Intesis® BY HMS NETWORKS

ENGLISH

INKNXUNI001I2** Universal Gateway

Integration of IR-enabled Air Conditioners into KNX TP (Application's Program Version 1.1)

USER MANUAL
Version 1.0.3
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HMS

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Table of Contents

1. Description, Compatible AC systems, and Order Codes

KNX TP Gateway for HVAC Integration.

The INKNXUNI001I2∗∗ is a KNX TP gateway for universal IR air conditioning systems. This gateway is compatible with IR-enabled AC units from all brands.

Use the compatibility tool to get a complete list of compatible units: https://compatibility.intesis.com/

ORDER CODE	LEGACY ORDER CODE
INKNXUNI001I2∗∗	INKNXUNI001I000

NOTE
The order code may vary depending on the product seller and the buyer's location.

2. General Information

INTENDED USE OF THE USER MANUAL

This manual contains the main features of this gateway and the instructions for its appropriate installation, configuration, and operation. The contents of this manual should be brought to the attention of any person who installs, configures, or operates this gateway or any associated equipment. Keep this manual for future reference during the installation, configuration, and operation.

GENERAL SAFETY INFORMATION

IMPORTANT
Follow these instructions carefully. Improper work may seriously harm your health and damage the gateway and/or any other equipment connected to it.

Only technical personnel, following these instructions and the country's legislation for installing electrical equipment, can install and manipulate this gateway.

Disconnect all systems from power before manipulating and connecting them to the gateway.

Install this gateway indoors, in a restricted access location, avoiding exposure to direct solar radiation, water, high relative humidity, or dust.

The gateway is to be connected only to networks without routing to the outside plant.

All communication ports are considered for indoor use and must only be connected to SELV circuits.

Take antistatic precautions when manipulating the gateway to avoid electrostatic discharges.

Respect the expected polarity of power and communication cables when connecting them to the gateway.

ADMONITION MESSAGES

IMPORTANT
Instruction that must be followed to avoid a risk of reduced functionality and/or damage to the equipment or to avoid a network security risk.

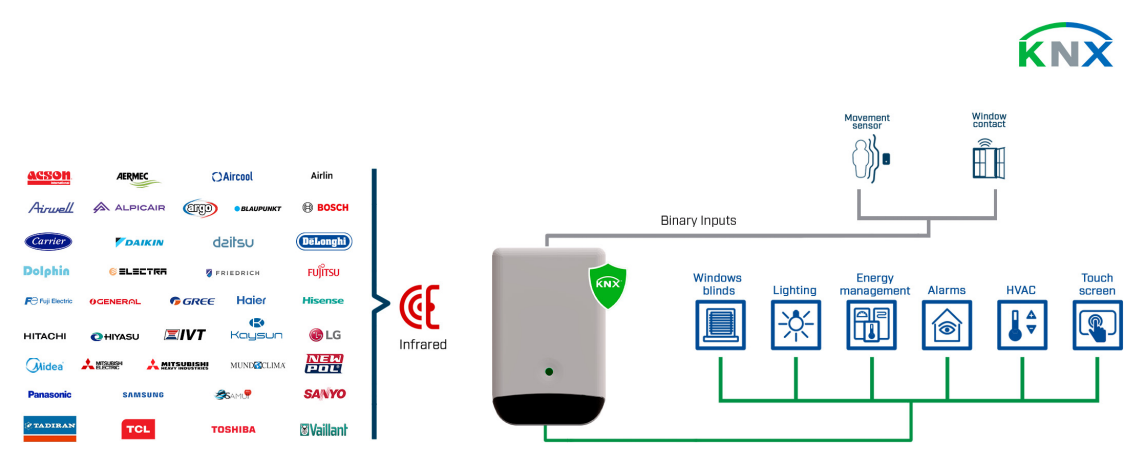
NOTE
Additional information that may facilitate installation and/or operation.

TIP
Helpful advice and suggestions.

NOTICE
Remarkable Information.

3. Overview

Figure 1. Integration of IR-enabled AC units into a KNX TP installation using the Intesis INKNXUNI001I2∗∗ gateway.



NOTE
This document assumes the user is familiar with KNX TP and IR-enabled air conditioning technologies, including their associated technical terminology.

3.1. Inside the Package

ITEMS INCLUDED

- Intesis INKNXUNI001I2∗∗ gateway
- 3-wire cable connector for binary inputs
- Installation guide

3.2. Main Features

- This is a KNX Data Secure gateway.
- Configuration using ETS, the KNX standard configuration tool.
- Compatible with all KNX thermostats in the market.
- USB Type-C connector for fast programming download.
- Built-in room temperature and humidity sensor.
- Two binary inputs.
- No power supply is needed. The gateway is powered by the KNX bus.
- Autolearning function to automatically set the IR remote control configuration.
- Simultaneous control of the AC unit through its IR remote control and KNX.
- Up to 10 scenes can be saved and executed from KNX.
- Significant reduction of the HVAC system energy consumption.

3.3. General Functionality

The gateway is connected to the KNX bus through its KNX connector and to the AC unit via infrared light, acting as a link between both systems. This enables bidirectional control for the gateway: On the one hand, the gateway receives the status of the indoor unit from the AC system's IR remote control and reports it to KNX. On the other hand, any command from KNX is sent to the gateway, which transmits those messages to the AC unit through IR signals.

The AC unit can be controlled simultaneously from both the AC system's IR remote control (if present) and the KNX system.

The gateway is very easy to configure using ETS, the official KNX configuration tool.

3.4. Gateway Capacity

With this Intesis INKNXUNI001I2∗∗ gateway you can control one AC indoor unit.

4. Quick Start Guide

1. Connect the gateway to the KNX bus to power it.
2. Connect the gateway to your laptop through its USB Type-C port.
3. Enter the Shop ETS Apps website.

> **NOTE**
> You can also enter the Shop ETS Apps website through ETS by following this path: From the main menu (**Overview**) → **Settings** → **ETS Apps** → **Find More Apps**.

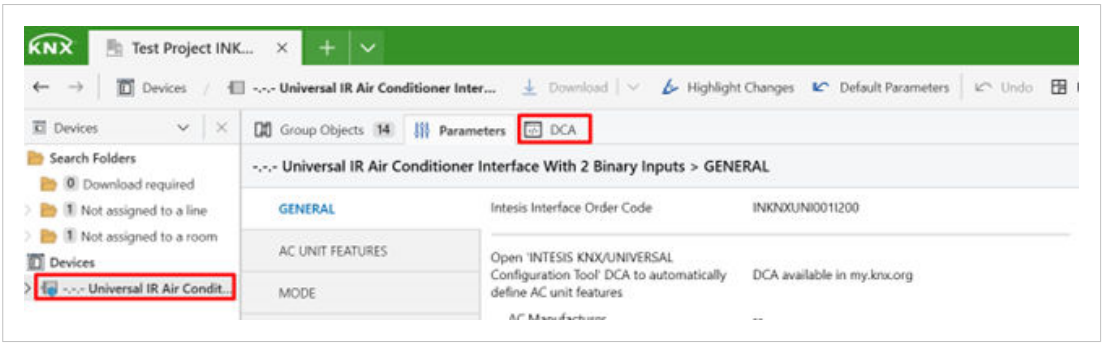
4. Look for the DCA: **INTESIS KNX/UNIVERSAL Configuration Tool**.

> **NOTE**
> Do not confuse it with **Intesis KNX Update Tool**.

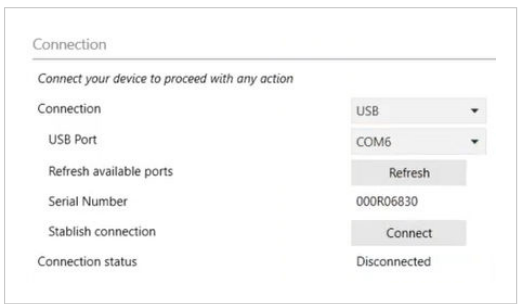
5. Open ETS.
6. Install the DCA. If you don't know how to do it, watch this video or read this article from the KNX Association.
7. Create your project as usual.

> **NOTE**
> The name of the device in the ETS catalog is **Universal IR Air Conditioner Interface With 2 Binary Inputs**.

8. Click the **DCA** tab.

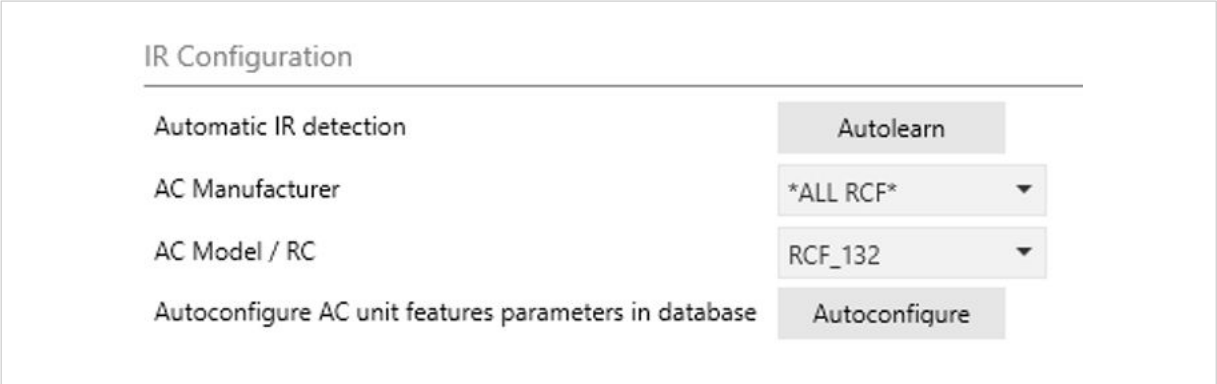


9. In the **Connection** parameter, select **USB**.



> **NOTE**
> For this part of the configuration, you can use the KNX connection instead, but we recommend using the USB since it is faster.

10. In the **USB Port** parameter, select the port where the gateway is connected.
11. Click **Connect** in the **Establish connection** parameter.
12. Click **Autolearn** in the **Automatic IR detection** parameter.



13. Follow the steps of the emergent window:

> **IMPORTANT**
> Steps **a** to **c** must be performed within 60 seconds.

a. Click the **Learn** button.
The LED of the gateway will turn steady white.

b. Point your IR remote control at the gateway.

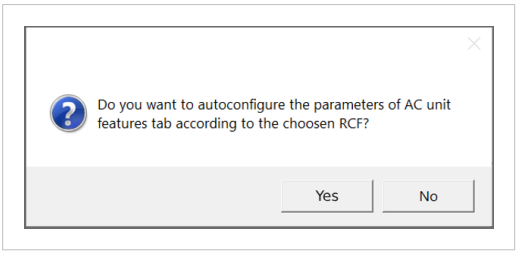
c. Press the ON/OFF button of your IR remote control.
The LED of the gateway will turn off.

> **NOTE**
> Once the gateway receives the remote control firmware, the fields **Received pulse** and **Accepted RCFs** should show some results. If not, try again. If the problem persists, contact the support department.

d. Select one of the **RCF_n** from the **Accepted RCFs** field.

e. Click **Save**.

14. Click **Autoconfigure** in the **Autoconfigure AC unit features parameters in database** parameter.
15. This message will pop up again:

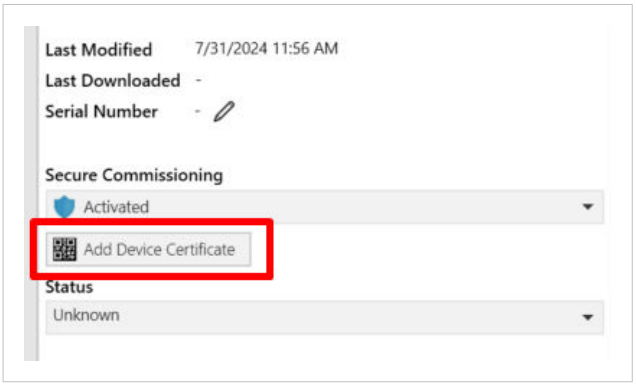


Click **Yes**.

16. Click **Download** in the **Download IR configuration** parameter.

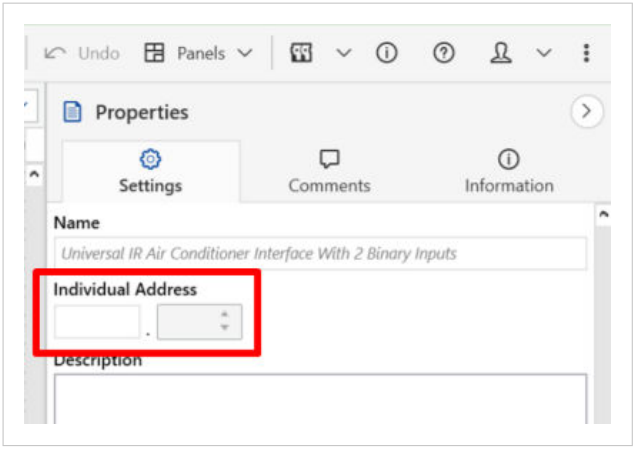
17. Look inside the package for the sticker showing the device certificate:

18. In ETS, click the **Add Device Certificate** button on the **Properties** menu.



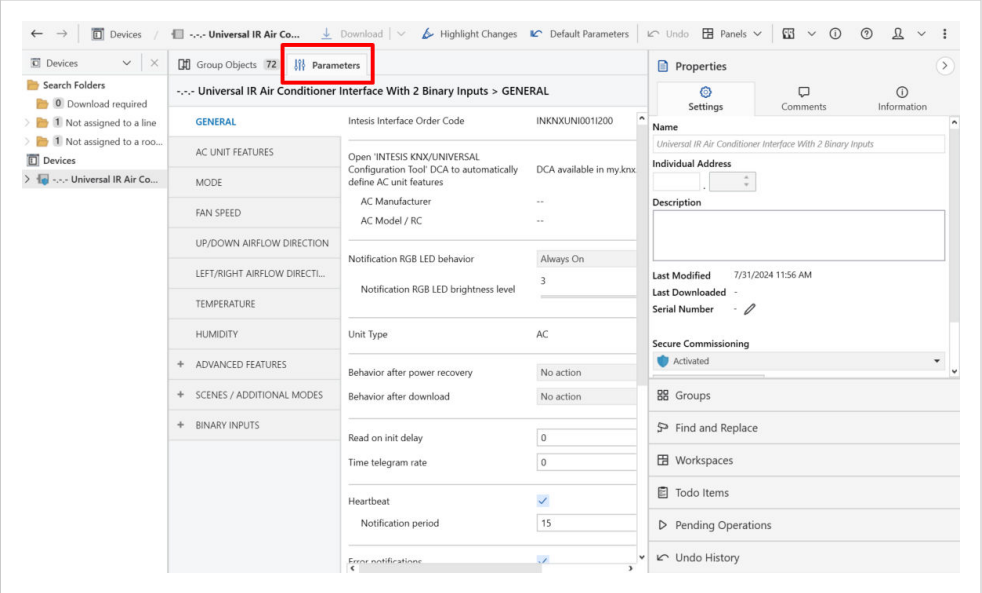
ETS will activate the laptop camera allowing you to scan the QR code. You can enter the code manually, instead.

19. Configure the **Individual Address**.



20. Configure the **Parameters**.

> **NOTE**
> The **AC UNIT FEATURES** tab parameters have already been configured in step 13.

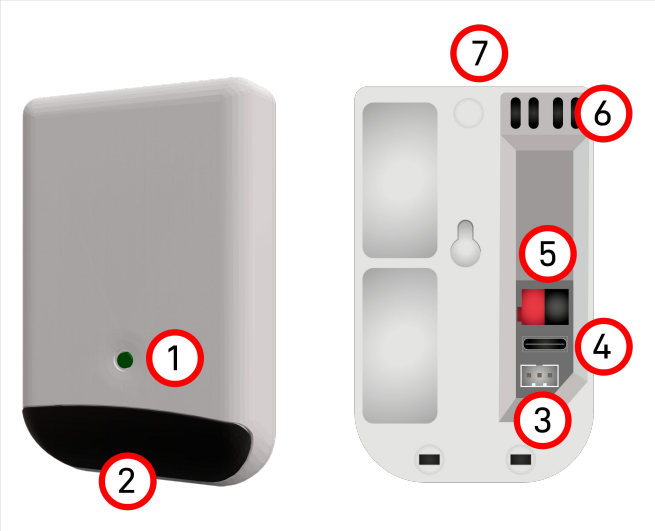


21. Link the KNX communication objects of the gateway with the communication objects of the KNX system by matching their group addresses.

22. Download the individual address and the application program into the gateway as usual.

5. Hardware

5.1. Gateway Layout



① LED indicator
② IR emitter/receiver
③ Binary inputs port
④ USB Type-C port
⑤ KNX port
⑥ Temp. probe and humidity sensor
⑦ Push button

IMPORTANT
Do not open the enclosure. If opened, it must be closed correctly, ensuring its frontal and rear parts fit perfectly. Two signs informing of a wrong closing are:

- The push button does not protrude from its hole and gets stuck inside the lid, which will cause a malfunction.
- The LED blinks in white.

