ENGLISH

AC Cloud Control

BINARY INPUT - USER MANUAL

Version 1.0.0
Publication date 2023-07-10

Table of Contents

1. Overview

1.1. About this Document

Throughout this document, you will learn how to:

Configure and use a binary input connected to an AC Cloud Control (ACCC) universal device.

1.2. About the Solution

The devices of the Intesis AC Cloud Control series are the perfect IoT solution for professional air conditioning (AC) management. Developed in collaboration with the main AC manufacturers, the AC Cloud Control (ACCC) devices enable the control of any domestic, commercial, or VRF air conditioning unit from a mobile or web application.

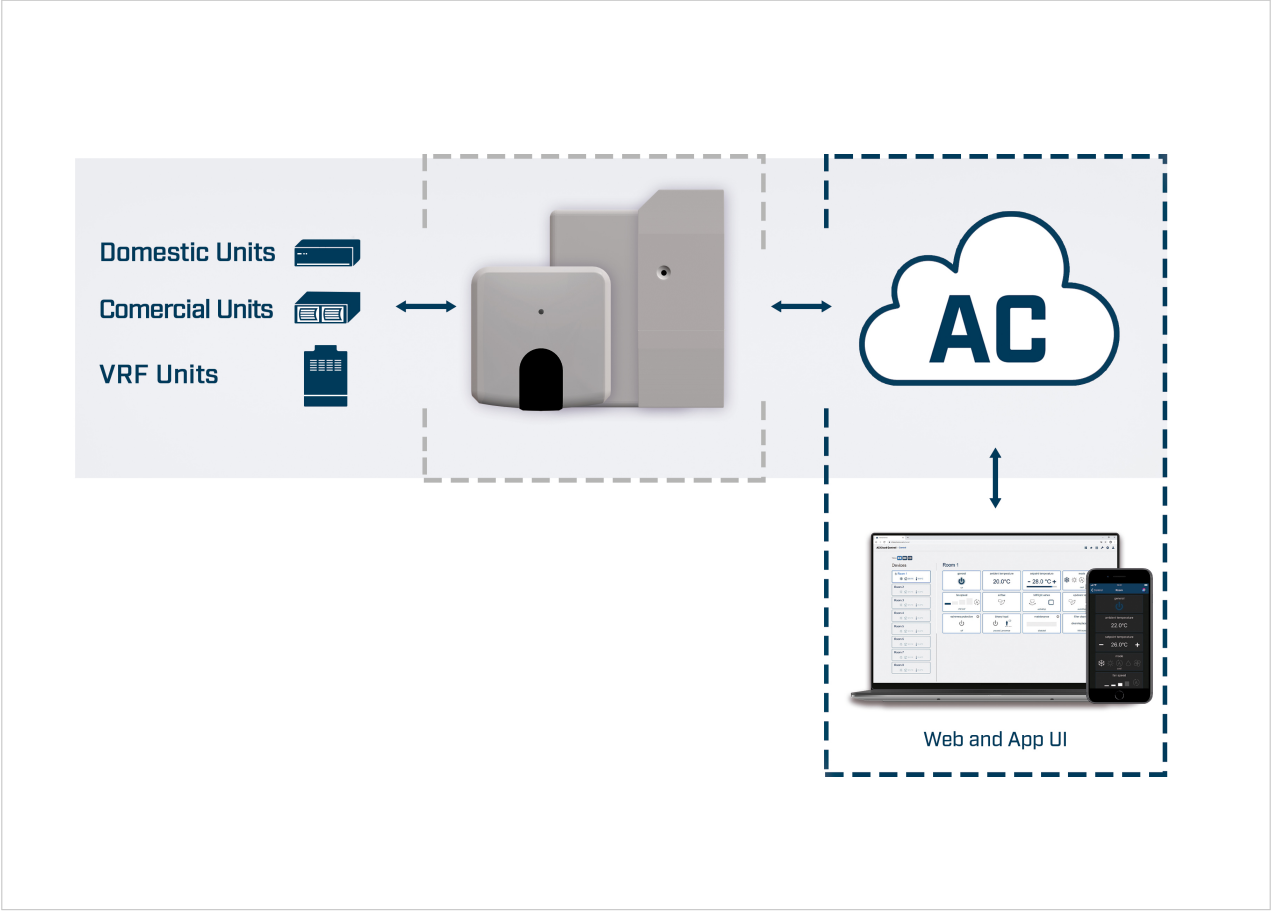

Figure 1. AC Cloud Control device integration

The binary input available in the ACCC universal device allows its owners to add a standard presence sensor or a window contact to its default functionalities. This way, it offers the possibility of executing automatic actions depending on whether somebody is in the room or if the window is open or closed.

2. Before Starting

Be sure you have everything you need for the configuration process:

- AC Cloud Control device

> **IMPORTANT**
> The ACCC device's model depends on the AC unit type. Make sure you have the proper device by checking the Intesis AC Compatibility tool.

