IntesisBox®

IS-IR-KNX-1i v1.0

User's Manual

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IntesisBox®

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Gateway for integration of IR air conditioners into KNX TP-1 (EIB) control systems.

Compatible with AC units, of most AC brands, provided with an IR receiver.

Application's Program Version: 1.0

Order Code: **IS-IR-KNX-1i**

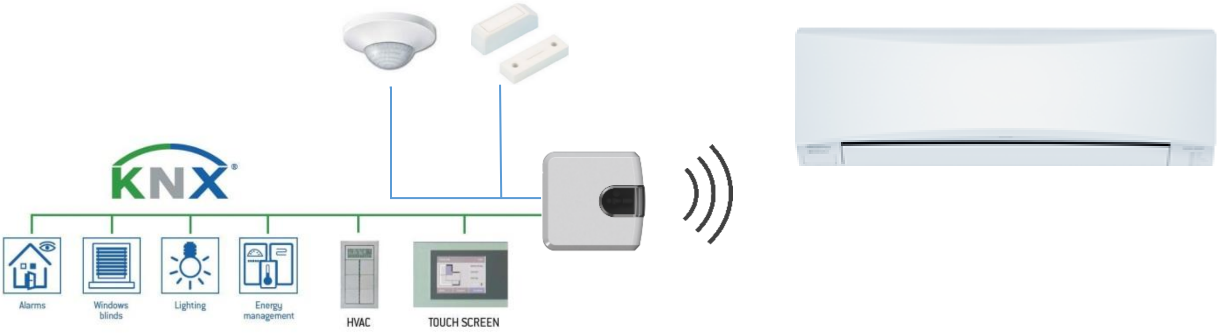
Table of Contents

1 Presentation

IntesisBox® IS-IR-KNX-1i allows monitoring and control of Air Conditioners from KNX installations.

Compatible with most AC units with an IR receiver.

Great flexibility of integration into your KNX projects. Configuration is made directly from ETS, the database of the device comes with a complete set of communication objects allowing, from a simple and quick integration using the basic objects, allowing a simple and quick integration.



Main features:

- Reduced dimensions and quick installation.
- Includes a USB connector for fast programming download.
- Multiple objects for control and status (bit, byte, characters…) with KNX standard datapoint types.
- Status objects for every control available.
- Special Modes available (Power, Economy, Additional Heating and Additional Cooling).
- Timeout for Open Window and Occupancy. Sleep function also available.
- Control of the AC unit based in the ambient temperature read by the own AC unit, or in the ambient temperature read by any KNX thermostat.
- Total Control and Monitoring of the AC unit from KNX, including monitoring of AC unit's state of internal variables, running hours' counter (for filter maintenance control), and error indication and error code.
- AC unit can be controlled simultaneously by the remote controller of the AC unit and by KNX.
- Up to 5 scenes can be saved and executed from KNX, fixing the desired combination of Operation Mode, Set Temperature, Fan Speed, Vane Position and Remote Controller Lock in any moment by using a simple switching.
- Two binary inputs for potential-free contacts provide the possibility to integrate many types of external devices for window status control (window contacts) and occupancy (presence sensor

2 Quick setup

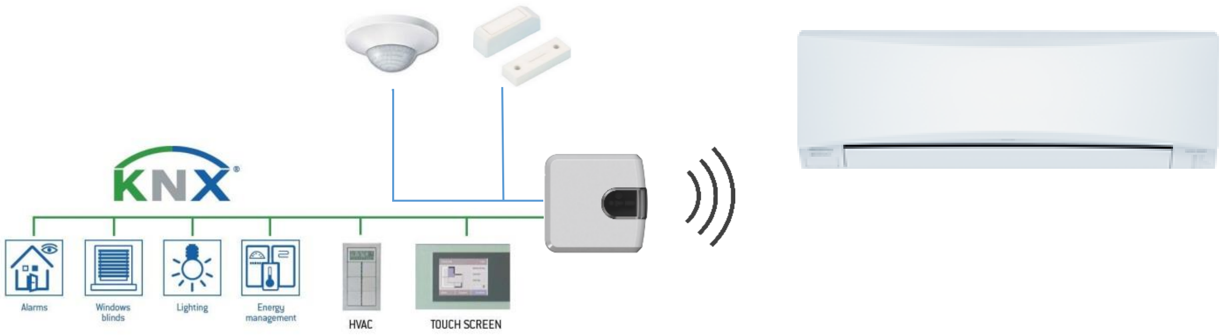


Figure 2.1 IS-IR-KNX-1i integration example

1. Check the interface location that best fits the installation (section 3.1)
2. Connect the interface to the KNX bus.
3. Download the ETS database for this product, import it and add it to the current ETS project.
4. Access the parameter section of the IntesisBox device. Notice that parameters for this interface are configured through a specific plugin (section 5).
5. Select the communication objects to be used and other parameters. This step can be omitted if working with the default objects and parameters.
6. Save the configuration file and download the application program.
7. Close the plugin and apply changes when asked.
8. Link the group address from the communication object of the KNX device with the communication object inside the IntesisBox interface.
9. Download the ETS parameters as with any other standard KNX device.

3 Device Installation

3.1 *Location selection*

Determining that the IntesisBox device will be working as expected in the installation location is an important stage. In order to determine the best location for your IntesisBox device, use the Wireless Controller (the one of your AC unit).

When selecting the installation location, please keep in mind that the IntesisBox device has 2 IR emitters and 1 IR receiver. The 2 emitters increase the installation possibilities allowing many different suitable positions for the device location. On the other hand, the receiver offers the possibility to get the feedback from the IR wireless remote controller so the KNX status objects can be updated with that feedback.

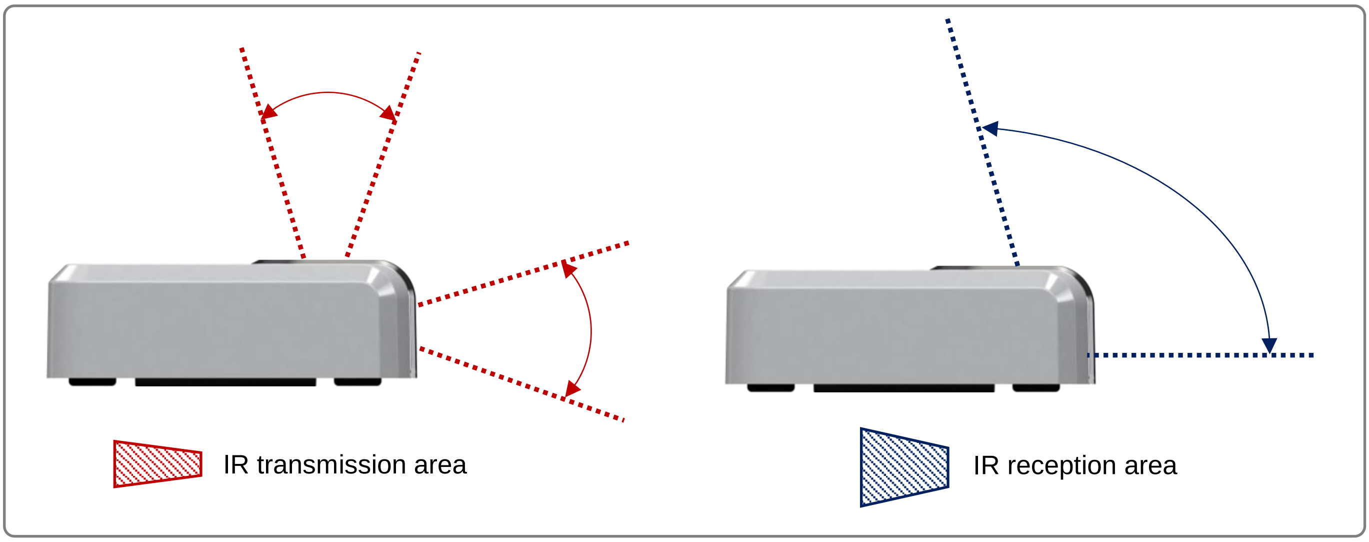


Figure 3.1 IR emitters and IR receiver location

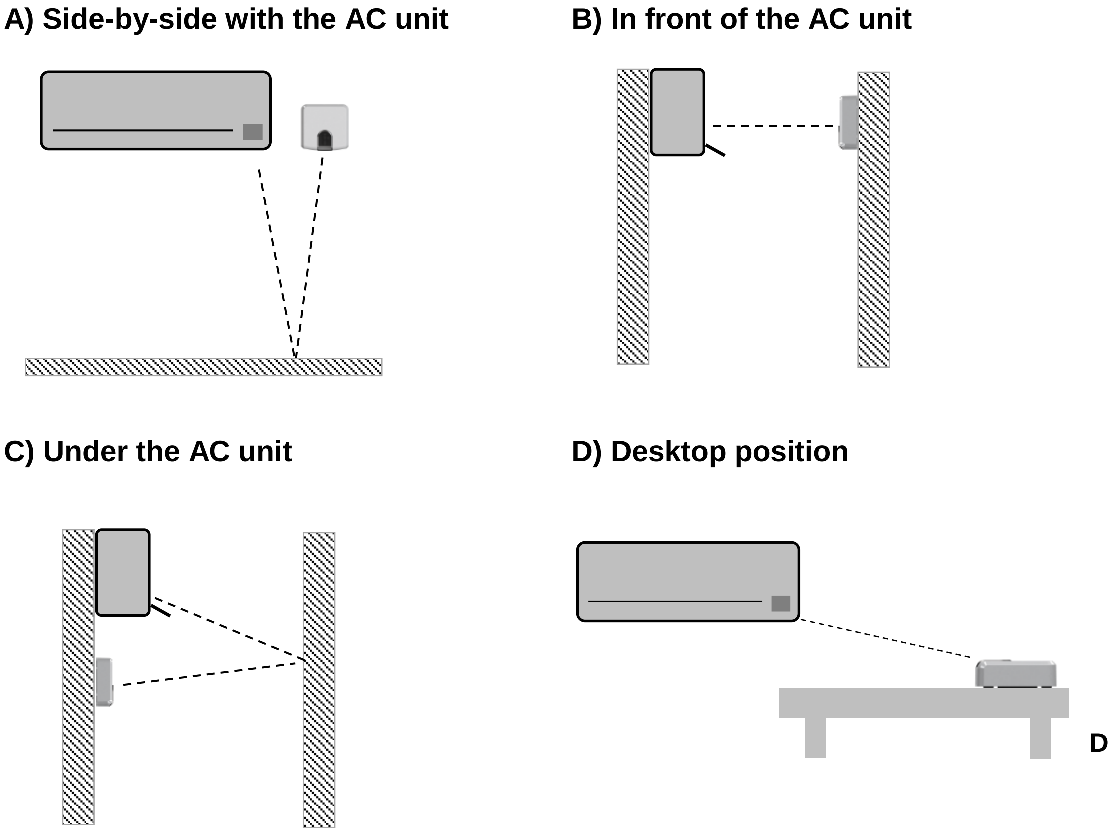
3.2 *Connection to IR and location*

There is no special requirement to match the IR receiver and the IntesisBox IS-IR-KNX-1i interface. Simply select your model from the list present in the plugin. If your AC unit is not present, please check the compatibility list as in section 7. You can find more information about the IR configuration in section 5.

IMPORTANT: Keep in mind that some furniture and materials (carpets, curtains, glass, metal…) may affect on the IR communication.

NOTE: The IntesisBox device has 2 IR emitters pointing at 2 different locations. Considering this and IR reflections, valid locations for the IntesisBox device may be many and very different depending on each installation. Check section 3.1 for more information.

IntesisBox IS-IR-KNX-1i can be installed in many different locations.



A) Side-by-side with the AC unit

B) In front of the AC unit

C) Under the AC unit

D) Desktop position

Figure 3.2 IR emitters and IR receiver location

Case A: Installed side-by-side with the AC unit. In that case, the signal will travel from the IntesisBox device to the AC unit tacking advantage of the rebounds on the floor or other furniture present in the room.

Case B: Installed in front of the AC unit. In that case, the signal will travel from the IntesisBox device directly to the AC unit.

Case C: Installed below the AC unit. In that case, the signal will travel from the IntesisBox device to the AC unit tacking advantage of the rebounds on the wall in front of it or other furniture present in the room.

Case D: If you want to place the device on your desktop or any other horizontal surface, please consider the sketch below. In this case, the signal will travel directly from the IntesisBox device to the AC unit.

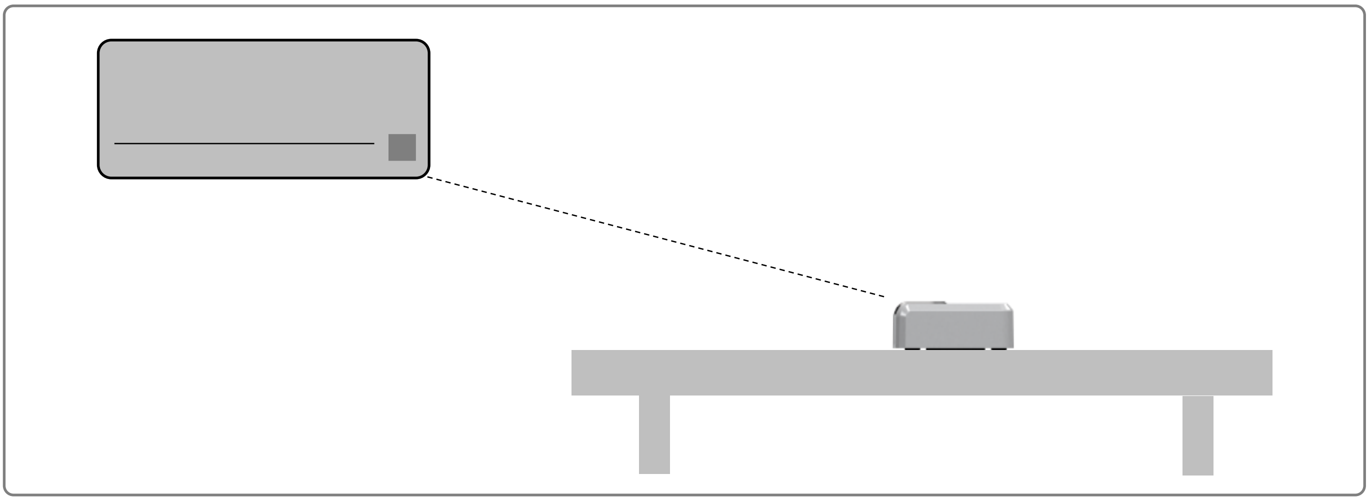


Figure 3.3 Desktop mounted position

In order not to produce marks or scratches on the surface and also to improve the device stability, you can use the rubber dumpers included in the package. Please, check **Figure 3.4**.