5.2. Installation Instructions

Follow this order to install the gateway:

1. Connect the gateway to the KNX bus to power it. See Connection to the KNX Bus (page 12).
2. Look for the proper emplacement for the gateway. See Gateway Emplacement (page 10).
3. Mount the gateway. See Mounting (page 13).

5.2.1. Gateway Emplacement

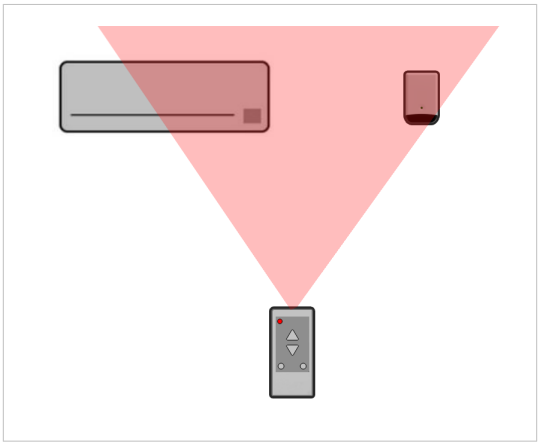
IMPORTANT
Connect the gateway to the KNX bus to power it on before looking for its emplacement. See Connection to the KNX Bus (page 12).

The gateway sends data to the indoor unit through its four IR transmitters, while it receives feedback from the AC indoor unit's IR remote control through its IR receiver. That makes the gateway emplacement very important to grant proper communication between the gateway, the indoor unit, and the IR remote control.

SIGNAL TRANSMISSION FROM THE IR REMOTE CONTROL TO THE GATEWAY

Both the indoor unit and the gateway must receive the remote control's IR signal simultaneously. To ensure that, place the gateway near the indoor unit and within the IR remote control's transmission range.

TIP
The recommended distance is up to five meters (16 feet). However, keeping this distance as short as possible will avoid transmission errors.

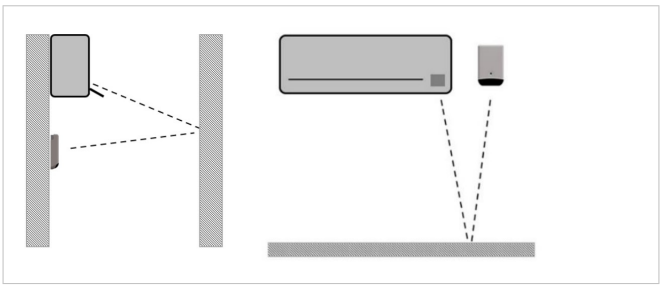


IMPORTANT
The range of the IR remote control may vary depending on the brand and model of the AC unit, as well as the charge level of the remote control battery.

SIGNAL TRANSMISSION FROM THE GATEWAY TO THE INDOOR UNIT

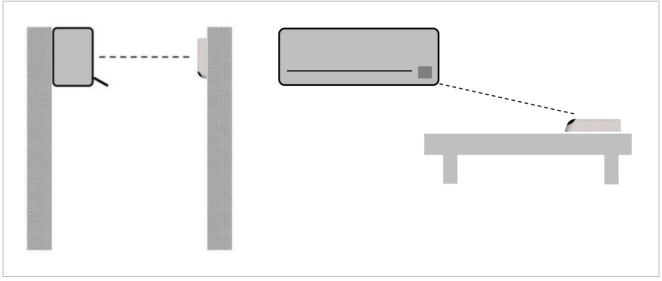
Also, the indoor unit must clearly receive the IR signal from the gateway, so there must be a clear line of sight between both devices. Several emplacements are allowed:

Figure 2. Gateway placed below (left) or alongside the AC unit (right)



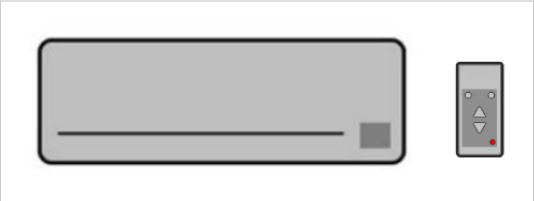
IMPORTANT
Consider that, in these two emplacement options shown above, the IR signal transmitted from the gateway to the indoor unit rebounds on a wall or the floor. Some furniture and materials (carpets, curtains, glass, metal…) could affect the signal.

Figure 3. Gateway placed in front of the AC unit (left) or over a desktop or any other horizontal surface (right)



CHOOSING THE EMPLACEMENT WITH THE AC UNIT'S IR REMOTE CONTROL

The most straightforward way to determine whether there is a clear line of sight between the gateway and the AC unit is by placing the AC unit's IR remote control in the location where you intend to mount the gateway.



If the AC unit successfully receives the commands sent with the IR remote control, you can be sure that the chosen location is suitable, as the gateway's IR transmitter is more powerful than that of the IR remote control.

Another option to check that the IR signal sent from the gateway is indeed received by the indoor unit is by using the Parrot mode:

CHOOSING THE EMPLACEMENT WITH THE PARROT MODE

When enabling the Parrot mode, the gateway acts as a repeater, continuously reemitting a signal previously emitted from the IR remote control, i.e., if you point the IR remote control at the gateway and press the On/Off button, this signal will be then reemitted by the gateway every second until it exits the Parrot mode.

To enable the Parrot mode, follow this procedure:

NOTE
At this point, the gateway is in the Parrot mode. To finish the emplacement process, continue with the following steps:

1. Point the AC unit's IR remote control at the gateway and press the On/Off button.
2. Place the gateway in the chosen location and verify that the AC unit receives the command.
3. Exit the Parrot mode by pressing the button three times again (three clicks).

NOTE
The Parrot mode can also be enabled from KNX through the **Parrot mode objects** parameter. See GENERAL (page 23).

5.2.2. Connections

NOTE
All connectors are accessible from the rear side of the gateway. See Gateway Layout (page 9).

5.2.2.1. Connection to the KNX Bus

NOTE
Power is supplied to the gateway through the KNX bus.

- Voltage rating: 29 VDC
- Power consumption: 17 mA

IMPORTANT
Disconnect the KNX bus from power before proceeding.

1. Connect the KNX bus to the gateway through its KNX port (standard grey and red terminal block).

   IMPORTANT
   Observe polarity.

2. Reconnect power.

5.2.2.2. USB Connection

Use the USB Type-C port to connect the gateway to the computer for configuration purposes.

NOTE
The gateway is configured with ETS, the KNX official configuration software. Find all the related information in Configuration (page 18).

TIP
When downloading the IR remote configuration, we recommend using the USB connection instead of KNX, as it will be significantly faster.

5.2.2.3. Potential Free Binary Inputs Connection

The gateway features a JST PHR-3 connector for potential-free binary inputs to connect third-party elements such as occupancy sensors, window contacts, or energy meters.

NOTICE
This connection is compatible with the S0 pulse counter type.

Table 1. JST PHR-3 three-wire connector

PIN (left to right)	Description	Wire color	Wire cross-section/gauge
1	Ground	Black	0.2 mm^2/24 AWG
2	Binary input 2	White	
3	Binary input 1	White	

NOTE
The wires are 12 cm/4.7" long. They can be extended up to 30 meters/98 feet.

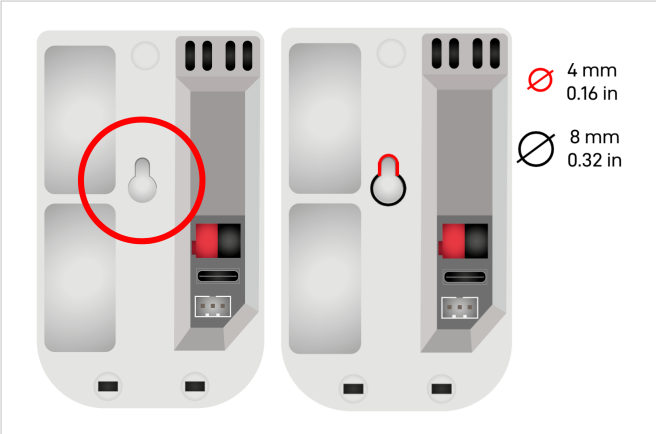
IMPORTANT
For occupancy sensors and window contacts, the gateway will only react if the sensor's contact is opened or closed.

TIP
We recommend setting a delay time in your presence sensor or window contact (if available) to prevent continuous contact changes in a very short period of time.

5.2.3. Mounting

NOTE
These instructions refer to the wall mounting option.

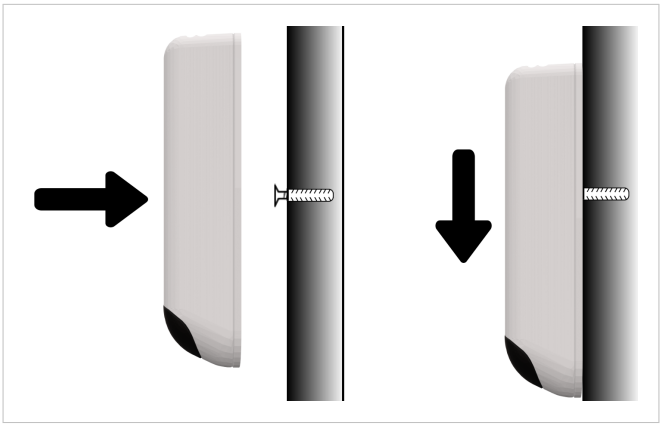
The rear panel of the gateway has a blind hole for its mounting.



NOTE

- Use an M4 screw.
- Let the screw's head protrude 2 mm (0.08 in) from the wall.

1. Position the gateway close to the wall, aligning the screw’s head with the blind hole.
2. Pull the gateway down gently to fit it into the screw's shank.



5.3. LED Indicator

The gateway has one multicolor LED indicator visible from the front panel.

Table 2. LED patterns

Behavior	Pattern
Steady on	100% on
Long blink	1 sec on - 1 sec off
Flicker	0.75 sec on - 0.25 sec off
Blink	0.5 sec on - 0.5 sec off
Off	100% off

Table 3. LED behavior during regular operation

Color	Behavior	Description
Orange	Steady on	Heat mode
Blue	Steady on	Cool mode
Blue	Steady on	Dry mode
Yellow	Steady on	Auto mode
Green	Steady on	Fan mode
Red	Blink x 3	Command received or sent during Heat mode
Blue	Blink x 3	Command received or sent during Cool mode
Blue	Blink x 3	Command received or sent during Dry mode
Yellow	Blink x 3	Command received or sent during Auto mode
Green	Blink x 3	Command received or sent during Fan mode

Table 4. LED behavior during KNX programming mode

Color	Behavior	Description
Red	Off	Programming mode disabled
	Steady on	Programming mode enabled
	Blink	Individual address check

NOTE
While holding the push button for five seconds to enable or disable the manual control mode the LED will flicker in white until the button is released.

Table 5. LED behavior during Parrot mode

Color	Behavior	Description
White	Blink	Parrot mode is enabled

Table 6. LED behavior during Autolearn mode

Color	Behavior	Description
White	Steady on	The gateway is ready to get an IR frame

Table 7. LED behavior during firmware download

Color	Behavior	Description
Magenta	Blink	FW download in progress (through KNX DCA communication)
		FW download in progress (through USB communication)
	Steady on For eight seconds[1]	Memory erasing during FW download in progress
Cyan	Long blink x 3	FW download finished

NOTE
[1]At some point during the firmware downloading process, the LED will stop blinking and will be steady for eight seconds during the *memory erase* process.

Table 8. LED behavior during error notification

Color	Behavior	Description
Orange	Blink	Communication error

5.4. Push Button

NOTE

- **Short press:** Press the button for less than two seconds.
- **Consecutive short pressings:** Time between short pressings must be less than 0.5 seconds.
- **Long press (5s):** Press and hold the button for five seconds.

FUNCTIONS LINKED TO THE PUSH BUTTON

- **Enter and exit the KNX programming mode**: 1x Short press.
- **Enter and exit the manual control mode**: Long press (5s).

NOTICE
Manual control mode allows the user to operate the indoor unit's basic functions using the gateway's push button, as described in the table below.

Indoor unit current status	Button action	Behavior
Off	1x Short press	AC unit turns on in Cool mode at 25°C
Off	2x Short press	AC unit turns on in Heat mode at 21°C
On	1x or 2x Short press	AC unit turns off
On or Off	3x Short press	Enable/disable the gateway's Parrot mode[1]

NOTICE
[1] To know more about the Parrot mode, see Installation Instructions → Gateway Emplacement → CHOOSING THE EMPLACEMENT WITH THE PARROT MODE (page 10).

When the gateway is in Parrot mode, the AC unit cannot be turned on/off using this button.

TIP
The manual control mode status will be reported by the **Button Manual Mode** KNX object.

- **Reset the gateway to its factory settings**:

1. Disconnect the gateway from power.
2. Press and hold the push button.
3. Reconnect power.
4. After ten seconds, the LED flashes five times in white.
5. Release the button.

5.5. Technical Specifications

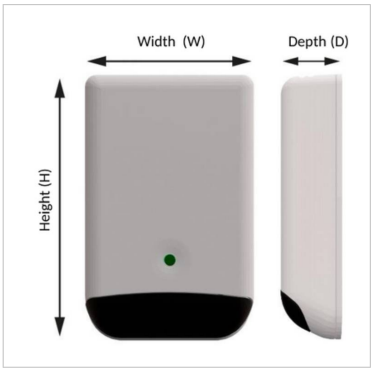
Housing	Plastic, PC-Type (UL94 V-0) Net dimensions (HxWxD): 93 x 60 x 21 mm / 3.7" x 2.4" x 0.9" Color: Light Grey. NCS S 1002-B Protection: IP20
Weight	80 g (2.82 oz)
Mounting	Wall On an horizontal surface (e.g. a desktop)
Power supply	Supplied through the KNX bus. See **KNX port** below
KNX port	1 x KNX TP standard red and gray terminal block (2 poles) Cross-section/gauge: 0.8 mm^2 (18 AWG) KNX power consumption: 17 mA Voltage rating: 29 VDC
Binary inputs port	1 x JST PHR-3 connector (cable included) S0 pulse counter compatible Provided wires: Cross-section/gauge: 0.2 mm^2 (24 AWG) Length: 12 cm / 4.7" Colors: 2 x binary input 1 and 2 (white), 1 x GND (black)
USB port	1 x USB Type-C, USB 2.0 compliant
Temperature and humidity sensor	Humidity: 5 .. 100% HR (accuracy: ±10%) Temperature: 0 .. 60°C / 32 .. 140°F (accuracy: ±5%)
Buttons	1 x Push button
Operational temperature	0 .. 60°C / 32 .. 140°F
Operational humidity	5 .. 95% RH, non-condensing
Isolation between communication ports	1000 VDC
LED Indicators	1 x external LED for device and KNX programming status

5.6. Dimensions

Net dimensions (HxWxD):

Millimeters: 93 x 60 x 21 mm

Inches: 3.7” x 2.3” x 0.83”



6. Configuration

IMPORTANT
Power the gateway by connecting it to the KNX bus before starting the configuration process. See Connection to the KNX Bus (page 12).

6.1. Prerequisites

For this integration, you will need:

- The items supplied by HMS Networks:
  - Intesis INKNXUNI001I2** gateway.
  - This User Manual.
  - DCA: **INTESIS KNX/UNIVERSAL Configuration Tool**, which is available on the Shop ETS Apps website.
- An ETS license (version 5.7.7 onwards).
- A Windows® computer to run the ETS configuration tool.

6.2. Configuration Process with the ETS Tool

IMPORTANT
Before starting the configuration process, connect the gateway to the KNX bus to power it on.

This Intesis gateway is officially certified by KNX. To set it up, use the standard KNX configuration tool ETS.

The name of the device in the ETS catalog is **Universal IR Air Conditioner Interface With 2 Binary Inputs**.

6.3. Device Configuration App (DCA)

NOTE
The DCA is a product-specific app not available for ETS demo versions.

You can download the DCA from the Shop ETS Apps website. Look for **INTESIS KNX/UNIVERSAL Configuration Tool**.

TIP
If you have any questions about how to install the DCA, watch this video or read this article from the KNX Association.

ABOUT THE REMOTE CONTROL FIRMWARE (RCF)
The remote control firmware (RCF) contains all data related to its AC unit, like the allowed modes, available fan speeds, if it supports control over the horizontal airflow, etc.

NOTE
The first time you enter the **DCA** tab, the RCF database will be automatically updated. The **Update IR Database** window will emerge, showing a progress bar.

The **DCA** tab includes the following options:

RCF DATABASE

- **Last update date**: It indicates when the RCF database was last updated.

- **Update database**: Click the **Update** button to update the RCF database.

CONNECTION

- **Connection**: Choose how to connect with the gateway to configure the IR remote control and update the firmware, if necessary.
  - **USB**: ETS will connect with the gateway through your computer's USB port.

    TIP
    USB connection is recommended: it is much faster and more secure.

