IntesisHome®

Binary Input - User Manual

Intesis Software S.L.

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1. Welcome

Welcome to IntesisHome, the eco-friendly system that will allow you to control your Air Conditioning, Heat Pump and Air-to-Water units using web interfaces, Apple iOS devices (iPhone, iPad and iPod) and even Android devices.

In this document you will find information about how to use the built-in binary input of the IR WIFI controller. This allows adding extra functionalities to your Air Conditioner with a Presence Sensor or a Window Contact. IntesisHome helps you to save energy easily with our innovative functions. That means no matter what type of Air Conditioner you have, with IntesisHome you can upgrade your Air Conditioner easily with the most advanced features of the market.

2. About this document

This document is exclusively to explain how the Binary Input works in the IR WIFI controller, for information about how IntesisHome Web and App works, please go to our website www.intesishome.com/manuals.

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3. Installation

Note that all the IntesisHome IR WIFI Controllers are equipped with a Binary Input from factory, so your device already have it.

In order to use the built-in binary input in all the IR WIFI Controllers, your installer only needs to supply an standard 3,5mm estereo jack connector.

Connections will be as in the image below.
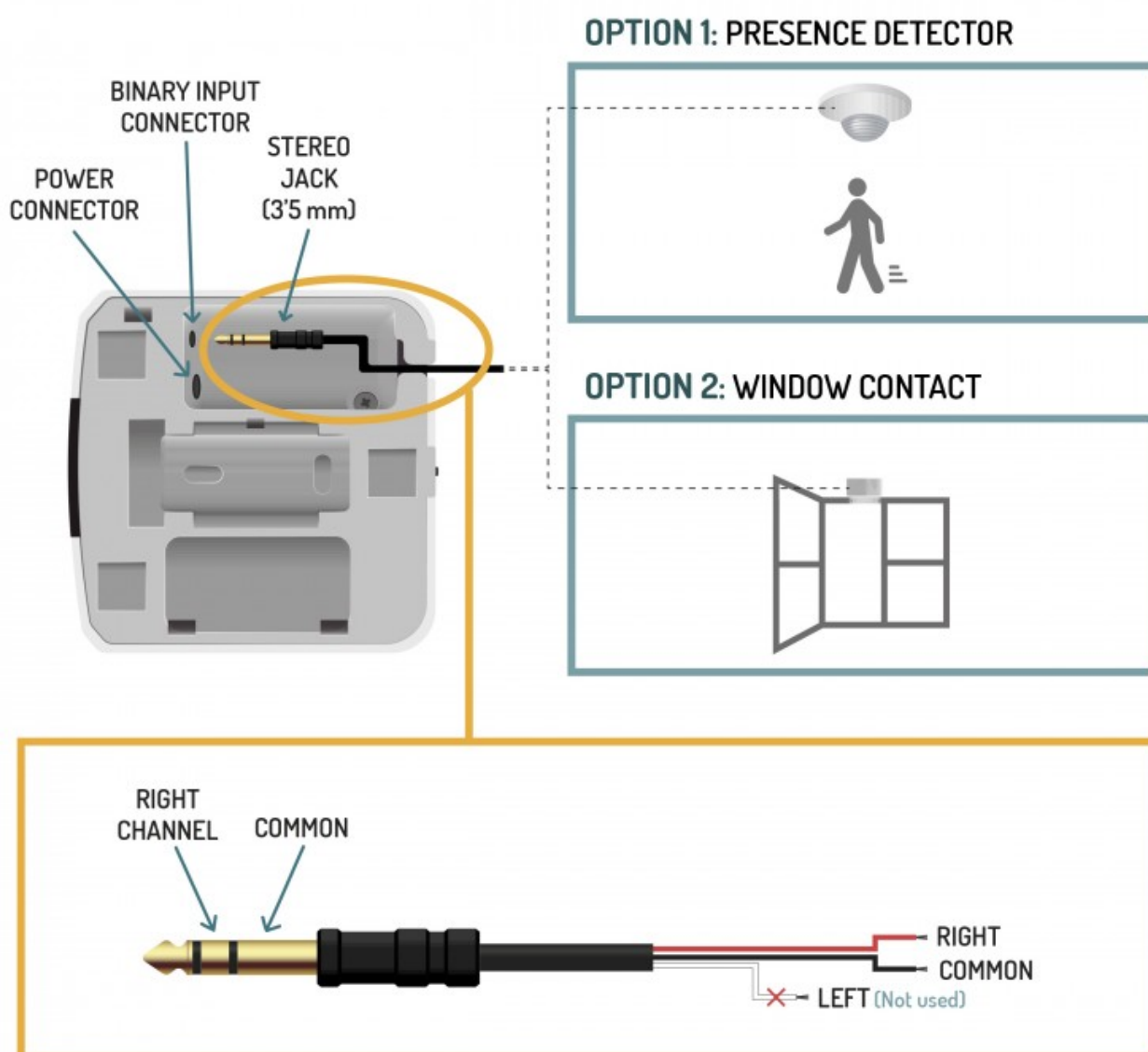
4. Connect a Presence Sensor or Window Contact

The binary input allows IntesisHome IR WIFI controllers owners to add a standard presence sensor or window contact to it. It offers the possibility to make automatic actions depending on if there is presence or not in the room or if the window is opened or closed.