> **IMPORTANT**
> It is necessary to be within a two-meter range from the device for the initial configuration. For more information, check the device configuration manual.

- Wireless network

> **NOTE**
> Wireless networks are commonly created by a router or an access point. Although you could set a mobile phone as an access point by sharing its data, that is not a recommended procedure and it is not explained in this manual.

> **IMPORTANT**
> The ACCC device supports the 2.4 GHz band and the 802.11 b/g or /n mode.

- Compatible input: The ACCC device has a standard 3,5 mm female stereo jack connector. Therefore, ensure the binary input sensor uses a male connector of the same type.

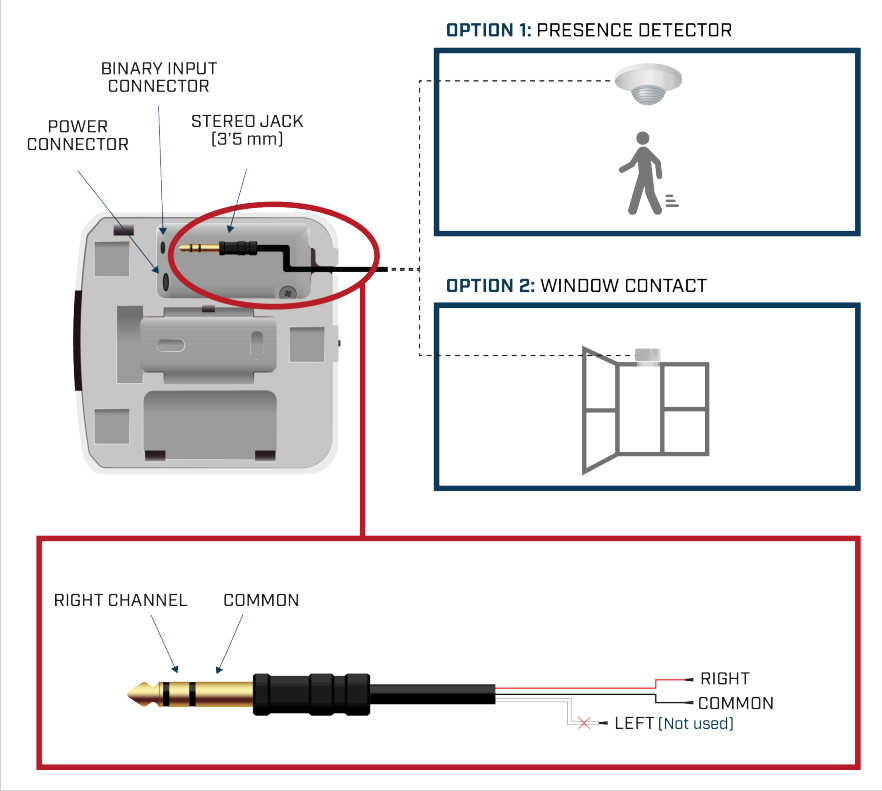

Figure 2. Binary input connection

Potential-free binary input Signal cable length: 5 m unshielded, may be extended up to 20 m with twisted. Compliant with the following standards: IEC61000-4-2: level 4 - 15 kV (air discharge) - 8 kV (contact discharge) MIL STD 883E-Method 3015-7: class 3B

- Internet access: The AC Cloud Control universal device must be connected to the Internet via Wi-Fi, you should therefore ensure the Wi-Fi signal reaches the device location.
- Device with Internet access: A device with Internet access, such as a smartphone or tablet is required.