    - **USB Port**: Select the port of your computer where the gateway is connected.
    - **Refresh available ports**: Click this button to refresh the list of USB ports currently available on your computer.
    - **Serial Number**: It shows the gateway's serial number.
    - **Establish connection**: Click **Connect** to establish a connection with the gateway.
    - **Connection status**: When the connection with the gateway is established, this parameter switches from **Disconnected** to **Connected**.
  - **KNX**: ETS will connect with the gateway through the KNX network.

    NOTE
    This process may take a long time.

    - **Establish connection**: Click **Connect** to establish a connection with the gateway.
    - **Connection status**: When the connection with the gateway is established, this parameter switches from **Disconnected** to **Connected**.

IR CONFIGURATION

- **Automatic IR detection**: By clicking the **Autolearn** button, the gateway will automatically get the RCF of your IR remote control.

  NOTE
  To use this function, the native AC infrared remote control is required, and the computer must have an internet connection.

  A new window will open. Follow carefully the steps indicated:

  IMPORTANT
  Steps **1** to **3** must be performed within 60 seconds.

  1. Click the **Learn** button on the bottom left side of the new window.

     NOTICE
     The gateway's LED will turn steady white.

  2. Point your IR remote control at the gateway.

3. Press the On/Off button of your IR remote control.

> **NOTICE**
> Once the pulse is received:
>
> – The fields **Received pulse** and **Accepted RCFs** will show some results.
>
> – The gateway's LED will turn off.

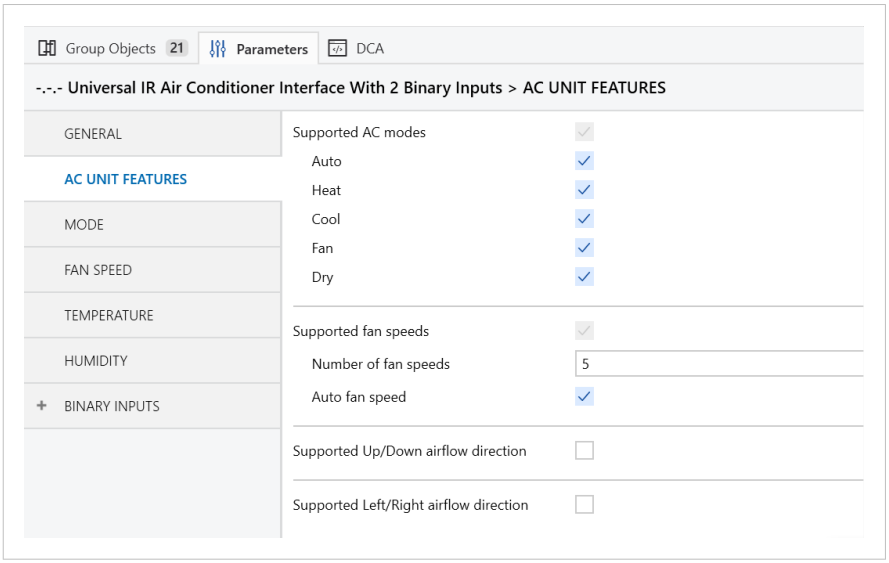
4. Choose one of the RCFs shown in the **Accepted RCFs** field.
5. Click **Save**.

> **IMPORTANT**
> If no RCFs are received, repeat the process. If the problem persists, please contact the support department.

> **NOTE**
> Once completed, the **Autolearn** function will autofill the following parameters (**AC Manufacturer** and **AC Model / RC**).

> **TIP**
> **Autolearn** is recommended to configure the IR remote control in the Intesis gateway. You can also do it manually by looking for the AC manufacturer and the IR remote control model in the list (see the following parameters).

- **AC Manufacturer**: Use the **Autolearn** function to autofill this parameter. You can also use this parameter to look for the AC manufacturer.
- **AC Model / RC**: Use the **Autolearn** function to autofill this parameter. You can also use this parameter to look for the AC model and the IR remote control for that model.
- **Autoconfigure AC unit features parameters in database**: Click the **Autoconfigure** button to autofill the **AC UNIT FEATURES** options in the **Parameters** tab:



> **TIP**
> **Autoconfigure** is recommended to avoid mistakes when configuring the **AC UNIT FEATURES** options. By using this function, you ensure the different **AC UNIT FEATURES** options will be set up according to those your AC unit allows.

IR CONFIGURATION DOWNLOAD

- **Download IR configuration**: Click the **Download** button to download the IR configuration to the gateway.

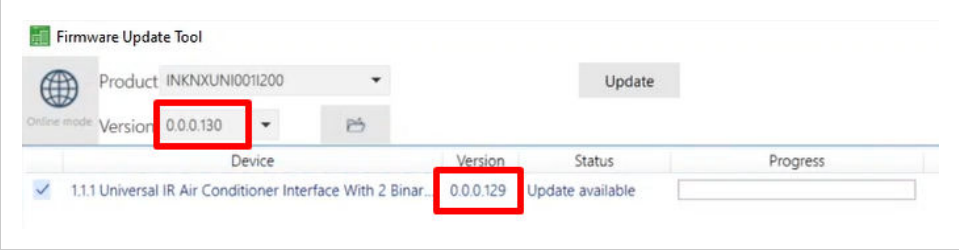
> **IMPORTANT**
> This action downloads only the IR configuration to the gateway. Later, you must use one of the options available in ETS to download the application program and the individual address as usual.
> See Downloading the Configuration to the Gateway (page 23).

FIRMWARE UPDATES

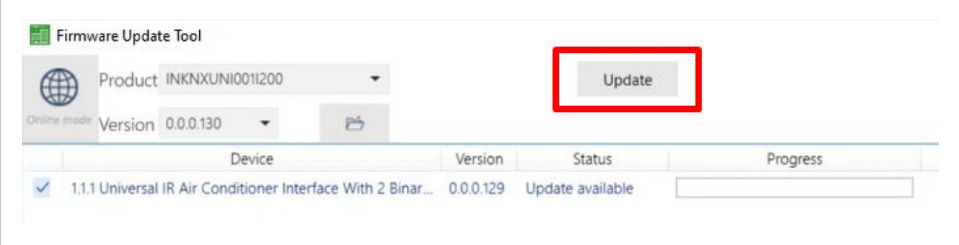
- **Firmware version updated**: Once you establish the connection with the gateway, this parameter will tell you if the gateway's firmware version is the last one available (**Yes**) or not (**No**).
- **Update Firmware from file or online**:

1. Click the **Firmware manager** button.
2. In the **Firmware update tool** window, check if there's a new version available.

Figure 4. In this image, the last version available is 0.0.0.130, while the version in the gateway is 0.0.0.129



3. To update the firmware version, click the **Update** button.



> **NOTICE**
> When using the USB connection, this process may take one or two minutes; however, through the KNX connection, this time can extend to up to 20 minutes.

You can also update the firmware version through a file locally stored on your computer:

1. In the **Firmware update tool** window, click either the globe icon button with the text **Online mode** button or the folder icon button .
2. Select the desired file.

6.4. Downloading the Configuration to the Gateway

IMPORTANT
Depending on the data you have to send, remember to push the gateway's button to activate the programming mode. See Push Button (page 15).

When the configuration is finished, use the standard procedure to download the configuration into the Intesis gateway through the **Download** variants offered by ETS:

Download variant	Shortcut	Comment
Download all	Ctrl + Shift + L	All project data in ETS is downloaded into the gateway: the individual address, application program, parameters, and group addresses and associations.
Partial download	Ctrl + D	Only the parts that have changed in ETS and have not been downloaded before are downloaded.
Download Individual Address	Ctrl + Shift + I	It assigns the individual address to the gateway.
Overwrite Individual Address	Ctrl + Shift + Alt + I	It assigns the individual address to the gateway by overwriting a known address.
Download Application	Ctrl + Shift + Alt + D	It downloads the application program into the gateway.

6.5. ETS Parameters

NOTE
The following sections list all the available ETS parameters for this gateway.

6.5.1. GENERAL

NOTE
To know more about these communication objects, see General (page 49).

- **Intesis Interface Order Code**: This parameter shows the gateway's order code: INKNXUNI001I200.
- **Open DCA to automatically define AC unit features**: Open the DCA page on the KNX Association website.
  - **AC Manufacturer**: AC brand in the DCA.
  - **AC Model / RC**: AC model and RCF in the DCA.
- **Notification RGB LED behavior**: Set the gateway's LED behavior.
  - **Always On. (Default value)**: The LED remains always on.
    - **Notification RGB LED brightness level**: Set the LED brightness level with the slider selector. (1 .. 5. Default value: **3**).
  - **Always Off**: The LED remains always off.
  - **Only notify changes**: The LED status changes when there is a change of value in an active communication object.

  - **Notification RGB LED brightness level**: Set the LED brightness level with the slider selector. (1 .. 5. Default value: **3**).

- **Unit Type**: Select the type of unit connected to the gateway.

> **NOTE**
> This gateway only supports the **AC** unit type.

- **Behavior after power recovery**: Set the behavior of the AC unit after a power recovery.
  - **No action. (Default value)**: No action is performed.
  - **Send last status before reset**: Send the AC unit's last status.
  - **Activate scene**: Activate a scene.

> **IMPORTANT**
> To activate a scene after a power recovery, besides this **Activate scene** option, you also must:
>
> - Activate the **Scenes (and additional modes)** parameter at the end of this menu.
> - Select a value >0 in the **Number of scenes (or additional modes)** parameter that you can find in the **SCENES / ADDITIONAL MODES** menu.
>
> After that, the new parameter **Activate scene after power recovery** appears in the **SCENNES / ADDITIONAL MODES** menu. See SCENES / ADDITIONAL MODES (page 37).

- **Behavior after download**: Set the behavior of the AC unit after downloading the ETS project to the gateway.
  - **No action. (Default value)**: No action is performed.
  - **Send last status before reset**: Send the AC unit's last status.
  - **Activate scene**: Activate a scene.

> **IMPORTANT**
> To activate a scene after downloading the ETS project to the gateway, besides this **Activate scene** option, you also must:
>
> - Activate the **Scenes (and additional modes)** parameter at the end of this menu.
> - Select a value >0 in the **Number of scenes (or additional modes)** parameter that you can find in the **SCENES / ADDITIONAL MODES** menu.
>
> After that, the new parameter **Activate scene after download** appears in the **SCENNES / ADDITIONAL MODES** menu. See SCENES / ADDITIONAL MODES (page 37).

- **Read on init delay**: Set the time in seconds before the gateway sends READ telegrams for the group addresses associated with its Control_ objects on bus recovery or application reset/start-up. (0 .. 255 seconds. Default value: **0 sec**).

> **NOTE**
> This function gives other KNX devices on the bus enough time to start up before sending READ telegrams.
>
> All Control_ objects with both Transmit (T) and Update (U) flags enabled will send READ telegrams, and their values will be updated with the response when received.

- **Time telegram rate**: Set the time in milliseconds between two telegrams. (0 .. 5000. Default value: **0 ms**).
- **Heartbeat. (Unchecked by default)**: Activate the **Heartbeat (Status)** object allowing the gateway to report keep-alive notifications.

  - **Notification period**: Set the time in minutes between keep-alive notifications. (1 .. 255. Default value: **15 min**).

- **Error notifications. (Checked by default)**: Activate the **Error: Flag (Status)** object, which reports the absence or presence of an error. It also allows the activation of the following parameters.
  - **Error Code notifications [2 bytes]. (Unchecked by default)**: Activate the **Error: Code (Status)** object, which reports the error code when an error occurs.
  - **Error Text notifications [14 bytes]. (Unchecked by default)**: Activate the **Error: Description (Status)** object, which reports a text with information about the error when an error occurs.

Table 9. Gateway's internal errors

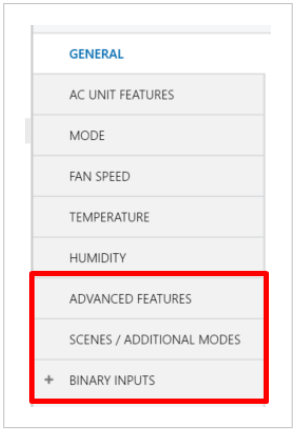
Error code (2 bytes)	Text code (14 bytes)	How to solve
-1	COMM ERROR	Open plug-in and Download IR parameters again
-3	WRONG IR-FW1	Open plug-in and Download IR parameters again
-4	WRONG IR-FW2	Open plug-in and Download IR parameters again
-5	#0005	Restart the gateway
-200	SUPPLY2 FAIL	The gateway is not receiving sufficient power

NOTE
The error codes and text reported by the indoor unit vary depending on the AC manufacturer. These errors are in the same format as displayed in the remote control and listed in the AC unit documentation.

- **Parrot mode objects. (Unchecked by default)**: Activate the **Parrot Mode (Control)** and **Parrot Mode (Status)** objects, which are used for the Parrot Mode function. See Gateway Emplacement (page 10).
- **Remote Control Lock. (Unchecked by default)**: Activate the **Remote Control Lock (Control)** and **Remote Control Lock (Status)** objects, which are used to block/unblock commands sent to the AC unit from the AC remote control.
- **KNX Control Lock. (Unchecked by default)**: Activate the **KNX Control Lock (Control)** and **KNX Control Lock (Status)** objects, which are used to block/unblock commands sent to the AC unit from KNX.
- **Operating time counter. (Unchecked by default)**: Activate the AC unit operating time counting through the following parameters.
  - **Operating time object (seconds). (Checked by default)**: Activate the **Operating Time Counter (s) (Control)** and **Operating Time Counter (s) (Status)** objects, which are used to count the AC unit running time in seconds.
  - **Operating time object (hours). (Checked by default)**: Activate the **Operating Time Counter (h) (Control)** and **Operating Time Counter (h) (Status)** objects, which are used to count the AC unit running time in hours.
  - **Notification period <0=disabled>**: Set the time in minutes between operating time counting notifications. (0 .. 65535. Default value: **0 min**).
  - **Operating time after KNX download**: This parameter indicates the gateway's uptime.
    - **Keep current value. (Default value)**: Keep the same value that the gateway had before the download.
    - **Set new value**:
      - **New value**: Set the gateway's uptime in hours (0 .. 65535. Default value: **0 hours**).
      - **Units: Hours**

- **Advanced features. (Unchecked by default)**: Activate all control and status objects for the advanced features of **OCCUPANCY**, **WINDOWS CONTACT**, and **SLEEP**.
- **Scenes (and additional modes). (Unchecked by default)**: Activate all control and status objects for **SCENES / ADDITIONAL MODES**.
- **Binary Inputs. (Unchecked by default)**: Activate all control and status objects for **Binary Input 1** and **Binary Input 2**.

When activating these three last parameters, new tabs appear in the menu to configure each feature:



6.5.2. AC UNIT FEATURES

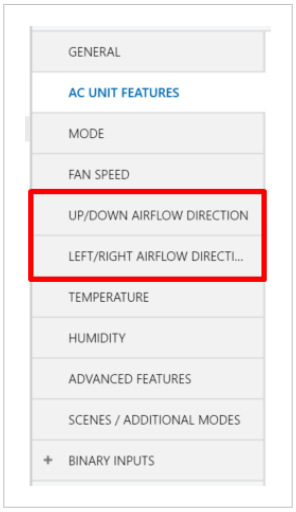
TIP
Use the **Autoconfigure** function to avoid mistakes while filling in the following parameters' information. See Device Configuration App (DCA) (page 18).

- **Supported AC modes**: Select the supported modes.
  - **Auto. (Checked by default)**: Activate the **Mode: AC: Auto (Control)** and **Mode: AC: Auto (Status)** objects.
  - **Heat. (Checked by default)**: Activate the **Mode: AC: Heat (Control)** and **Mode: AC: Heat (Status)** objects.
  - **Cool. (Checked by default)**: Activate the **Mode: AC: Cool (Control)** and **Mode: AC: Cool (Status)** objects.
  - **Fan. (Checked by default)**: Activate the **Mode: AC: Fan (Control)** and **Mode: AC: Fan (Status)** objects.
  - **Dry. (Checked by default)**: Activate the **Mode: AC: Dry (Control)** and **Mode: AC: Dry (Status)** objects.
- **Supported fan speeds**: Select the supported fan speeds.
  - **Number of fan speeds**: Set the number of fan speeds supported by the AC unit. (0 .. 10. Default value: **3**).
  - **Auto fan speed. (Unchecked by default)**: Activate the **Fan Speed: Auto (Control)** and **Fan Speed: Auto (Status)** objects.
- **Supported Up/Down airflow direction. (Unchecked by default)**: Select the supported up/down airflow directions.
  - **Number of positions**: Set the number of up/down airflow directions supported by the AC unit. (0 .. 9. Default value: **3**)
  - **Auto/Stop. (Unchecked by default)**: Include the Auto and Stop positions in the Up/Down Air Directions sequence and activate the **Up/Down Air Direction: Auto/Stop (Control) 1=Auto/Stop**, and **Up/Down Air Direction: Auto/Stop (Status) 1=Auto/Stop** objects.