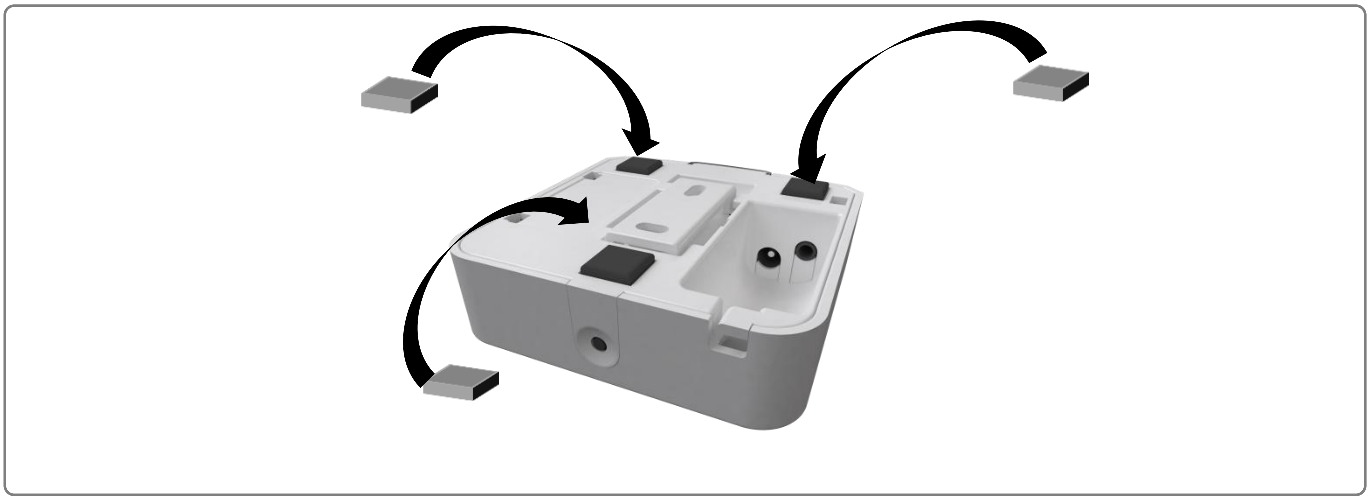


Figure 3.4 Rubber dumpers location

3.3 *Connection to KNX*

IntesisBox device needs to be connected directly through a KNX TP-1 bus.

To get access to the KNX connector, remove the screw as seen in Figure 3.5.

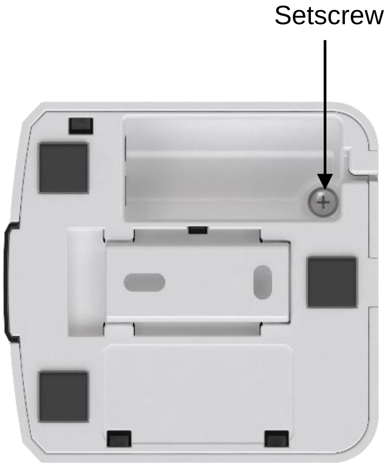


Figure 3.5 Top lid release and KNX connection

Disconnect power of the KNX bus. Connect the IS-IR-KNX-1i to the KNX TP-1 (EIB) bus using the KNX standard connector (red/grey) of the IS-IR-KNX-1i, respect polarity.

Reconnect power of the KNX bus, and mains power of the AC unit.

3.4 *Binary Input connection*

IntesisBox IS-IR-KNX.1i interface is equipped with a Binary Input from factory. To use the built-in binary input in all the IR WIFI Controllers, a standard 3,5mm stereo jack connector is required.

Connections will be as in the image below.

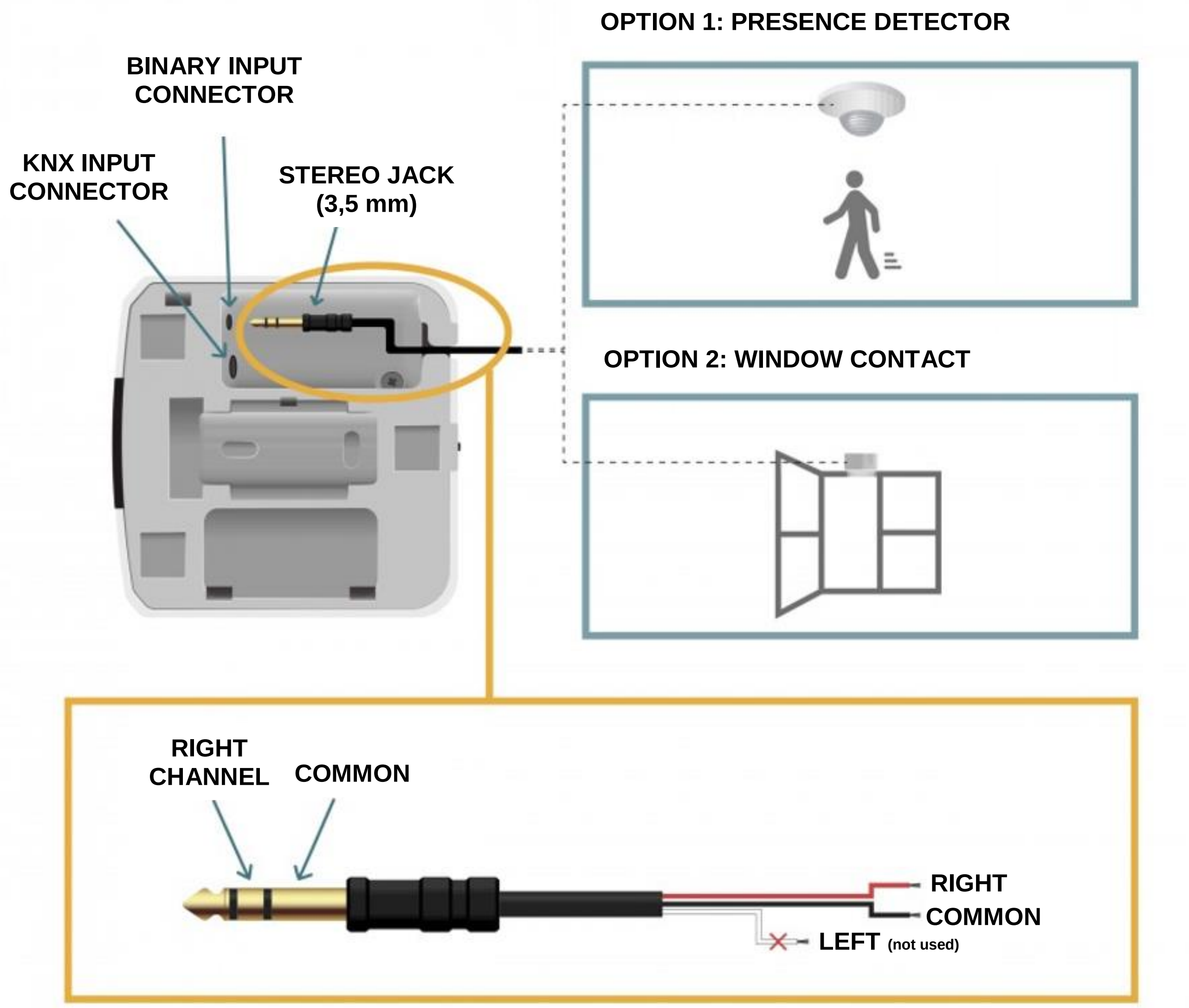


Figure 3.6 Binary Input connection

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

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

Potential 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: class 3B

Once you are sure your installation is compliant with the specifications, please check the presence sensor or window contact you would like to use. Basically, 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 IntesisBox WEB Site).

IMPORTANT NOTE: Please, note that IS-IR-KNX-1i interface 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. IntesisBox 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, IntesisBox 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 to prevent continuous contact changes in a very short period of time.

4 Configuration and setup

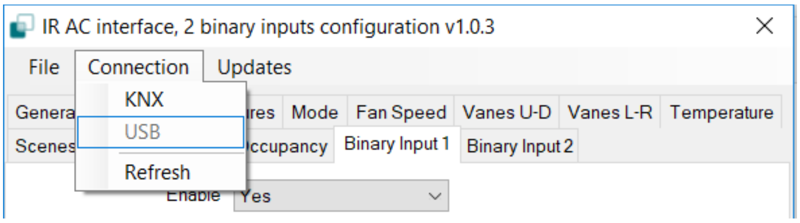
This is a fully compatible KNX device which must be configured and setup using standard KNX tool ETS.

Before starting with the configuration, please make sure that the binary inputs (if used) and the USB cable are properly connected to the interface. Make sure as well, that the interface is connected to the KNX bus to allow the proper download of the KNX programming.

In order to proceed with the configuration and set up, it is recommended to follow instructions next:

1. Download and install the latest version of the ETS data base (section 5).
2. Open the product's plugin and make sure that the catalog is in its last available version (section 5).
3. Select your AC brand and model (section 5.1).
4. Download the infrared configuration to the IntesisBox pushing on the "***Download IR parameters***".

   NOTE: Check the current connection to the IntesisBox. Notice that in order to send the Infrared configuration, you can use the standard KNX connection (the same used to program the device) or a USB connection.



   USB connection is faster than KNX connection. Notice that this is only available for the infrared configuration settings.

5. Proceed with the rest of AC unit settings and other parameters.
6. Proceed with the KNX programming.
7. Download the programming to the interface as any other KNX device.

5 ETS Parameters and Configuration

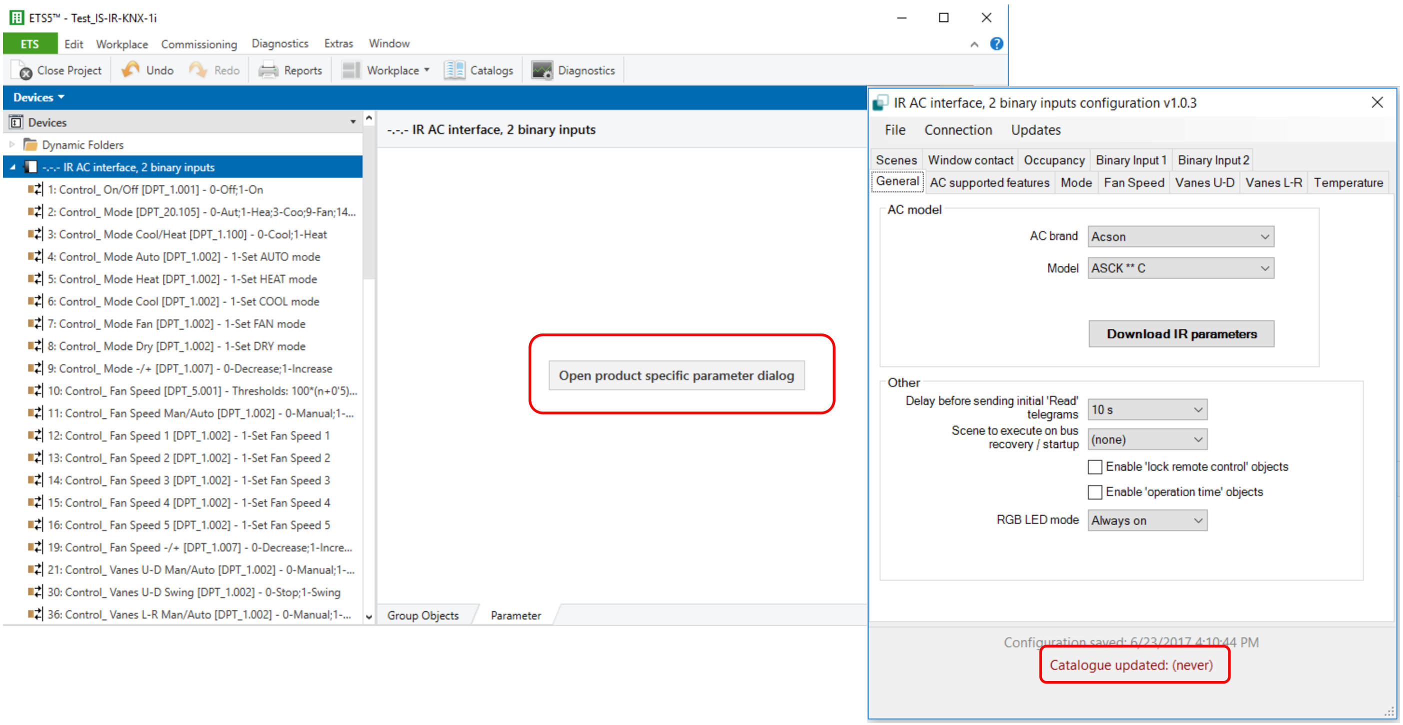
The IntesisBox IS-IR-KNX-1i interface is configured through ETS. General KNX parameters, such as the physical address, group addresses or DPTs can be configured as usual using the ETS interface. For the specific AC unit configuration and IR communication, the use of the specific plugin included in the ETS database is required.

ETS database for this device can be downloaded from:

https://www.intesisbox.com/intesis/product/media/IS-IR-KNX-1i_ETS_database.zip

Please consult the README.txt file, located inside the downloaded zip file, to find instructions on how to install the database.

Once the database is imported, the plugin can be accessed when editing parameters. To get access to parameters edition, click on the ***Parameter*** tab, located in the project screen, and then press the specific parameter dialog.



-.-.- IR AC interface, 2 binary inputs

1: Control_ On/Off [DPT_1.001] - 0-Off;1-On
2: Control_ Mode [DPT_20.105] - 0-Aut;1-Hea;3-Coo;9-Fan;14...
3: Control_ Mode Cool/Heat [DPT_1.100] - 0-Cool;1-Heat
4: Control_ Mode Auto [DPT_1.002] - 1-Set AUTO mode
5: Control_ Mode Heat [DPT_1.002] - 1-Set HEAT mode
6: Control_ Mode Cool [DPT_1.002] - 1-Set COOL mode
7: Control_ Mode Fan [DPT_1.002] - 1-Set FAN mode
8: Control_ Mode Dry [DPT_1.002] - 1-Set DRY mode
9: Control_ Mode -/+ [DPT_1.007] - 0-Decrease;1-Increase
10: Control_ Fan Speed [DPT_5.001] - Thresholds: 100*(n+0'5)...
11: Control_ Fan Speed Man/Auto [DPT_1.002] - 0-Manual;1-...
12: Control_ Fan Speed 1 [DPT_1.002] - 1-Set Fan Speed 1
13: Control_ Fan Speed 2 [DPT_1.002] - 1-Set Fan Speed 2
14: Control_ Fan Speed 3 [DPT_1.002] - 1-Set Fan Speed 3
15: Control_ Fan Speed 4 [DPT_1.002] - 1-Set Fan Speed 4
16: Control_ Fan Speed 5 [DPT_1.002] - 1-Set Fan Speed 5
19: Control_ Fan Speed -/+ [DPT_1.007] - 0-Decrease;1-Incre...
21: Control_ Vanes U-D Man/Auto [DPT_1.002] - 0-Manual;1-...
30: Control_ Vanes U-D Swing [DPT_1.002] - 0-Stop;1-Swing
36: Control_ Vanes L-R Man/Auto [DPT_1.002] - 0-Manual;1-...

