute when deactivating the intrusion alarm (by default it is 0 2 7, see further below programming using scripts)

As already mentioned we can program in two different ways:

- Assisted programming.
- Programming by scripts.

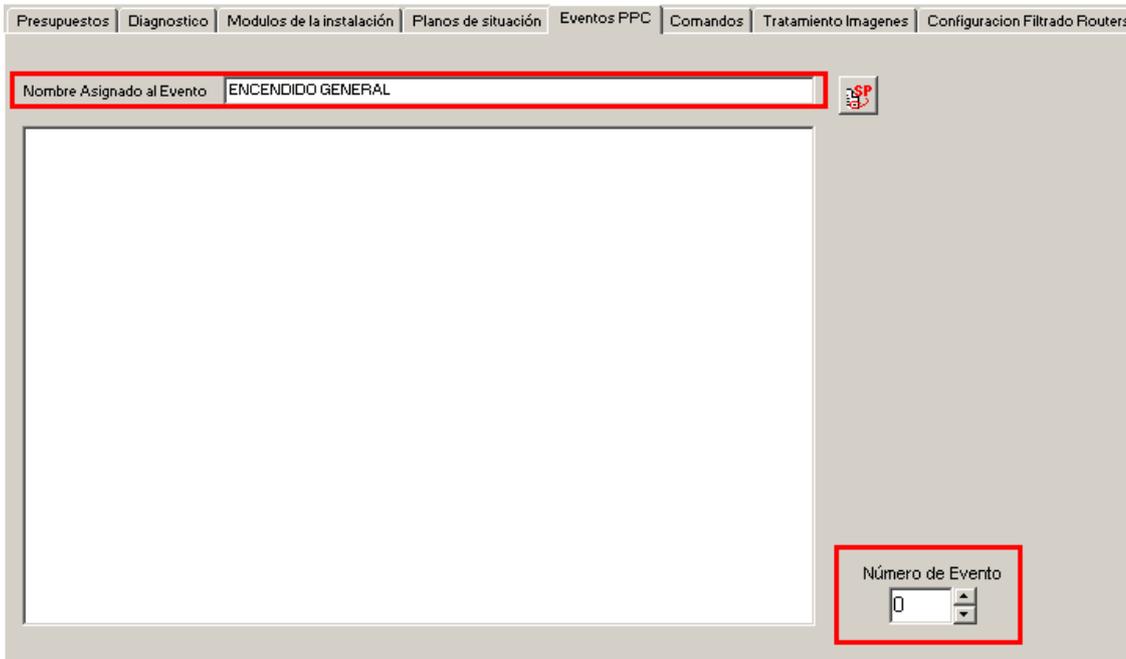
4.4.2.1 ASSISTED PROGRAMMING

Example: We wish to turn on the living room's and both bedrooms' lights in one event; to turn them off in another event; to dim the kitchen's light at 50% and the hall's light at 25% in one event; we wish to raise all

blinds in one event (3 blinds) and to lower them in another event. Besides we also want to set and disable the intrusion alarm from the PPL7.

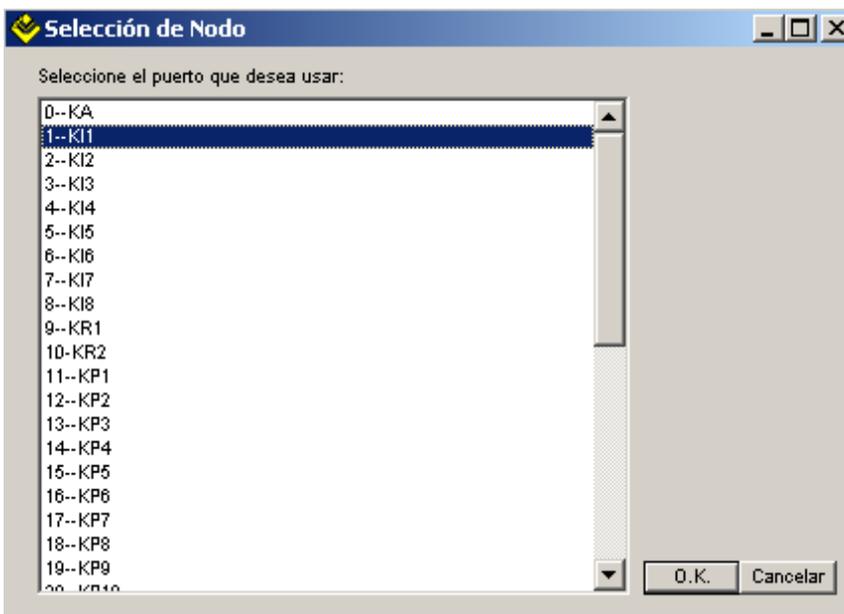
For this example we need to include in our project one K1, one KP and one KR. And also one KCTR (KA) for the intrusion control.

Once we are in the “PPC Scripts” tab, we select script number zero and we name it, for instance “All_on”.



Then we do double click on the central white box.

Once we have done this, following window (Node selection) will appear.