IMPORTANT
The supported browsers to use the web interface are:

  - Safari
  - Google Chrome
  - Mozilla Firefox
  - Microsoft Edge
  - Internet Explorer

- Smart device with a connection: Android and iOS operative systems are supported.
- AC Cloud Control app. Download it from:
  - Google Play
  - iOS App Store

3. Binary Input Usage

3.1. Presence Sensor / Window Contact

Once the installation process has been completed according to the specifications, check how the binary input sensor is going to be used. The sensor only needs to be equipped with a single potential-free external contact. It does not matter if the contact is NO (normally open) or NC (normally closed), as the user can configure the contact type of the sensor through the web interface later.

NOTE
Only a single sensor (whether a presence sensor or a window contact sensor) can be connected at once. Both sensors cannot work together at the same time.

NOTE
Some presence sensors or window contacts offer the possibility of setting up a time delay to the external contact. Similarly, AC Cloud Control settings also allow users to set up a time out interval before a configured action is triggered. It is thus recommended to use any of these available options to set up a specific time delay on the presence sensor or the window contact to prevent continuous state changes in a very short amount of time.

NOTE
The ACCC universal device will only react if the contact of the sensor is opened or closed. In the presence sensor case, the installer needs to decide the specific settings to be applied. Intesis will not be held responsible for an incorrect installation or an incorrect configuration.

3.2. Sleep Mode

NOTE
Sleep mode is only available when the binary input is activated.

The sleep mode function modifies the standard behavior of the binary input in the following way: When sleep mode is active, the binary input will be able to turn the AC unit on when a presence is detected for the first time. The AC unit will remain in this status even if no further presence is detected afterward. If the AC unit is turned off manually from either the AC Cloud Control system (app, web, calendar, or scenes) or the AC unit remote controller, then the presence function will not be able to turn it on while sleep mode is active.

Example A: User is sleeping

The sleep mode function is enabled at 20:00 when the user is supposed to be sleeping, through a calendar action or a scene. Once enabled, a single trigger of the presence sensor will cause the AC unit to turn on and remain in this status even if the presence sensor reports no presence afterward.

Example B: User is cold/hot

The sleep mode function is enabled through a calendar action or a scene at 20:00 when the user is supposed to be sleeping. The room may already be at a proper temperature, even getting too cold or hot. If the user turns the AC unit off manually, it will remain that way until the user, a calendar action, or a scene turns it back on.

NOTICE
For more information about setting up the sleep mode see Control Panel - Sleep Mode (page 11)

4. Binary Input Configuration

NOTE
The binary input functionality will only apply if the AC unit is on. Otherwise, the sensor presence or window contact functionalities will not change the AC unit status.

The configuration of the binary input must be done through the web interface. To do so, follow these steps:

1. Go to https://accloud.intesis.com/
2. Log in using your account information.

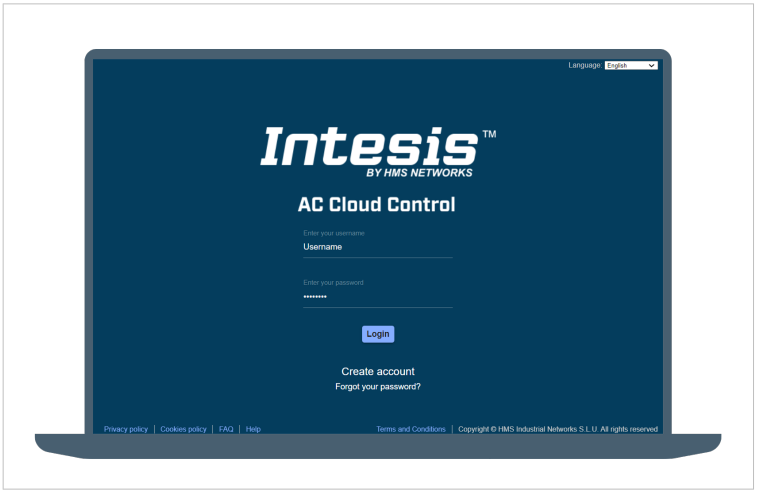

Figure 3. AC Cloud Control login screen

3. Once logged in, go to **Settings**, either by clicking on **Settings** on the main screen or the gear icon in the upper-right corner.