IR AC interface, 2 binary inputs configuration v1.0.3

AC model

AC brand: Acson

Model: ASCK ** C

Other

Delay before sending initial 'Read' telegrams: 10 s

Scene to execute on bus recovery / startup: (none)

☐ Enable 'lock remote control' objects

☐ Enable 'operation time' objects

RGB LED mode: Always on

Configuration saved: 6/23/2017 4:10:44 PM

Catalogue updated: (never)

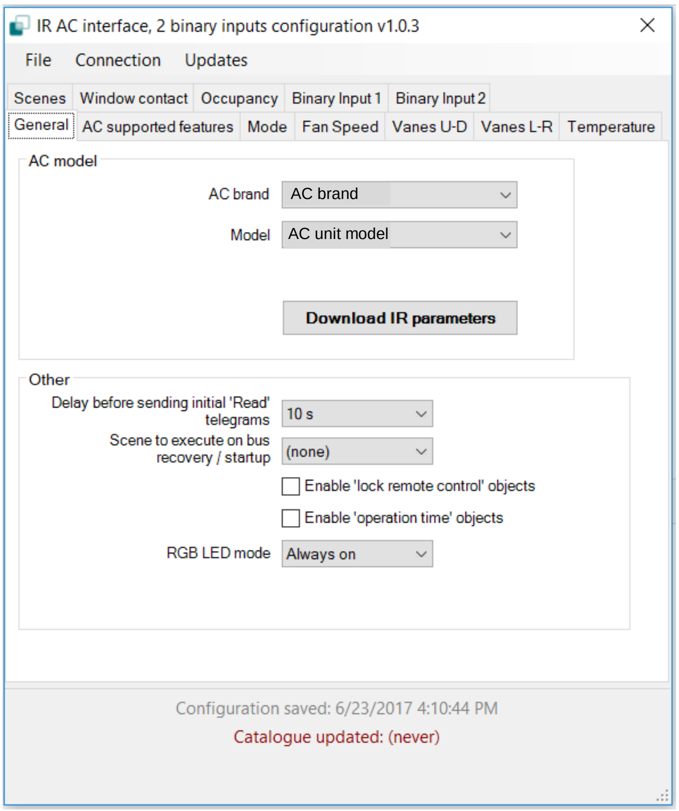
Figure 5.1 ETS Project managing and plugin screen

Remember that before start using the IntesisBox interface along with the AC unit, you need to set up at least the brand and type of you AC unit. Check section 5.1 for more information about it.

IMPORTANT: Please, update the Catalogue before proceeding with the device configuration and programming. The laptop where ETS is running shall have Internet connection to update the catalogue.

5.1 *General configuration*

Inside this parameter's dialog it is possible to activate or change the parameters shown below:



IR AC interface, 2 binary inputs configuration v1.0.3

AC model

AC brand: AC brand

Model: AC unit model

Other

Delay before sending initial 'Read' telegrams: 10 s

Scene to execute on bus recovery / startup: (none)

□ Enable 'lock remote control' objects

□ Enable 'operation time' objects

RGB LED mode: Always on

Configuration saved: 6/23/2017 4:10:44 PM

Catalogue updated: (never)

Figure 5.2 General parameters

5.1.1 AC brand

Use the dropdown menu to select the AC brand of the AC unit you want to control.

In case your AC unit brand is not present, please select the IS-IR-KNX-1i and contact our support department for more information about the Model to select.

5.1.2 Model

Use the dropdown menu to select the AC brand of the AC unit you want to control.

In case your AC unit brand is not present in the AC brand list, please select the IS-IR-KNX-1i and contact our support department for more information about the Model to select.

5.1.3 Delay before sending initial "Read" telegrams

This parameter sets the delay before the interface will send READ telegrams for the group addresses associated on its *Control_* objects on bus recovery or application reset/start-up. All *Control_* objects with both Transmit **(T)** and Update **(U)** flags enabled will send READs and their values will be updated with the response when received.

Valid values go from 10 to 60 seconds. This is to give time enough to other KNX devices on the bus to start-up before sending the READs.

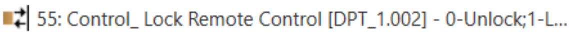
5.1.4 Scene to execute on bus recovery / startup

This parameter executes a selected scene on bus recovery or startup, only if the selected scene has an enabled preset or values previously saved from KNX bus (see Scene Configuration dialog). You can select any of the 5 available scenes.

5.1.5 Enable “lock control” objects

This parameter shows/hide the *Control_ Lock Control Obj* communication object which, depending on the sent value, locks or unlocks ALL the *Control_* communication objects except itself.

When a **“1”** value is sent to this communication object, the remote controller is locked. To be unlocked a **“0”** value must be sent. The gateway remembers the last value received even if a KNX bus reset/failure happens.



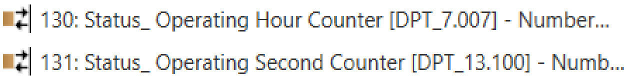
55: Control_ Lock Remote Control [DPT_1.002] - 0-Unlock;1-L...

Figure 5.3 Communication object detail

⚠ ***Important:*** *If an initial scene is enabled and it has as Value for Remote Lock (unchanged) or unlocked, this would unlock the remote controller because the initial scene has priority over the Control_ Lock Remote Control communication object.*

5.1.6 Enable func “Operation time objects”

This parameter shows/hides the *Status_ Operating Hour Counter and Status_ Operating Second Counter* communication object which counts the number of operating hours for the IS-IR-KNX-1i.



130: Status_ Operating Hour Counter [DPT_7.007] - Number...

131: Status_ Operating Second Counter [DPT_13.100] - Numb...

Figure 5.4 Communication object detail

- If set to **“no”** the object will not be shown.
- If set to **“yes”** the *Status_ Operation Hour Counter* object will appear.
  - This object can be read and sends its status every time an hour is counted. The gateway keeps that count in memory and the status is sent also after a KNX bus reset/failure. Although this object is marked as a *Status_* object it also can be written to update the counter when needed. To reset the counter should be written a **“0”** value.

⚠ ***Important:*** *This object comes by default without the write* ***(W)*** *flag activated. If is necessary to write on it, this flag must be activated.*

⚠ ***Important:*** *This object will also return its status, every time a value is written, only if it’s different from the existing one.*

⚠ ***Important:*** *If the stored value is 0 hours, the gateway will not send the status to KNX.*

5.1.7 RGB LED mode

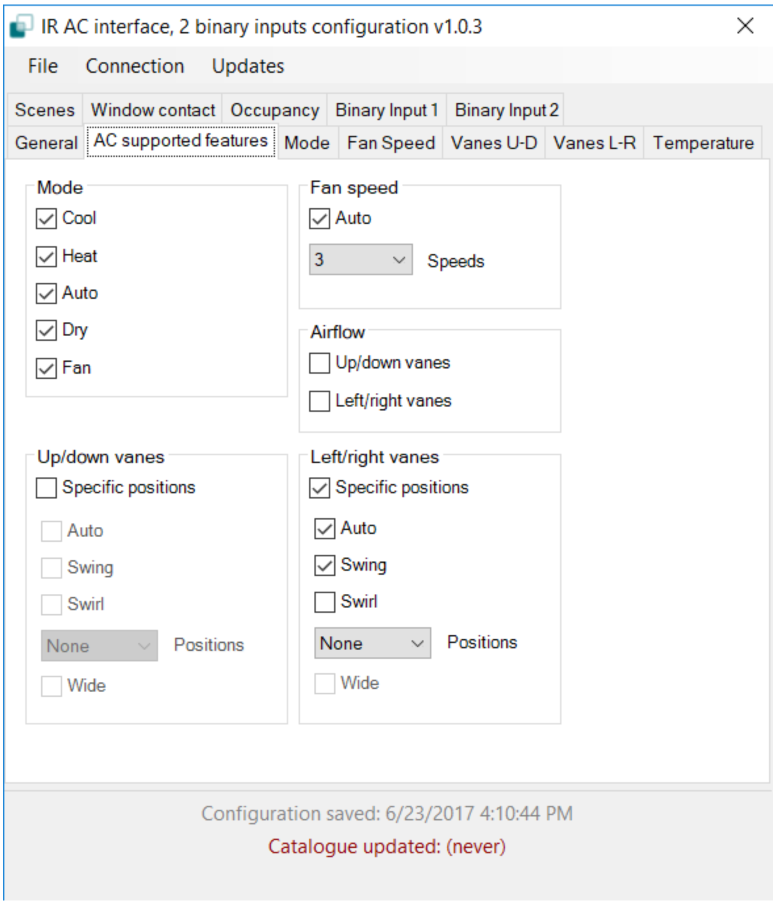
This parameter determines the working mode of the interface LED.

- If set to **“Always off”** the LED will always be off.
- If set to **“Always on”** the LED will always be on.
- If set to **“Only on changes”** the LED will always change when there is a change of value in any of the active communication objects.

5.2 *AC supported features*

Select the AC features of your AC unit to match both: the AC unit features with the enabled communication objects and parameters.

Please, select these parameters carefully, otherwise not expected behavior may occur.



Mode
☑ Cool
☑ Heat
☑ Auto
☑ Dry
☑ Fan

Fan speed
☑ Auto
3 Speeds

Airflow
☐ Up/down vanes
☐ Left/right vanes

Up/down vanes
☐ Specific positions
☐ Auto
☐ Swing
☐ Swirl
None Positions
☐ Wide

Left/right vanes
☑ Specific positions
☑ Auto
☑ Swing
☐ Swirl
None Positions
☐ Wide

Configuration saved: 6/23/2017 4:10:44 PM

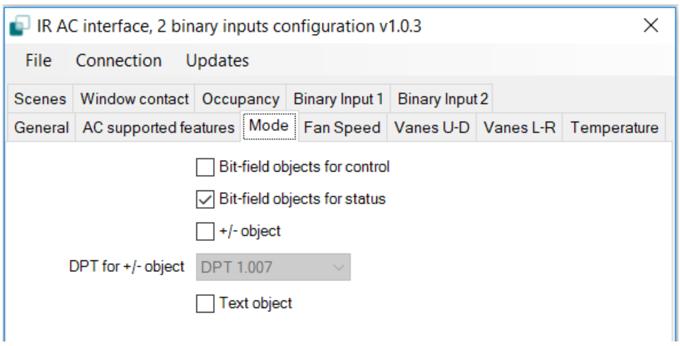
Catalogue updated: (never)

Figure 5.5 AC supported features

5.3 *Mode*

All the parameters in this section are related with the different mode properties and communication objects.

The byte-type communication object for Mode works with the DTP_20.105. Auto mode will be enabled with a **“0”** value, Heat mode with a **“1”** value, Cool mode with a **“3”** value, Fan mode with a **“9”** value and Dry mode with a **“14”** value.



☐ Bit-field objects for control

☑ Bit-field objects for status

☐ +/- object

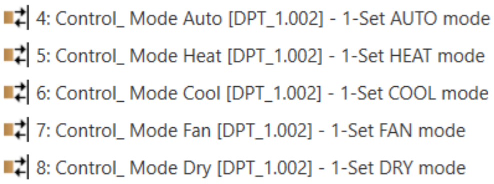
DPT for +/- object: DPT 1.007

☐ Text object

Figure 5.6 AC mode additional communication objects

5.3.1 Enable use of bit-type Mode objects (for control)

This parameter shows/hides the bit-type *Control_ Mode* objects.


4: Control_ Mode Auto [DPT_1.002] - 1-Set AUTO mode

5: Control_ Mode Heat [DPT_1.002] - 1-Set HEAT mode

6: Control_ Mode Cool [DPT_1.002] - 1-Set COOL mode

7: Control_ Mode Fan [DPT_1.002] - 1-Set FAN mode

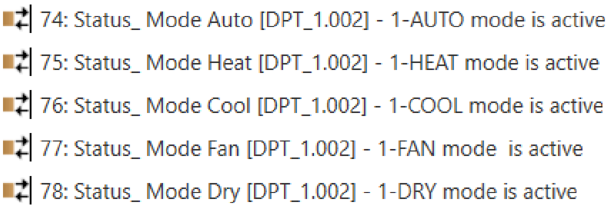
8: Control_ Mode Dry [DPT_1.002] - 1-Set DRY mode

Figure 5.7 Communication object detail

- If set to **“no”** the objects will not be shown.
- If set to **“yes”** the *Control_ Mode* objects for Auto, Heat, Cool, Fan and Dry will appear. To activate a mode by using these objects a **“1”** value has to be sent.

5.3.2 Enable use of bit-type Mode objects (for status)

This parameter shows/hides the bit-type *Status_ Mode* objects.


74: Status_ Mode Auto [DPT_1.002] - 1-AUTO mode is active

75: Status_ Mode Heat [DPT_1.002] - 1-HEAT mode is active

76: Status_ Mode Cool [DPT_1.002] - 1-COOL mode is active

77: Status_ Mode Fan [DPT_1.002] - 1-FAN mode is active

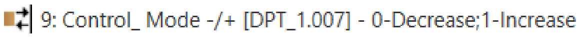
78: Status_ Mode Dry [DPT_1.002] - 1-DRY mode is active

Figure 5.8 Communication object detail

- ○ If set to **“no”** the objects will not be shown.
- ○ If set to **“yes”** the *Status_ Mode* objects for Auto, Heat, Cool, Fan and Dry will appear. When enabled, a mode will return a **“1”** through its bit-type object.

5.3.3 Enable use of + / - object for Mode

This parameter shows/hides the *Control_ Mode +/-* communication object which lets change the indoor unit mode by using two different datapoint types.



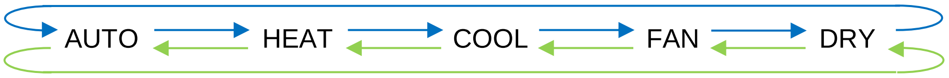
9: Control_ Mode -/+ [DPT_1.007] - 0-Decrease;1-Increase

- ○ If set to **“no”** the object will not be shown.
- ○ If set to **“yes”** the *Control_ Mode +/-* object and a new parameter will appear.

➢ <u>DPT type for +/- Mode Object</u>

This parameter lets choose between the datapoints **0-Up / 1-Down [DPT_1.008]** and **0-Decrease / 1-Increase [DPT_1.007]** for the *Control_ Mode +/-* object.

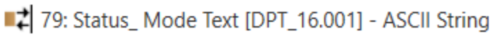
The sequence followed when using this object is shown below:



- 🟦 Up / Increase
- 🟩 Down / Decrease

5.3.4 Enable use of Text object for Mode

This parameter shows/hides the *Status_ Mode Text* communication object.

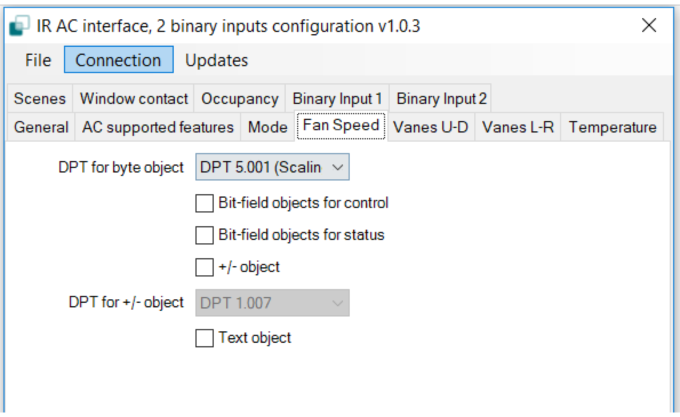


79: Status_ Mode Text [DPT_16.001] - ASCII String

- ○ If set to **“no”** the object will not be shown.
- ○ If set to **“yes”** the *Status_ Mode Text* object will appear.

5.4 *Fan Speed*

All the parameters in this section are related with the Fan Speed properties and communication objects.



IR AC interface, 2 binary inputs configuration v1.0.3

DPT for byte object: DPT 5.001 (Scalin

□ Bit-field objects for control

□ Bit-field objects for status

□ +/- object

DPT for +/- object: DPT 1.007

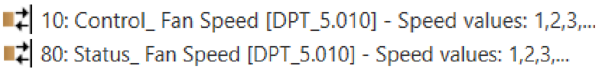
□ Text object

Figure 5.9 Fan Speed parameters

5.4.1 DPT object type for fan speed

With this parameter is possible to change de DPT for the *Control_ Fan Speed* and *Status_ Fan Speed* byte-type communication objects. Datapoints Scaling (DPT_5.001) and Enumerated (DPT_5.010) can be selected.