  - **Swing. (Unchecked by default)**: Include the Swing position in the Up/Down Air Directions sequence and activate the **Up/Down Air Direction: Swing (Control)** and **Up/Down Air Direction: Swing (Status)** objects.
  - **Swirl. (Unchecked by default)**: Include the Swirl position in the Up/Down Air Directions sequence and activate the **Up/Down Air Direction: Swirl (Control)** and **Up/Down Air Direction: Swirl (Status)** objects.
  - **Spot. (Unchecked by default)**: Include the Spot position in the Up/Down Air Directions sequence and activate the **Up/Down Air Direction: Spot (Control)** and **Up/Down Air Direction: Spot (Status)** objects.
  - **Move. (Unchecked by default)**: Include the Move position in the Up/Down Air Directions sequence and activate the **Up/Down Air Direction: Move (Control)** object.

- **Supported Left/Right airflow direction. (Unchecked by default)**: Select the supported left/right airflow directions.
  - **Number of positions**: Set the number of left/right airflow directions supported by the AC unit. (0 .. 9. Default value: **3**)
  - **Auto/Stop. (Unchecked by default)**: Include the Auto and Stop positions in the Left/Right Air Directions sequence and activate the **Left/Right Air Direction: Auto/Stop (Control) 1=Auto/Stop**, and **Left/Right Air Direction: Auto/Stop (Status) 1=Auto/Stop** objects.
  - **Swing. (Unchecked by default)**: Include the Swing position in the Left/Right Air Directions sequence and activate the **Left/Right Air Direction: Swing (Control)** and **Left/Right Air Direction: Swing (Status)** objects.
  - **Swirl. (Unchecked by default)**: Include the Swirl position in the Left/Right Air Directions sequence and activate the **Left/Right Air Direction: Swirl (Control)** and **Left/Right Air Direction: Swirl (Status)** objects.
  - **Spot. (Unchecked by default)**: Include the Spot position in the Left/Right Air Directions sequence and activate the **Left/Right Air Direction: Spot (Control)** and **Left/Right Air Direction: Spot (Status)** objects.
  - **Move. (Unchecked by default)**: Include the Move position in the Left/Right Air Directions sequence and activate the **Left/Right Air Direction: Move (Control)** object.

When activating the **Supported Up/Down airflow direction** and **Supported Left/Right airflow direction** parameters, new tabs appear in the menu to configure each feature:



6.5.3. MODE

NOTE
To know more about these communication objects, see Mode (page 50).

- **Simplified mode (Cool/Heat) objects. (Unchecked by default)**: Activate the **Mode: AC: Simplified (Cool/Heat) (Control)** and **Mode: AC: Simplified (Cool/Heat) (Status)** objects.
- **1 bit (-/+) step mode object. (Unchecked by default)**: Activate the following parameters.
  - **1 bit (-/+) step mode object polarity: 0=Decrease; 1=Increase. (Unchecked by default)**: Activate the **Mode: AC: Step (-/+) (Control) - 0=Decrease; 1=Increase** object.

    NOTE
    A value of 0 decreases the mode one step; a value of 1 increases the mode one step.

  - **1 bit (-/+) step mode object polarity: 1=Decrease; 0=Increase. (Unchecked by default)**: Activate the **Mode: AC: Step (-/+) (Control) - 0=Increase; 1=Decrease** object.

    NOTE
    A value of 0 increases the mode one step; a value of 1 decreases the mode one step.

- **Individual objects for each mode. (Unchecked by default)**: Activate the 1-bit Boolean objects for control and status of each mode.

  NOTE
  For control objects, a value of 1 activates the mode; for status objects, a value of 1 indicates that that mode is active.

- **Percentage mode (Heat and Cool) objects (PID Compatible). (Unchecked by default)**: Activate the **Mode AC: Percentage: On/Off + Heat (Control) - 0%=Off; (1 .. 100%)%=On + Heat** and **Mode AC: Percentage: On/Off + Cool (Control) - 0%=Off; (1 .. 100%)%=On + Cool** objects.

  NOTE
  - For the **On/Off + Heat** object: A value of 0% turns the AC unit off; any other value turns the AC unit On and sets it in the Heat mode.
  - For the **On/Off + Cool** object: A value of 0% turns the AC unit off; any other value turns the AC unit On and sets it in the Cool mode.

6.5.4. FAN SPEED

NOTE
To know more about these communication objects, see Fan Speed (page 51).

- **Percentage fan speed objects. (Checked by default)**: Activate the **Fan Speed: Percentage (Control)** and **Fan Speed: Percentage (Status)** objects, which establish different thresholds for the fan speed positions.
  This parameter sets the threshold for the Control object using the formula 100*(n+0.5)/N, where "n" is the current position and "N" is the total number of positions supported. For the Status object, the formula is 100*n/N.
  For example, in a unit supporting five positions, these are the thresholds for each position:

Position	Formula	Threshold for Control object	Value reported by Status object
1	100*(1+0.5)/5=30	1% .. 30%	20%
2	100*(2+0.5)/5=50	31% .. 50%	40%
3	100*(3+0.5)/5=70	51% .. 70%	60%
4	100*(4+0.5)/5=90	71% .. 90%	80%
5	100*(5+0.5)/5=100	91% .. 100%	100%

In this case, sending a value between 1% and 30% sets position 1; sending a value between 31% and 50% sets position 2, etcetera.

  - **"0%" means "auto" fan speed. (Unchecked by default)**: A value of 0% sets the fan speed in Auto.

- **Enumerated fan speed objects. (Unchecked by default)**: Activates the **Fan Speed: Enumerated (Control)** and **Fan Speed: Enumerated (Status)** objects.
  - **"0" means "auto" fan speed. (Unchecked by default)**: A value of 0 sets the fan speed in Auto.
- **Fanstage fan speed objects. (Checked by default)**: Activates the **Fan Speed: Fan Stage (Control) - 0=Off; Fan Speed values= 1 .. N** and **Fan Speed: Fan Stage (Status) - 0=Off; Fan Speed values= 1 .. N** objects.
  - **"0" means AC operation "OFF". (Checked by default)**: A value of 0 turns the AC unit off.
- **1 bit (-/+) step fan speed object. (Unchecked by default)**: Activates the following parameters.
  - **1 bit (-/+) step fan speed object polarity 0=Decrease; 1=Increase. (Unchecked by default)**: Activates the **Fan Speed: Step (-/+) (Control) - 0=Decrease; 1=Increase** object.

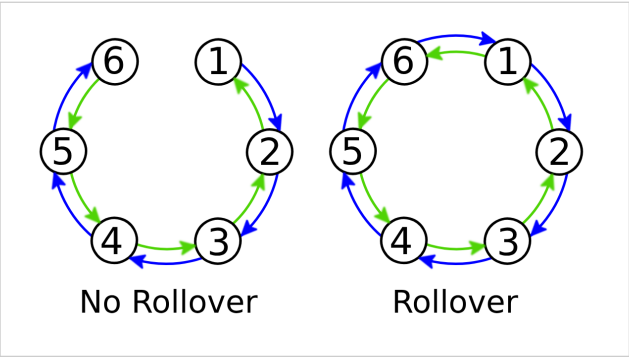
    NOTE
    A value of 0 decreases the fan speed in one step; a value of 1 increases the fan speed in one step.

  - **1 bit (-/+) step fan speed object polarity: 1=Increase; 0=Decrease. (Unchecked by default)**: Activates the **Fan Speed: Step (+/-) (Control) - 0=Increase; 1=Decrease** object.

    NOTE
    A value of 0 increases the fan speed in one step; a value of 1 decreases the fan speed in one step.

  - **Rollover fan speed at upper/lower limit. (Unchecked by default)**: The sequence for fan speed allows a cyclic movement:

Figure 5. Difference between a sequence without and with rollover. The example represents a unit supporting six fan speeds.



Blue arrows represent the sequence for the up/increase steps, while green arrows show the down/decrease steps.

- **Individual objects for each fan speed. (Unchecked by default)**: Activates the 1-bit Boolean objects for control and status of each fan speed.

> **NOTE**
> For control objects, a value of 1 activates that fan speed; for status objects, a value of 1 indicates that that fan speed is active.

6.5.5. UP/DOWN AIRFLOW DIRECTION

> **NOTE**
> To know more about these communication objects, see Up/Down Airflow Direction (page 53).

- **Percentage Up/Down airflow direction objects. (Checked by default)**: Activate the **Up/Down Airflow Direction: Percentage (Control)** and **Up/Down Airflow Direction: Percentage (Status)** objects, which establish different thresholds for the up/down airflow direction.
  This parameter sets the threshold for the Control object using the formula 100*(n+0.5)/N, where "n" is the current position and "N" is the total number of positions supported. For the Status object, the formula is 100*n/N.
  For example, in a unit supporting five positions, these are the thresholds for each position:

Position	Formula	Threshold for Control object	Value reported by Status object
1	100*(1+0.5)/5=30	1% .. 30%	20%
2	100*(2+0.5)/5=50	31% .. 50%	40%
3	100*(3+0.5)/5=70	51% .. 70%	60%
4	100*(4+0.5)/5=90	71% .. 90%	80%
5	100*(5+0.5)/5=100	91% .. 100%	100%

  In this case, sending a value between 1% and 30% sets position 1; sending a value between 31% and 50% sets position 2, etcetera.

  – **"0%" sets "auto/stop" Up/Down airflow direction. (Unchecked by default)**: A value of 0% sets the Up/Down airflow direction in Auto/Stop.

- **Enumerated Up/Down airflow direction objects. (Unchecked by default)**: Activate the **Up/Down Airflow Direction: Enumerated (Control)** and **Up/Down Airflow Direction: Enumerated (Status)** objects.

  – **"0" sets "auto/stop" Up/Down airflow direction. (Unchecked by default)**: A value of 0 sets the Up/Down airflow direction in Auto/Stop.

- **1 bit (-/+) step Up/Down airflow direction objects. (Unchecked by default)**: Activate the following parameters.

  – **1 bit (-/+) step Up/Down airflow direction object polarity: 0=Decrease; 1=Increase. (Unchecked by default)**: Activate the **Up/Down Airflow Direction: Step (-/+) (Control) - 0=Decrease; 1=Increase** object.

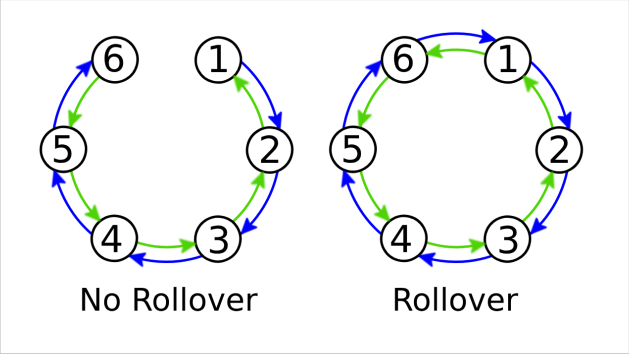
  > **NOTE**
  > A value of 0 decreases the up/down airflow position one step; a value of 1 increases the up/down airflow position one step.

  – **1 bit (-/+) step Up/Down airflow direction object polarity: 1=Decrease; 0=Increase. (Unchecked by default)**: Activate the **Up/Down Airflow Direction: Step (+/-) (Control) - 0=Increase; 1=Decrease** object.

NOTE
A value of 0 increases the up/down airflow position one step; a value of 1 decreases the up/down airflow position one step.

- **"Auto/Stop" Up/Down airflow direction position included in the sequence. (Unchecked by default)**: Include Auto in the -/+ step sequence.
- **"Stop" Up/Down airflow direction position included in the sequence. (Unchecked by default)**: Include Stop in the -/+ step sequence.
- **"Swing" Up/Down airflow direction position included in the sequence. (Unchecked by default)**: Include Swing in the -/+ step sequence.
- **"Swirl" Up/Down airflow direction position included in the sequence. (Unchecked by default)**: Include Swirl in the -/+ step sequence.
- **"Wide" Up/Down airflow direction position included in the sequence. (Unchecked by default)**: Include Wide in the -/+ step sequence.
- **"Spot" Up/Down airflow direction position included in the sequence. (Unchecked by default)**: Include Spot in the -/+ step sequence.
- **Rollover Up/Down airflow direction position at upper/lower limit. (Unchecked by default)**: The sequence for Up/Down airflow direction allows a cyclic movement:

Figure 6. Difference between a sequence without and with rollover. The example represents a unit supporting six positions for the up/down airflow.



Blue arrows represent the sequence for the up/increase steps, while green arrows show the down/decrease steps.

- **Individual objects for each Up/Down airflow direction position. (Unchecked by default)**: Activate the 1-bit Boolean objects for control and status of each position for Up/Down airflow direction.

NOTE
For control objects, a value of 1 activates that position; for status objects, a value of 1 indicates that that position is active.

6.5.6. LEFT/RIGHT AIR FLOW DIRECTION

NOTE
To know more about these communication objects, see Left/Right Airflow Direction (page 56).

- **Percentage Left/Right airflow direction objects. (Checked by default)**: Activate the **Left/Right Airflow Direction: Percentage (Control)** and **Left/Right Airflow Direction: Percentage (Status)** objects, which establish different thresholds for the up/down airflow direction.

This parameter sets the threshold for the Control object using the formula 100*(n+0.5)/N, where "n" is the current position and "N" is the total number of positions supported. For the Status object, the formula is 100*n/N.
For example, in a unit supporting five positions, these are the thresholds for each position:

Position	Formula	Threshold for Control object	Value reported by Status object
1	100*(1+0.5)/5=30	1% .. 30%	20%
2	100*(2+0.5)/5=50	31% .. 50%	40%
3	100*(3+0.5)/5=70	51% .. 70%	60%
4	100*(4+0.5)/5=90	71% .. 90%	80%
5	100*(5+0.5)/5=100	91% .. 100%	100%

In this case, sending a value between 1% and 30% sets position 1; sending a value between 31% and 50% sets position 2, etcetera.

- **"0%" sets "auto/stop" Left/Right airflow direction. (Unchecked by default)**: A value of 0% sets the Left/Right airflow direction in Auto/Stop.

- **Enumerated Left/Right airflow direction objects. (Unchecked by default)**: Activate the **Left/Right Airflow Direction: Enumerated (Control)** and **Left/Right Airflow Direction: Enumerated (Status)** objects.
  - **"0" sets "auto/stop" Left/Right airflow direction. (Unchecked by default)**: A value of 0 sets the Left/Right airflow direction in Auto/Stop.

- **1 bit (-/+) step Left/Right airflow direction objects. (Unchecked by default)**: Activate the following parameters.
  - **1 bit (-/+) step Left/Right airflow direction object polarity: 0=Decrease; 1=Increase. (Unchecked by default)**: Activate the **Left/Right Airflow Direction: Step (-/+) (Control) - 0=Decrease; 1=Increase** object.

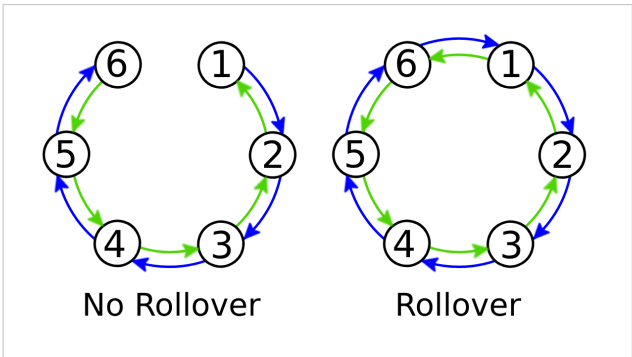
    NOTE
    A value of 0 decreases the left/right airflow position one step; a value of 1 increases the left/right airflow position one step.

  - **1 bit (-/+) step Left/Right airflow direction object polarity: 0=Increase; 1=Decrease. (Unchecked by default)**: Activate the **Left/Right Airflow Direction: Step (+/-) (Control) - 0=Increase; 1=Decrease** object.

    NOTE
    A value of 0 increases the left/right airflow position one step; a value of 1 decreases the left/right airflow position one step.

  - **"Auto/Stop" Left/Right airflow direction position included in the sequence. (Unchecked by default)**: Include Auto/Stop in the -/+ step sequence.
  - **"Swing" Left/Right airflow direction position included in the sequence. (Unchecked by default)**: Include Swing in the -/+ step sequence.
  - **"Swirl" Left/Right airflow direction position included in the sequence. (Unchecked by default)**: Include Swirl in the -/+ step sequence.
  - **"Wide" Left/Right airflow direction position included in the sequence. (Unchecked by default)**: Include Wide in the -/+ step sequence.
  - **"Spot" Left/Right airflow direction position included in the sequence. (Unchecked by default)**: Include Spot in the -/+ step sequence.
  - **Rollover Left/Right airflow direction position at upper/lower limit. (Unchecked by default)**: The sequence for Left/Right airflow direction allows a cyclic movement:

Figure 7. Difference between a sequence without and with rollover. The example represents a unit supporting six positions for the left/right airflow.



Blue arrows represent the sequence for the up/increase steps, while green arrows show the down/decrease steps.