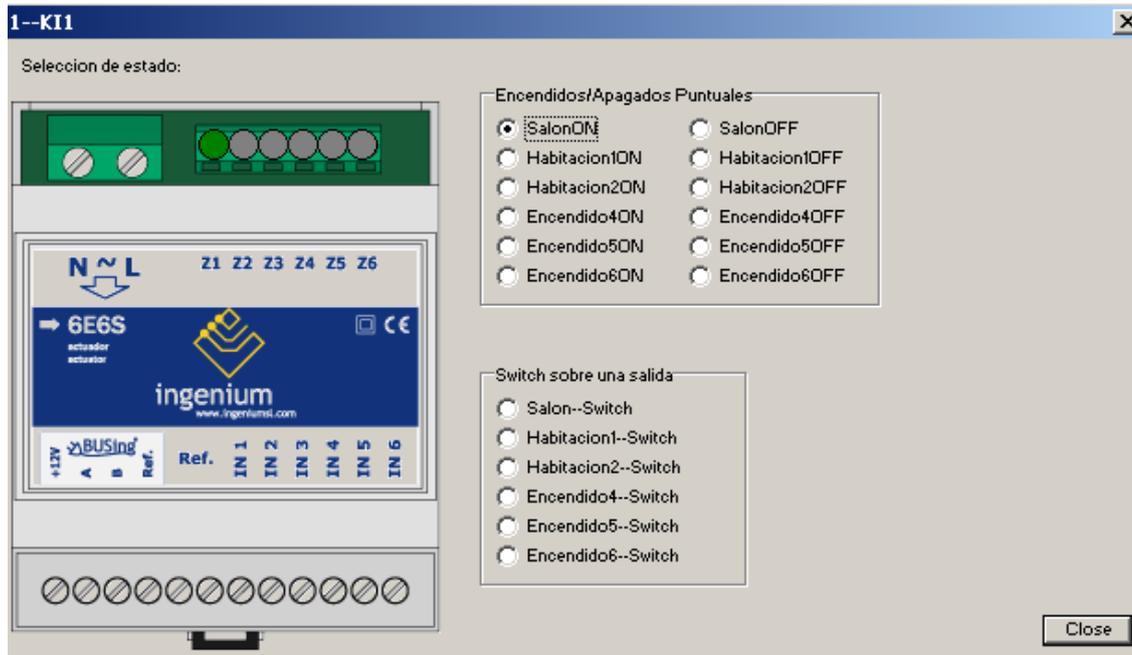


On this screen all components that have been inserted in the project will be shown. But it is only possible to choose those devices that belong to the actuators group (should we select other kind of device, the development system will ignore it) That is if we select a device that does not belong to the actuators group (KI, KP, KR, KA...) as for instance a MECBUS-C, TECBUS-C, MECing, LDRBUS, etc., the system will not do anything.

If we double click on the actuators you can access to any of its outputs.

We choose (double click) KI1 to switch on the living room's lights.

We get a new image where we can select the living room's light, as shown below. If you wish to consult how to assign names ("living room", "room1" and "room2" in this case) to the KI outputs, please refer to the KI Help.

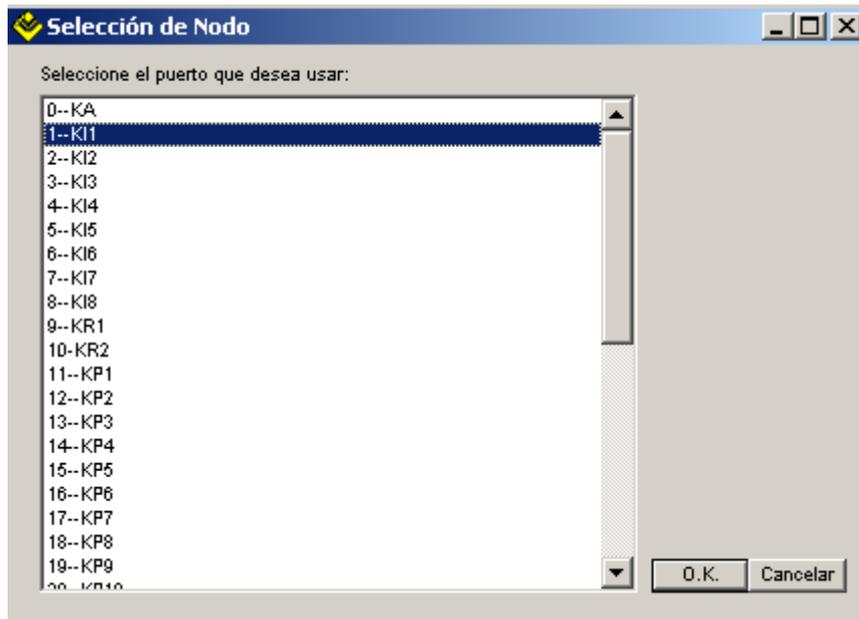


Once we have done this, we press "Close" and following script is generated:

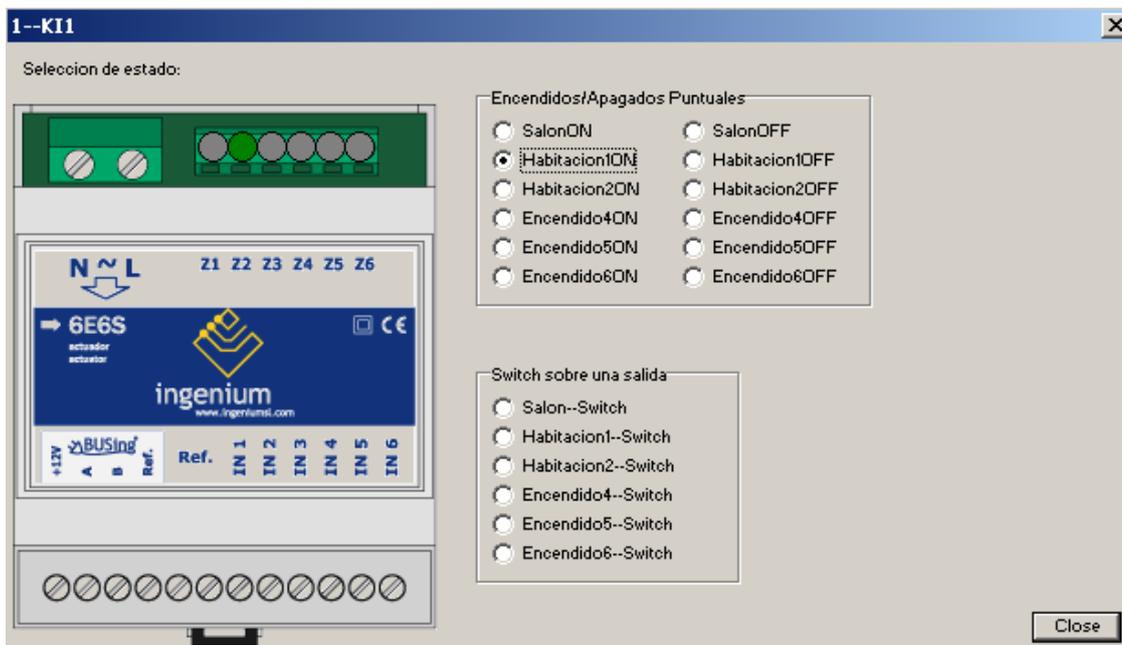


Next step will be the 1 bedroom's light. As we wished that the light turns on in the same script that the living room and bedroom 2, we should double click on the same white box without changing the script number.

We select again KI (double click on it).



