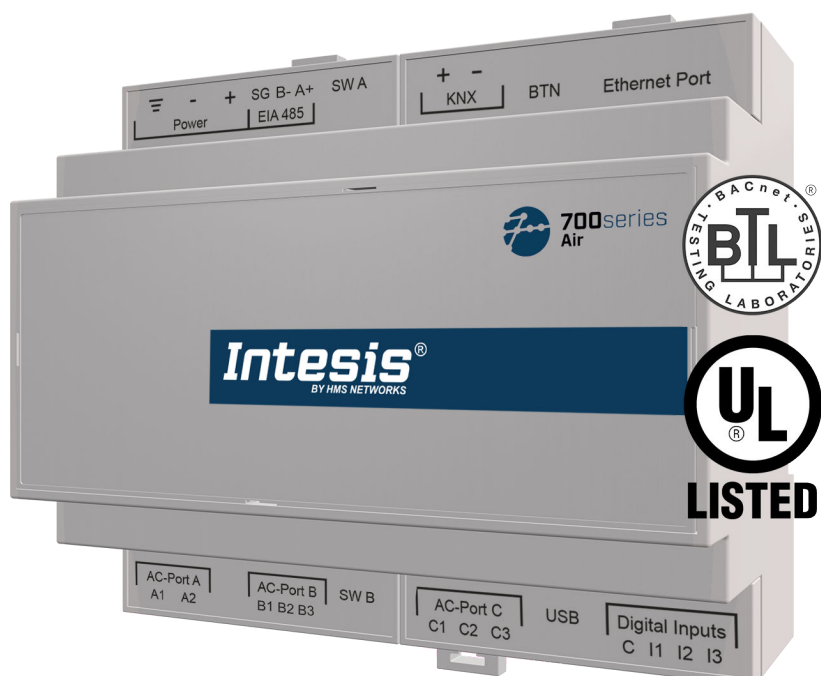


700series Air Gateway - IN770AIR***O000

DAIKIN HVAC SYSTEMS (DIII-NET)
to Modbus, KNX, BACnet, and Home Automation

USER MANUAL
Version 1.0.4
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Table of Contents

1. Description, Compatible AC systems, and Order Codes	1
2. Licensing	2
3. General Information	3
3.1. Intended Use of the User Manual	3
3.2. General Safety Information	3
3.3. Admonition Messages and Symbols	4
4. Overview	5
4.1. Inside the Package	6
4.2. Main Features	6
4.3. Gateway General Functionality	7
5. Quick Start Guide	8
6. Hardware	9
6.1. Mounting	9
6.2. Connection	11
6.2.1. Gateway Connectors	11
6.2.2. Connection to the Power Supply	13
6.2.3. Connection to the AC Unit	13
6.2.4. Connection to Modbus	14
6.2.5. Connection to KNX	15
6.2.6. Connection to BACnet	15
6.2.7. Connection to Home Automation	16
6.2.8. Connection to a PC for Configuration	17
6.2.9. Connection to Energy Meters (Digital Inputs)	17
6.3. Gateway Layout	18
6.4. LED Indicators	19
6.5. DIP Switches	20
6.6. Push Button	20
6.7. Technical Specifications	21
6.8. Dimensions	22
7. Available Protocol Combinations	23
7.1. Integration into Modbus Systems	23
7.1.1. Modbus Registers	23
7.2. Integration into KNX Systems	28
7.2.1. KNX Signals	28
7.3. Integration into BACnet Systems	34
7.3.1. BACnet Objects	34
7.4. Integration into Home Automation Systems	40
7.4.1. Home Automation Signals	40
8. Late Configuration: Change the Gateway's Protocol	41
9. Error Codes	42

1. Description, Compatible AC systems, and Order Codes

IN770AIR*O000 Gateway.**

Modbus®, KNX®, BACnet®, and Home Automation gateway for Daikin® HVAC systems.

This gateway is compatible with HVAC units incorporating a DIII-Net connector commercialized by Daikin.

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

You can set up this Intesis gateway for Modbus TCP, Modbus RTU, KNX TP, BACnet/IP, BACnet MS/TP, or Home Automation.

ORDER CODE	LEGACY ORDER CODE
IN770AIR***O000 ¹	-
¹ *** stands for XXS, 00S, or 00M, depending on the license you have purchased. To know more, see Licensing (page 2) .	