- When **"Enumerated [DPT 5.010]"** is selected, *Control_ Fan Speed* and *Status_ Fan Speed* communication objects for this DPT will appear. Also, depending on the number of fan speeds selected, these objects will be different.



10: Control_ Fan Speed [DPT_5.010] - Speed values: 1,2,3,...

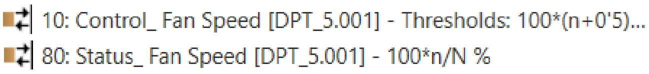
80: Status_ Fan Speed [DPT_5.010] - Speed values: 1,2,3,...

The first fan speed will be selected if a **"1"** is sent to the *Control_* object. The second fan speed will be selected sending a **"2"** and so on.

The *Status_* object will always return the value for the fan speed selected.

⚠ ***Important:*** *In both cases if a **"0"** value is sent to the Control_ object, the minimum fan speed will be selected. If a value bigger than **"2"** (in case of 2 speeds) or bigger than **"3"** (in case of 3 fan speeds) is sent to the Control_ object, then the maximum fan speed will be selected.*

- When **"Scaling [DPT 5.001]"** is selected, *Control_ Fan Speed* and *Status_ Fan Speed* communication objects for this DPT will appear. Also, depending on the number of fan speeds selected, these objects will be different.



10: Control_ Fan Speed [DPT_5.001] - Thresholds: 100*(n+0'5)...

80: Status_ Fan Speed [DPT_5.001] - 100*n/N %

The formula used to calculate the value to be set in the Control object is ‘**100*(n+0,5)/N %’**, where n is the current fan speed and N the maximum number of fan speeds.

On the other hand, the formula to calculate the status to be read according to the current value is ‘**100*n/N**’, where n is the current fan speed and N the maximum number of fan speeds.

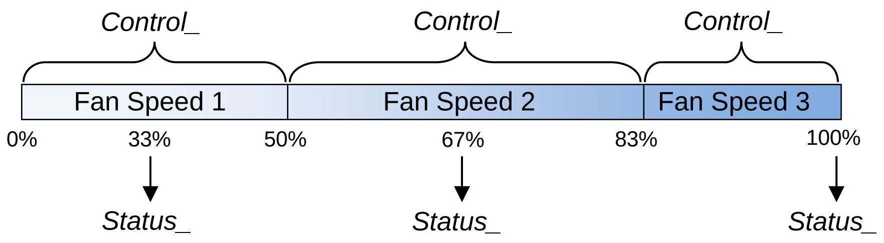
Check this example with 3 fan speeds:

When a value between **0%** and **49%** is sent to the *Control_* object the first fan speed will be selected.

When a value between **50%** and **83%** is sent to the *Control_* object, the second speed will be selected.

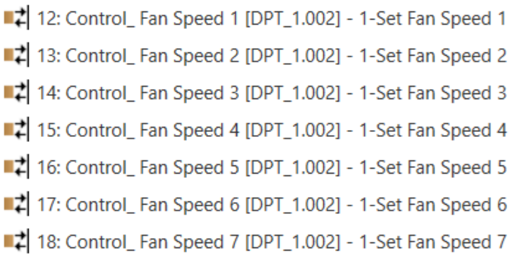
When a value between **84%** and **100%** is sent to the *Control_* object, the third speed will be selected.

The *Status_* object will return a **33%** when the first speed is selected, a **67%** for the second one and a **100%** for the third one.



5.4.2 Enable use of bit-type Fan Speed objects (for Control)

This parameter shows/hides the bit-type *Control_ Fan Speed* objects.

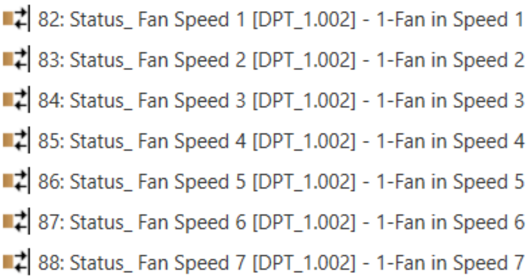


12: Control_ Fan Speed 1 [DPT_1.002] - 1-Set Fan Speed 1
13: Control_ Fan Speed 2 [DPT_1.002] - 1-Set Fan Speed 2
14: Control_ Fan Speed 3 [DPT_1.002] - 1-Set Fan Speed 3
15: Control_ Fan Speed 4 [DPT_1.002] - 1-Set Fan Speed 4
16: Control_ Fan Speed 5 [DPT_1.002] - 1-Set Fan Speed 5
17: Control_ Fan Speed 6 [DPT_1.002] - 1-Set Fan Speed 6
18: Control_ Fan Speed 7 [DPT_1.002] - 1-Set Fan Speed 7

- If set to **“no”** the objects will not be shown.
- If set to **“yes”** the *Control_ Fan Speed* objects for Speed 1, Speed 2 and Speed 3 (if available) will appear. To activate a Fan Speed by using these objects a **“1”** value has to be sent.

5.4.3 Enable use of bit-type Fan Speed objects (for Status)

This parameter shows/hides the bit-type *Status_ Fan Speed* objects.



82: Status_ Fan Speed 1 [DPT_1.002] - 1-Fan in Speed 1

83: Status_ Fan Speed 2 [DPT_1.002] - 1-Fan in Speed 2

84: Status_ Fan Speed 3 [DPT_1.002] - 1-Fan in Speed 3

85: Status_ Fan Speed 4 [DPT_1.002] - 1-Fan in Speed 4

86: Status_ Fan Speed 5 [DPT_1.002] - 1-Fan in Speed 5

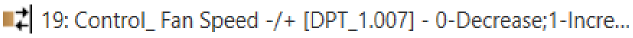
87: Status_ Fan Speed 6 [DPT_1.002] - 1-Fan in Speed 6

88: Status_ Fan Speed 7 [DPT_1.002] - 1-Fan in Speed 7

- If set to **“no”** the objects will not be shown.
- If set to **“yes”** the *Status_ Fan Speed* objects for Speed 1, Speed 2 and Speed 3 (if available) will appear. When a Fan Speed is enabled, a **“1”** value is returned through its bit-type object.

5.4.4 Enable use of +/- object for Fan Speed

This parameter shows/hides the *Control_ Fan Speed* +/- communication object which lets you increase/decrease the indoor unit fan speed by using two different datapoint types.



19: Control_ Fan Speed -/+ [DPT_1.007] - 0-Decrease;1-Incre...

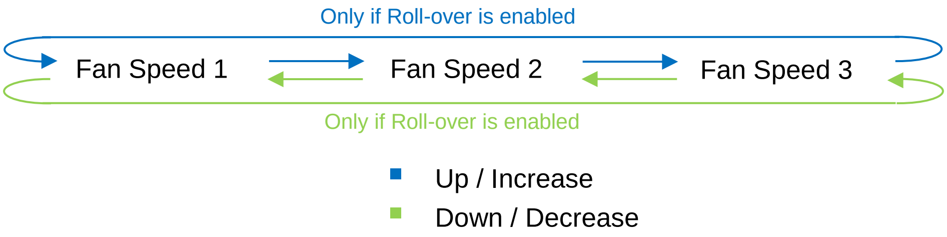
- If set to **“no”** the object will not be shown.
- If set to **“yes”** the *Control_ Fan Speed* +/- object.

➢ <u>DPT type for +/- Fan Speed Object</u>

This parameter lets choose between the datapoints **0-Up / 1-Down [DPT_1.008]** and **0-Decrease / 1-Increase [DPT_1.007]** for the *Control_ Fan Speed* +/- object.

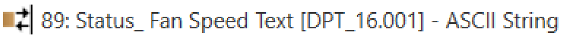
➢ <u>Roll-over Speed at upper/lower limit</u>

This parameter lets choose if roll-over will be enabled (**“yes”**) or disabled (**“no”**) for the *Control_ Fan Speed* +/- object.



5.4.5 Enable use of Text object for Fan Speed

This parameter shows/hides the *Status_ Fan Speed Text* communication object.



89: Status_ Fan Speed Text [DPT_16.001] - ASCII String

- If set to **“no”** the object will not be shown.
- If set to **“yes”** the *Status_ Fan Speed Text* object will appear.

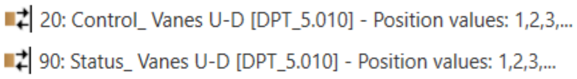
5.5 *Up-Down vanes configuration dialog*

All the parameters in this section are related with the Vane Up-Down properties and communication objects.

5.5.1 DPT object type for Vane Up-Down

With this parameter is possible to change de DPT for the *Control_ Vane Up-Down* and *Status_ Vane Up-Down* byte-type communication objects. Datapoints Scaling (DPT_5.001) and Enumerated (DPT_5.010) can be selected.

- When **“Enumerated [DPT 5.010]”** is selected, *Control_ Vane Up-Down* and *Status_ Vane Up-Down* communication objects for this DPT will appear.

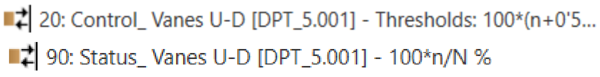

20: Control_ Vanes U-D [DPT_5.010] - Position values: 1,2,3,...
90: Status_ Vanes U-D [DPT_5.010] - Position values: 1,2,3,...

To choose a vane position, values from **“1”** to **“N”** can be sent to the *Control_* object. Each value will correspond to the position (i.e. Value **“3”** = Position 3).

The *Status_* object will always return the value for the vane position selected.

⚠ ***Important:*** *If a **“0”** value is sent to the Control_ object, the Position 1 will be selected. If a value bigger than **“N”** is sent to the Control_ object, then the Position N will be selected.*

- When **“Scaling [DPT 5.001]”** is selected, *Control_ Vane Up-Down* and *Status_ Vane Up-Down* communication objects for this DPT will appear.


20: Control_ Vanes U-D [DPT_5.001] - Thresholds: 100*(n+0'5...
90: Status_ Vanes U-D [DPT_5.001] - 100*n/N %

The formula used to calculate the value to be set in the Control object is ‘**100*(n+0,5)/N %**’, where n is the current fan speed and N the maximum number of fan speeds.

On the other hand, the formula to calculate the status to be read according to the current value is ‘**100*n/N**’, where n is the current fan speed and N the maximum number of fan speeds.

Check the example with 5 positions:

When a value between **0%** and **29%** is sent to the *Control_* object the first vane position will be selected.

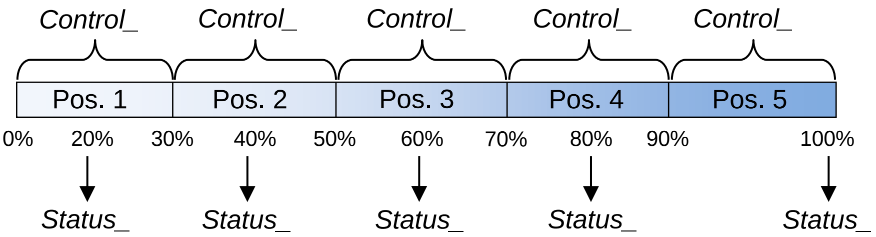
When a value between **30%** and **49%** is sent to the *Control_* object, the second vane position will be selected.

When a value between **50%** and **69%** is sent to the *Control_* object, the third vane position will be selected.

When a value between **70%** and **89%** is sent to the *Control_* object, the fourth vane position will be selected.

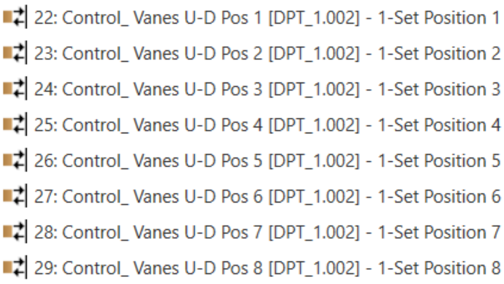
When a value between **90%** and **100%** is sent to the *Control_* object, the fifth vane position will be selected.

The *Status_* object will return a **20%** for the first vane position, a **40%** for the second one, a **60%** for the third one, an **80%** for the fourth one and a **100%** for the fifth and last one.



5.5.2 Enable use of bit-type Vane U-D objects (for Control)

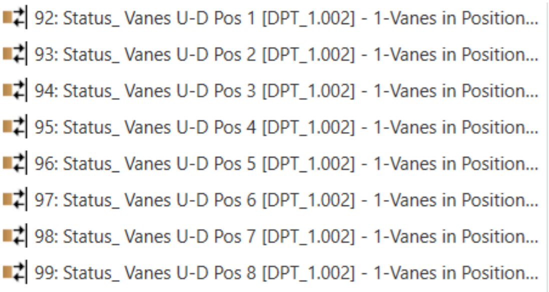
This parameter shows/hides the bit-type *Control_ Vane Up-Down* objects.


22: Control_ Vanes U-D Pos 1 [DPT_1.002] - 1-Set Position 1
23: Control_ Vanes U-D Pos 2 [DPT_1.002] - 1-Set Position 2
24: Control_ Vanes U-D Pos 3 [DPT_1.002] - 1-Set Position 3
25: Control_ Vanes U-D Pos 4 [DPT_1.002] - 1-Set Position 4
26: Control_ Vanes U-D Pos 5 [DPT_1.002] - 1-Set Position 5
27: Control_ Vanes U-D Pos 6 [DPT_1.002] - 1-Set Position 6
28: Control_ Vanes U-D Pos 7 [DPT_1.002] - 1-Set Position 7
29: Control_ Vanes U-D Pos 8 [DPT_1.002] - 1-Set Position 8

- If set to **"no"** the objects will not be shown.
- If set to **"yes"** the *Control_ Vane Up-Down* objects for each Position (1 to 5) will appear. To activate a Vane Position by using these objects, a **"1"** value has to be sent.

5.5.3 Enable use of bit-type Vane U-D objects (for Status)

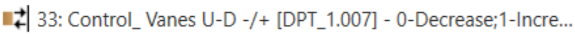
This parameter shows/hides the bit-type *Status_ Vane Up-Down* objects.


92: Status_ Vanes U-D Pos 1 [DPT_1.002] - 1-Vanes in Position...
93: Status_ Vanes U-D Pos 2 [DPT_1.002] - 1-Vanes in Position...
94: Status_ Vanes U-D Pos 3 [DPT_1.002] - 1-Vanes in Position...
95: Status_ Vanes U-D Pos 4 [DPT_1.002] - 1-Vanes in Position...
96: Status_ Vanes U-D Pos 5 [DPT_1.002] - 1-Vanes in Position...
97: Status_ Vanes U-D Pos 6 [DPT_1.002] - 1-Vanes in Position...
98: Status_ Vanes U-D Pos 7 [DPT_1.002] - 1-Vanes in Position...
99: Status_ Vanes U-D Pos 8 [DPT_1.002] - 1-Vanes in Position...

- If set to **"no"** the objects will not be shown.
- If set to **"yes"** the *Status_ Vane Up-Down* objects for each Position (1 to N) will appear. When a Vane Position is enabled, a **"1"** value is returned through its bit-type object.