- **Individual objects for each Left/Right airflow direction position. (Unchecked by default)**: Activate the 1-bit Boolean objects for control and status of each position for Left/Right airflow direction.

> **NOTE**
> For control objects, a value of 1 activates that position; for status objects, a value of 1 indicates that that position is active.

6.5.7. TEMPERATURE

> **NOTE**
> To know more about these communication objects, see Temperature (page 59).

- **1 bit (-/+) step user setpoint object. (Unchecked by default)**: Activate the following parameters.
  - **1 bit (-/+) step user setpoint object polarity: 0=Decrease; 1=Increase. (Unchecked by default)**: Activate the **Temperature: User Setpoint: Step (-/+) (Control) - 0=Decrease; 1=Increase** object.

    > **NOTE**
    > A value of 0 decreases the setpoint one step; a value of 1 increases the setpoint one step.

  - **1 bit (-/+) step user setpoint object polarity: 1=Decrease; 0=Increase. (Unchecked by default)**: Activate the **Temperature: User Setpoint: Step (+/-) (Control) - 0=Increase; 1=Decrease** object.

    > **NOTE**
    > A value of 0 increases the setpoint one step; a value of 1 decreases the setpoint one step.

- **Setpoint temperature range objects. (Unchecked by default)**: Activate the following status objects for the AC setpoint's highest and lowest limits: **Temperature: AC Setpoint: Lowest Limit (Status) - °C, Temperature: AC Setpoint: Highest Limit (Status) - °C, Temperature: AC Setpoint: Applied Lower Limit (Status) - °C, Temperature: AC Setpoint: Applied Higher Limit (Status) - °C**.
- **Setpoint temperature limits. (Unchecked by default)**: Set lower and upper temperature limits for heating and cooling through the following parameters.
  - **Heating lower limit**: Set the lower temperature limit when the AC unit is in HEAT mode. (10 .. 32°C. Default value: **19°C**).

- **Heating upper limit**: Set the upper temperature limit when the AC unit is in HEAT mode. (10 .. 32°C. Default value: **23°C**).
- **Cooling lower limit**: Set the lower temperature limit when the AC unit is in COOL mode. (10 .. 32°C. Default value: **24°C**).
- **Cooling upper limit**: Set the upper temperature limit when the AC unit is COOL mode. (10 .. 32°C. Default value: **28°C**).

IMPORTANT
Activate both **Setpoint temperature range objects** and **Setpoint temperature limits** parameters to activate the following control and status objects: **Temperature: User Setpoint: Lower Limit: Heating (Control) - °C, Temperature: User Setpoint: Lower Limit: Heating (Status) - °C, Temperature: User Setpoint: Upper Limit: Heating (Control) - °C, Temperature: User Setpoint: Upper Limit: Heating (Status) - °C, Temperature: User Setpoint: Lower Limit: Cooling (Control) - °C, Temperature: User Setpoint: Lower Limit: Cooling (Status) - °C, Temperature: User Setpoint: Upper Limit: Cooling (Control) - °C, Temperature: User Setpoint: Upper Limit: Cooling (Status) - °C**.

- **Periodical sending of AC setpoint temperature. (Unchecked by default)**: Set a notification period for the setpoint temperature.
  - **Notification period**: Set the time in minutes between AC setpoint temperature notifications. (1 .. 255. Default value: **15 min**).
- **Intesis ambient reference temperature offset**: Adjust the gateway's thermistor temperature offset. (-15 .. 15. Default value: **0**).
- **Sending of Intesis ambient reference temperature**: Select when the gateway sends the ambient temperature value provided by its own sensor.
  - **Change of value (default)**: The ambient temperature value is sent when the current value changes.
    - **Minimum time between sendings**: Set the time in seconds between change of value notifications. (1 .. 255. Default value: **1 sec**).
    - **Minimum change between sendings**: Set the minimum value in degrees Celsius at which the ambient temperature must change before sending the change of value notification. (1 .. 100. Default value: **1°C**).
  - **Periodically**: The ambient temperature value is sent after a certain period of time.
    - **Notification period**: Set the time in minutes between ambient temperature notifications. (1 .. 255. Default value: **15 min**).
  - **Periodically & Change of value**: The ambient temperature value is sent when the current value changes and after certain periods of time.
    - **Minimum time between sendings**: Set the time in seconds between change of value notifications. (1 .. 255. Default value: **1 sec**).
    - **Minimum change between sendings**: Set the minimum value in degrees Celsius at which the ambient temperature must change before sending the change of value notification. (1 .. 100. Default value: **1°C**).
    - **Notification period**: Set the time in minutes between gateway ambient temperature notifications. (1 .. 255. Default value: **15 min**).

6.5.8. HUMIDITY

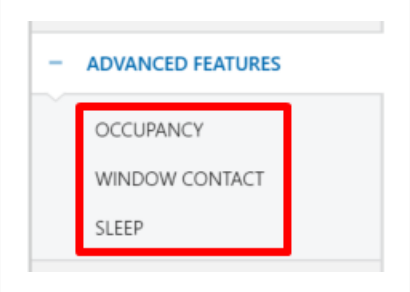
NOTE
To know more about these communication objects, see Humidity (page 59).

- **Sending of Intesis relative humidity reference**: Select when the gateway sends the ambient relative humidity value provided by its own sensor.
  - **Disabled (default)**: The ambient relative humidity value is not reported.
  - **Change of value**: The ambient relative humidity value is sent when the current value changes.
    - **Minimum time between sendings**: Set the time in seconds between change of value notifications. (1 .. 255. Default value: **1 sec**).
    - **Minimum change between sendings**: Set the minimum value in percentage at which the ambient relative humidity must change before sending the change of value notification. (0 .. 100. Default value: **1%**).
  - **Periodically**: The ambient relative humidity value is sent after a certain period of time.
    - **Notification period**: Set the time in minutes between ambient relative humidity notifications. (1 .. 255. Default value: **15 min**).
  - **Periodically & Change of value**: The ambient relative humidity value is sent when the current value changes and after certain periods of time.
    - **Minimum time between sendings**: Set the time in seconds between change of value notifications. (1 .. 255. Default value: **1 sec**).
    - **Minimum change between sendings**: Set the minimum value in percentage at which the ambient relative humidity must change before sending the change of value notification. (0 .. 100. Default value: **1%**).
    - **Notification period**: Set the time in minutes between ambient relative humidity notifications. (1 .. 255. Default value: **15 min**).

6.5.9. ADVANCED FEATURES

- **Occupancy**: Activate all Control and Status objects for Occupancy.
- **Window Contact**: Activate all Control and Status objects for Window Contact
- **Sleep (Switch-off delay)**: Activate the **Sleep Timer: Stop/Start (Control) - 0-Stop; 1-Start** object.

When activating these parameters, you can expand the **ADVANCED FEATURES** menu to configure each feature:



6.5.9.1. OCCUPANCY

NOTE
To know more about these communication objects, see Advanced Features (page 60).

ACTION 1

- **First action after unoccupancy**: Select the first AC unit behavior after unoccupancy.

- **Turn Off AC Unit**: The AC unit turns off.
  - **Delay**: Set the time in minutes before turning the AC unit off after unoccupancy. (0 .. 255. Default value: **10 min**).
- **Apply setpoint offset. (Default value)**: A setpoint offset is applied, allowing the setpoint to decrease (heating) or increase (cooling).
  - **Delay**: Set the time in minutes before applying the offset. (0 .. 255. Default value: **10 min**).
  - **Offset when heating**: Set the degrees Celsius to decrease when the unit is in HEAT mode (-7 .. 0. Default value: **-2°C**).
  - **Offset when cooling**: Set the degrees Celsius to increase when the unit is in COOL mode(0 .. 7. Default value: **2°C**).

- **Enable second action. (Unchecked by default)**: Set a second action after unoccupancy.

NOTE
The parameters for ACTION 2 are the same as for ACTION 1.

- **Disable On/Off operation while unoccupancy. (Checked by default)**: Deactivate the On/Off function until the room is occupied again. It also activates the **Occupancy: On/Off Operation Lock (Status)** object.
- **Recover last status before unoccupancy when occupied again. (Unchecked by default)**: When the room is occupied again, this para meter restores the AC unit to the temperature at which it was operating before unoccupancy.
  - **Time limit to recover last status before unoccupancy when occupied again ("0" means to always recover)**: Set the time in minutes before restoring the last temperature. (0 .. 65535. Default value: **0 min**).

6.5.9.2. WINDOW CONTACT

NOTE
To know more about these communication objects, see Advanced Features (page 60).

- **Use DPT_1.009 (0-Open/1-Closed). (Checked by default)**: Activate the **Window: Input: NO (Control) - 0-Open window; 1-Closed window**, and **Window: Input: NO (Status) - 0-Open window; 1-Closed window**.
- **Use DPT_1.019 (0-Closed/1-Open). (Unchecked by default)**: Activate the **Window: Input: NO (Control) - 0-Closed window; 1-Open window**, and **Window: Input: NO (Status) - 0-Closed window; 1-Open window**.
- **Switch-Off delay**: Set the time in minutes before turning the AC unit off when the window is opened. (0 .. 255. Default value: 10 min).
- **Disable On/Off operation while open window. (Checked by default)**: Deactivate the On/Off function until the window is closed again. This parameter also activates the **Window: On/Off Operation Lock (Status)** object.
- **Recover last status before open window when closed again. (Unchecked by default)**: When the window is closed again, this parameter restores the AC unit to the temperature at which it was operating before opening the window.
  - **Time limit to recover last status before open window when closed again ("0" means to always recover)**: Set the time in minutes before restoring the last temperature. (0 .. 65535. Default value: **0 min**).

6.5.9.3. SLEEP

NOTE
To know more about these communication objects, see Advanced Features (page 60).

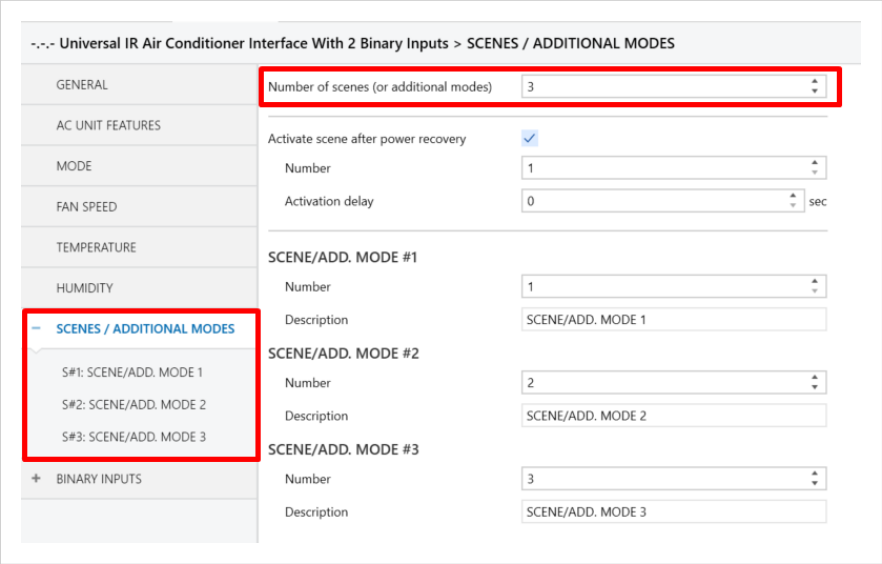
- **Switch-Off delay**: Set the time in minutes before turning the AC unit off when the Sleep feature is active. (0 .. 255. Default value: **10 min**).

6.5.10. SCENES / ADDITIONAL MODES

NOTE
You can set up to 10 scenes/additional modes.

NOTE
To know more about these communication objects, see Scenes (page 61).

- **Number of scenes (or additional modes)**: Select how many scenes/additional modes you want to add to your project (1 .. 10. Default value: **0**).
  When setting this parameter with a value >0, you can expand the **SCENES / ADDITIONAL MODES** menu to configure each scene/additional mode:



  In the root of this menu, you can also configure the following parameters:

- **Activate scene after power recovery. (Unchecked by default)**: Set the scene you want to activate after a power recovery.

NOTICE
This parameter appears only if the **Behavior after power recovery** parameter of the **GENERAL** menu is set to **Activate scene** and the value of the **Number of scenes (or additional modes)** in this menu is set to >0.

  - **Number**: Select the number of the scene to activate after a power recovery.
  - **Activation delay**: Set the time in seconds between the power recovery and the activation of the scene.

- **Activate scene after download. (Unchecked by default)**: Set the scene you want to activate after downloading the ETS project to the gateway.

> **NOTICE**
> This parameter appears only if the **Behavior after download** parameter of the **GENERAL** menu is set to **Activate scene** and the value of the **Number of scenes (or additional modes)** in this menu is set to >0.

  - **Number**: Select the number of the scene to activate after downloading the ETS project to the gateway.
  - **Activation delay**: Set the time in seconds between the project download and the activation of the scene.

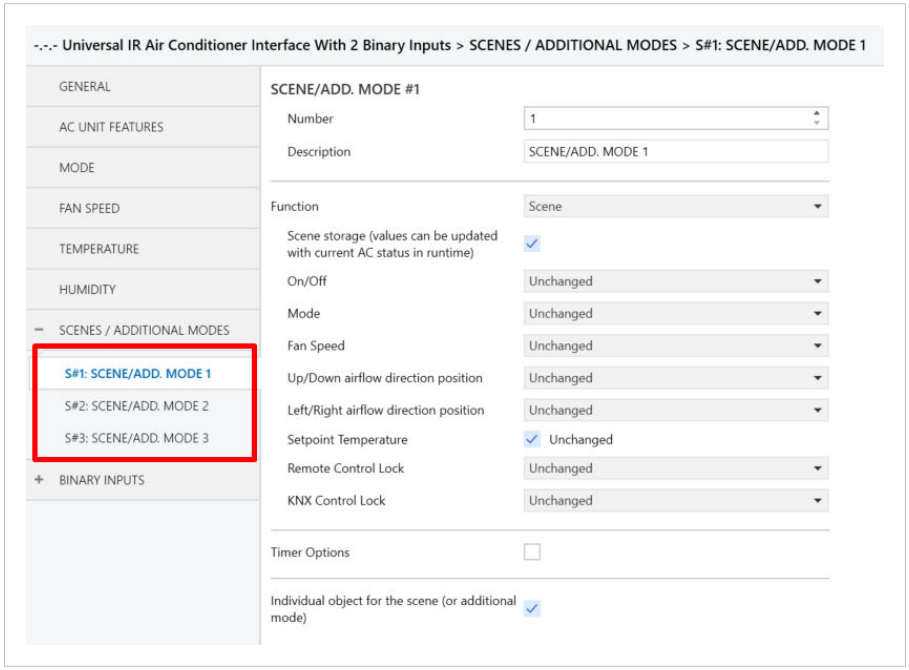
SCENE/ADD. MODE #1 .. 10

- **Number**: Set a number for this scene/additional mode (1 .. 64. Default value: **1 .. 10**).
- **Description**: Type a description for this scene/additional mode. (64 bytes allowed. Default text: **SCENE/ADD. MODE 1 ..10**).

> **NOTE**
> You can also edit the **Number** and **Description** parameters in the specific configuration menu for each scene/additional mode. See the next section.

6.5.10.1. S#1 .. 10: SCENE/ADD.MODE 1 .. 10

Use the expanded menu on the left to enter the specific configuration menu for each scene/additional mode.



For each scene/additional mode, you can set these parameters:

- **Number**: Set a number for this scene/additional mode. (1 .. 64. Default value: **1 .. 10**).
- **Description**: Type a description for this scene/additional mode. (64 bytes allowed. Default text: **SCENE/ADD. MODE 1 ..10**).
- **Function**: Select one of the following functions.

– **Scene. (Default value)**
  - **Scene storage (values can be updated with current AC status in runtime)**

    IMPORTANT
    If you disable this parameter, this function cannot be used to store the AC status in runtime.

  - **On/Off**: Select the AC unit status when activating this scene.
    – **Unchanged. (Default value)**: The AC unit remains in the same status that it had before activating this scene.
    – **Off**: The AC unit turns off.
    – **On**: The AC unit turns on.
  - **Mode**: Select the mode when activating this scene.
    – **Unchanged. (Default value)**: The AC unit remains in the same mode that it had before activating this scene.
    – **Auto**: The AC unit is set to Auto mode.
    – **Heat**: The AC unit is set to Heat mode.
    – **Cool**: The AC unit is set to Cool mode.
    – **Fan**: The AC unit is set to Fan mode.
    – **Dry**: The AC unit is set to Dry mode.
  - **Fan Speed**: Select the fan speed when activating this scene.
    – **Unchanged. (Default value)**: The fan remains at the same speed that it had before activating this scene.
    – **Auto**: The fan speed is set to Auto.
    – **Fan Speed 1**: The fan speed is set to 1.
    – **Fan Speed 2**: The fan speed is set to 2.
    – ..
    – **Fan Speed 9**: The fan speed is set to 9.
    – **Fan Speed 10**: The fan speed is set to 10.
  - **Up/Down airflow position**: Select the up/down airflow direction when activating this scene.
    – **Unchanged. (Default value)**: The up/down airflow direction is the same as before activating this scene.
    – **Position 1**: The up/down airflow direction is set to position 1.
    – **Position 2**: The up/down airflow direction is set to position 2.
    – ..
    – **Position 8**: The up/down airflow direction is set to position 8.
    – **Position 9**: The up/down airflow direction is set to position 9.
    – **Swing**: The up/down airflow direction is set to Swing mode.
    – **Swirl**: The up/down airflow direction is set to Swirl mode.
    – **Auto**: The up/down airflow direction is set to Auto mode.
    – **Wide**: The up/down airflow direction is set to Wide mode.
  - **Left/Right airflow direction**: Select the left/right airflow direction when activating this scene.