NOTE

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

2. Licensing

Distribution license(s) for the IN770AIR***O000 gateway:

Order Code	License	Maximum AC units	
		Indoor units	Outdoor units
IN770AIRXXSO000	XXS	4	4
IN770AIR00SO000	Small	16	10
IN770AIR00MO000	Medium	64	10

**NOTE**

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

3. General Information

3.1. 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.

Any person who installs, configures, or operates this gateway or any associated equipment should be aware of this manual's contents.

Keep this manual for future reference during the installation, configuration, and operation.

3.2. 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 legislation for installing electrical equipment, can install and manipulate this gateway.

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

Preferably, mount this gateway on a DIN rail inside a grounded metallic cabinet, following the instructions in this manual.

If mounting on a wall, firmly fix this gateway on a non-vibrating surface, following the instructions in this manual.

All wires (for communication and power supply, if needed) must only be connected to networks with indoor wiring. All communication ports are considered for indoor use and must only be connected to SELV circuits.

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

Use SELV-rated NEC class 2 or limited power source (LPS) power supply.



CAUTION

To avoid earth loops that can damage the gateway and/or any other equipment connected to it, we strongly recommend:

- The use of DC power supplies, floating or with the negative terminal connected to earth. **Never use a DC power supply with a positive terminal connected to earth.**
- The use of AC power supplies only if they are floating and not powering any other device.

Use a circuit breaker between the gateway and the power supply. Rating: 250 V, 6 A.

Supply the correct voltage to power the gateway. The admitted range is detailed in the technical specifications table.

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

This Intesis gateway is designed for installation in an enclosure. When the device is mounted outside an enclosure, precautions should be taken to avoid electrostatic discharges to the unit in environments with static levels above 4 kV. When working in an enclosure (e.g., making adjustments, setting switches, etc.), typical anti-static precautions should be observed before touching the unit.

Binary inputs, if present, are potential-free contact. Do not connect any voltage.

These safety instructions in other languages can be found [here](#).

3.3. Admonition Messages and Symbols

**CAUTION**

Instruction that must be followed to avoid a potentially hazardous situation that, if not avoided, could result in minor or moderate injury.

**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 which may facilitate installation and/or operation.

**TIP**

Helpful advice and suggestions.

**NOTICE**

Remarkable Information.

4. Overview

This IN770AIR***O000 gateway supports four combinations.

Gateway's client interface	↔	Gateway's server interface
Daikin HVAC systems	to	Modbus TCP and RTU
		KNX TP
		BACnet/IP or MS/TP
		Home Automation



IMPORTANT
This document assumes that the user is familiar with these technologies.