5.5.4 Enable use of +/- obj for Vane Up-Down

This parameter shows/hides the *Control_ Vane Up-Down +/-* communication object which lets you change the indoor unit vane position by using two different datapoint types.


33: Control_ Vanes U-D -/+ [DPT_1.007] - 0-Decrease;1-Incre...

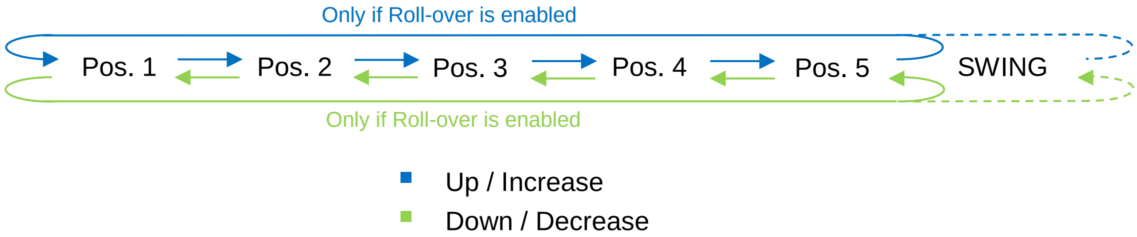
- ○ If set to **"no"** the object will not be shown.
- ○ If set to **"yes"** the *Control_ Vane Up-Down +/-* object.

➢ <u>DPT type for +/- Vane Up-Down obj</u>

This parameter lets choose between the datapoints **0-Up / 1-Down [DPT_1.008]** and **0-Decrease / 1-Increase [DPT_1.007]** for the *Control_ Vane Up-Down +/-* object.

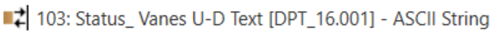
➢ <u>Rollover Vane at upper/lower limit</u>

This parameter lets choose if roll-over will be enabled (**"yes"**) or disabled (**"no"**) for the *Vane Up-Down +/-* object.



5.5.5 Enable use of Text object for Vane U-D

This parameter shows/hides the *Status_ Vane Up-Down Text* communication object.


103: Status_ Vanes U-D Text [DPT_16.001] - ASCII String

- ○ If set to **"no"** the object will not be shown.
- ○ If set to **"yes"** the *Status_ Vane Up-Down Text* object will appear.

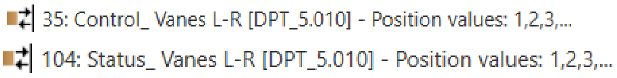
5.6 *Left-Right vanes configuration dialog*

All the parameters in this section are related with the Vane Up-Down properties and communication objects.

5.6.1 DPT object type for Vane Left-Right

With this parameter is possible to change de DPT for the *Control_ Vane Left-Right* and *Status_ Vane Left-Right* byte-type communication objects. Datapoints Scaling (DPT_5.001) and Enumerated (DPT_5.010) can be selected.

- When **"Enumerated [DPT 5.010]"** is selected, *Control_ Vane Left-Right* and *Status_ Vane Left-Right* communication objects for this DPT will appear.



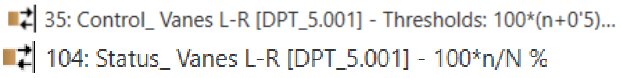
35: Control_ Vanes L-R [DPT_5.010] - Position values: 1,2,3,...
104: Status_ Vanes L-R [DPT_5.010] - Position values: 1,2,3,...

To choose a vane position, values from **"1"** to **"N"** can be sent to the *Control_* object. Each value will correspond to the position (i.e. Value **"3"** = Position 3).

The *Status_* object will always return the value for the vane position selected.

⚠ ***Important:** If a **"0"** value is sent to the Control_ object, the Position 1 will be selected. If a value bigger than **"N"** is sent to the Control_ object, then the Position N will be selected.*

- When **"Scaling [DPT 5.001]"** is selected, *Control_ Vane Up-Down* and *Status_ Vane Up-Down* communication objects for this DPT will appear.



35: Control_ Vanes L-R [DPT_5.001] - Thresholds: 100*(n+0'5)...
104: Status_ Vanes L-R [DPT_5.001] - 100*n/N %

The formula used to calculate the value to be set in the Control object is '**100*(n+0,5)/N %**', where n is the current fan speed and N the maximum number of fan speeds.

On the other hand, the formula to calculate the status to be read according to the current value is '**100*n/N**', where n is the current fan speed and N the maximum number of fan speeds.

Check the example with 5 positions:

When a value between **0%** and **29%** is sent to the *Control_* object the first vane position will be selected.

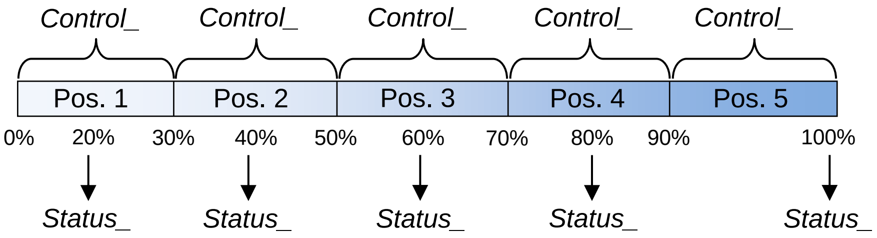
When a value between **30%** and **49%** is sent to the *Control_* object, the second vane position will be selected.

When a value between **50%** and **69%** is sent to the *Control_* object, the third vane position will be selected.

When a value between **70%** and **89%** is sent to the *Control_* object, the fourth vane position will be selected.

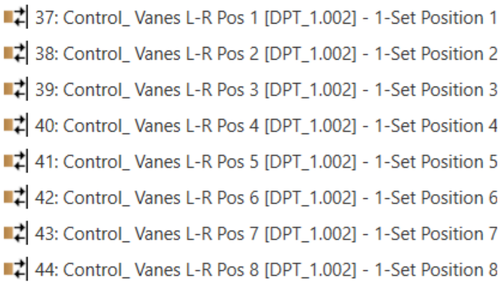
When a value between **90%** and **100%** is sent to the *Control_* object, the fifth vane position will be selected.

The *Status_* object will return a **20%** for the first vane position, a **40%** for the second one, a **60%** for the third one, an **80%** for the fourth one and a **100%** for the fifth and last one.



5.6.2 Enable use of bit-type Vane L-R objects (for Control)

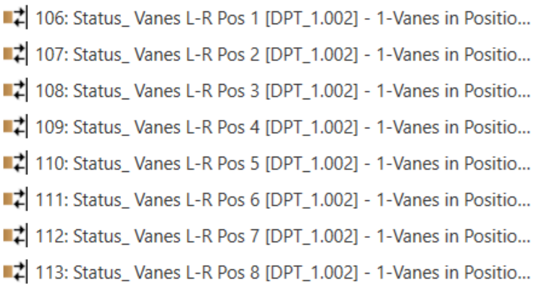
This parameter shows/hides the bit-type *Control_ Vane Left-Right* objects.


37: Control_ Vanes L-R Pos 1 [DPT_1.002] - 1-Set Position 1
38: Control_ Vanes L-R Pos 2 [DPT_1.002] - 1-Set Position 2
39: Control_ Vanes L-R Pos 3 [DPT_1.002] - 1-Set Position 3
40: Control_ Vanes L-R Pos 4 [DPT_1.002] - 1-Set Position 4
41: Control_ Vanes L-R Pos 5 [DPT_1.002] - 1-Set Position 5
42: Control_ Vanes L-R Pos 6 [DPT_1.002] - 1-Set Position 6
43: Control_ Vanes L-R Pos 7 [DPT_1.002] - 1-Set Position 7
44: Control_ Vanes L-R Pos 8 [DPT_1.002] - 1-Set Position 8

- If set to **"no"** the objects will not be shown.
- If set to **"yes"** the *Control_ Vane Up-Down* objects for each Position (1 to N) will appear. To activate a Vane Position by using these objects, a **"1"** value has to be sent.

5.6.3 Enable use of bit-type Vane U-D objects (for Status)

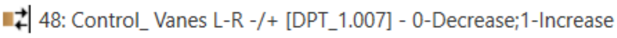
This parameter shows/hides the bit-type *Status_ Vane Up-Down* objects.


106: Status_ Vanes L-R Pos 1 [DPT_1.002] - 1-Vanes in Positio...
107: Status_ Vanes L-R Pos 2 [DPT_1.002] - 1-Vanes in Positio...
108: Status_ Vanes L-R Pos 3 [DPT_1.002] - 1-Vanes in Positio...
109: Status_ Vanes L-R Pos 4 [DPT_1.002] - 1-Vanes in Positio...
110: Status_ Vanes L-R Pos 5 [DPT_1.002] - 1-Vanes in Positio...
111: Status_ Vanes L-R Pos 6 [DPT_1.002] - 1-Vanes in Positio...
112: Status_ Vanes L-R Pos 7 [DPT_1.002] - 1-Vanes in Positio...
113: Status_ Vanes L-R Pos 8 [DPT_1.002] - 1-Vanes in Positio...

- If set to **"no"** the objects will not be shown.
- If set to **"yes"** the *Status_ Vane Up-Down* objects for each Position (1 to N) will appear. When a Vane Position is enabled, a **"1"** value is returned through its bit-type object.

5.6.4 Enable use of +/- obj for Vane Left-Right

This parameter shows/hides the *Control_ Vane Left-Right* +/- communication object which lets you change the indoor unit vane position by using two different datapoint types.


48: Control_ Vanes L-R -/+ [DPT_1.007] - 0-Decrease;1-Increase

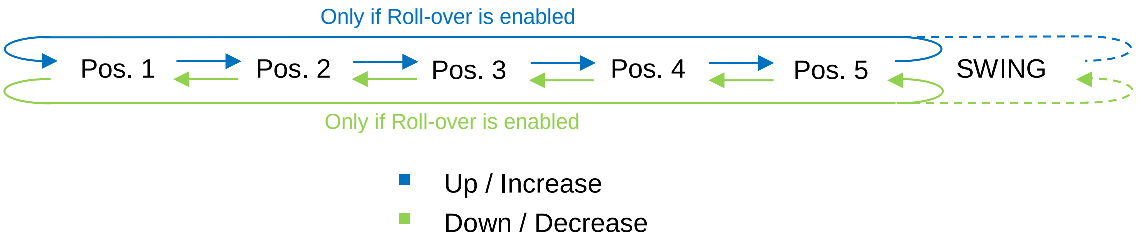
- If set to **"no"** the object will not be shown.
- If set to **"yes"** the *Control_ Vane Left-Right* +/- object.

➢ <u>DPT type for +/- Vane Left-Right obj</u>

This parameter lets choose between the datapoints **0-Up / 1-Down [DPT_1.008]** and **0-Decrease / 1-Increase [DPT_1.007]** for the *Control_ Vane Left-Right* +/- object.

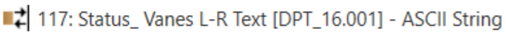
➢ <u>Rollover Vane at upper/lower limit</u>

This parameter lets choose if roll-over will be enabled (**"yes"**) or disabled (**"no"**) for the *Vane Up-Down* +/- object.



5.6.5 Enable use of Text object for Vane U-D

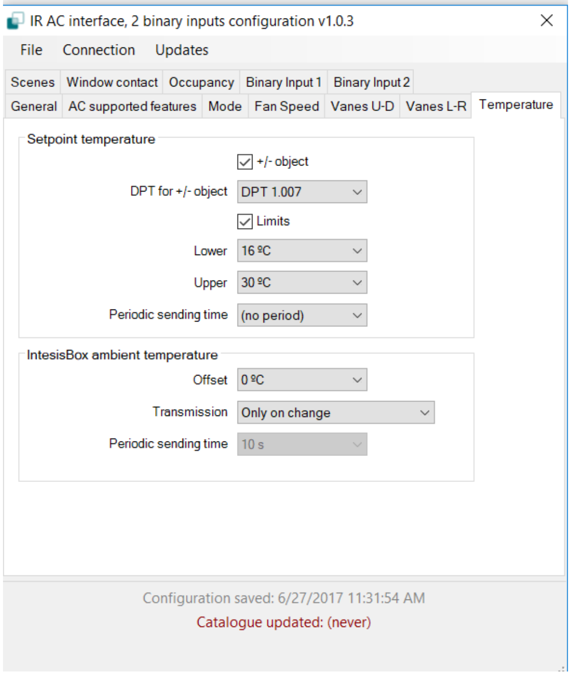
This parameter shows/hides the *Status_ Vane Up-Down Text* communication object.


117: Status_ Vanes L-R Text [DPT_16.001] - ASCII String

- If set to **"no"** the object will not be shown.
- If set to **"yes"** the *Status_ Vane Up-Down Text* object will appear.

5.7 *Temperature configuration dialog*

All the parameters in this section are related with the Temperature properties and communication objects.



IR AC interface, 2 binary inputs configuration v1.0.3

Setpoint temperature

☑ +/- object

DPT for +/- object: DPT 1.007

☑ Limits

Lower: 16 ºC

Upper: 30 ºC

Periodic sending time: (no period)

IntesisBox ambient temperature

Offset: 0 ºC

Transmission: Only on change

Periodic sending time: 10 s

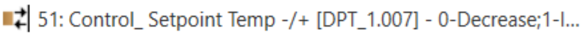
Configuration saved: 6/27/2017 11:31:54 AM

Catalogue updated: (never)

Figure 5.10 Tempeature settings

5.7.1 Set Point - Enable use of +/- obj for Setp Temp

This parameter shows/hides the *Control_ Setpoint Temp +/-* communication object which lets you change the indoor unit setpoint temperature by using two different datapoint types.



51: Control_ Setpoint Temp -/+ [DPT_1.007] - 0-Decrease;1-I...

- If set to **"no"** the object will not be shown.
- If set to **"yes"** the *Control_ Setpoint Temp +/-* object.

➢ <u>DPT type for +/- Setp Temp object</u>

This parameter lets choose between the datapoints **0-Up / 1-Down [DPT_1.008]** and **0-Decrease / 1-Increase [DPT_1.007]** for the *Control_ Setpoint Temp +/-* object.

(Lower limit) **16ºC** ⇄ 17ºC ⇄ … ⇄ 31ºC ⇄ **32ºC** (Upper limit)

- 🟦 Up / Increase
- 🟩 Down / Decrease

5.7.2 Set Point - Enable limits on Control_ Setpoint obj

This parameter enables to define temperature limits for the *Control_ Setpoint Temperature* object.

- If set to **"no"** the setpoint temperature limits for the *Control_ Setpoint Temperature* object will be the default: 16ºC for the lower limit and 32ºC for the upper limit.
- If set to **"yes"** it is possible to define temperature limits for the *Control_ Setpoint Temperature* object.
  - Control_ Set Temp Lower limit (ºC)

    This parameter lets to define the lower limit for the setpoint temperature.
  - Control_ Set Temp Upper limit (ºC)

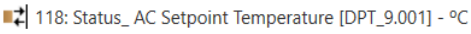
    This parameter lets to define the upper limit for the setpoint temperature.