IMPORTANT NOTE: Please, note that you can only connect a presence sensor or a window contact at the same time. Both sensors cannot work together at same time.

Before proceeding, please check the technical specification of the binary input below:

Potencial free binary input

Signal cable length: 5m unshielded, may be extended up to 20m with twisted.

Compliant with the following standards:
IEC61000-4-2: level 4 - 15kV (air discharge) - 8kV (contact discharge)
MIL STD 883E-Method 3015-7: class3B

Once you are sure your installation is compliant with the especifications, please check the presense sensor or window contact you would like to use. Basically, your sensors only need to be equipped with a potential free external contact. No matter if the contact is NO (Normally Open) or NC (Normally closed) as you will be able to configure the contact type (NO or NC) of your sensor in the settings of the Binary Input function (Go to Settings menu in the IntesisHome WEB Site).

IMPORTANT NOTE: Please, note that IR WIFI controller will only react if the contact of your sensor is opened or closed. In the case of the presence sensor, the installer needs to decide the specific settings of the presence sensor to be applied. IntesisHome will be not responsible of the incorrect settings or incorrect installations.

Recommendation: In some presence sensors or window contacts it is possible to setup a delay time to the external contact. As you will see in this manual, IntesisHome Settings allow the user to setup a timer before starting with the configured actions. Anyway we recommend to setup a certain delay time in your presence sensor or window contact in order to prevent continuos contact changes in a very short period of time.

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5. Configuration

An IntesisHome user account and an IR-WIFI controller are needed to setup the binary input settigs. This process is only available through the web interface. To do it so, please follow instructions next:

1.- Go to https://user.intesishome.com/ , introduce your credentials and click on **Login** button (See Figure 1).

Figure 1 IntesisHome login page

2.- On the main menu, go to **Settings > Devices.** Then select from the left menu the **IR WIFI device** you would like to configure and finally in the bottom of the screen you will see the **Binary Input** configuration (See Figure 2).
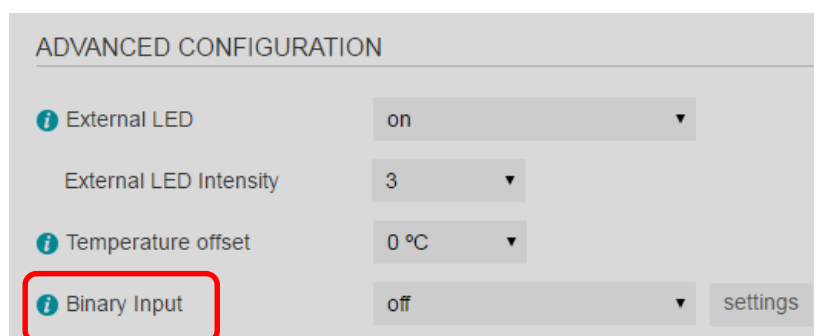

Figure 2 Binary Input configuration

3.- Now, you can use the dropdown menu to select "**off**" or "**presence detection**" or "**window contact**" (See Figure 3).
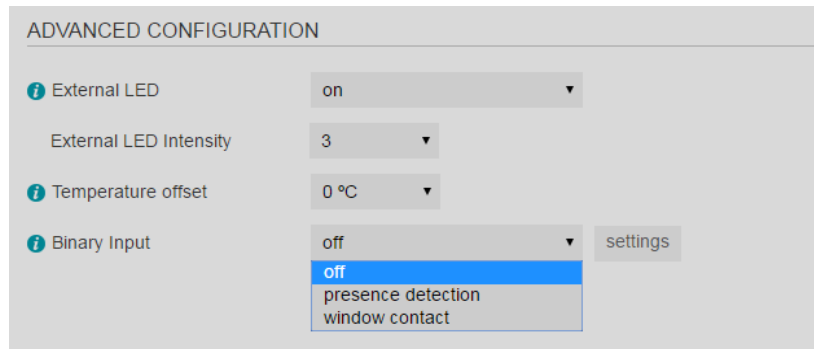
Figure 3 Binary Input functions

Off -> Binary input is disabled

Presence detection -> Binary input is enabled and you can setup the actions to perform when the room is occupied or not occupied.

Window contact -> Binary input is enabled and you can setup the action to perform when the window is closed or opened (it could also be a door).

5.2 Presence detection

Once you select Presence detection, options below will appear (see Figure 4).