  - **Unchanged. (Default value)**: The left/right airflow direction is the same as before activating this scene.
  - **Position 1**: The left/right airflow direction is set to position 1.
  - **Position 2**: The left/right airflow direction is set to position 2.
  - ..
  - **Position 8**: The left/right airflow direction is set to position 8.
  - **Position 9**: The left/right airflow direction is set to position 9.
  - **Swing**: The left/right airflow direction is set to Swing mode.
  - **Swirl**: The left/right airflow direction is set to Swirl mode.
  - **Auto**: The left/right airflow direction is set to Auto mode.
  - **Wide**: The left/right airflow direction is set to Wide mode.
- **Setpoint Temperature**: Uncheck the **Unchanged** option to establish the setpoint temperature when activating this scene. (10 .. 32. Default value: **25°C**).
- **Remote Control Lock**: Select the remote control lock behavior when activating this scene.
  - **Unchanged. (Default value)**: The remote control remains in the same status that it had before activating this scene.
  - **Unlocked**: The remote control is unlocked.
  - **Locked**: The remote control is locked.
- **KNX Control Lock**: Select the KNX control lock behavior when activating this scene.
  - **Unchanged. (Default value)**: KNX Control Lock remains in the same status that it had before activating this scene.
  - **Unlocked**: KNX Control is unlocked.
  - **Locked**: KNX Control is locked.

– **Power Mode**

> **IMPORTANT**
> This function cannot be used to store the AC status in runtime.

- **Fan Speed**: Select the fan speed when activating this function.
  - **Unchanged**: The fan remains at the same speed that it had before activating this function.
  - **Auto**: The fan speed is set to Auto.
  - **Fan Speed 1**: The fan speed is set to 1.
  - **Fan Speed 2**: The fan speed is set to 2.
  - ..
  - **Fan Speed 9**: The fan speed is set to 9.
  - **Fan Speed 10. (Default value)**: The fan speed is set to 10.
- **Offset [Δ] when heating [+Δ] / cooling [-Δ] (°C)**: Set the degrees Celsius to increase (HEAT mode) or decrease (COOL mode) when activating this function. (0 .. 7. Default value: **2°C**).

– **Eco Mode**

> **IMPORTANT**
> This function cannot be used to store the AC status in runtime.

- **Fan Speed**: Select the fan speed when activating this function.
  - **Unchanged**: The fan remains at the same speed that it had before activating this function.
  - **Auto**: The fan speed is set to Auto.
  - **Fan Speed 1. (Default value)**: The fan speed is set to 1.
  - **Fan Speed 2**: The fan speed is set to 2.
  - ..
  - **Fan Speed 9**: The fan speed is set to 9.
  - **Fan Speed 10**: The fan speed is set to 10.
- **Offset [Δ] when heating [-Δ] / cooling [+Δ] (°C)**: Set the degrees Celsius to decrease (HEAT mode) or increase (COOL mode) when activating this function. (0 .. 7. Default value: **2°C**).

– **Additional Heat**

IMPORTANT
This function cannot be used to store the AC status in runtime.

- **Fan Speed**: Select the fan speed when activating this function.
  - **Unchanged**: The fan remains at the same speed that it had before activating this function.
  - **Auto**: The fan speed is set to Auto.
  - **Fan Speed 1**: The fan speed is set to 1.
  - **Fan Speed 2**: The fan speed is set to 2.
  - ..
  - **Fan Speed 9**: The fan speed is set to 9.
  - **Fan Speed 10. (Default value)**: The fan speed is set to 10.
- **Setpoint Temperature**: Establish the temperature setpoint when this function is active. (10 .. 32. Default value: **32°C**).

– **Additional Cool**

IMPORTANT
This function cannot be used to store the AC status in runtime.

- **Fan Speed**: Select the fan speed when activating this function.
  - **Unchanged**: The fan remains at the same speed that it had before activating this function.
  - **Auto**: The fan speed is set to Auto.
  - **Fan Speed 1**: The fan speed is set to 1.
  - **Fan Speed 2**: The fan speed is set to 2.
  - ..
  - **Fan Speed 9**: The fan speed is set to 9.
  - **Fan Speed 10. (Default value)**: The fan speed is set to 10.
- **Setpoint Temperature**: Establish the temperature setpoint when this function is active. (10 .. 32. Default value: **18°C**).

- **Timer Options. (Unchecked by default)**: Set a timer for delaying the function and establishing its duration.

- **Sending delay**: Select the units for the delaying of this function.
  - **Seconds**: Set the time in seconds before starting this function. (0 .. 15300. Default value: **600 sec**).
  - **Minutes. (Default value)**: Set the time in minutes before starting this function. (0 .. 255. Default value: **10 min**).
- **Duration (0=no end)**: Select the units for the duration of this function.
  - **Seconds**: Set the time in seconds for the duration of this function. (0 .. 15300. Default value: **600 sec**).
  - **Minutes. (Default value)**: Set the time in minutes for the duration of this function. (0 .. 255. Default value: **10 min**).

> **NOTE**
> Setting a value of 0 causes the function not to end.

- **Individual object for the scene (or additional mode). (Checked by default)**: Activate the **Scene #N: Activate 'SCENE/ADD. MODE N' (Control)** and **Scene #N: Save 'SCENE/ADD. MODE N' (Control)** objects.

6.5.11. BINARY INPUTS

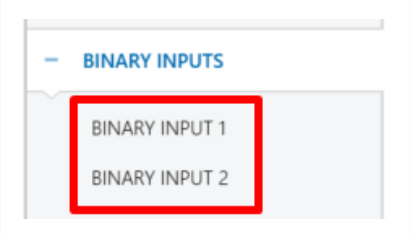
> **NOTE**
> - You can set up to two binary inputs.
> - The binary input contact type by default is Normally Open.
> - Open Circuit Logic Level '0': Inactive
> - Short Circuit Logic Level '1': Active
> - Rising Edge: Inactive → Active
> - Falling Edge: Active → Inactive

> **NOTE**
> To know more about these communication objects, see Binary Inputs (page 62).

- **Number of binary inputs**: 2
- **Binary Input 1. (Unchecked by default)**: Activates binary input 1.
  - **Description**: Type a description for Binary Input 1. (Default text: **BINARY INPUT 1**).
- **Binary Input 2. (Unchecked by default)**: Activates binary input 2.
  - **Description**: Type a description for Binary Input 2. (Default text: **BINARY INPUT 2**).

6.5.11.1. BINARY INPUTS 1 and 2

Use the expanded menu on the left to enter the specific configuration menu for each binary input.



For each binary input, you can set these parameters:

- **Binary Input 1. (Unchecked by default)**: Activate binary input 1.
  - **Description**: Type a description for this binary input. (Default text: **BINARY INPUT 1**).
- **Contact type**: Normally Open.
- **Debounce time**: (0 .. 255. Default value: **50 ms**).
- **Function**: Select the function for this binary input.
  - **Switching. (Default value)**: For this function type, you must set the following parameters.
    - **Rising edge action**: Actions to be executed on the pulse's rising edge (the switch/sensor transitions from open to closed, i.e., the logic value changes from 0 to 1).
      - **On. (Default value)**
      - **Off**
      - **Toggle (On/Off)**
      - **No action**
    - **Falling edge action**: Actions to be executed on the pulse's falling edge (the switch/sensor transitions from closed to open, i.e., the logic value changes from 1 to 0).
      - **On**
      - **Off. (Default value)**
      - **Toggle (On/Off)**
      - **No action**
    - **Periodical sending**
      - **When output value is On**
      - **When output value is Off**
      - **Always**
      - **Never. (Default value)**
    - **Send after reboot**
      - **Current Status**
      - **On**
      - **Off**
      - **No action. (Default value)**
  - **Dimming**: For this function type, you must set the following parameters.
    - **Action triggered on**
      - **Rising edge. (Default value)**: Actions will be executed on the pulse's rising edge (the switch/sensor transitions from open to closed, i.e., the logic value changes from 0 to 1).
      - **Falling edge**: Actions will be executed on the pulse's falling edge (the switch/sensor transitions from closed to open, i.e., the logic value changes from 1 to 0).
    - **Dimming action**
      - **Short press=On; Long press=Brighter. (Default value)**
      - **Short press=Off; Long press=Darker**

  - **Short press=Toggle (On/Off); Long press=Toggle (Brighter/Darker)**
- **Dimming step (brighter)**
  - **100%**
  - **50%**
  - **25%. (Default value)**
  - **12.50%**
  - **6.25%**
  - **3.13%**
  - **1.56%**
- **Dimming step (darker)**
  - **-100%**
  - **-50%**
  - **-25%. (Default value)**
  - **-12.50%**
  - **-6.25%**
  - **-3.13%**
  - **-1.56%**
- **Minimum long press time**: (1 .. 255. Default value: **10x100 ms**).
- **Periodical sending of long press action. (Unchecked by default)**
  - **Notification period**: (1 .. 255. Default value: **10x100 ms**).
- **Send after reboot**
  - **On**
  - **Off**
  - **No action. (Default value)**

- **Shutter/Blind**: For this function type, you must set the following parameters.
  - **Action triggered on**
    - **Rising edge. (Default value)**: Actions will be executed on the pulse's rising edge (the switch/sensor transitions from open to closed, i.e., the logic value changes from 0 to 1).
    - **Falling edge**: Actions will be executed on the pulse's falling edge (the switch/sensor transitions from closed to open, i.e., the logic value changes from 1 to 0).
  - **Shutter/Blind action**
    - **Up. (Default value)**
    - **Down**
    - **Toggle (Up/Down)**
  - **Shutter/Blind operation method**
    - **Step-Move-Step. (Default value)**
    - **Move-Step**
  - **Minimum long press time**: (1 .. 255. Default value: 20x100 ms).

- **Vanes adjustment time**: (1 .. 255. Default value: 10x100 ms).
- **Send after reboot**
  - **Move up**
  - **Move down**
  - **No action. (Default value)**

– **Value**: For this function type, you must set the following parameters.

- **Action triggered on**
  - **Rising edge. (Default value)**: Actions will be executed on the pulse's rising edge (the switch/sensor transitions from open to closed, i.e., the logic value changes from 0 to 1).
  - **Falling edge**: Actions will be executed on the pulse's falling edge (the switch/sensor transitions from closed to open, i.e., the logic value changes from 1 to 0).
- **DPT to be sent**
  - **DPT 5.010 (1 byte). (Default value)**
  - **DPT 7.001 (2 byte)**
  - **DPT 8.001 (2 byte)**
  - **DPT 9.001 (2 byte)**
  - **DPT 12.001 (4 byte)**
  - **Value to send**: (0 .. 255. Default value: **0**).
- **Send after reboot**
  - **Sending delay**: (0 .. 255. Default value: **0 sec**).

– **Scene (Internal)**: For this function type, you must set the following parameters.

- **Action triggered on**
  - **Rising edge. (Default value)**: Actions will be executed on the pulse's rising edge (the switch/sensor transitions from open to closed, i.e., the logic value changes from 0 to 1).
  - **Falling edge**: Actions will be executed on the pulse's falling edge (the switch/sensor transitions from closed to open, i.e., the logic value changes from 1 to 0).
- **Scene number**: (1 .. 64. Default value: **1**).
- **Save scene on long press action. (Unchecked by default)**
  - **Minimum long press time**: (1 .. 255. Default value: **10x100 ms**).

– **Occupancy (Internal)**: For this function type, you must set the following parameters.

- **Rising edge action**: Actions to be executed on the pulse's rising edge (the switch/sensor transitions from open to closed, i.e., the logic value changes from 0 to 1).
  - **Occupied. (Default value)**
  - **Not occupied**
- **Falling edge action**: Actions to be executed on the pulse's falling edge (the switch/sensor transitions from closed to open, i.e., the logic value changes from 1 to 0).
  - **Occupied**
  - **Not occupied. (Default value)**

– **Window contact (Internal)**: For this function type, you must set the following parameters.

- **Rising edge action**: Actions to be executed on the pulse's rising edge (the switch/sensor transitions from open to closed, i.e., the logic value changes from 0 to 1).
  - **Closed window. (Default value)**
  - **Open window**
- **Falling edge action**: Actions to be executed on the pulse's falling edge (the switch/sensor transitions from closed to open, i.e., the logic value changes from 1 to 0).
  - **Closed window**
  - **Open window. (Default value)**

– **Sleep timer (Internal)**: For this function type, you must set the following parameters.

- **Rising edge action**: Actions to be executed on the pulse's rising edge (the switch/sensor transitions from open to closed, i.e., the logic value changes from 0 to 1).
  - **Start. (Default value)**
  - **Stop**
- **Falling edge action**: Actions to be executed on the pulse's falling edge (the switch/sensor transitions from closed to open, i.e., the logic value changes from 1 to 0).
  - **Start**
  - **Stop. (Default value)**

– **Pulse counter meter**: For this function type, you must set the following parameters.

- **Pulse trigger mode**: Select when to count the pulse.
  - **Rising edge. (Default value)**: Count on the pulse's rising edge (the switch/sensor transitions from closed to open, i.e., the logic value changes from 1 to 0).
  - **Falling edge**: Count on the pulse's falling edge (the switch/sensor transitions from open to closed, i.e., the logic value changes from 0 to 1).
  - **Rising edge and falling edge**: Count for both pulse behaviors.
- **Number of received pulses per counted pulse (pulses/counted pulse)**: (1 .. 10000. Default value: **1**).
- **Increase per counted pulse (unit of measurement/counted pulse)**: (1 .. 10000. Default value: **1**).
- **Pulse width**: (1 .. 99999. Default value: **50 ms**).
- **Unit of measurement**:
  - **W**
  - **kW**
  - **W·h. (Default value)**
  - **kW·h**
  - **l**
  - **l/h**
  - **m^3**
  - **m^3/h**
  - **Individual objects for each AC mode (for monitoring AC system consumption). (Unchecked by default)**

> **IMPORTANT**
> If enabling this parameter, the meter connected to this binary input must monitor the outdoor unit controlled by this gateway.

- **Sending of measures**
  - **Change of value. (Default value)**
    - **Minimum change between sendings**: (0 .. 4294967295. Default value: **0**).
    - **Minimum time between sendings**: (1 .. 255. Default value: **1 sec**).
  - **Periodically**
    - **Notification period <0=disabled>**: (0 .. 255. Default value: **0 min**).
  - **Periodically & change of value**
    - **Minimum change between sendings**: (0 .. 4294967295. Default value: **0**).
    - **Minimum time between sendings**: (1 .. 255. Default value: **1 sec**).
    - **Notification period <0=disabled>**: (0 .. 255. Default value: **0 min**).
- **Send after power recovery. (Unchecked by default)**
  - **Sending delay**: (0 .. 255. Default value: **0 sec**).
- **Measurement values after KNX download**
  - **Keep current value. (Default value)**
  - **Set new value**
    - **New total measurement value**: (0 .. 4294967295. Default value: **0**).
    - **New heat measurement value**: (0 .. 4294967295. Default value: **0**).

      > **NOTE**
      > This parameter is visible only when the unit of measurement is **W·h** or **kW·h** and the **Individual objects for each AC mode (for monitoring AC system consumption)** parameter is enabled.

    - **New cool measurement value**: (0 .. 4294967295. Default value: **0**).

      > **NOTE**
      > This parameter is visible only when the unit of measurement is **W·h** or **kW·h** and the **Individual objects for each AC mode (for monitoring AC system consumption)** parameter is enabled.

    - **New others measurement value**: (0 .. 4294967295. Default value: **0**).

      > **NOTE**
      > This parameter is visible only when the unit of measurement is **W·h** or **kW·h** and the **Individual objects for each AC mode (for monitoring AC system consumption)** parameter is enabled.

  - **Unit of measurement**: It shows the unit of measurement previously selected.
- **Binary Input lock. (Unchecked by default)**: Activate the following parameters.

- **Binary Input lock object polarity: 0=Unlocked; 1=Locked. (Checked by default)**: Activate the **Binary Input 1: Lock/Unlock (Control) - 0=Unlocked; 1=Locked** and **Binary Input 1: Lock/Unlock (Status) - 0=Unlocked; 1=Locked** objects.
- **Binary Input lock object polarity: 0=Locked; 1=Unlocked. (Unchecked by default)**: Activate the **Binary Input 1: Unlock/Lock (Control) - 0=Locked; 1=Unlocked** and **Binary Input 1: Unlock/Lock (Status) - 0=Locked; 1=Unlocked** objects.