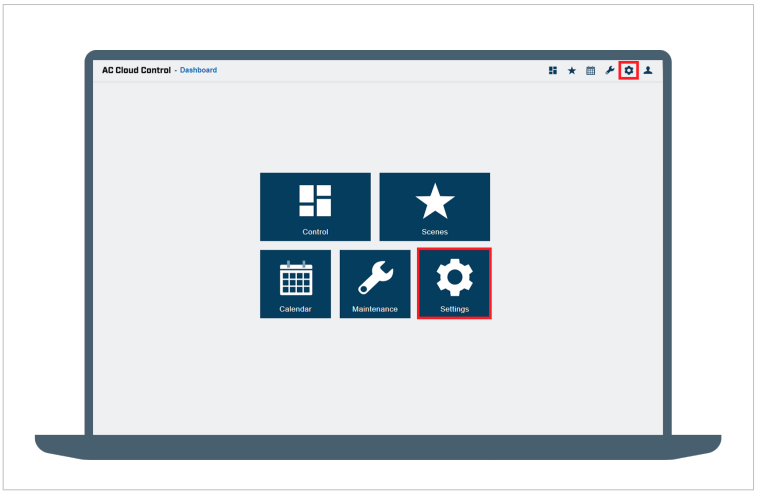

Figure 4. AC Cloud Control main screen, **Settings** access

4. Click on **devices** and select the AC Cloud Control universal device from the left menu.

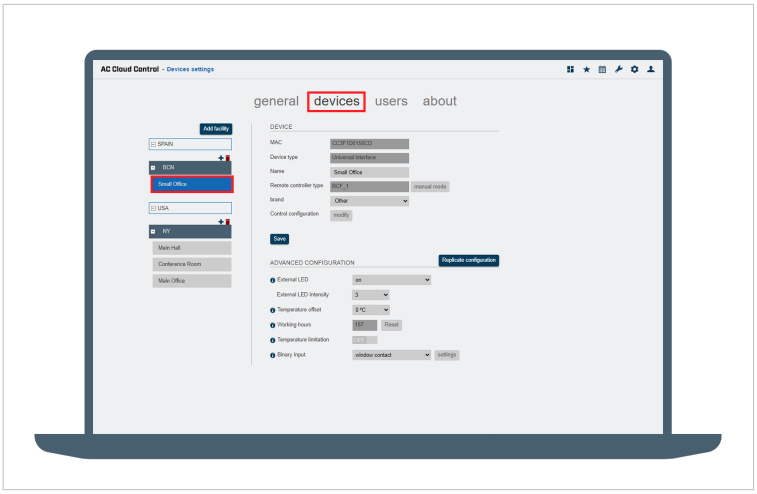

Figure 5. Devices section, Universal model subsection

NOTICE
If you need more information about adding devices to AC Cloud Control, refer to the web user manual.

5. The binary input selection is located in the **advanced configuration** section. There, a dropdown list offers three different options:

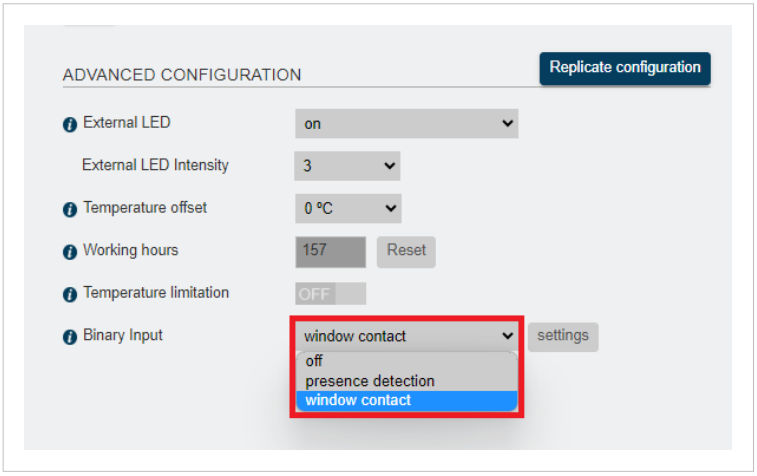

Figure 6. Advanced configuration, binary input options

- **Off:** Binary input is disabled.
- **Presence detection:** Binary input is enabled, and the setup actions can be performed when the room is occupied or unoccupied.
- **Window contact:** Binary input is enabled, and the setup actions can be performed when the window (or door) is closed or opened.

4.1. Presence Sensor

These are the available settings for the presence detection option:

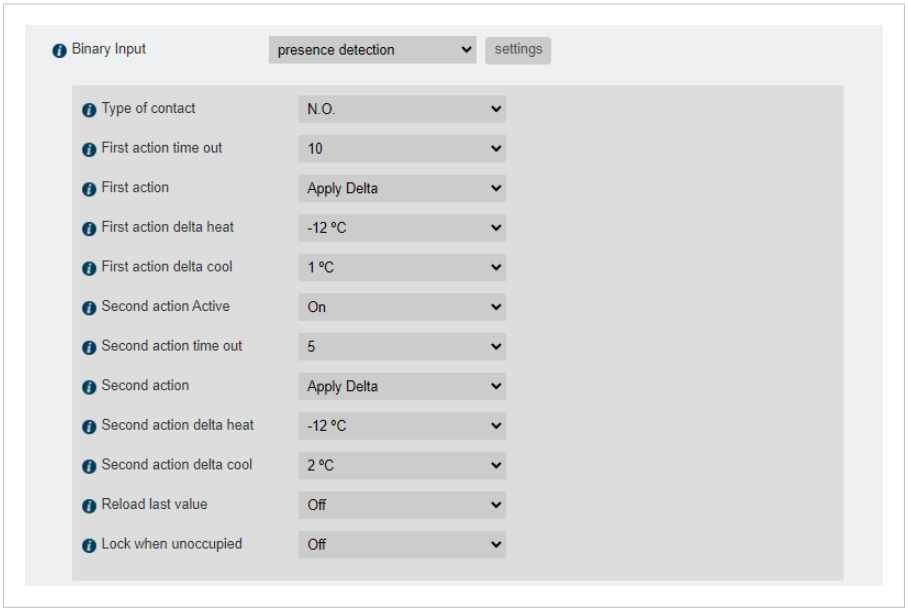

Figure 7. Binary input presence detection settings

- **Type of contact:** Select the contact type, normally open (NO) or normally closed (NC).
- **First action time out:** This is the time, in minutes, that the ACCC universal device will wait before executing the first action when no presence is detected.
- **First action:** Select what type of action will be executed initially between **Apply delta** or **Switch Off** the AC unit.

> **NOTE**
> If **Switch Off** is selected, then a second action is not available.

- **First action delta heat:** Set up the delta temperature to be applied when the AC unit is working in heat mode (only available if the first action is **Apply delta**).
- **First action delta cool:** Set up the delta temperature to be applied when the AC unit is working in cool mode (only available if the first action is **Apply delta**).
- **Second action active:** Set up and execute a second action. Only available if the first action is **Apply delta**.
- **Second action time out:** This is the time, in minutes, that the ACCC universal device will wait before executing the second action once the first action has been executed.
- **Second action:** Select what type of action will be executed as a second action between **Apply delta** or **Switch Off** the AC unit.
- **Second action delta heat:** Set up the delta temperature to be applied when the AC unit is working in heat mode (only available if the second action is **Apply delta**).
- **Second action delta cool:** Set up the delta temperature to be applied when the AC unit is working in cool mode (only available if the second action is **Apply delta**).
- **Reload last value:** With this setting on, when a presence is detected back in the room after the **Apply delta** action has been executed, the AC unit will return to its previous settings. In other words, the applied delta temperatures will be back. On the other hand, if the last executed action was **Switch Off**, the AC unit will recover the previous operation commands if this setting is on, remaining off otherwise.
- **Lock when unoccupied:** This setting overwrites any change made from the wireless remote controller. Only changes from the AC Cloud Control app or the web interface are allowed.