Figure 1. Integration of Daikin units into Modbus systems

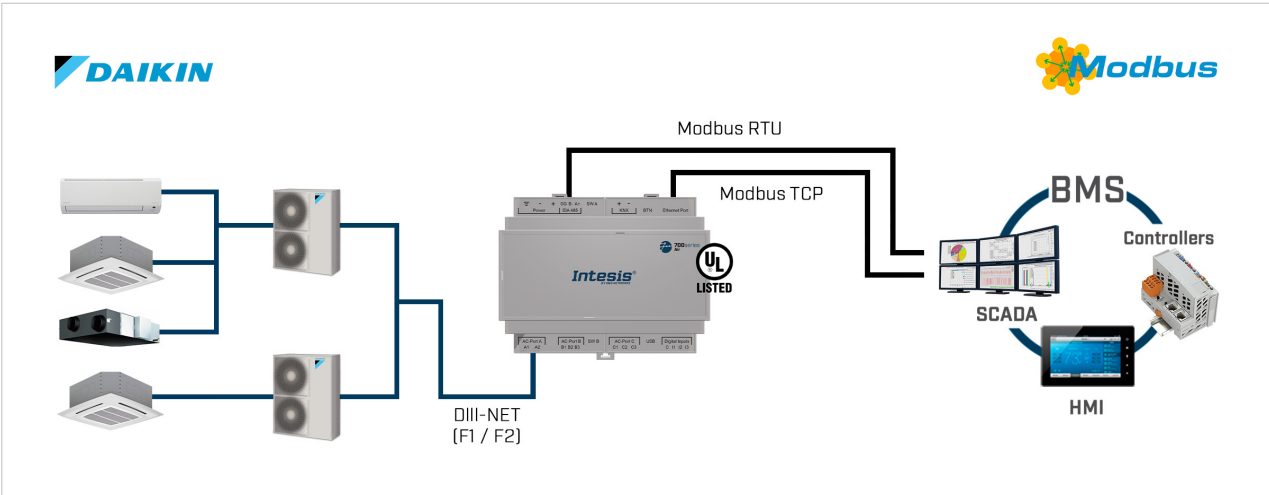


Figure 2. Integration of Daikin units into KNX TP systems

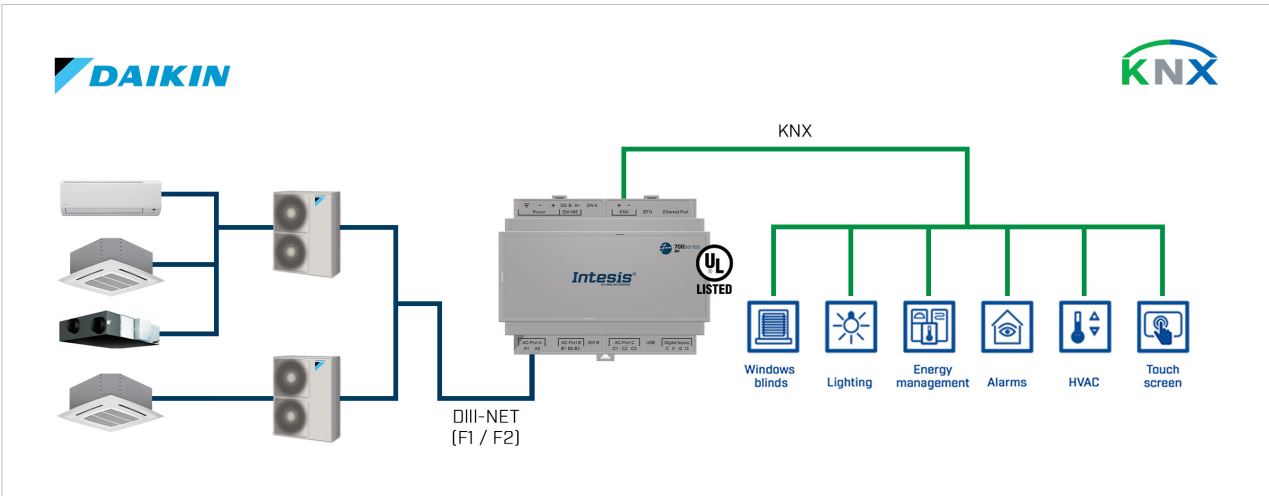


Figure 3. Integration of Daikin units into BACnet systems

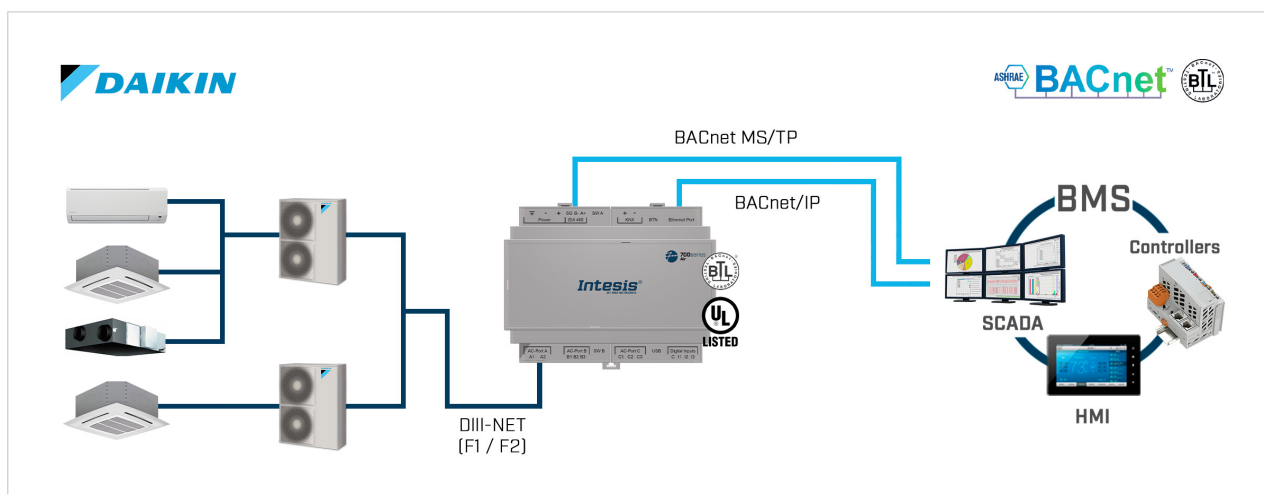
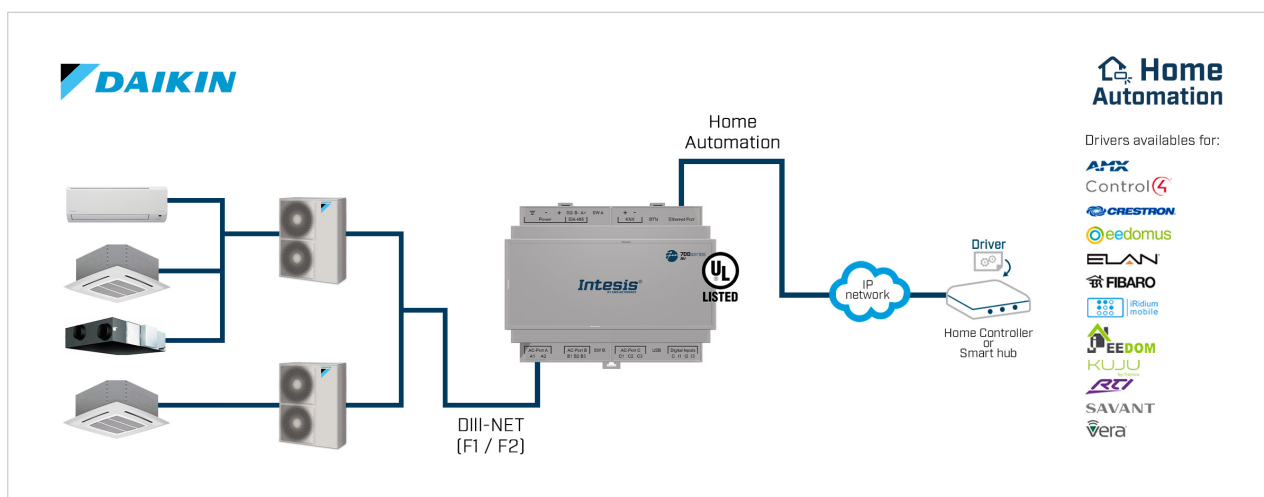


Figure 4. Integration of Daikin units into Home Automation systems



4.1. Inside the Package

ITEMS INCLUDED

- Intesis IN770AIR***O000 Gateway
- USB Mini-B type to USB Type-A cable
- Installation guide

4.2. Main Features

- Several protocol combinations available: Configurable for Modbus TCP and RTU, KNX TP, BACnet/IP and MS/TP, and Home Automation communication protocols.
- Late configuration: Change between protocol combinations easily.
- Three licenses with different capacities.
- Scan function: Find the AC units connected to the air conditioning bus.
- 2 x DIP switches for the EIA-485 connector termination and polarization configuration.

- 14 LEDs indicate the operating status for both the gateway and the communication bus.
- DIN rail and wall mounting case.
- Accredited with the main certifications for electronic equipment.
- Three binary inputs to integrate energy meters.
- Multiple ports for serial and TCP/IP communication:
 - Green pluggable terminal block for EIA-485 (3 poles)
 - Orange pluggable terminal block for KNX (2 poles)
 - Ethernet
 - Green pluggable terminal block for binary inputs (4 poles)
 - USB Mini-B type 2.0 port for connection to the PC
 - Green pluggable terminal block for AC connection (2 poles)
 - Green pluggable terminal block for AC connection (3 poles)
 - Green pluggable terminal block for AC connection (3 poles)

4.3. Gateway General Functionality

With this Intesis IN770AIR***O000 gateway, you can easily integrate Daikin HVAC systems into an installation based on Modbus TCP, Modbus RTU, KNX TP, BACnet/IP, BACnet MS/TP, or Home Automation. To do so, the gateway acts as a server device of the installation itself, accessing all signals from each unit and allowing control of the whole HVAC network.