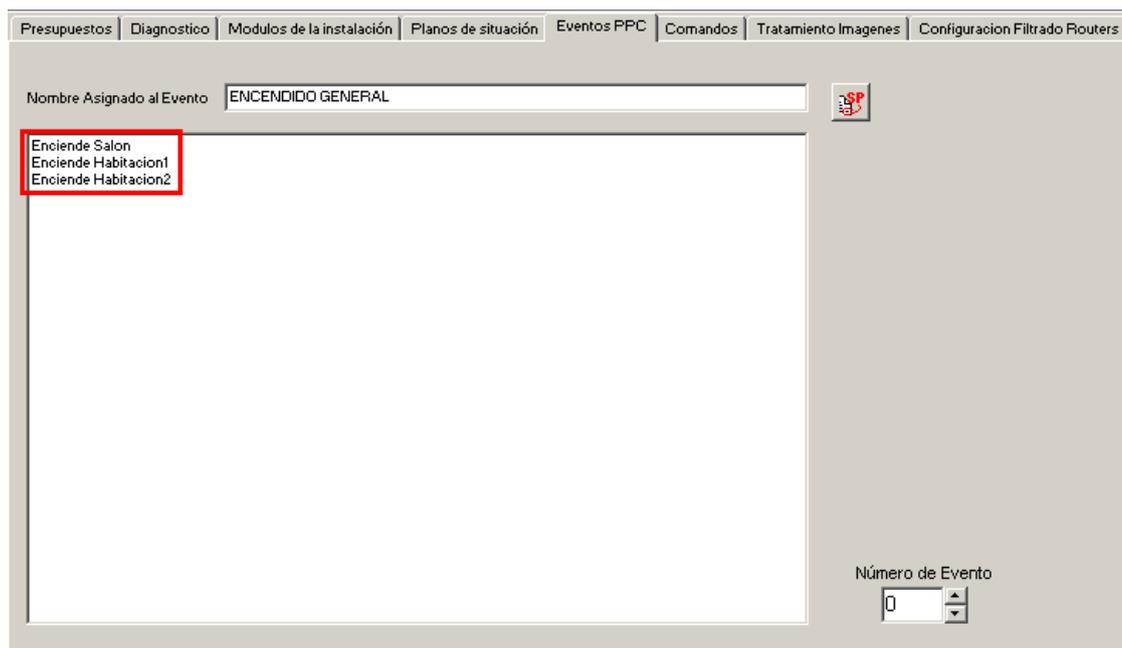
KI screen will appear. We should choose the bedroom1 light as we can see below:



Once we have done this, we press "Close" and following script is generated:



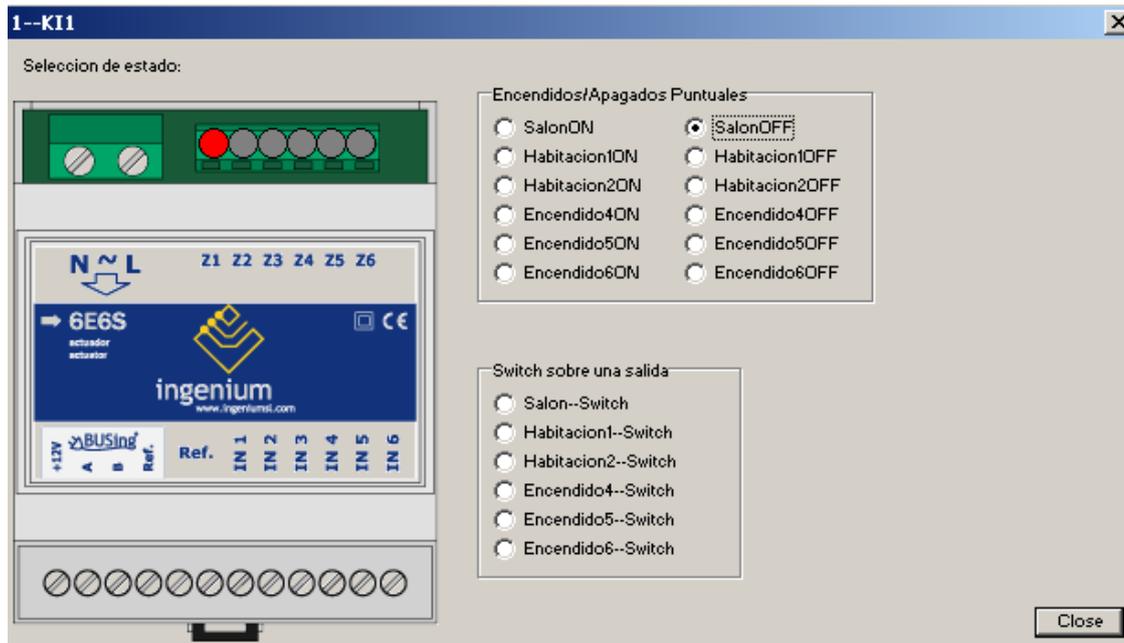
For the lights of bedroom number 2 we should follow the same process. On the KI screen we should select to switch on “bedroom2”. When we click on “Close” the final scripts for this first event would be:



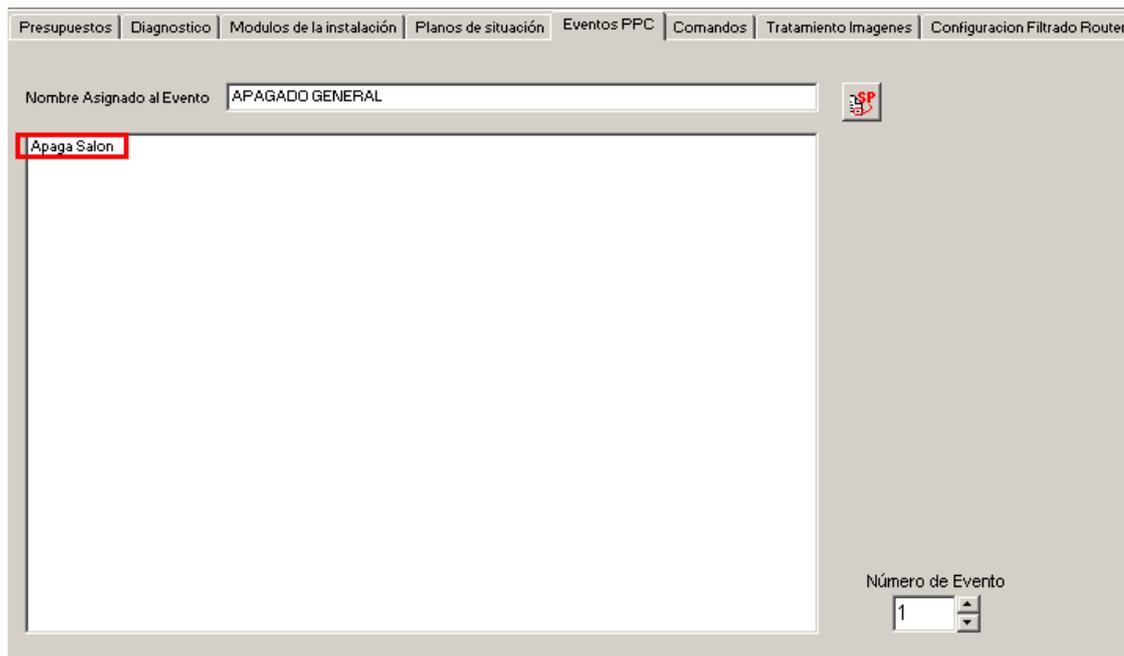
We will now go to script number 1 (we only need to press on the arrow pointing upwards in the “number of script” section). In script number 1 we wish to turn off all the lights that we have turned on in script 0. We will name this script “All_off”.