4.2. Window Contact

These are the available settings for the window contact option:

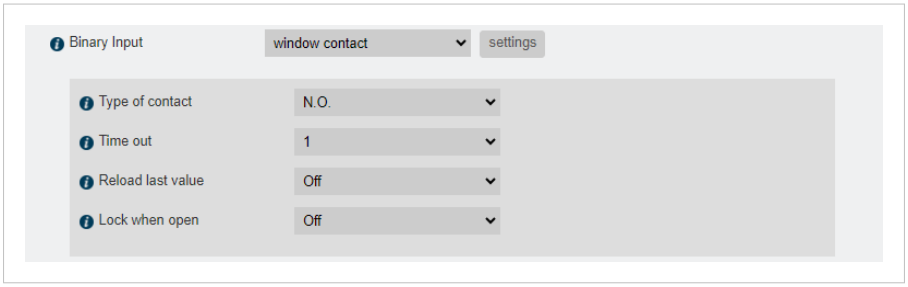

Figure 8. Binary input window contact settings

- **Type of contact:** Select the contact type, normally open (NO) or normally closed (NC).
- **Time out:** This is the time, in minutes, that the ACCC universal device will wait before executing the action **Switch Off** when the window or door is opened.
- **Reload last value:** After the window or door is closed again, the AC unit will recover the last operation commands if this setting is on, remaining off otherwise.
- **Lock when open:** This setting overwrites any change made from the wireless remote controller. Only changes from the AC Cloud Control app or the web interface are allowed.

5. Control Panel

5.1. Presence Sensor

When the Presence detection function is activated, a new widget called **binary Input** appears on the control screen. This widget can show four different states:

- **State 1:** Presence
  This state indicates to the user that the room is occupied and any presence detection action is in progress.

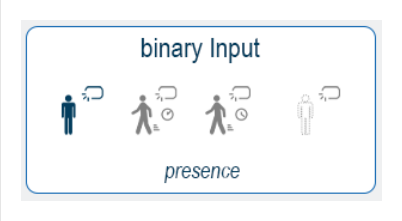

Figure 9. State 1 - presence

- **State 2:** Transition 1
  This state indicates that the room is currently unoccupied, and the first action time out is in progress.

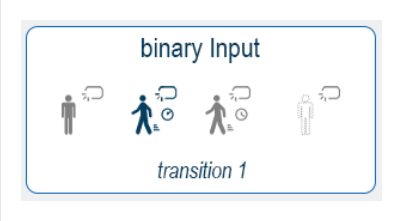

Figure 10. State 2 - transition 1

NOTE
If the AC unit is turned off during transition 1, the time out progress will be stopped.

- **State 3:** Transition 2
  This state indicates that the room is currently unoccupied and:
  – The first action was executed.
  – The second action time out is in progress.

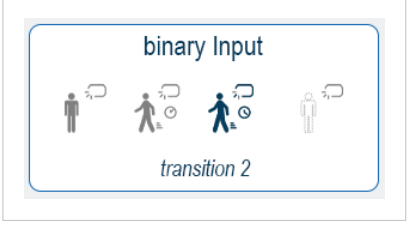

Figure 11. State 3 - transition 2

NOTE
If the AC unit is turned off during transition 2, the system will return to the transition 1 state.

- **State 4:** No presence
  This state indicates that the room is currently unoccupied and:
  – The second action was executed.
  – No more actions will be executed until a presence is detected.