⚠ ***Important:*** *If a setpoint temperature above the upper defined limit (or below the lower defined limit) is sent through the Control_ Setpoint Temperature object, it will be ALWAYS applied the limit defined.*

⚠ ***Important:*** *When limits are enabled, any setpoint temperature sent to the AC (even through scenes, special modes, etc.) will be limited.*

5.7.3 Set Point - Periodic sending time

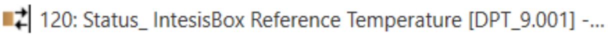
This parameter lets you change the interval of time (in seconds, from 0 to 255) at the end of which the AC setpoint temperature is sent to the KNX bus. For a **"0"** value, the AC setpoint temperature will ONLY be sent on change. The AC setpoint temperature is sent through the communication object *Status_ AC Setpoint Temp.*



118: Status_ AC Setpoint Temperature [DPT_9.001] - ºC

5.7.4 Ambient - Transmission of "Status_ AC Ret Temp"

This parameter lets to you choose if the AC return temperature will be sent **"only cyclically"**, **"only on change"** or **"cyclically and on change"**. The AC return temperature is sent through the communication object *Status_ AC Return Temp.*



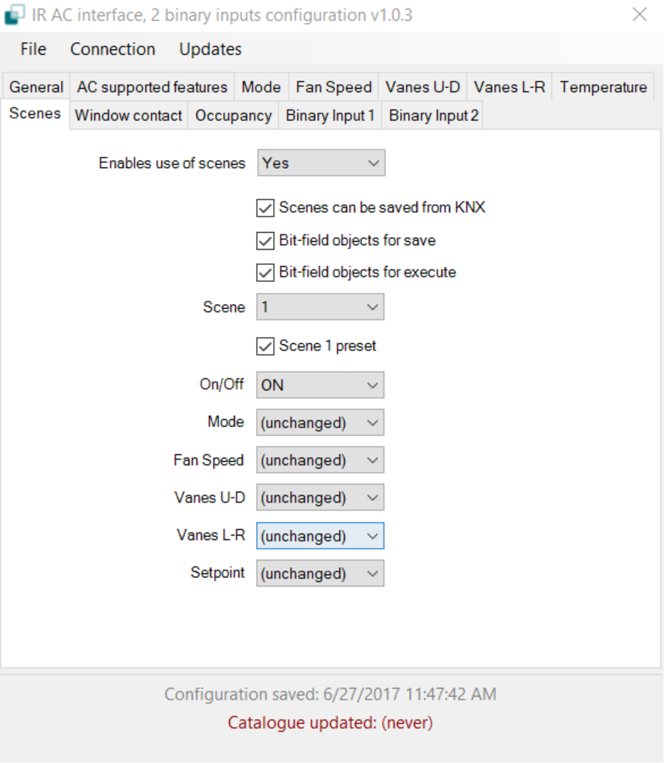
120: Status_ IntesisBox Reference Temperature [DPT_9.001] -...

5.7.5 Ambient - Periodic sending time

This parameter will only be available for the **"only cylically"** and **"cyclically and on change"** options, and lets you change the interval of time (in seconds, from 1 to 255) at the end of which the AC return temperature is sent to the KNX bus.

5.8 *Scene Configuration dialog*

All the parameters in this section are related with the Scene properties and communication objects. A scene contains values of: On/Off, Mode, Fan speed, Vane position and Setpoint Temperature.



Enables use of scenes: Yes

☑ Scenes can be saved from KNX

☑ Bit-field objects for save

☑ Bit-field objects for execute

Scene: 1

☑ Scene 1 preset

On/Off: ON

Mode: (unchanged)

Fan Speed: (unchanged)

Vanes U-D: (unchanged)

Vanes L-R: (unchanged)

Setpoint: (unchanged)

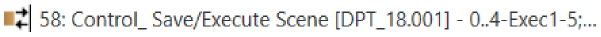
Configuration saved: 6/27/2017 11:47:42 AM

Catalogue updated: (never)

Figure 5.11 Scene configuration settings

5.8.1 Enable use of scenes

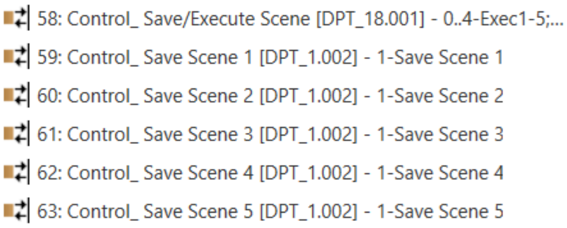
This parameter shows/hides the scene configuration parameters and communication objects.


58: Control_ Save/Execute Scene [DPT_18.001] - 0..4-Exec1-5;...

- If set to **"no"** the scene parameters and communication objects will not be shown.
- If set to **"yes"** the scene parameters and communication objects will be shown. To execute a scene through the byte-type object, a value from **"0"** to **"4"** has to be sent, correponding each one to a different scene (i.e. "0" = Scene 1;… "4" = Scene 5).

5.8.2 Scenes can be saved from KNX

This parameter shows/hides the *Control_ Save/Exec Scene* and all the *Control_ Save Scene* (if enabled) communication objects.



58: Control_ Save/Execute Scene [DPT_18.001] - 0..4-Exec1-5;...
59: Control_ Save Scene 1 [DPT_1.002] - 1-Save Scene 1
60: Control_ Save Scene 2 [DPT_1.002] - 1-Save Scene 2
61: Control_ Save Scene 3 [DPT_1.002] - 1-Save Scene 3
62: Control_ Save Scene 4 [DPT_1.002] - 1-Save Scene 4
63: Control_ Save Scene 5 [DPT_1.002] - 1-Save Scene 5

- If set to **"no"** the communication objects will not be shown.
- If set to **"yes"** the communication objects and a new parameter will appear. To store a scene through the byte-type object, a value from **"128"** to **"132"** has to be sent to the object, correponding each one to a different scene (i.e. "128" = Scene 1;… "132" = Scene 5).

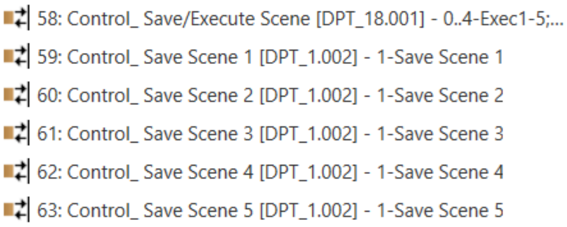
➢ Enable use of bit objects for storing scenes (from bus)

If set to **"no"** the objects will not be shown.

If set to **"yes"** the *Control_ Store Scene* objects for storing scenes will appear. To store a scene by using these objects, a **"1"** value has to be sent to the scene's object we want to store (i.e. to store scene 4, a "1" has to be sent to the *Control_ Store Scene 4* object).

5.8.3 Enable use of bit-field objects for save

This parameter shows/hides the *Control_ Execute Scene* bit-type communication objects.

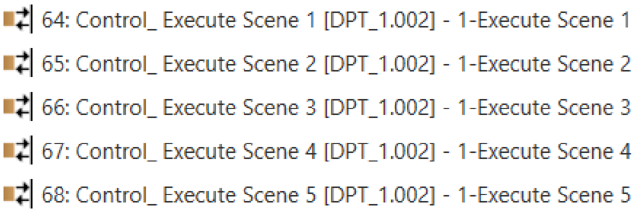


58: Control_ Save/Execute Scene [DPT_18.001] - 0..4-Exec1-5;...
59: Control_ Save Scene 1 [DPT_1.002] - 1-Save Scene 1
60: Control_ Save Scene 2 [DPT_1.002] - 1-Save Scene 2
61: Control_ Save Scene 3 [DPT_1.002] - 1-Save Scene 3
62: Control_ Save Scene 4 [DPT_1.002] - 1-Save Scene 4
63: Control_ Save Scene 5 [DPT_1.002] - 1-Save Scene 5

- If set to **"no"** the communication objects will not be shown.
- If set to **"yes"** the communication objects will appear. To execute a scene by using these objects, a **"1"** value has to be sent to the scene's object we want to execute (i.e. to execute scene 4, a "1" has to be sent to the *Control_ Execute Scene 4* object).

5.8.4 Enable use of bit-field objects for execute

This parameter shows/hides the *Control_ Execute Scene* bit-type communication objects.



64: Control_ Execute Scene 1 [DPT_1.002] - 1-Execute Scene 1
65: Control_ Execute Scene 2 [DPT_1.002] - 1-Execute Scene 2
66: Control_ Execute Scene 3 [DPT_1.002] - 1-Execute Scene 3
67: Control_ Execute Scene 4 [DPT_1.002] - 1-Execute Scene 4
68: Control_ Execute Scene 5 [DPT_1.002] - 1-Execute Scene 5

- If set to **“no”** the communication objects will not be shown.
- If set to **“yes”** the communication objects will appear. To execute a scene by using these objects, a **“1”** value has to be sent to the scene’s object we want to execute (i.e. to execute scene 4, a “1” has to be sent to the *Control_ Execute Scene 4* object).

5.8.5 Scene “x” preset

This parameter lets you define a preset for a scene (the following description is valid for all the scenes).

- If set to **“no”** the preset for the scene “x” will be disabled.
- If set to **“yes”** the preset will be enabled. When a scene is executed the values configured in the preset will be aplied.

⚠ ***Important:*** *If a scene’s preset is enabled, will not be possible to modify (store) the scene from the KNX bus.*

➢ Scene “x” / Value for On-Off

This parameter lets you choose the power of the indoor unit when the scene is executed. The following options are available: **“ON”, “OFF”** or **“(unchanged)”**.

➢ Scene “x” / Value for Mode

This parameter lets you choose the mode of the indoor unit when the scene is executed. The following options are available: **“AUTO”**, **“HEAT”**, **“COOL”**, **“FAN”**, **“DRY”**, or **“(unchanged)”**.

➢ Scene “x” / Value for Fan Speed

This parameter lets you choose the fan speed of the indoor unit when the scene is executed. The following options are available: **“SPEED 1”**, **“SPEED 2”**… **“SPEED N”**, or **“(unchanged)”**.

➢ Scene “x” / Value for Vane Up-Down

This parameter lets you choose the vane position of the indoor unit when the scene is executed. The following options are available: **“POSITION 1”**, **“POSITION 2”**… **“POSITION N”, “SWIRL”, “SWING”** or **“(unchanged)”**.

➢ Scene “x” / Value for Vane Left-Right

This parameter lets you choose the vane position of the indoor unit when the scene is executed. The following options are available: **“POSITION 1”**, **“POSITION 2”**… **“POSITION N”, “SWIRL”, “SWING”** or **“(unchanged)”**.

➢ Scene “x” / Value for Setp Temp (ºC)

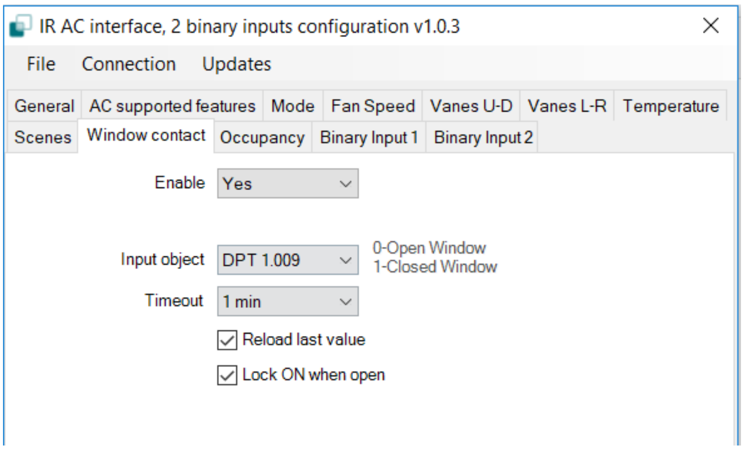
This parameter lets you choose the setpoint temperature of the indoor unit when the scene is executed. The following options are available: from **“16ºC”** to **“32ºC”** (both included), or **“(unchanged)”**.

⚠ ***Important:*** *If any preset value is configured as* ***"(unchanged)"****, the execution of this scene will not change current status of this feature in the AC unit.*

⚠ ***Important:*** *When a scene is executed, Status_ Current Scene object shows the number of this scene. Any change in previous items does Status_ Current Scene show* ***"No Scene"****. Only changes on items marked as* ***"(unchanged)"*** *will not disable current scene.*

5.9 *Enable use of Open Window*

This parameter shows/hides the *Control_ Window Contact Input* communication object which lets you Start/Stop a timeout to switch off the indoor unit.



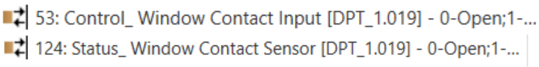
Enable: Yes

Input object: DPT 1.009 — 0-Open Window / 1-Closed Window

Timeout: 1 min

☑ Reload last value

☑ Lock ON when open



53: Control_ Window Contact Input [DPT_1.019] - 0-Open;1-...

124: Status_ Window Contact Sensor [DPT_1.019] - 0-Open;1-...

- If set to **"no"** the object will not be shown.

- If set to **"yes"** the *Control_ Window Contact Input* object will appear. If a **"1"** value is sent to this object, and the indoor unit is already turned on, the switch-off timeout will begin. If a **"0"** value is sent to this object, the switch-off timeout will stop.

➢ Input Object

This parameter lets you choose between the datapoints **0-Open / 1-Closed Window [DPT_1.009]** and **0-Stop / 1-Start Timeout [DPT_1.010]** for the *Control_ Switch Off Timeout*.

➢ Timeout (min)

This parameter lets you select how much time (in minutes) to wait before switching off the indoor unit.

➢ Reload last Value

If set to **"no"**, once the switch-off timeout is stopped, any value will be reloaded.

If set to **"yes"**, once the switch-off timeout is stopped, the last On/Off value sent will be reloaded.

- If a **"1"** value is sent to the *Control_ Window Contact Input* object after the timeout period, the indoor unit will **turn on**.

- If a **"0"** value is sent to the *Control_ Switch Off Timeout* after the timeout period, no action will be performed.

➢ <u>Lock ON when Open</u>

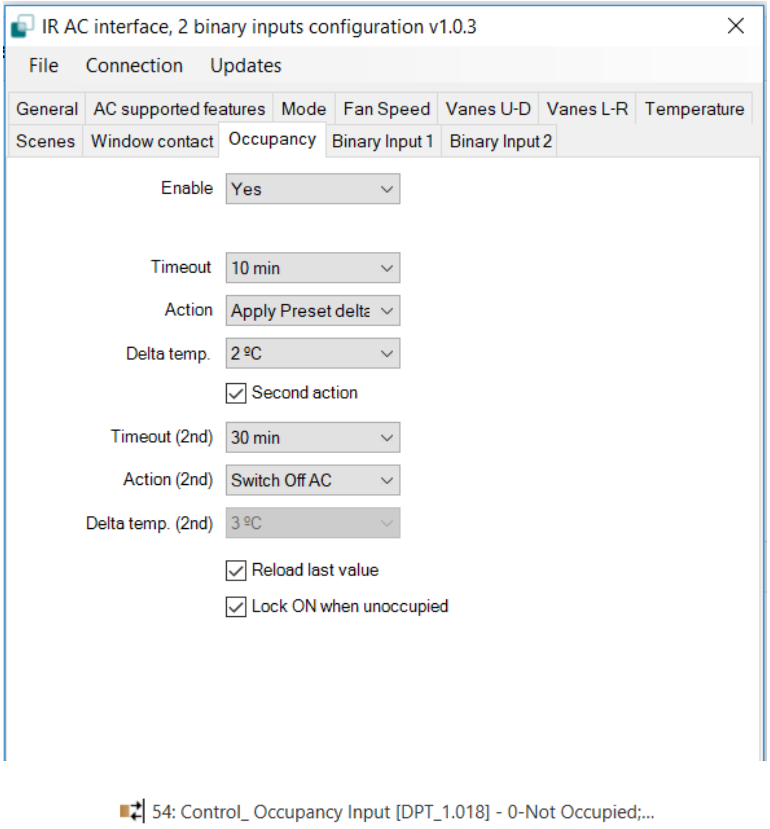
If set to **"no"**, On/Off commands while the window is open will be accepted.