We will follow exactly the same steps as done in the previous example.

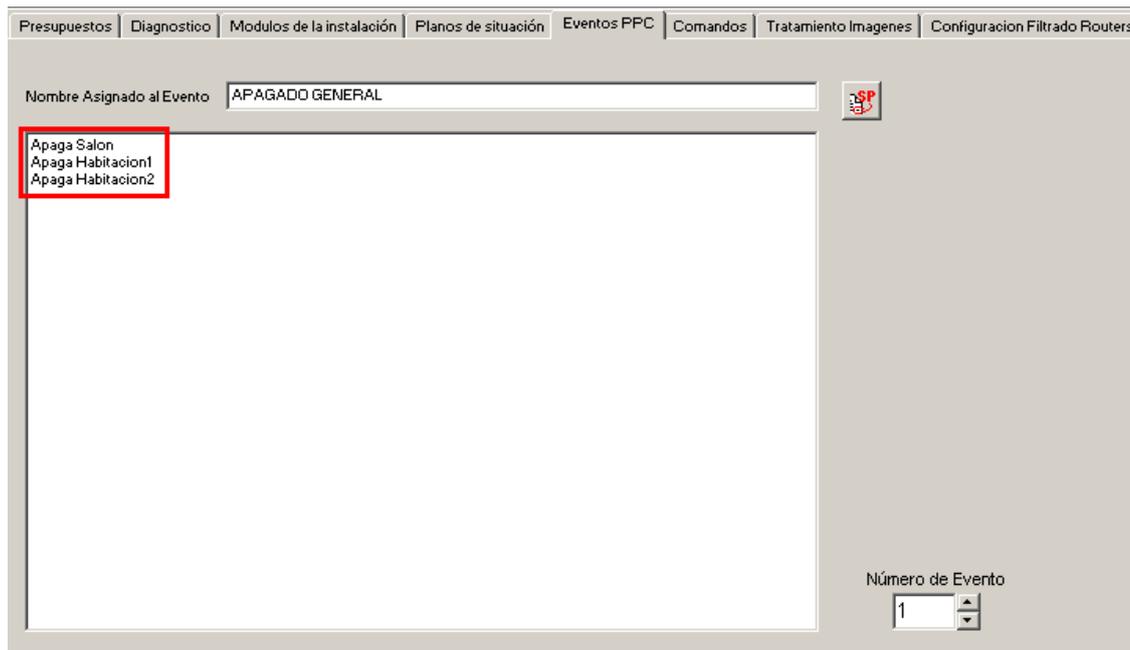
Double click on the programming box (central white box), select KI. We will see then following screen, we press on the living room’s lighting off as shown below:



We click on “Close” and following script will be generated.

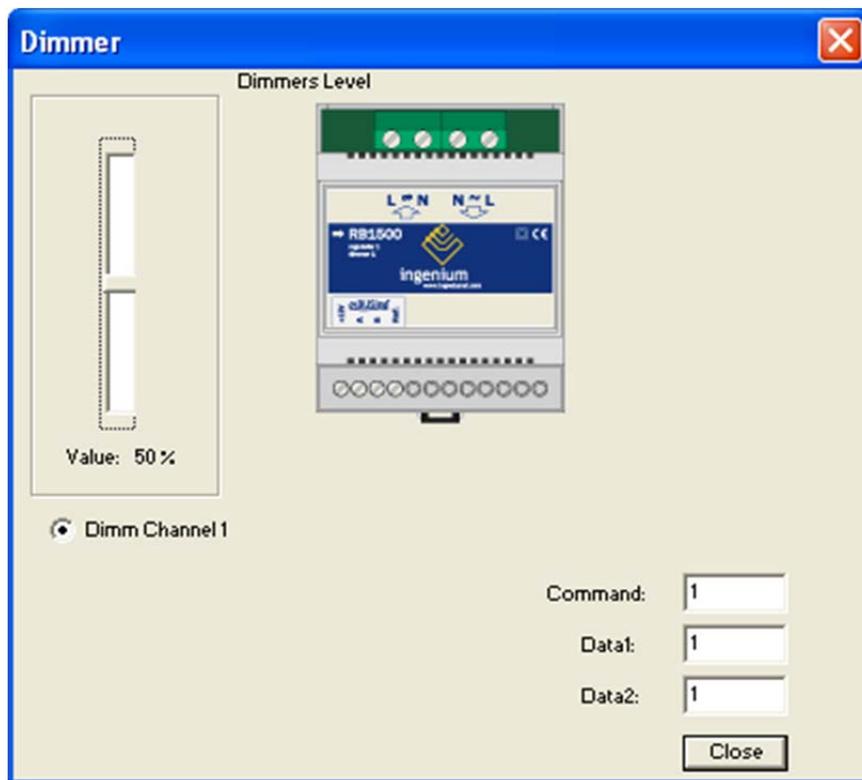


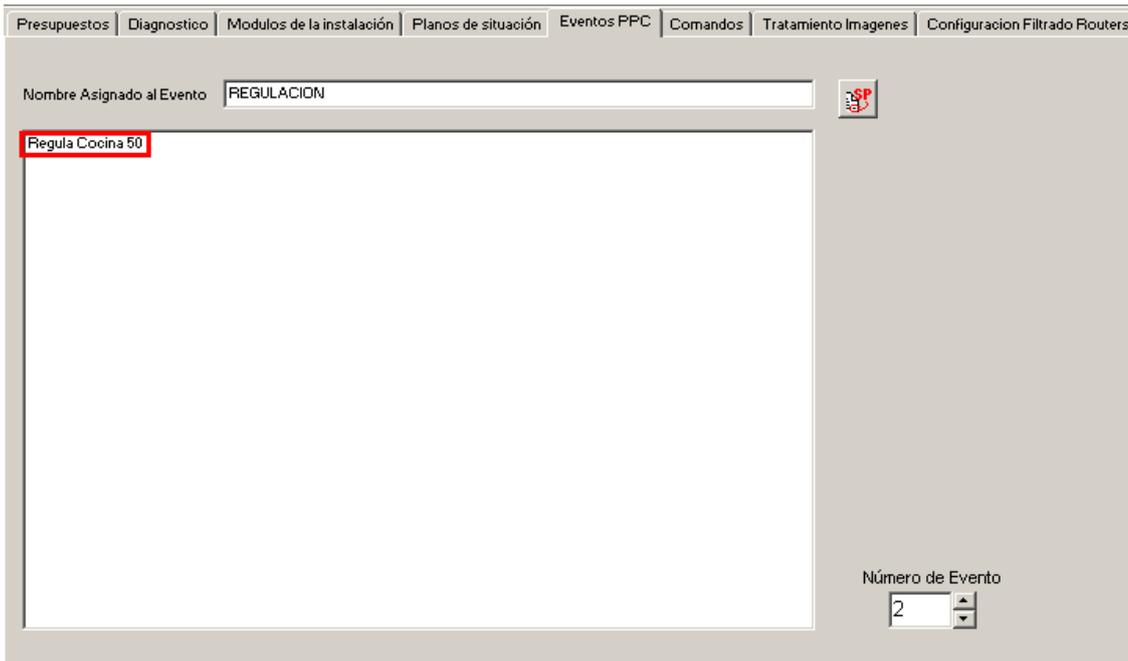
For turning off bedroom1’s and bedroom2’s 1 lights we will follow the same steps. You can see the generated scripts on the next image:



We will then pass to event number 2. We would like to dim the kitchen's light at 50% and the hall's light at 25%. We call this event "Dimmer"

As usual, double click on the programming box (central white box) and as what we need is a regulation we select KRI. Following screen will show up, by means of the left bar we choose the light level, in our case 50%. (To assign the names "kitchen" and "hall" to the dimmer channels please refer to the KR Help)



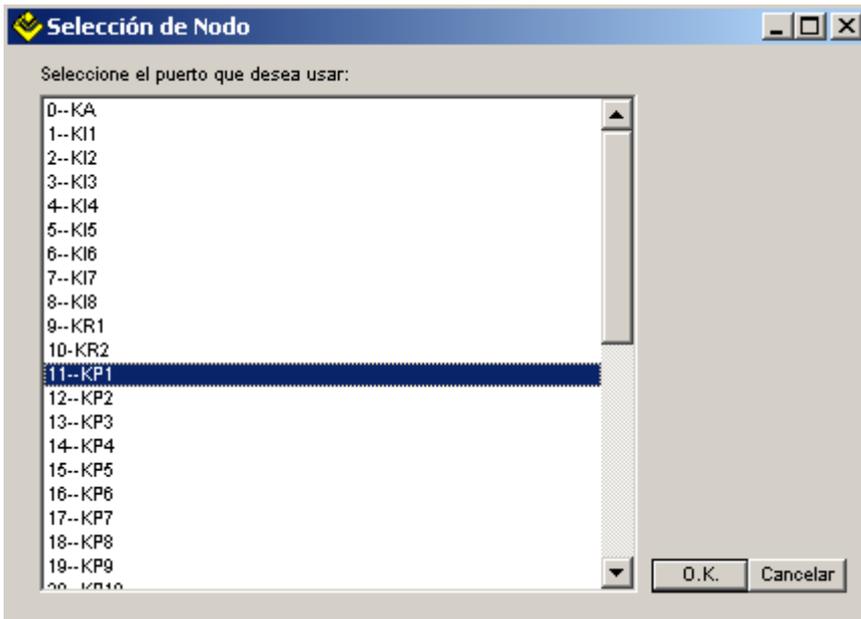


In order to regulate the hall's Light at 25% we should follow the same steps but instead of choosing channel number 1, we should choose channel number 2. The bar on the right should be put at 25%. We click on close and the definitive scripts of the event will be:

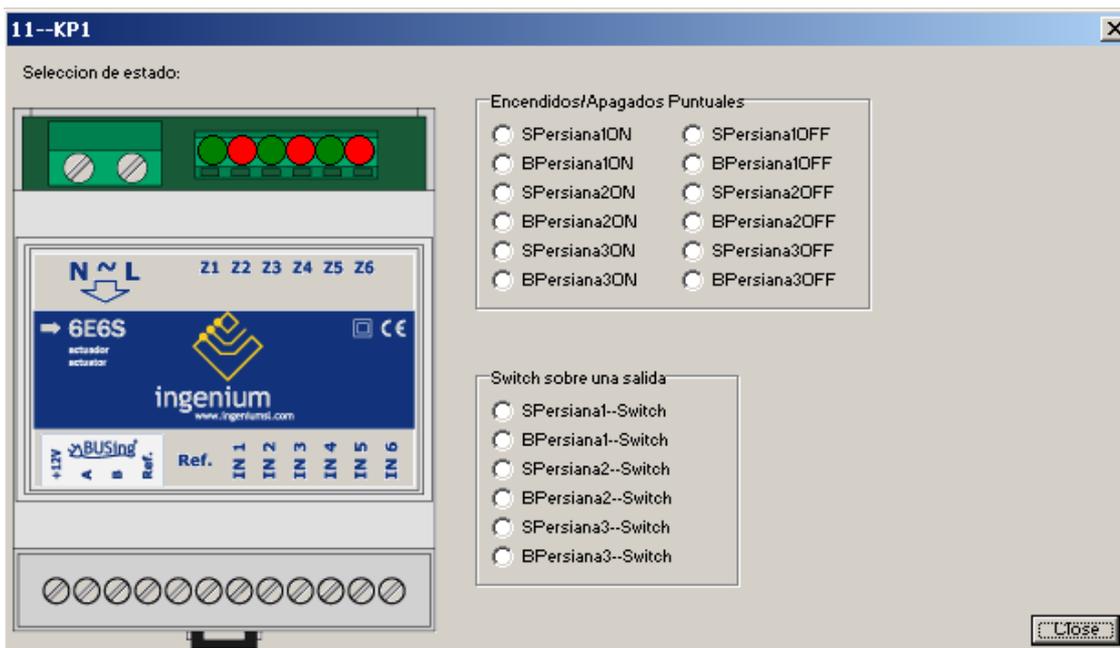


Next we will explain the programming of event number 3: to raise the 3 blinds of the house. We will name the event "blinds ON"