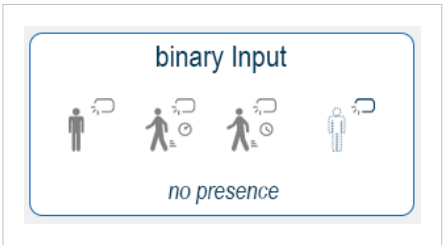

Figure 12. State 4 - no presence

5.2. Window Contact

Just like with the presence sensor, when the window contact function is activated, a new widget called **binary Input** appears on the control screen. This widget can show three different states:

- **State 1:** Window closed
  This state indicates that the window or door is closed and any window contact action is in progress.

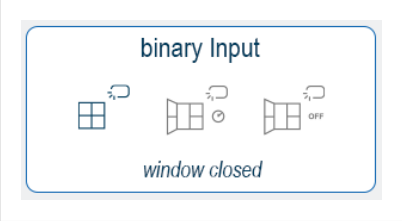

Figure 13. State 1 - window closed

- **State 2:** Waiting for action
  This state indicates that the window or door has been opened, and the time out is in progress.

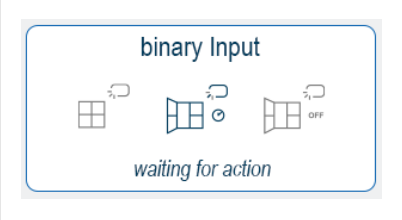

Figure 14. State 2 - waiting for action

NOTE
If the AC unit is off or is turned off during the waiting for action state, the time out progress will be stopped.

- **State 3:** Window open
  This state indicates that the window or door is currently open and:
  – The AC unit was switched off.
  – No more actions will be executed until the window or door is closed.

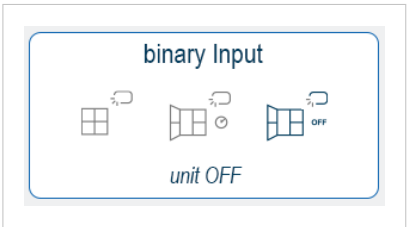

Figure 15. State 3 - unit OFF

5.3. Sleep Mode

Sleep mode can only be activated when creating a calendar pattern or a scene. To activate it, click on the widget for the binary input and then the sleep icon. You can find more information about sleep mode in Sleep Mode (page 4)

This widget can show three different states:

- **Binary input for presence and sleep mode active:** When both the presence detection and sleep mode are active. The binary input will only be used to turn the AC unit on if a presence is detected, and the AC unit will remain on at least until the sleep mode activates or any user, calendar, or scene turns the AC unit off.

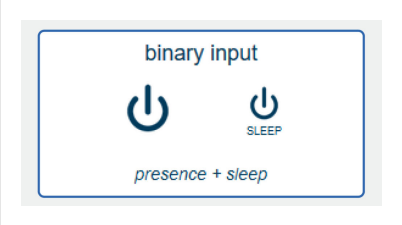

Figure 16. Presence + sleep

- **Binary input for presence active, sleep mode inactive:** When the presence detection is active, but sleep mode is not. The binary input will work as usual with a presence sensor connected to it. You can find more information about the presence function in section 3.1 (page 7) and section 4.1 (page 9).

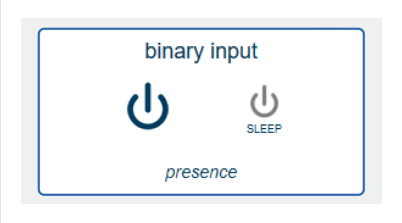

Figure 17. Presence

- **Binary input for presence and sleep mode inactive:** When neither the presence detection nor sleep mode are active. In this case, the reported status of the presence sensor will not affect the AC unit status or its current working mode.

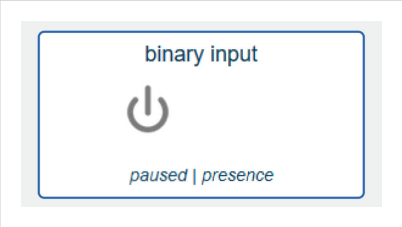

Figure 18. Inactive mode