- If a **"1"** value is sent to the *Control_ Switch Off Timeout* object the switch-off timeout period will begin again.
- If a **"0"** value is sent to the *Control_ Switch Off Timeout* object, no action will be performed.

If set to **"yes"**, On/Off commands, while the window is open, will be saved (but not applied). These commands will be used in the next parameter if set to **"yes"**.

5.10 *Enable use of Occupancy function*

This parameter shows/hides the *Control_ Occupancy Input* communication object which lets you apply different parameters to the indoor unit depending on the presence/no presence in the room.



Enable: Yes

Timeout: 10 min

Action: Apply Preset delta

Delta temp.: 2 ºC

☑ Second action

Timeout (2nd): 30 min

Action (2nd): Switch Off AC

Delta temp. (2nd): 3 ºC

☑ Reload last value

☑ Lock ON when unoccupied

54: Control_ Occupancy Input [DPT_1.018] - 0-Not Occupied;...

- ○ If set to **"no"** the object will not be shown.
- ○ If set to **"yes"** the *Control_ Occupancy* object and new parameters will appear. If a **"1"** value is sent to this object (no room occupancy), the timeout will begin. If a **"0"** value is sent to this object, the timeout will stop.

Figure 4.33 Parameter detail

- Timeout to apply action (minutes)

  This parameter lets you choose how much time to wait (in minutes) before executing the action specified in the next parameter ("Action after timeout elapsed").

- Action

  When **Switch Off AC** is selected, once the timeout has elapsed, the indoor unit will be turned off.

  When **Apply Preset Delta** is selected, once the timeout has elapsed, a delta temperature will be applied in order to save energy (decreasing the setpoint when in Heat mode, or increasing the setpoint when in Cool mode). Also new parameters will appear.

  - Temp delta decrease (HEAT) or increase (COOL) (ºC)

    This parameter lets configure the delta temperature (increase or decrease) that will be applied when the timeout has elapsed.

  ⚠ ***Important:*** *When there is occupancy again after the application of a delta, the same delta will be applied inversely. (i.e. In a room with AC in cool mode and 25ºC setpoint temperature, a* ***+2ºC*** *delta is applied after the occupancy timeout, setting the setpoint at 27ºC because there is no occupancy in the room. If the setpoint is raised to 29ºC during that period, when the room is occupied again, a* ***-2ºC*** *delta will be applied and the final setpoint temperature will then be 27ºC).*

- Second Action

  If set to **"no"** nothing will be applied.
  If set to **"yes"**, a new timeout will be enabled and two new parameters will appear.

- Timeout (2nd)

  This parameter lets you choose how much time to wait (in minutes) before executing the action specified in the next parameter ("Action after timeout elapsed").

- Action (2nd)

  When **Switch-Off** is selected, once the timeout has elapsed, the indoor unit will turn off.

  When **Apply Preset Delta** is selected, once the timeout configured is extinguished, a delta temperature will be applied (decreasing the setpoint when in Heat mode, or increasing the setpoint when in Cool mode). Also new parameters will appear.

  - Temp delta decrease (HEAT) or increase (COOL) (ºC)

    This parameter lets configure the delta temperature that will be applied when the timeout is extinguished.

  ⚠ ***Important:*** *When there is occupancy again after the application of a delta, the same delta will be applied inversely as explained above.*

- Reload last On/Off value when Occupied

If set to **"no"**, once the switch-off timeout has elapsed, any value will be reloaded.

If set to **"yes"**, once the switch-off timeout has elapsed, the last On/Off value will be reloaded.

- If a **"1"** value is sent to the *Control_ Occupancy* object after the timeout period, the indoor unit will **turn on**.
- If a **"0"** value is sent to the *Control_ Occupancy* after the timeout period no action will be performed.

- Lock ON when occupied

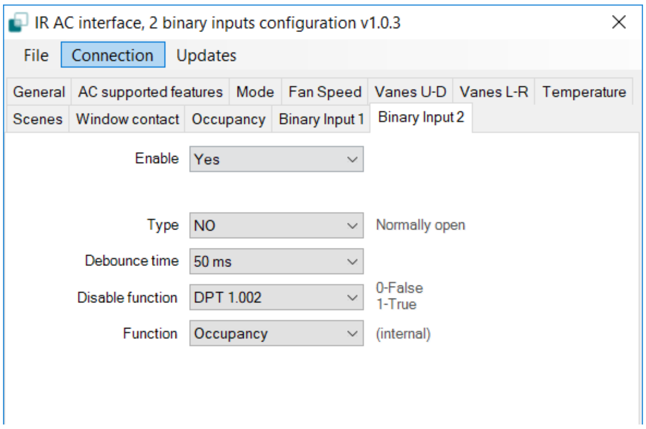
If set to **"no"**, On/Off commands while the room is occupied will be accepted.

- If a **"1"** value is sent to the *Control_ Switch Off Timeout* object the switch-off timeout period will begin again.
- If a **"0"** value is sent to the *Control_ Switch Off Timeout* object, no action will be performed.

If set to **"yes"**, On/Off commands, while the window is open, will be saved (but not applied). These commands will be used in the next parameter if set to **"yes"**.

5.11 *Binary Input "x" configuration dialogs*

All the parameters in this section are related with the binary inputs properties and communication objects.



Enable: Yes

Type: NO — Normally open

Debounce time: 50 ms

Disable function: DPT 1.002 — 0-False 1-True

Function: Occupancy — (internal)

5.11.1 Enable use of Input "x"

This parameter enables the use of the Input "x".

- If set to **"no"** the objects will not be shown.
- If set to **"yes"** the *Status_ Inx* object(s) and new parameters will appear.

5.11.2 Contact type

This parameter lets choose the behavior that will have the binary input depending on if the contact is normally open or normally closed.

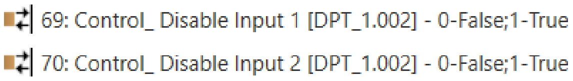
- There are two possible options to configure the contact type: **“NO: Normally Open”** and **“NC: Normally Closed”**.

5.11.3 Debounce time

This parameter lets choose a debounce time (in milliseconds) that will be applied to the contact.

5.11.4 Disabling function

This parameter shows/hides the *Control_ Disable Input x* communication object which will let disable/enable the input x.



69: Control_ Disable Input 1 [DPT_1.002] - 0-False;1-True

70: Control_ Disable Input 2 [DPT_1.002] - 0-False;1-True

- If set to **“no”** any object will be shown.
- When **“DPT 1.003: 0-Disable; 1-Enable”** is selected, the input can be disabled using the value **“0”** and enabled using the value **“1”**.
- When **“DPT 1.002: 1-True (Disable); 0-False (Enable)”** is selected, the input can be disabled using the value **“1”** and enabled using the value **“0”**.

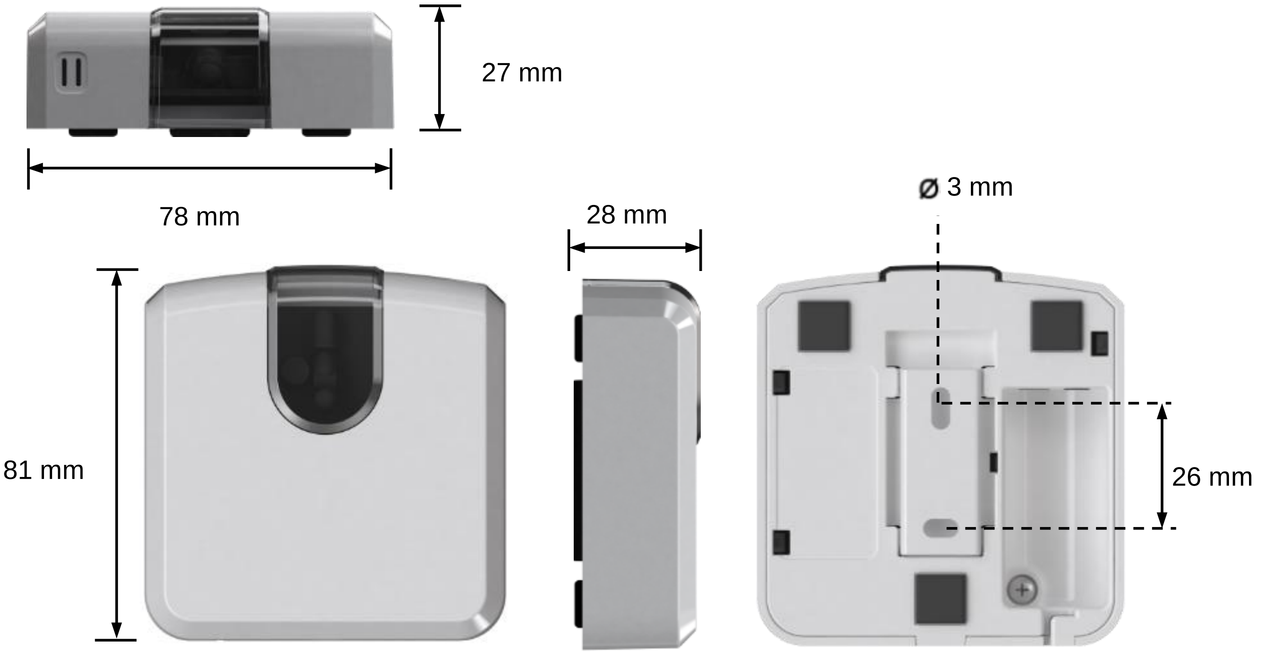
5.11.5 Function

This parameter lets choose the function that will have the binary input. There are 3 different functions available: Occupancy (internal), On/Off and Window Contact (internal).

- When **“Occupancy”** is selected, the binary input “x” will have the same behavior as configured in the parameter “Occupanys” (section 5.10).
- When **“On/Off**” is selected, the AC unit will turn off when the binary inpyt “x” is active.
- When **“Window Contact (internal)”** is selected, the binary input “x” will have the same behavior as configured in the parameter “Window Contact” (section 5.9).

6 Electrical and Mechanical features

Enclosure	ABS (V-0). 2,1 mm thickness PC (V-2). 1 mm thickness
Dimensions	81 x 78 x 28 mm
Weight	76 g
Color	Ivory white
Power supply	29V DC, 17mA Supplied through KNX bus
Mounting	Wall and desktop
LED indicators	1 x Device status and KNX programming
Push buttons	1 x KNX programming.
Binary inputs	2 x binary inputs for potential-free contacts. 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
Console port	Mini USB port for console usage
Configuration	Configuration with ETS
Operating Temperature	From 0ºC to 40ºC
Operating humidity	<93% HR, no condensation
Stock humidity	<93% HR, no condensation



7 List of compatible AC indoor units.

A list of indoor unit model references compatible with IS-IR-KNX-1 and their available features can be found in:

http://intesis.com/pdf/IntesisBox_IS-IR-xxx-1_AC_Compatibility.pdf

8 Appendix A – Communication Objects Table

TOPIC	OBJECT NUMBER	NAME	LENGTH	DATAPOINT TYPE		FLAGS				FUNCTION
				DPT_NAME	DPT_ID	R	W	T	U	
On/Off	1	Control_ On/Off	1 bit	DPT_Switch	1.001		W	T		0 - Off; 1-On
Mode	2	Control_ Mode	1 byte	DPT_HVACContrMode	20.105		W	T		0 - Auto; 1 - Heat; 3 - Cool; 9 - Fan; 14 - Dry
	3	Control_ Mode Cool/Heat	1 bit	DPT_Heat/Cool	1.100		W	T		0 - Cool; 1 - Heat
	4	Control_ Mode Auto	1 bit	DPT_Bool	1.002		W	T		1 - Auto
	5	Control_ Mode Heat	1 bit	DPT_Bool	1.002		W	T		1 - Heat
	6	Control_ Mode Cool	1 bit	DPT_Bool	1.002		W	T		1 - Cool
	7	Control_ Mode Fan	1 bit	DPT_Bool	1.002		W	T		1 - Fan
	8	Control_ Mode Dry	1 bit	DPT_Bool	1.002		W	T		1 - Dry
	9	Control_ Mode +/-	1 bit	DPT_Step	1.007		W			0 - Decrease; 1 - Increase
		Control_ Mode +/-	1 bit	DPT_UpDown	1.008		W			0 - Up; 1 - Down
Fan Speed	10	Control_ Fan Speed / N Speeds	1 byte	DPT_Scaling	5.001		W	T		100*(n+0,5)/N %
		Control_ Fan Speed / N Speeds	1 byte	DPT_Enumerated	5.010		W	T		1 - Speed1; 2 - Speed2; 3 - Speed3; 4 - Speed4; 5 - Speed5; 6 - Speed6; 7 - Speed7
	11	Control_ Fan Speed Man/Auto	1 bit	DPT_Bool	1.002		W	T		0 - Manual; 1 - Auto
	12	Control_ Fan Speed 1	1 bit	DPT_Bool	1.002		W	T		1 - Fan Speed 1
	13	Control_ Fan Speed 2	1 bit	DPT_Bool	1.002		W	T		1 - Fan Speed 2
	14	Control_ Fan Speed 3	1 bit	DPT_Bool	1.002		W	T		1 - Fan Speed 3
	15	Control_ Fan Speed 4	1 bit	DPT_Bool	1.002		W	T		1 - Fan Speed 4
	16	Control_ Fan Speed 5	1 bit	DPT_Bool	1.002		W	T		1 - Fan Speed 5
	17	Control_ Fan Speed 6	1 bit	DPT_Bool	1.002		W	T		1 - Fan Speed 6