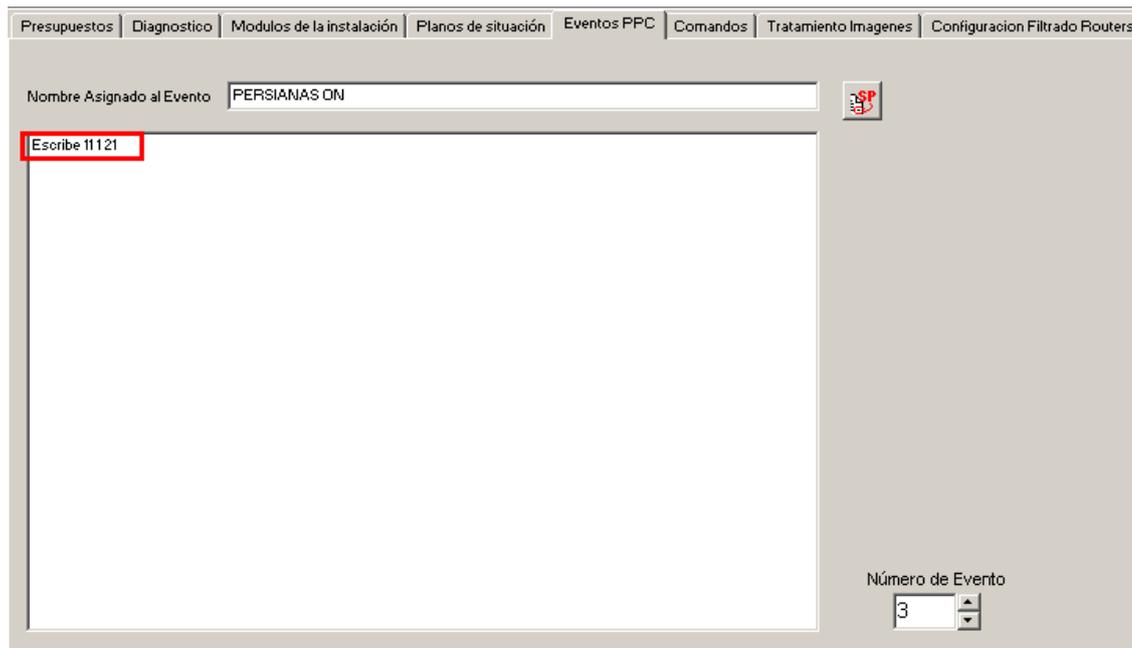
Double click on the white box, select KP1.



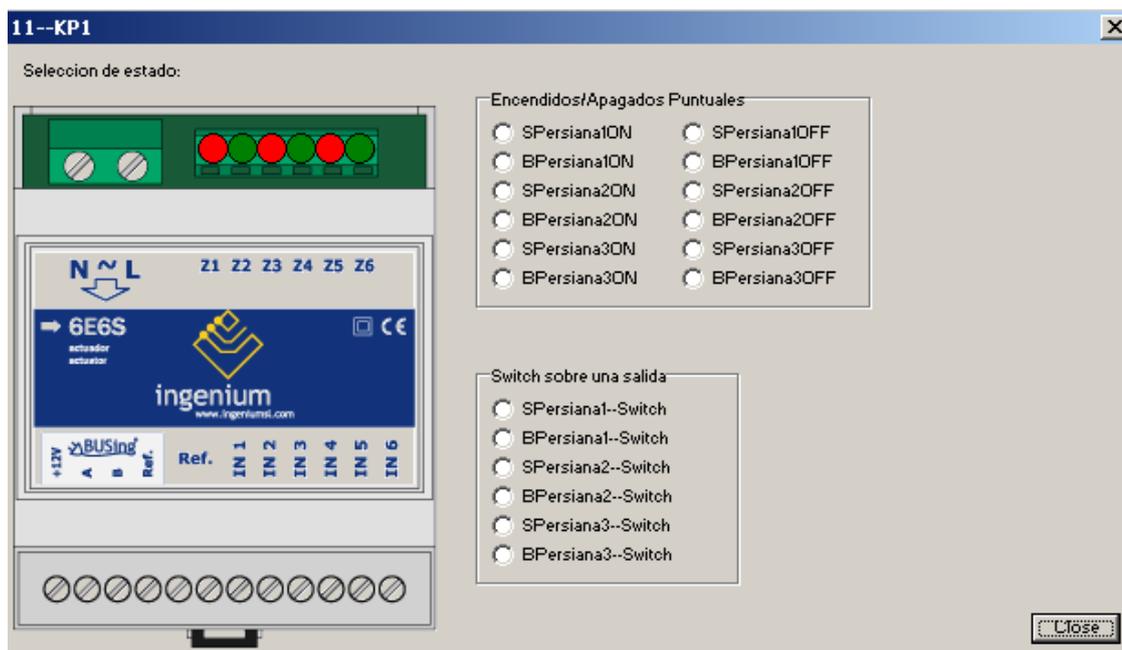
If we double click on KP1, next image will appear. We can configure the event in order to raise the 3 blinds on this image. (See KP1 Help to configure to raise/lower blinds).



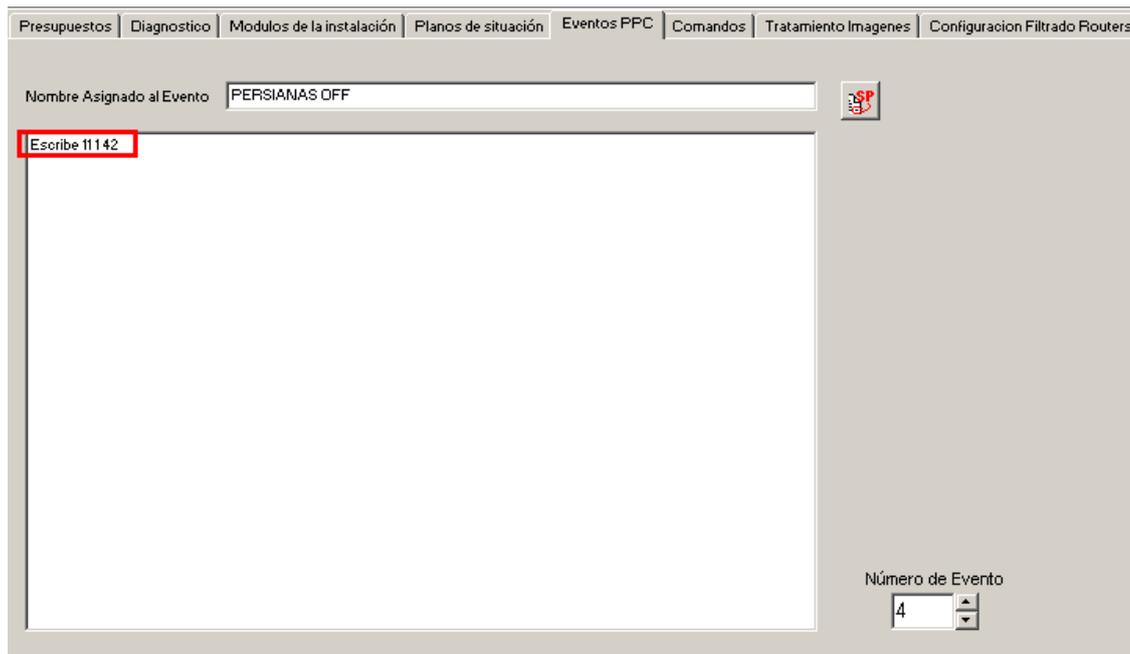
We click on "Close" and following script will be generated.