NOTE
The options for **Binary Input 2** are the same as per **Binary Input 1**.

7. KNX Communication Objects

NOTICE
Communication object flags:

- **R**: The KNX system can read this signal.
- **W**: The KNX system can write this signal.
- **T**: The KNX system receives a telegram when this signal changes its value.
- **U**: This signal's data is updated after a reboot of either the gateway or the bus.

7.1. General

#	Name	Values	Length	Data type ID	Flags
1	Heartbeat (Status)	1: Alive	1 bit	1.011	R, T
2	Button Manual Mode (Status)	0: Inactive 1: Active	1 bit	1.011	R, T
3	Parrot Mode (Control)	0: Inactive 1: Active	1bit	1.011	R, W, U
4	Parrot Mode (Status)	0: Inactive 1: Active	1 bit	1.011	R, T
7	RCF: AC Model / RC (Status)	RCF	2 byte	8.	R, T
11	Error: Flag (Status)	0: No Error 1: Error	1 bit	1.005	R, T
12	Error: Code (Status)	Error code	2 byte	8.	R, T
13	Error: Description (Status)	Error description	14 byte	16.001	R, T
21	Operating Time Counter (s) (Control)	0 .. 2147483647 (s)	4 byte	13.100	R, W, U
22	Operating Time Counter (s) (Status)	0 .. 2147483647 (s)	4 byte	13.100	R, T
23	Operating Time Counter (h) (Control)	0 .. 65535 (h)	2 byte	7.007	R, W, U
24	Operating Time Counter (h) (Status)	0 .. 65535 (h)	2 byte	7.007	R, T
25	Remote Control Lock (Control)	0: Unlocked 1: Locked	1 bit	1.002	R, W, U
26	Remote Control Lock (Status)	0: Unlocked 1: Locked	1 bit	1.002	R, T
27	KNX Control Lock (Control)	0: Unlocked 1: Locked	1 bit	1.002	R, W, U
28	KNX Control Lock (Status)	0: Unlocked 1: Locked	1 bit	1.002	R, T
29	On/Off (Control)	0: Off 1: On	1 bit	1.001	R, W, U

#	Name	Values	Length	Data type ID	Flags
30	On/Off (Status)	0: Off 1: On	1 bit	1.001	R, T

7.2. Mode

#	Name	Values	Length	Data type	Flags
32	Mode: AC (Control)	0: Auto 1: Heat 3: Cool 9: Fan 14: Dry	1 byte	20.105	R, W, U
33	Mode: AC (Status)	0: Auto 1: Heat 3: Cool 9: Fan 14: Dry	1 byte	20.105	R, T
34	Mode: AC: Step (-/+) (Control)	0: Decrease 1: Increase	1 bit	1.007	R, W, U
35	Mode: AC: Step (+/-) (Control)	0: Increase 1: Decrease	1 bit	1.008	R, W, U
36	Mode: AC: Simplified (Cool/Heat) (Control)	0: Cool 1: Heat	1 bit	1.100	R, W, U
37	Mode: AC: Simplified (Cool/Heat) (Status)	0: Cool 1: Heat	1 bit	1.100	R, T
38	Mode: AC: Percentage: On/Off + Heat (Control)	0%: Off (1 .. 100)%: On + Heat	1 byte	5.001	R, W, U
39	Mode: AC: Percentage: On/Off + Cool (Control)	0%: Off (1 .. 100)%: On + Cool	1 byte	5.001	R, W, U
40	Mode: AC: Auto (Control)	1: Auto	1 bit	1.002	R, W, U
41	Mode: AC: Auto (Status)	1: Auto	1 bit	1.002	R, T
42	Mode: AC: Heat (Control)	1: Heat	1 bit	1.002	R, W, U
43	Mode: AC: Heat (Status)	1: Heat	1 bit	1.002	R, T
44	Mode: AC: Cool (Control)	1: Cool	1 bit	1.002	R, W, U
45	Mode: AC: Cool (Status)	1: Cool	1 bit	1.002	R, T
46	Mode: AC: Fan (Control)	1: Fan	1 bit	1.002	R, W, U
47	Mode: AC: Fan (Status)	1: Fan	1 bit	1.002	R, T
48	Mode: AC: Dry (Control)	1: Dry	1 bit	1.002	R, W, U
49	Mode: AC: Dry (Status)	1: Dry	1 bit	1.002	R, T

7.3. Fan Speed

#	Name	Values	Length	Data type	Flags
62	Fan Speed: Percentage (Control) **NOTE** It sets the threshold by using the formula 100*(n+0.5)/N, where "n" is the current position and "N" is the total number of positions supported. See FAN SPEED (page 28).	0%: Auto (x1a .. x1b)%: Fan Speed 1 (x2a .. x2b)%: Fan Speed 2 (x3a .. x3b)%: Fan Speed 3 (x4a .. x4b)%: Fan Speed 4 (x5a .. x5b)%: Fan Speed 5 (x6a .. x6b)%: Fan Speed 6 (x7a .. x7b)%: Fan Speed 7 (x8a .. x8b)%: Fan Speed 8 (x9a .. x9b)%: Fan Speed 9 (x10a .. x10b)%: Fan Speed 10	1 byte	5.001	R, W, U
63	Fan Speed: Percentage (Status) **NOTE** It reports the current threshold by using the formula 100*n/N, where "n" is the current position and "N" is the total number of positions supported. See FAN SPEED (page 28).	0%: Auto (x1a .. x1b)%: Fan Speed 1 (x2a .. x2b)%: Fan Speed 2 (x3a .. x3b)%: Fan Speed 3 (x4a .. x4b)%: Fan Speed 4 (x5a .. x5b)%: Fan Speed 5 (x6a .. x6b)%: Fan Speed 6 (x7a .. x7b)%: Fan Speed 7 (x8a .. x8b)%: Fan Speed 8 (x9a .. x9b)%: Fan Speed 9 (x10a .. x10b)%: Fan Speed 10	1 byte	5.001	R, T
64	Fan Speed: Enumerated (Control)	0: Auto 1: Fan Speed 1 2: Fan Speed 2 3: Fan Speed 3 4: Fan Speed 4 5: Fan Speed 5 6: Fan Speed 6 7: Fan Speed 7 8: Fan Speed 8 9: Fan Speed 9 10: Fan Speed 10	1 byte	5.010	R, W, U

#	Name	Values	Length	Data type	Flags
65	Fan Speed: Enumerated (Status)	0: Auto 1: Fan Speed 1 2: Fan Speed 2 3: Fan Speed 3 4: Fan Speed 4 5: Fan Speed 5 6: Fan Speed 6 7: Fan Speed 7 8: Fan Speed 8 9: Fan Speed 9 10: Fan Speed 10	1 byte	5.010	R, T
66	Fan Speed: Fan Stage (Control)	0: Off 1: Fan Speed 1 2: Fan Speed 2 3: Fan Speed 3 4: Fan Speed 4 5: Fan Speed 5 6: Fan Speed 6 7: Fan Speed 7 8: Fan Speed 8 9: Fan Speed 9 10: Fan Speed 10	1 byte	5.100	R, W, U
67	Fan Speed: Fan Stage (Status)	0: Off 1: Fan Speed 1 2: Fan Speed 2 3: Fan Speed 3 4: Fan Speed 4 5: Fan Speed 5 6: Fan Speed 6 7: Fan Speed 7 8: Fan Speed 8 9: Fan Speed 9 10: Fan Speed 10	1 byte	5.100	R, T
68	Fan Speed: Step (-/+) (Control)	0: Decrease 1: Increase	1 bit	1.007	R, W, U
69	Fan Speed: Step (+/-) (Control)	0: Increase 1: Decrease	1 bit	1.008	R, W, U
70	Fan Speed: Auto (Control)	1: Auto	1 bit	1.002	R, W, U

#	Name	Values	Length	Data type	Flags
71	Fan Speed: Auto (Status)	1: Auto	1 bit	1.002	R, T
72	Fan Speed: 1 (Control)	1: Fan Speed 1	1 bit	1.002	R, W, U
73	Fan Speed: 1 (Status)	1: Fan Speed 1	1 bit	1.002	R, T
74	Fan Speed: 2 (Control)	1: Fan Speed 2	1 bit	1.002	R, W, U
75	Fan Speed: 2 (Status)	1: Fan Speed 2	1 bit	1.002	R, T
76	Fan Speed: 3 (Control)	1: Fan Speed 3	1 bit	1.002	R, W, U
77	Fan Speed: 3 (Status)	1: Fan Speed 3	1 bit	1.002	R, T
78	Fan Speed: 4 (Control)	1: Fan Speed 4	1 bit	1.002	R, W, U
79	Fan Speed: 4 (Status)	1: Fan Speed 4	1 bit	1.002	R, T
80	Fan Speed: 5 (Control)	1: Fan Speed 5	1 bit	1.002	R, W, U
81	Fan Speed: 5 (Status)	1: Fan Speed 5	1 bit	1.002	R, T
82	Fan Speed: 6 (Control)	1: Fan Speed 6	1 bit	1.002	R, W, U
83	Fan Speed: 6 (Status)	1: Fan Speed 6	1 bit	1.002	R, T
84	Fan Speed: 7 (Control)	1: Fan Speed 7	1 bit	1.002	R, W, U
85	Fan Speed: 7 (Status)	1: Fan Speed 7	1 bit	1.002	R, T
86	Fan Speed: 8 (Control)	1: Fan Speed 8	1 bit	1.002	R, W, U
87	Fan Speed: 8 (Status)	1: Fan Speed 8	1 bit	1.002	R, T
88	Fan Speed: 9 (Control)	1: Fan Speed 9	1 bit	1.002	R, W, U
89	Fan Speed: 9 (Status)	1: Fan Speed 9	1 bit	1.002	R, T
90	Fan Speed: 10 (Control)	1: Fan Speed 10	1 bit	1.002	R, W, U
91	Fan Speed: 10 (Status)	1: Fan Speed 10	1 bit	1.002	R, T

7.4. Up/Down Airflow Direction

#	Name	Values	Length	Data type	Flags
92	Up/Down Airflow Direction: Percentage (Control) **NOTE** It sets the threshold by using the formula 100*(n+0.5)/N, where "n" is the current position and "N" is the total number of positions supported. See UP/DOWN AIRFLOW DIRECTION (page 30).	(x0a .. x0b)%: Auto/Stop (x1a .. x1b)%: Position 1 (x2a .. x2b)%: Position 2 (x3a .. x3b)%: Position 3 (x4a .. x4b)%: Position 4 (x5a .. x5b)%: Position 5 (x6a .. x6b)%: Position 6 (x7a .. x7b)%: Position 7 (x8a .. x8b)%: Position 8 (x9a .. x9b)%: Position 9 (x10a .. x10b)%: Swing (x11a .. x11b)%: Swirl (x12a .. x12b)%: Wide	1 byte	5.001	R, W, U

#	Name	Values	Length	Data type	Flags
93	Up/Down Airflow Direction: Percentage (Status) **NOTE** It reports the current threshold by using the formula 100*n/N, where "n" is the current position and "N" is the total number of positions supported. See UP/DOWN AIRFLOW DIRECTION (page 30).	(x0a .. x0b)%: Auto/Stop (x1a .. x1b)%: Position 1 (x2a .. x2b)%: Position 2 (x3a .. x3b)%: Position 3 (x4a .. x4b)%: Position 4 (x5a .. x5b)%: Position 5 (x6a .. x6b)%: Position 6 (x7a .. x7b)%: Position 7 (x8a .. x8b)%: Position 8 (x9a .. x9b)%: Position 9 (x10a .. x10b)%: Swing (x11a .. x11b)%: Swirl (x12a .. x12b)%: Wide	1 byte	5.001	R, T
94	Up/Down Airflow Direction: Enumerated (Control)	0: Auto/Stop 1: Position 1 2: Position 2 3: Position 3 4: Position 4 5: Position 5 6: Position 6 7: Position 7 8: Position 8 9: Position 9 10: Swing 11: Swirl 12: Wide	1 byte	5.010	R, W, U

#	Name	Values	Length	Data type	Flags
95	Up/Down Airflow Direction: Enumerated (Status)	0: Auto/Stop 1: Position 1 2: Position 2 3: Position 3 4: Position 4 5: Position 5 6: Position 6 7: Position 7 8: Position 8 9: Position 9 10: Swing 11: Swirl 12: Wide	1 byte	5.010	R, T
96	Up/Down Airflow Direction: Step (-/+) (Control)	0: Decrease 1: Increase	1 bit	1.007	R, W, U
97	Up/Down Airflow Direction: Step (+/-) (Control)	0: Increase 1: Decrease	1 bit	1.008	R, W, U
98	Up/Down Airflow Direction: Move (Control)	1: Move	1 bit	1.002	R, W, U
99	Up/Down Airflow Direction: Auto/Stop (Control)	1: Auto/Stop	1 bit	1.002	R, W, U
100	Up/Down Airflow Direction: Auto/Stop (Status)	1: Auto/Stop	1 bit	1.002	R, T
101	Up/Down Airflow Direction: Position 1 (Control)	1: Position 1	1 bit	1.002	R, W, U
102	Up/Down Airflow Direction: Position 1 (Status)	1: Position 1	1 bit	1.002	R, T
103	Up/Down Airflow Direction: Position 2 (Control)	1: Position 2	1 bit	1.002	R, W, U
104	Up/Down Airflow Direction: Position 2 (Status)	1: Position 2	1 bit	1.002	R, T
105	Up/Down Airflow Direction: Position 3 (Control)	1: Position 3	1 bit	1.002	R, W, U
106	Up/Down Airflow Direction: Position 3 (Status)	1: Position 3	1 bit	1.002	R, T
107	Up/Down Airflow Direction: Position 4 (Control)	1: Position 4	1 bit	1.002	R, W, U
108	Up/Down Airflow Direction: Position 4 (Status)	1: Position 4	1 bit	1.002	R, T
109	Up/Down Airflow Direction: Position 5 (Control)	1: Position 5	1 bit	1.002	R, W, U
110	Up/Down Airflow Direction: Position 5 (Status)	1: Position 5	1 bit	1.002	R, T
111	Up/Down Airflow Direction: Position 6 (Control)	1: Position 6	1 bit	1.002	R, W, U
112	Up/Down Airflow Direction: Position 6 (Status)	1: Position 6	1 bit	1.002	R, T
113	Up/Down Airflow Direction: Position 7 (Control)	1: Position 7	1 bit	1.002	R, W, U

#	Name	Values	Length	Data type	Flags
114	Up/Down Airflow Direction: Position 7 (Status)	1: Position 7	1 bit	1.002	R, T
115	Up/Down Airflow Direction: Position 8 (Control)	1: Position 8	1 bit	1.002	R, W, U
116	Up/Down Airflow Direction: Position 8 (Status)	1: Position 8	1 bit	1.002	R, T
117	Up/Down Airflow Direction: Position 9 (Control)	1: Position 9	1 bit	1.002	R, W, U
118	Up/Down Airflow Direction: Position 9 (Status)	1: Position 9	1 bit	1.002	R, T
119	Up/Down Airflow Direction: Swing (Control)	1: Swing	1 bit	1.002	R, W, U
120	Up/Down Airflow Direction: Swing (Status)	1: Swing	1 bit	1.002	R, T
121	Up/Down Airflow Direction: Swirl (Control)	1: Swirl	1 bit	1.002	R, W, U
122	Up/Down Airflow Direction: Swirl (Status)	1: Swirl	1 bit	1.002	R, T
123	Up/Down Airflow Direction: Wide (Control)	1: Wide	1 bit	1.002	R, W, U
124	Up/Down Airflow Direction: Wide (Status)	1: Wide	1 bit	1.002	R, T
125	Up/Down Airflow Direction: Spot (Control)	1: Spot	1 bit	1.002	R, W, U
126	Up/Down Airflow Direction: Spot (Status)	1: Spot	1 bit	1.002	R, T

7.5. Left/Right Airflow Direction

#	Name	Values	Length	Data type	Flags
129	Left/Right Airflow Direction: Percentage (Control) **NOTE** It sets the threshold by using the formula 100*(n+0.5)/N, where "n" is the current position and "N" is the total number of positions supported. See LEFT/RIGHT AIR FLOW DIRECTION (page 31).	0%: Auto/Stop (x1a .. x1b)%: Position 1 (x2a .. x2b)%: Position 2 (x3a .. x3b)%: Position 3 (x4a .. x4b)%: Position 4 (x5a .. x5b)%: Position 5 (x6a .. x6b)%: Position 6 (x7a .. x7b)%: Position 7 (x8a .. x8b)%: Position 8 (x9a .. x9b)%: Position 9 (x10a .. x10b)%: Swing (x11a .. x11b)%: Swirl (x12a .. x12b)%: Wide	1 byte	5.001	R, W, U