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ⓘ Binary Input	presence detection ▼	settings	
1 ⓘ Type of contact	N.C. ▼		
2 ⓘ First action time out	10 ▼		
3 ⓘ First action	Apply Delta ▼		
4 ⓘ First action delta heat	-2 ºC ▼		
5 ⓘ First action delta cool	2 ºC ▼		
6 ⓘ Second action Active	On ▼		
7 ⓘ Second action Timeout	30 ▼		
8 ⓘ Second action	Switch off ▼		
9 ⓘ Second action delta heat	-3 ºC ▼		
10 ⓘ Second action delta cool	3 ºC ▼		
11 ⓘ Reload last value	Off ▼		
12 ⓘ Lock when unoccupied	Off ▼		

Figure 4 Presence detection options

1 Type of contact

Select what type of contact the sensor has: Normally open (NO) or Normally closed (NC).

2 First action time out (minutes)

When no presence is detected, this is the time the IR WIFI controller will wait to execute First action.

3 First action

Select what type of action will be executed as First action between "Apply delta" or "Switch Off" the Unit. Note that if "Switch off" is selected, then a second action is not available. If "Apply delta" is selected, then user can setup diferent delta temperatures for Heat and Cool. User could also setup a second action if he wants to.

4 First action delta heat

Setup the delta temperature to be applied when unit is working in Heat mode (Only if First action is "Apply delta").

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5 First action delta cool

Setup the delta temperature to be applied when unit is working in Cool mode (Only if First action is "Apply delta").

6 Second action active

Setup and execute a second action. Only available if first action was "Apply delta".

7 Second action timeout (minutes)

After executing the First action, this is the time the IR WIFI controller will wait to execute the Second action.

8 Second action

Select what type of action will be executed as second action between "Apply delta" or "Switch Off" the Unit.

9 Second action delta heat

Setup the delta temperature to be applied when unit is working in Heat mode (Only if Second action is "Apply delta").

10　　Second action delta cool

Setup the delta temperature to be applied when unit is working in cool mode (Only if Second action is "Apply delta").
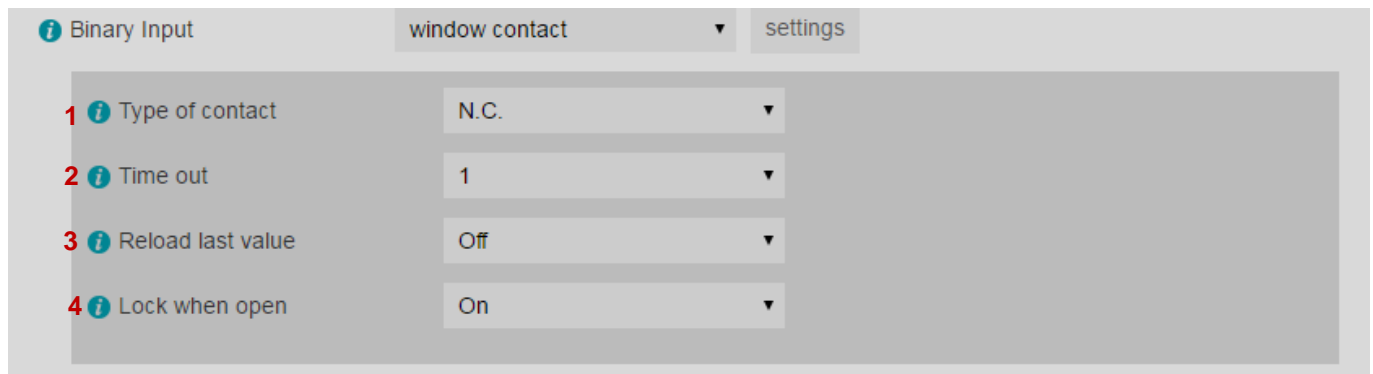
11　　Reload last value

After "Apply delta" action is executed, if presence is detected in the room, the unit will start working as at the beginning. That means in the same way as the unit was working when Presence was detected, in other words the delta temperatures applied will be back.
On the other hand, if the last executed action was Switch off, then the unit will remain off if this setting is in "Off", or will recover the last operation commands if this setting is in "On".

12　　Lock when unoccupied

This setting overwrites any change made from the Wireless remote controller. Only changes from IntesisHome App or Web are allowed.

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5.3 Window contact

Once you selected Window contact, option below will appear (see Figure 5).

Figure 5 Window contact options

1 Type of contact

Select what type of contact the sensor has. Normally open (NO) or Normally closed (NC).

2 Time out (minutes)

When the window or door is opened, this is the time the IR WIFI controller will wait to execute the Action "Switch Off the AC".

3 Reload last value

After the window or door is closed again,the AC unit will remain off if this setting is in "Off" or will recover the last operation commands if this setting is in "On".