	18	Control_ Fan Speed 7	1 bit	DPT_Bool	1.002		W	T		1 - Fan Speed 7
	19	Control_ Fan Speed +/-	1 bit	DPT_Step	1.007		W	T		0 - Decrease; 1 - Increase
		Control_ Fan Speed +/-	1 bit	DPT_UpDown	1.008		W	T		0 - Up; 1 - Down
Vanes	**20**	Control_ Vane Up-Down / N pos	1 byte	DPT_Scaling	5.001		W	T		100*(n+0,5)/N %
		Control_ Vane Up-Down / N pos	1 byte	DPT_Enumerated	5.010		W	T		1 - Pos1; 2 - Pos2; 3 - Pos3; 4 - Pos4; 5 - Pos5; 6 - Pos6; 7 - Pos7; 8 - Pos8
	21	Control_ Vane Up-Down Man/Auto	1 bit	DPT_Bool	1.002		W	T		0 - Manual; 1 - Auto
	22	Control_ Vane Up-Down Pos1	1 bit	DPT_Bool	1.002		W	T		1 - Position 1
	23	Control_ Vane Up-Down Pos2	1 bit	DPT_Bool	1.002		W	T		1 - Position 2
	24	Control_ Vane Up-Down Pos3	1 bit	DPT_Bool	1.002		W	T		1 - Position 3
	25	Control_ Vane Up-Down Pos4	1 bit	DPT_Bool	1.002		W	T		1 - Position 4
	26	Control_ Vane Up-Down Pos5	1 bit	DPT_Bool	1.002		W	T		1 - Position 5
	27	Control_ Vane Up-Down Pos6	1 bit	DPT_Bool	1.002		W	T		1 - Position 6
	28	Control_ Vane Up-Down Pos7	1 bit	DPT_Bool	1.002		W	T		1 - Position 7
	29	Control_ Vane Up-Down Pos8	1 bit	DPT_Bool	1.002		W	T		1 - Position 8
	30	Control_ Vane Up-Down Swing	1 bit	DPT_Bool	1.002		W	T		0 - Stop; 1 – Swing
	31	Control_ Vane Up-Down Swirl	1 bit	DPT_Bool	1.002		W	T		0 - Stop; 1 – Swirl
	32	Control_ Vane Up-Down Wide	1 bit	DPT_Bool	1.002		W	T		0 - Stop; 1 – Wide
	33	Control_ Vane Up-Down +/-	1 bit	DPT_Step	1.007		W			0 - Decrease; 1 - Increase
		Control_ Vane Up-Down +/-	1 bit	DPT_UpDown	1.008		W			0 - Up; 1 - Down
	34	Control_ Vane Up-Down Move Pos	1 bit	DPT_Trigger	1.002		W	T		0,1 Move Position
	35	Control_ Vane Left-Right / N pos	1 byte	DPT_Scaling	5.001		W	T		100*(n+0,5)/N %
		Control_ Vane Left-Right / N pos	1 byte	DPT_Enumerated	5.010		W	T		1 - Pos1; 2 - Pos2; 3 - Pos3; 4 - Pos4; 5 - Pos5; 6 - Pos6; 7 - Pos7; 8 - Pos8
	36	Control_ Vane Left-Right Man/Auto	1 bit	DPT_Bool	1.002		W	T		0 - Manual; 1 - Auto
	37	Control_ Vane Left-Right Pos1	1 bit	DPT_Bool	1.002		W	T		1 - Position 1

	38	Control_ Vane Left-Right Pos2	1 bit	DPT_Bool	1.002		W	T		1 - Position 2
	39	Control_ Vane Left-Right Pos3	1 bit	DPT_Bool	1.002		W	T		1 - Position 3
	40	Control_ Vane Left-Right Pos4	1 bit	DPT_Bool	1.002		W	T		1 - Position 4
	41	Control_ Vane Left-Right Pos5	1 bit	DPT_Bool	1.002		W	T		1 - Position 5
	42	Control_ Vane Left-Right Pos6	1 bit	DPT_Bool	1.002		W	T		1 - Position 6
	43	Control_ Vane Left-Right Pos7	1 bit	DPT_Bool	1.002		W	T		1 - Position 7
	44	Control_ Vane Left-Right Pos8	1 bit	DPT_Bool	1.002		W	T		1 - Position 8
	45	Control_ Vane Left-Right Swing	1 bit	DPT_Bool	1.002		W	T		0 - Stop; 1 – Swing
	46	Control_ Vane Left-Right Swirl	1 bit	DPT_Bool	1.002		W	T		0 - Stop; 1 – Swirl
	47	Control_ Vane Left-Right Wide	1 bit	DPT_Bool	1.002		W	T		0 - Stop; 1 – Wide
	48	Control_ Vane Left-Right +/-	1 bit	DPT_Step	1.007		W			0 - Decrease; 1 – Increase
		Control_ Vane Left-Right +/-	1 bit	DPT_UpDown	1.008		W			0 - Up; 1 – Down
	49	Control_ Vane Left-Right Move Pos	1 bit	DPT_Trigger	1.002		W	T		0,1 Move Position
Temperature	**50**	Control_ Setpoint Temperature	2 byte	DPT_Value_Temp	9.001		W	T		16ºC to 32ºC
	51	Control_ Setpoint Temp +/-	1 bit	DPT_Step	1.007		W			0 - Decrease; 1 – Increase
		Control_ Setpoint Temp +/-	1 bit	DPT_UpDown	1.008		W			0 - Up; 1 – Down
	52	Control_ Ambient Temperature	2 byte	DPT_Value_Temp	9.001		W	T		ºC value
Window	**53**	Control_ Window Contact Input	1 bit	DPT_Window_Door	1.019		W	T		0 - Closed; 1 - Open
Occupancy	**54**	Control_ Occupancy Input	1 bit	DPT_Occupancy	1.018		W	T		0 – Not Occupied; 1 - Occupied
Locking	**55**	Control_ Lock Remote Control	1 bit	DPT_Bool	1.002		W	T		0 - Unlocked; 1 – Locked
Operating Time	**56**	Control_ Operating Hour Counter	2 byte	DPT_Time (Hours)	7.007		W	T		Number of operating hours
	57	Control_ Operating Second Counter	2 byte	DPT_Time_Lag (Sec)	13.100		W	T		Number of operating seconds
Scenes	**58**	Control_ Save/Exec Scene	1 byte	DPT_SceneControl	18.001		W			0 to 4 - Exec. Scene 1 to 5; 128 to 132 - Save Scene 1 to 5
	59	Control_ Store Scene1	1 bit	DPT_Bool	1.002		W			1 - Store Scene
	60	Control_ Store Scene2	1 bit	DPT_Bool	1.002		W			1 - Store Scene

	61	Control_ Store Scene3	1 bit	DPT_Bool	1.002		W			1 - Store Scene
	62	Control_ Store Scene4	1 bit	DPT_Bool	1.002		W			1 - Store Scene
	63	Control_ Store Scene5	1 bit	DPT_Bool	1.002		W			1 - Store Scene
	64	Control_ Execute Scene1	1 bit	DPT_Bool	1.002		W			1 - Execute Scene
	65	Control_ Execute Scene2	1 bit	DPT_Bool	1.002		W			1 - Execute Scene
	66	Control_ Execute Scene3	1 bit	DPT_Bool	1.002		W			1 - Execute Scene
	67	Control_ Execute Scene4	1 bit	DPT_Bool	1.002		W			1 - Execute Scene
	68	Control_ Execute Scene5	1 bit	DPT_Bool	1.002		W			1 - Execute Scene
Disabling	**69**	Control_ Disable Input 1	1 bit	DPT_Bool	1.002		W	T		0 - Enable; 1 - Disable
		Control_ Disable Input 1	1 bit	DPT_Enable	1.003		W	T		0 - Disable; 1 - Enable
	70	Control_ Disable Input 2	1 bit	DPT_Bool	1.002		W	T		0 - Enable; 1 - Disable
		Control_ Disable Input 2	1 bit	DPT_Enable	1.003		W	T		0 - Disable; 1 - Enable

On/Off	**71**	Status_ On/Off	1 bit	DPT_Switch	1.001	R		T		0 - Off; 1-On
Mode	**72**	Status_ Mode	1 byte	DPT_HVACContrMode	20.105	R		T		0 - Auto; 1 - Heat; 3 - Cool; 9 - Fan; 14 - Dry
	73	Status_ Mode Cool/Heat	1 bit	DPT_Heat/Cool	1.100	R		T		0 - Cool; 1 - Heat
	74	Status_ Mode Auto	1 bit	DPT_Bool	1.002	R		T		1 - Auto
	75	Status_ Mode Heat	1 bit	DPT_Bool	1.002	R		T		1 - Heat
	76	Status_ Mode Cool	1 bit	DPT_Bool	1.002	R		T		1 - Cool
	77	Status_ Mode Fan	1 bit	DPT_Bool	1.002	R		T		1 - Fan
	78	Status_ Mode Dry	1 bit	DPT_Bool	1.002	R		T		1 - Dry

	79	Status_ Mode Text	14 byte	DPT_String_8859_1	16.001	R		T		ASCII String
Fan Speed	**80**	Status_ Fan Speed / N Speeds	1 byte	DPT_Scaling	5.001	R		T		100*(n+0,5)/N %
		Status_ Fan Speed / N Speeds	1 byte	DPT_Enumerated	5.010	R		T		1 - Speed1; 2 - Speed2; 3 - Speed3; 4 - Speed4; 5 - Speed5; 6 - Speed6; 7 - Speed7
	81	Status_ Fan Speed Man/Auto	1 bit	DPT_Bool	1.002	R		T		0 - Manual; 1 - Auto
	82	Status_ Fan Speed 1	1 bit	DPT_Bool	1.002	R		T		1 - Speed 1
	83	Status_ Fan Speed 2	1 bit	DPT_Bool	1.002	R		T		1 - Speed 2
	84	Status_ Fan Speed 3	1 bit	DPT_Bool	1.002	R		T		1 - Speed 3
	85	Status_ Fan Speed 4	1 bit	DPT_Bool	1.002	R		T		1 - Speed 4
	86	Status_ Fan Speed 5	1 bit	DPT_Bool	1.002	R		T		1 - Speed 5
	87	Status_ Fan Speed 6	1 bit	DPT_Bool	1.002	R		T		1 - Speed 6
	88	Status_ Fan Speed 7	1 bit	DPT_Bool	1.002	R		T		1 - Speed 7
	89	Status_ Fan Speed Text	14 byte	DPT_String_8859_1	16.001	R		T		ASCII String
Vanes	**90**	Status_ Vane Up-Down / 8 pos	1 byte	DPT_Scaling	5.001	R		T		100*(n+0,5)/N %
		Status_ Vane Up-Down / 8 pos	1 byte	DPT_Enumerated	5.010	R		T		1 - Pos1; 2 - Pos2; 3 - Pos3; 4 - Pos4; 5 - Pos5; 6 - Pos6; 7 - Pos7; 8 - Pos8
	91	Status_ Vane Man/Auto	1 bit	DPT_Bool	1.002	R		T		0 - Manual; 1 - Auto
	92	Status_ Vane Up-Down Pos1	1 bit	DPT_Bool	1.002	R		T		1 - Position 1
	93	Status_ Vane Up-Down Pos2	1 bit	DPT_Bool	1.002	R		T		1 - Position 2
	94	Status_ Vane Up-Down Pos3	1 bit	DPT_Bool	1.002	R		T		1 - Position 3
	95	Status_ Vane Up-Down Pos4	1 bit	DPT_Bool	1.002	R		T		1 - Position 4
	96	Status_ Vane Up-Down Pos5	1 bit	DPT_Bool	1.002	R		T		1 - Position 5
	97	Status_ Vane Up-Down Pos6	1 bit	DPT_Bool	1.002	R		T		1 - Position 6
	98	Status_ Vane Up-Down Pos7	1 bit	DPT_Bool	1.002	R		T		1 - Position 7
	99	Status_ Vane Up-Down Pos8	1 bit	DPT_Bool	1.002	R		T		1 - Position 8
	100	Status_ Vane Up-Down Swing	1 bit	DPT_Bool	1.002	R		T		0 - Stop; 1 - Swing

	101	Status_ Vane Up-Down Swirl	1 bit	DPT_Bool	1.002	R		T		0 - Stop; 1 - Swirl
	102	Status_ Vane Up-Down Wide	1 bit	DPT_Bool	1.002	R		T		0 - Stop; 1 - Wide
	103	Status_ Vane Up-Down Text	14 byte	DPT_String_8859_1	16.001	R		T		ASCII String
	104	Status_ Vane Left-Right / 8 pos	1 byte	DPT_Scaling	5.001	R		T		100*(n+0,5)/N %
		Status_ Vane Left-Right / 8 pos	1 byte	DPT_Enumerated	5.010	R		T		1 - Pos1; 2 - Pos2; 3 - Pos3; 4 - Pos4; 5 - Pos5; 6 - Pos6; 7 - Pos7; 8 - Pos8
	105	Status_ Vane Left-Right Man/Auto	1 bit	DPT_Bool	1.002	R		T		0 - Manual; 1 - Auto
	106	Status_ Vane Left-Right Pos1	1 bit	DPT_Bool	1.002	R		T		1 - Position 1
	107	Status_ Vane Left-Right Pos2	1 bit	DPT_Bool	1.002	R		T		1 - Position 2
	108	Status_ Vane Left-Right Pos3	1 bit	DPT_Bool	1.002	R		T		1 - Position 3
	109	Status_ Vane Left-Right Pos4	1 bit	DPT_Bool	1.002	R		T		1 - Position 4
	110	Status_ Vane Left-Right Pos5	1 bit	DPT_Bool	1.002	R		T		1 - Position 5
	111	Status_ Vane Left-Right Pos6	1 bit	DPT_Bool	1.002	R		T		1 - Position 6
	112	Status_ Vane Left-Right Pos7	1 bit	DPT_Bool	1.002	R		T		1 - Position 7
	113	Status_ Vane Left-Right Pos8	1 bit	DPT_Bool	1.002	R		T		1 - Position 8
	114	Status_ Vane Left-Right Swing	1 bit	DPT_Bool	1.002	R		T		0 - Stop; 1 - Swing
	115	Status_ Vane Left-Right Swirl	1 bit	DPT_Bool	1.002	R		T		0 - Stop; 1 - Swirl
	116	Status_ Vane Left-Right Wide	1 bit	DPT_Bool	1.002	R		T		0 - Stop; 1 - Wide
	117	Status_ Vane Left-Right Text	14 byte	DPT_String_8859_1	16.001	R		T		ASCII String
Temperature	**118**	Status_ AC Setpoint Temp	2 byte	DPT_Value_Temp	9.001	R		T		16ºC to 32ºC
	119	Status_ IntesisBox Ambient Temp	2 byte	DPT_Value_Temp	9.001	R		T		ºC value
	120	Status_ IntesisBox Reference Temp	2 byte	DPT_Value_Temp	9.001	R		T		ºC value
Error	**121**	Status_ Error/Alarm	1 bit	DTP_Alarm	1.005	R		T		0 - No Alarm; 1 - Alarm
	122	Status_ Error Code	2 byte	Enumerated		R		T		0 - No Error; Any other see user's manual
	123	Status_ Error Text code	14 byte	DPT_String_8859_1	16.001	R		T		2 char Error; Empty - none

Window	**124**	Status_ Window Contact Sensor	1 bit	DPT_Window_Door	1.019	R		T		0 - Closed; 1 - Open
	125	Status_ Window Contact Step	8 bit	Enumerated		R		T		0-Window Closed; 1-Window Open; 2-AC switched off
Occupancy	**126**	Status_ Occupancy Sensor	1 bit	DPT_Occupancy	1.018	R		T		0 – Not Occupied; 1 – Occupied
	127	Status_ Occupancy Mode	8 bit	DPT_OCC_MODE	20.003	R		T		0 – Occupied; 1 – Stand by; 2 – Not Occupied
	128	Status_ Occupancy State	8 bit	Enumerated		R		T		0 - Occupied; 1 - Unoccupied; 2 - Action1; 3 - Action2
	129	Status_ Lock Remote Control	1 bit	DPT_Bool	1.002	R		T		0 - Unlocked; 1 – Locked
Counter	**130**	Status_ Operating Hour Counter	2 byte	DPT_Value_2_Ucount	7.001	R		T		Number of operating hours
	131	Status_ Operating Second Counter	2 byte	DPT_Value_2_Ucount	13.100	R		T		Number of operating seconds
Scene	**132**	Status_ Current Scene	1 byte	DPT_SceneNumber	17.001	R		T		0 to 4 - Scene 1 to 5; 63 - No Scene