#	Name	Values	Length	Data type	Flags
130	Left/Right Airflow Direction: Percentage (Status) **NOTE** It reports the current threshold by using the formula 100*n/N, where "n" is the current position and "N" is the total number of positions supported. See LEFT/RIGHT AIR FLOW DIRECTION (page 31).	0%: Auto/Stop (x1a .. x1b)%: Position 1 (x2a .. x2b)%: Position 2 (x3a .. x3b)%: Position 3 (x4a .. x4b)%: Position 4 (x5a .. x5b)%: Position 5 (x6a .. x6b)%: Position 6 (x7a .. x7b)%: Position 7 (x8a .. x8b)%: Position 8 (x9a .. x9b)%: Position 9 (x10a .. x10b)%: Swing (x11a .. x11b)%: Swirl (x12a .. x12b)%: Wide	1 byte	5.001	R, T
131	Left/Right Airflow Direction: Enumerated (Control)	0: Auto/Stop 1: Position 1 2: Position 2 3: Position 3 4: Position 4 5: Position 5 6: Position 6 7: Position 7 8: Position 8 9: Position 9 10: Swing 11: Swirl 12: Wide	1 byte	5.010	R, W, U

#	Name	Values	Length	Data type	Flags
132	Left/Right Airflow Direction: Enumerated (Status)	0: Auto/Stop 1: Position 1 2: Position 2 3: Position 3 4: Position 4 5: Position 5 6: Position 6 7: Position 7 8: Position 8 9: Position 9 10: Swing 11: Swirl 12: Wide	1 byte	5.010	R, T
133	Left/Right Airflow Direction: Step (-/+) (Control)	0: Decrease 1: Increase	1 bit	1.007	R, W, U
134	Left/Right Airflow Direction: Step (+/-) (Control)	0: Increase 1: Decrease	1 bit	1.008	R, W, U
135	Left/Right Airflow Direction: Move (Control)	1: Move	1 bit	1.002	R, W, U
136	Left/Right Airflow Direction: Auto/Stop (Control)	1: Auto/Stop	1 bit	1.002	R, W, U
137	Left/Right Airflow Direction: Auto/Stop (Status)	1: Auto/Stop	1 bit	1.002	R, T
138	Left/Right Airflow Direction: Position 1 (Control)	1: Position 1	1 bit	1.002	R, W, U
139	Left/Right Airflow Direction: Position 1 (Status)	1: Position 1	1 bit	1.002	R, T
140	Left/Right Airflow Direction: Position 2 (Control)	1: Position 2	1 bit	1.002	R, W, U
141	Left/Right Airflow Direction: Position 2 (Status)	1: Position 2	1 bit	1.002	R, T
142	Left/Right Airflow Direction: Position 3 (Control)	1: Position 3	1 bit	1.002	R, W, U
143	Left/Right Airflow Direction: Position 3 (Status)	1: Position 3	1 bit	1.002	R, T
144	Left/Right Airflow Direction: Position 4 (Control)	1: Position 4	1 bit	1.002	R, W, U
145	Left/Right Airflow Direction: Position 4 (Status)	1: Position 4	1 bit	1.002	R, T
146	Left/Right Airflow Direction: Position 5 (Control)	1: Position 5	1 bit	1.002	R, W, U
147	Left/Right Airflow Direction: Position 5 (Status)	1: Position 5	1 bit	1.002	R, T
148	Left/Right Airflow Direction: Position 6 (Control)	1: Position 6	1 bit	1.002	R, W, U
149	Left/Right Airflow Direction: Position 6 (Status)	1: Position 6	1 bit	1.002	R, T
150	Left/Right Airflow Direction: Position 7 (Control)	1: Position 7	1 bit	1.002	R, W, U
151	Left/Right Airflow Direction: Position 7 (Status)	1: Position 7	1 bit	1.002	R, T
152	Left/Right Airflow Direction: Position 8 (Control)	1: Position 8	1 bit	1.002	R, W, U
153	Left/Right Airflow Direction: Position 8 (Status)	1: Position 8	1 bit	1.002	R, T
154	Left/Right Airflow Direction: Position 9 (Control)	1: Position 9	1 bit	1.002	R, W, U
155	Left/Right Airflow Direction: Position 9 (Status)	1: Position 9	1 bit	1.002	R, T

#	Name	Values	Length	Data type	Flags
156	Left/Right Airflow Direction: Swing (Control)	1: Swing	1 bit	1.002	R, W, U
157	Left/Right Airflow Direction: Swing (Status)	1: Swing	1 bit	1.002	R, T
158	Left/Right Airflow Direction: Swirl (Control)	1: Swirl	1 bit	1.002	R, W, U
159	Left/Right Airflow Direction: Swirl (Status)	1: Swirl	1 bit	1.002	R, T
160	Left/Right Airflow Direction: Wide (Control)	1: Wide	1 bit	1.002	R, W, U
161	Left/Right Airflow Direction: Wide (Status)	1: Wide	1 bit	1.002	R, T
162	Left/Right Airflow Direction: Spot (Control)	1: Spot	1 bit	1.002	R, W, U
163	Left/Right Airflow Direction: Spot (Status)	1: Spot	1 bit	1.002	R, T

7.6. Temperature

#	Name	Values	Length	Data type	Flags
166	Temperature: User Setpoint (Control)	10 .. 32 °C	2 byte	9.001	R, W, U
167	Temperature: User Setpoint (Status)	10 .. 32 °C	2 byte	9.001	R, T
168	Temperature: User Setpoint: Step (-/+) (Control)	0: Decrease 1: Increase	1 bit	1.007	R, W, U
169	Temperature: User Setpoint: Step (+/-) (Control)	0: Increase 1: Decrease	1 bit	1.008	R, W, U
174	Temperature: Intesis Ambient Reference (Status)	-15 .. 15 °C	2 byte	9.001	R, T
176	Temperature: AC Setpoint: Lowest Limit (Status)	10 .. 32 °C	2 byte	9.001	R, T
177	Temperature: AC Setpoint: Highest Limit (Status)	10 .. 32 °C	2 byte	9.001	R, T
178	Temperature: AC Setpoint: Applied Lower Limit (Status)	10 .. 32 °C	2 byte	9.001	R, T
179	Temperature: AC Setpoint: Applied Upper Limit (Status)	10 .. 32 °C	2 byte	9.001	R, T
180	Temperature: User Setpoint: Lower Limit: Heating (Control)	10 .. 32 °C	2 byte	9.001	R, W, U
181	Temperature: User Setpoint: Lower Limit: Heating (Status)	10 .. 32 °C	2 byte	9.001	R, T
182	Temperature: User Setpoint: Upper Limit: Heating (Control)	10 .. 32 °C	2 byte	9.001	R, W, U
183	Temperature: User Setpoint: Upper Limit: Heating (Status)	10 .. 32 °C	2 byte	9.001	R, T
184	Temperature: User Setpoint: Lower Limit: Cooling (Control)	10 .. 32 °C	2 byte	9.001	R, W, U
185	Temperature: User Setpoint: Lower Limit: Cooling (Status)	10 .. 32 °C	2 byte	9.001	R, T
186	Temperature: User Setpoint: Upper Limit: Cooling (Control)	10 .. 32 °C	2 byte	9.001	R, W, U
187	Temperature: User Setpoint: Upper Limit: Cooling (Status)	10 .. 32 °C	2 byte	9.001	R, T

7.7. Humidity

#	Name	Values	Length	Data type	Flags
188	Humidity: Intesis Relative Humidity Reference (Status)	0 .. 100%	2 byte	9.007	R, T

7.8. Advanced Features

#	Name	Values	Length	Data type	Flags
189	Occupancy: Enable/Disable (Control)	0: Disable 1: Enable	1 bit	1.003	R, W, U
190	Occupancy: Enable/Disable (Status)	0: Disabled 1: Enabled	1 bit	1.003	R, T
191	Occupancy: Input (Control)	0: Not occupied 1: Occupied	1 bit	1.018	R, W, U
192	Occupancy: Input (Status)	0: Not occupied 1: Occupied	1 bit	1.018	R, T
193	Occupancy: Mode (Status)	0: Occupied 1: Standby 2: Not occupied	1 byte	20.003	R, T
194	Occupancy: Step (Status)	0: Occupied 1: Not occupied (First action timeout) 2: Not occupied (Second action timeout) 3: Not occupied (No pending actions)	1 byte	5	R, T
195	Occupancy: On/Off Operation Lock (Status)	0: Unlocked 1: Locked (Forced Off)	1 bit	1.002	R, T
196	Window: Enable/Disable (Control)	0: Disable 1: Enable	1 bit	1.003	R, W, U
197	Window: Enable/Disable (Status)	0: Disabled 1: Enabled	1 bit	1.003	R, T
198	Window: Input: NO (Control)	0: Open window 1: Closed window	1 bit	1.009	R, W, U
199	Window: Input: NO (Status)	0: Open window 1: Closed window	1 bit	1.009	R, T
200	Window: Input: NC (Control)	0: Closed window 1: Open window	1 bit	1.019	R, W, U
201	Window: Input: NC (Status)	0: Closed window 1: Open window	1 bit	1.019	R, T
202	Window: Step (Status)	0: Closed window 1: Open window (Switch-Off timeout) 3: Open window (No pending actions)	1 byte	5	R, T
203	Window: On/Off Operation Lock (Status)	0: Unlocked 1: Locked (Forced Off)	1 bit	1.002	R, T
204	Sleep Timer: Stop/Start (Control)	0: Stop 1: Start	1 bit	1.010	R, W, U

7.9. Scenes

#	Name	Values	Length	Data type	Flags
205	Scene: Activate/Store (Control)	0 .. 63: Activate Scene 1..64 128 .. 191: Store Scene 1..64	1 byte	18.001	R, W, U
206	Scene: Cancel (Control)	0 .. 63: Cancel Scene 1 .. 64	1 byte	17.001	R, W, U
207	Scene: Cancel All (Control)	1: Cancel All Scenes	1 bit	1.002	R, W, U
208	Scene: Current Scene (Status)	0 .. 63: Scene 1 .. 64 255: No scene	1 byte	17.001	R, T
209	Scene: Activate Scene #1 (Control)	1: Activate scene 1	1 bit	1.002	R, W, U
219	Scene: Save Scene #1 (Control)	1: Save scene 1	1 bit	1.002	R, W, U
210	Scene: Activate Scene #2 (Control)	1: Activate scene 2	1 bit	1.002	R, W, U
220	Scene: Save Scene #2 (Control)	1: Save scene 2	1 bit	1.002	R, W, U
211	Scene: Activate Scene #3 (Control)	1: Activate scene 3	1 bit	1.002	R, W, U
221	Scene: Save Scene #3 (Control)	1: Save scene 3	1 bit	1.002	R, W, U
212	Scene: Activate Scene #4 (Control)	1: Activate scene 4	1 bit	1.002	R, W, U
222	Scene: Save Scene #4 (Control)	1: Save scene 4	1 bit	1.002	R, W, U
213	Scene: Activate Scene 5# (Control)	1: Activate scene 5	1 bit	1.002	R, W, U
223	Scene: Save Scene #5 (Control)	1: Save scene 5	1 bit	1.002	R, W, U
214	Scene: Activate Scene #6 (Control)	1: Activate scene 6	1 bit	1.002	R, W, U
224	Scene: Save Scene #6 (Control)	1: Save scene 6	1 bit	1.002	R, W, U
215	Scene: Activate Scene #7 (Control)	1: Activate scene 7	1 bit	1.002	R, W, U
225	Scene: Save Scene #7 (Control)	1: Save scene 7	1 bit	1.002	R, W, U
216	Scene: Activate Scene #8 (Control)	1: Activate scene 8	1 bit	1.002	R, W, U
226	Scene: Save Scene #8 (Control)	1: Save scene 8	1 bit	1.002	R, W, U
217	Scene: Activate Scene #9 (Control)	1: Activate scene 9	1 bit	1.002	R, W, U
227	Scene: Save Scene #9 (Control)	1: Save scene 9	1 bit	1.002	R, W, U
218	Scene: Activate Scene #10 (Control)	1: Activate scene 10	1 bit	1.002	R, W, U
228	Scene: Save Scene #10 (Control)	1: Save scene 10	1 bit	1.002	R, W, U

7.10. Binary Inputs

#	Name	Values	Length	Data type	Flags
229	Binary Input 1: Physical Input Status (Status)	0: Inactive 1: Active	1 bit	1.011	R, T
230	Binary Input 1: Lock/Unlock (Control)	0: Unlocked 1: Locked	1 bit	1.002	R, W, U
231	Binary Input 1: Lock/Unlock (Status)	0: Unlocked 1: Locked	1 bit	1.002	R, T
232	Binary Input 1: Unlock/Lock (Control)	0: Locked 1: Unlocked	1 bit	1.002	R, W, U
233	Binary Input 1: Unlock/Lock (Status)	0: Locked 1: Unlocked	1 bit	1.002	R, T
234	Binary Input 1: Switching (Status)	0: Off 1: On	1 bit	1.001	R, T
235	Binary Input 1: Dimming: On/Off (Status)	Short press: 1: On Short press: 0: Off Short press: Toggle (1: On/0: Off)	1 bit	1.001	R, T
236	Binary Input 1: Dimming: Step (Status)	Long press: Brighter Long press: Darker Long press: Toggle (Brighter/ Darker)	4 bit	3.007	R, T
237	Binary Input 1: Shutter/Blind: Move: Up/Down (Status)	0: Up 1: Down Toggle (0: Up/1: Down)	1 bit	1.008	R, T
238	Binary Input 1: Shutter/Blind: Move: Step (Status)	0: Step Up 1: Step Down Toggle (0: Up/1: Down)	1 bit	1.007	R, T
239	Binary Input 1: Value (Status)	0 .. 255 0 .. 65535 -32768 .. 32767 -273 .. 67043328 0 .. 4294967295	4 byte	-	R, T
240	Binary Input 1: Measurement: Total (Control)	0 .. 4294967295 (W / kW / W·h / kW·h / l / l·h / m3 / m3·h)	4 byte	-	R, W, U
241	Binary Input 1: Measurement: Total (Status)	0 .. 4294967295 (W / kW / W·h / kW·h / l / l·h / m3 / m3·h)	4 byte	-	R, T
242	Binary Input 1: Measurement: Heat: Total (Control)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, W, U
243	Binary Input 1: Measurement: Heat: Total (Status)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, T

#	Name	Values	Length	Data type	Flags
244	Binary Input 1: Measurement: Cool: Total (Control)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, W, U
245	Binary Input 1: Measurement: Cool: Total (Status)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, T
246	Binary Input 1: Measurement: Others: Total (Control)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, T
247	Binary Input 1: Measurement: Others: Total (Status)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, T
248	Binary Input 2: Physical Input Status (Status)	0: Inactive 1: Active	1 bit	1.011	R, T
249	Binary Input 2: Lock/Unlock (Control)	0: Unlocked 1: Locked	1 bit	1.002	R, W, U
250	Binary Input 2: Lock/Unlock (Status)	0: Unlocked 1: Locked	1 bit	1.002	R, T
251	Binary Input 2: Unlock/Lock (Control)	0: Locked 1: Unlocked	1 bit	1.002	R, W, U
252	Binary Input 2: Unlock/Lock (Status)	0: Locked 1: Unlocked	1 bit	1.002	R, T
253	Binary Input 2: Switching (Status)	0: Off 1: On	1 bit	1.001	R, T
254	Binary Input 2: Dimming: On/Off (Status)	Short press: 1: On Short press: 0: Off Short press: Toggle (1: On/0: Off)	1 bit	1.001	R, T
255	Binary Input 2: Dimming: Step (Status)	Long press: Brighter Long press: Darker Long press: Toggle (Brighter/ Darker)	4 bit	3.007	R, T
256	Binary Input 2: Shutter/Blind: Move: Up/Down (Status)	0: Up 1: Down Toggle (0: Up/1: Down)	1 bit	1.008	R, T
257	Binary Input 2: Shutter/Blind: Move: Step (Status)	0: Step Up 1: Step Down Toggle (0: Up/1: Down)	1 bit	1.007	R, T
258	Binary Input 2: Value (Status)	0 .. 255 0 .. 65535 -32768 .. 32767 -273 .. 67043328 0 .. 4294967295	4 byte	-	R, T
259	Binary Input 2: Measurement: Total (Control)	0 .. 4294967295 (W / kW / W·h / kW·h / l / l·h / m3 / m3·h)	4 byte	-	R, W, U

#	Name	Values	Length	Data type	Flags
260	Binary Input 2: Measurement: Total (Status)	0 .. 4294967295 (W / kW / W·h / kW·h / l / l·h / m3 / m3·h)	4 byte	-	R, T
261	Binary Input 2: Measurement: Heat: Total (Control)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, W, U
262	Binary Input 2: Measurement: Heat: Total (Status)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, T
263	Binary Input 2: Measurement: Cool: Total (Control)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, W, U
264	Binary Input 2: Measurement: Cool: Total (Status)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, T
265	Binary Input 2: Measurement: Others: Total (Control)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, T
266	Binary Input 2: Measurement: Others: Total (Status)	0 .. 4294967295 (W·h / kW·h)	4 byte	-	R, T