4 Lock when open

This setting overwrites any change made from the Wireless remote controller. Only changes from IntesisHome App or Web are allowed.

6. Binary input visualization

The IntesisHome users with an IR WIFI controller can also monitor how the Binary input and the function selected (Presense detection or Window contact) are working.

For this, a new widget was added in the control screen. Note that this new widget only will appear if the Binary input function (Presense detection or Window contact) is activated in the settings menu.

6.1 Presence detection widget

When the function Presence detection is activated, in the control screen it will appear a new widget called "Binary Input"

This widget can show 4 different states:

State 1 - > Presence

This state indicates to the user that the room is occupied and any Presence Detection action is in progress.

State 2 - > Transition 1

This state indicates that the room is currently unucupied and the "First action time out" is in progress.
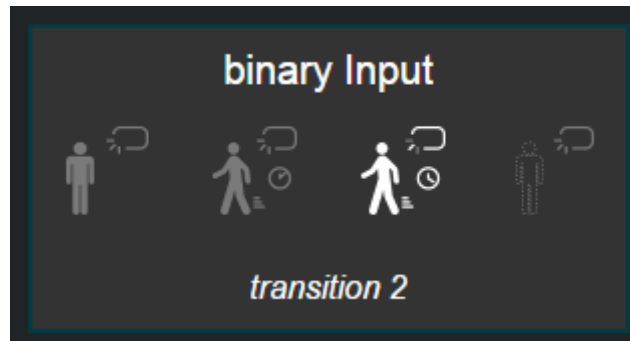

> **Note:** If the AC Unit is Off or is turned Off during transition 1, the time out progress will be stoped.

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State 3 - > Transition 2

This state indicates that the room is currently unucupied and:

- First action was executed.
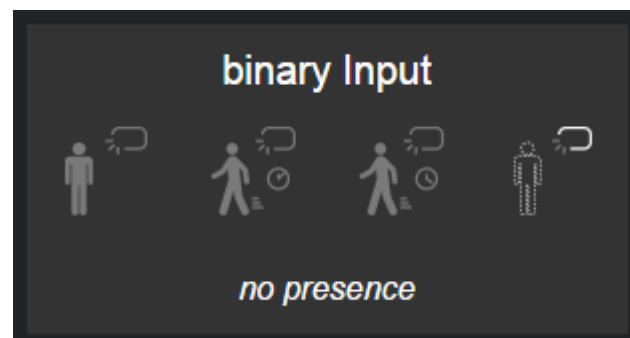- The "Second action time out" is in progress.

> **Note:** If the AC Unit is turned Off during transition 2, the system will go back to Transition 1 state.

State 4 - > No presence

This state indicates that the room is currently unucupied and:

- Second action was executed.
- No more actions will be executed until presence will be detected.

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6.2 Window contact widget

When the function Window contact is activated, in the control screen it will appear a new widget called "Binary Input"
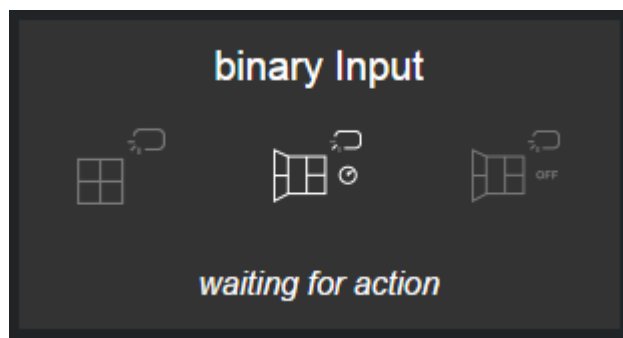
This widget can show 3 different states:

State 1 - > Window closed

This state indicates to the user that window or door is closed and any Window Contact action is in progress.
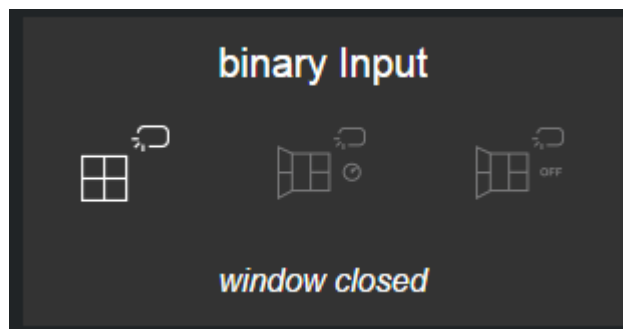
State 2 - > Waiting for action

This state indicates that the window or door is currently open and the "Time out" is in progress.

Note: If the AC Unit is Off or is turned Off during Waiting for action state, the time out progress will be stoped.

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State 3 - > Window opened

This state indicates that the window or door is currently open and:

- Unit was Switch OFF.
- No more actions will be executed until window or door is closed.

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