The gateway continuously polls the HVAC network, storing in its memory the current status of every signal you want to track and serving this data to the installation when requested. When a signal status changes, the gateway communicates it to the installation, waits for the response, and performs the corresponding action.

A signal's lack of response activates a communication error, allowing you to determine which signal from which unit is not working correctly.

5. Quick Start Guide



IMPORTANT

While the following procedure outlines the fundamental steps for installing, wiring, and configuring the gateway, it is crucial to thoroughly review all documentation to prevent errors.

1. Install [Intesis MAPS](#) on your laptop. Use the setup program supplied and follow the instructions given by the installation wizard.
2. Mount the gateway at the desired installation site. The gateway can be mounted on a DIN rail or on a wall. Mounting the gateway on a DIN rail inside a metallic industrial cabinet grounded to earth is recommended. See [Mounting \(page 9\)](#).
3. Disconnect all systems from power before wiring the gateway.
4. Connect the BMS communication wires to the gateway. See [Gateway Connectors \(page 11\)](#).
 - a. If using Modbus TCP, BACnet/IP, or Home Automation, connect the communication cable coming from the Modbus/BACnet/Home Automation network to the port marked as **Ethernet** on the gateway.
 - b. If using Modbus RTU or BACnet MS/TP, connect the communication cables coming from the Modbus/BACnet network to the port marked as **EIA 485** on the gateway.
 - c. If using KNX TP, connect the communication cables coming from the KNX network to the port marked as **KNX** on the gateway.
5. Connect the communication cable from the Daikin system to the port marked as **AC-Port A** on the gateway.
6. Power the gateway. The supply voltage can be from 12 to 36 VDC or just 24 VAC. Observe the polarity. See [Connection to the Power Supply \(page 13\)](#).
7. Connect the gateway to your laptop to configure it with Intesis MAPS. See [Connection to a PC for Configuration \(page 17\)](#).
 - a. If you want to connect via USB, connect a USB cable from the laptop to the port marked as **USB** on the gateway.
 - b. If you want to connect via IP, connect the Ethernet cable from the laptop to the port marked as **Ethernet Port** on the gateway.
8. Open Intesis MAPS and create a new project selecting the needed project template.
9. Modify the configuration as needed, save it, and send the configuration file to the gateway. Consult the [Intesis MAPS guide for Daikin](#).
10. Go to the **Diagnostic** tab and check the communication activity between the gateway, the BMS, and the Daikin systems. If there is no communication activity, check that all systems are operative, the wiring of all devices is right, and the configuration of the gateway is correct.

6. Hardware

6.1. Mounting

**IMPORTANT**

Before mounting, please ensure that the chosen installation place preserves the gateway from direct solar radiation, water, high relative humidity, or dust.

**NOTE**

Mount the gateway on a wall or over a DIN rail. We recommend the DIN rail mounting option, preferably inside a grounded metallic industrial cabinet.

**IMPORTANT**

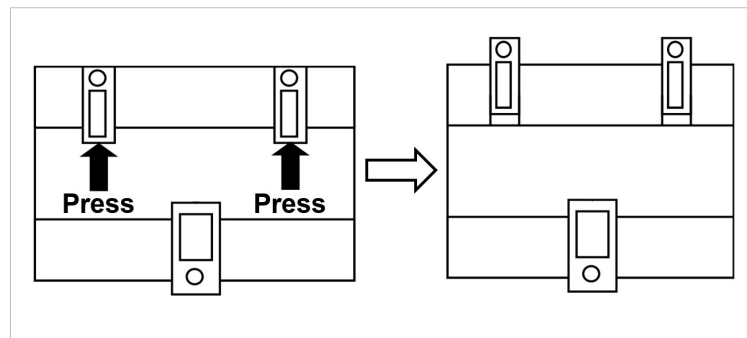
Ensure the gateway has sufficient clearances for all connections when mounted. See [Dimensions \(page 22\)](#).

WALL MOUNTING

**IMPORTANT**

For reasons of security, the maximum height for wall mounting is two meters (6.5 feet).

1. Press the top-side mobile clips in the rear panel until you hear a *click*.



2. Use the clip holes to fix the gateway on the wall using screws.

**NOTE**

Use M3 screws, 25 mm (1") length.