To configure the blinds to lower, do double click on the programming box of event number 4. A new screen will appear, choose again KP1. Then following screen will be shown, on this screen we should configure to lower the blinds as shown below (See KP1 Help for more information about raise/lower the blinds).

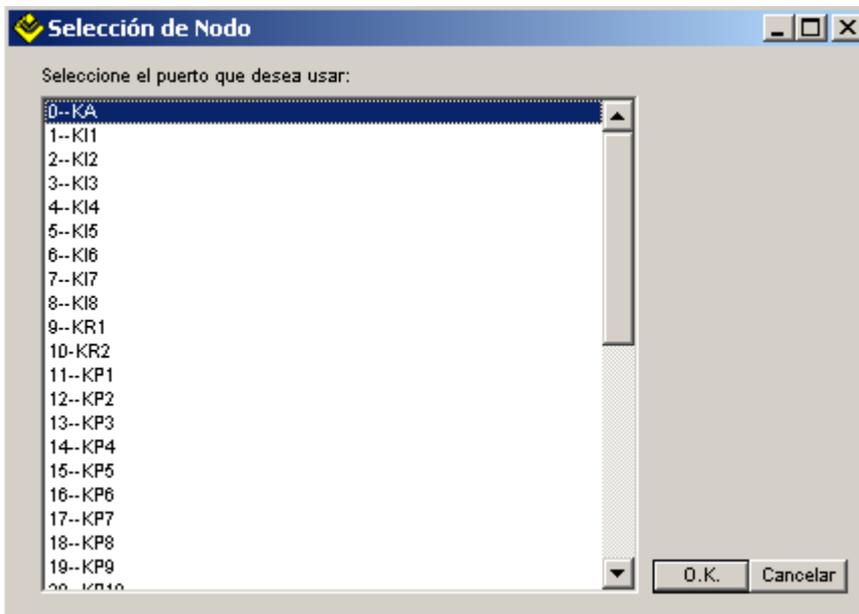


We click on “Close” and following script will be generated.



Once we have programmed all the wished scripts, we will go to scripts 13 and 14 for the intrusion alarm (set /disable).

In script number 13 (intrusion disable), do double click on the programming box. Node selection screen will then show up. In this example we select KA for control of the intrusion alarm.



We press on OK and on the following screen we select the configuration for disabling the intrusion alarm, see below:

Operaciones a Realizar sobre KA

Seleccione Accion:

Seleccione Opcion:

After having clicked on OK, following script will be generated:

Presupuestos | Diagnostico | Modulos de la instalación | Planos de situación | Eventos PPC | Comandos | Tratamiento Imagenes | Configuracion Filtrado Routers

Nombre Asignado al Evento:

Número de Evento:

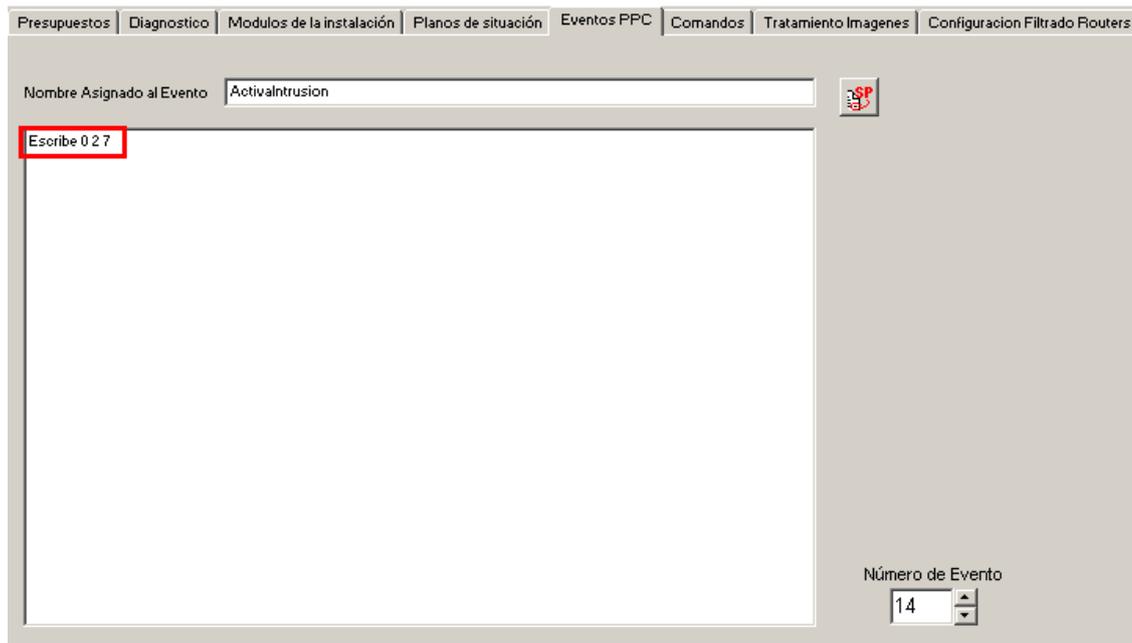
In order to set the alarm we should select script number 14, we select again KA, and we will reach again the configuration screen of the KA. Now we will choose following options:

Operaciones a Realizar sobre KA

Seleccione Accion:

Seleccione Opcion:

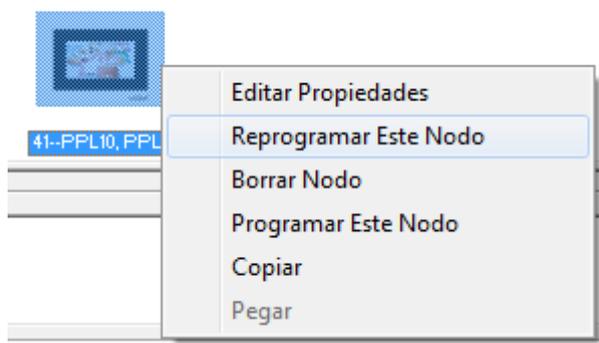
After having pressed on OK, the next script will be generated:

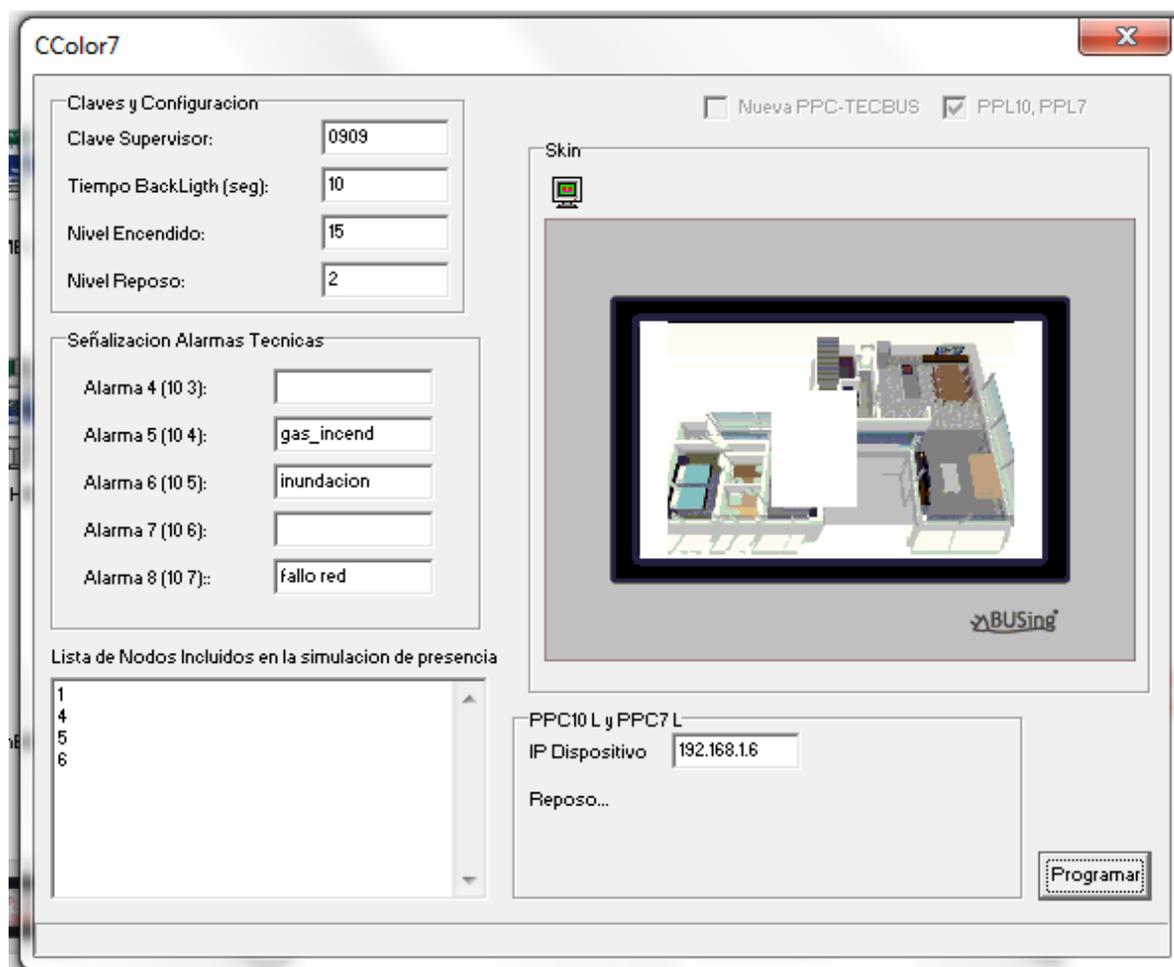


Once we have done the programming of the scripts, we should associate them with the corresponding icons. These icons will be shown on the drawings of the PPL7. This should be done on the "Situation drawings" tab and has already been explained.

4.5 DATA UPLOADING TO PPL7

Once all configurable settings such as screen properties, drawings, icons, screensaver, events, etc... are ready we should go to the programming screen of PPL7. On the "Installation modules" tab press on the right button on the node icon of PPL7. Select the option "Reprogram this node".





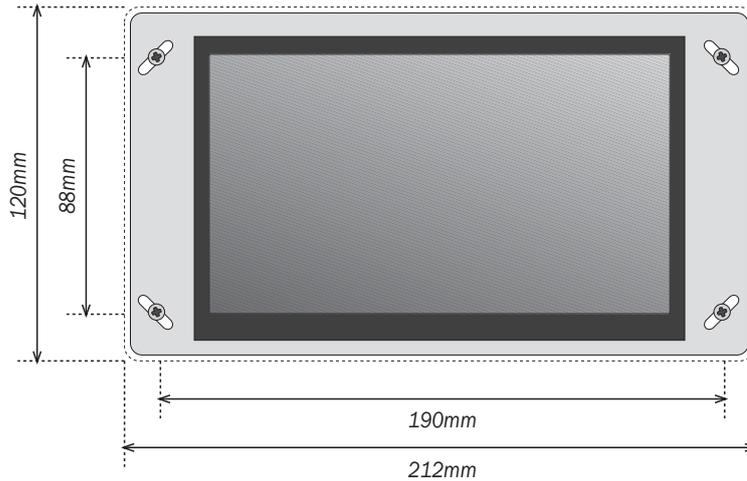
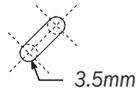
Make sure that the screen has only one IP address and the Wi-Fi net is working properly. If the device has been previously configured, we will only need to introduce the IP of the device and click on “Program”.

The system will need a short period of time to upload the project to the screen. It will automatically reboot and will be ready to use with the project correctly uploaded.

5 INSTALLATION

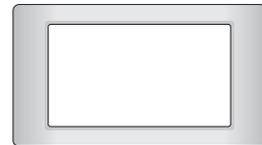
WiFi connection

To software actualization, weather forecast and upload data from the SIDE (plans and configuration).

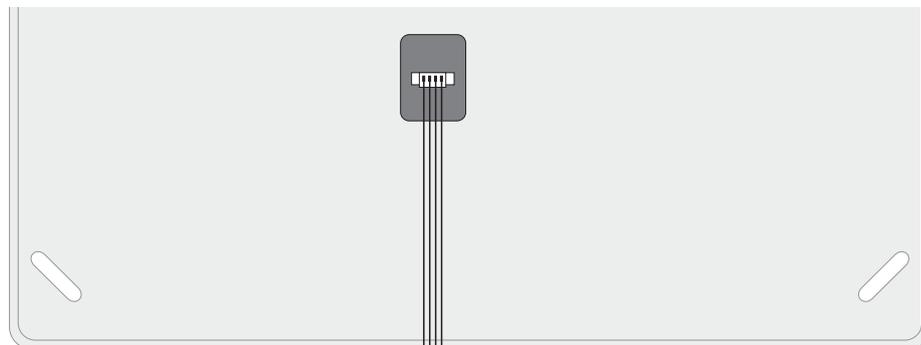


Installation

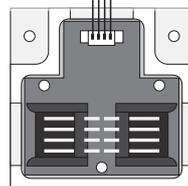
This device is fixed in an universal box in the wall with 4 screws following the measurements shown in the diagram.



Finally, press on the embellisher.



BUSing®
 connection
 Using
 ConnectorT



BUSing®