3. Make sure the gateway is firmly fixed.

DIN RAIL MOUNTING

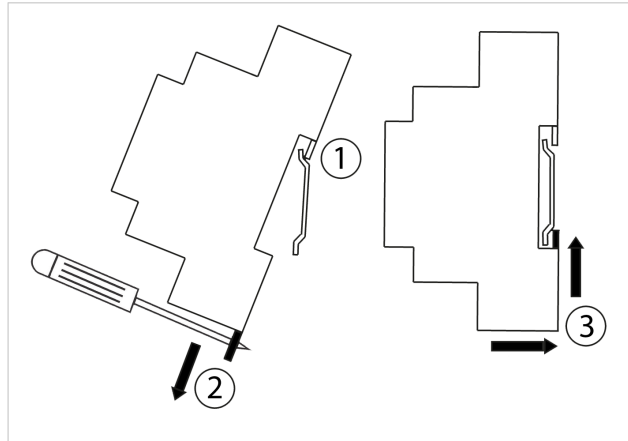
Keep the clips in their original position.

1. Fit the gateway's top-side clips in the upper edge of the DIN rail.
2. Press the low side of the gateway gently to lock it in the DIN rail.
3. Make sure the gateway is firmly fixed.



NOTE

For some DIN rails, to complete step 2, you may need a small screwdriver or similar to pull the bottom clip down.



6.2. Connection



CAUTION

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

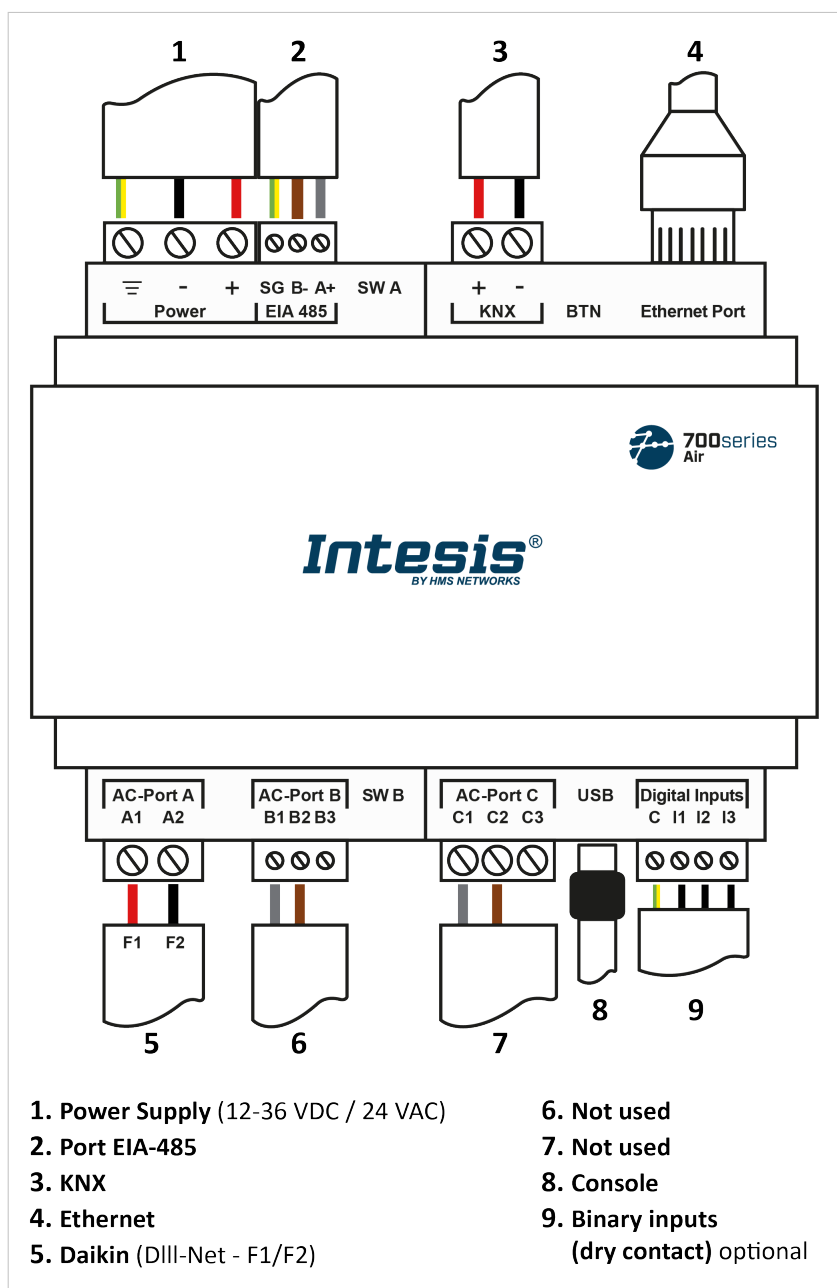


IMPORTANT

Keep communication cables away from power and ground wires.

6.2.1. Gateway Connectors

Figure 5. Wiring diagram



WIRING THE CONNECTORS



IMPORTANT

For all connectors, use solid or stranded wires (twisted or with ferrule).

Cross-section/gauge per terminal:

- One core: 0.2 .. 2.5 mm² / 24 .. 11 AWG
- Two cores: 0.2 .. 1.5 mm² / 24 .. 15 AWG
- Three cores: Not permitted



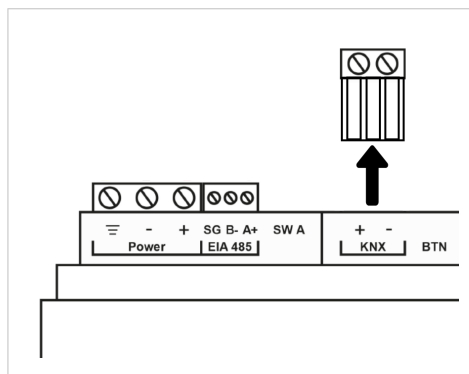
NOTE

To know more about each port's specifications, see [Technical Specifications \(page 21\)](#).



TIP

- Mount the gateway in the desired place before wiring it.
- Terminal block connectors can be unplugged to facilitate the wiring process.



COMMUNICATION PORTS

PORT	USAGE	WIRING			
EIA-485	BACnet MS/TP and Modbus RTU	SG: Signal ground	B-	A+	
KNX	KNX bus	+		-	
Ethernet	As an IP/TCP port: BACnet/IP, Modbus TCP, and Home Automation As a console port: Connection to a PC for configuration purposes	Ethernet cable (CAT5 or higher) When using the building LAN, contact the network administrator and make sure traffic is allowed. When starting up the gateway for the first time, DHCP will be enabled for 30 seconds. After that time, the default IP 192.168.100.246 will be set.			
AC-Port A No polarity to observe	Daikin DIII-NET	A1: F1		A2: F2	
AC-Port B	Not used				
AC-Port C	Not used				
USB	Connection to a PC for configuration purposes	USB Mini-B type			
Digital Inputs	Dry contact for metering devices	C: Common	I1: Input 1	I2: Input 2	I3:Input3

6.2.2. Connection to the Power Supply

The power supply connector is a green pluggable terminal block (three poles) labeled as **Power**.

Apply the voltage within the admitted range and of enough power:

- **For DC:** 12 .. 36 VDC ($\pm 10\%$), Max: 250 mA
- **For AC:** 24 VAC ($\pm 10\%$), 50-60 Hz, Max: 127 mA



NOTE

Recommended voltage: 24 VDC, Max: 127 mA



IMPORTANT

Use a circuit breaker between the gateway and the power supply. Rating: 250 V, 6 A.



IMPORTANT

- **When using a DC power supply:** Respect the polarity labeled on the power connector for the positive and negative wires.
- **When using an AC power supply:** Ensure the same power supply is not powering any other device.



IMPORTANT

- Use SELV-rated NEC class 2 or limited power source (LPS) power supply.
- Respect the polarity.
- Connect the gateway's ground terminal  to the installation grounding.



IMPORTANT

To avoid earth loops that can damage the gateway and/or any other equipment connected to it, we strongly recommend:

- The use of DC power supplies, floating or with the negative terminal connected to earth.
- The use of AC power supplies only if they are floating and not powering any other device.



CAUTION

Never use a DC power supply with a positive terminal connected to earth.

6.2.3. Connection to the AC Unit

Connect the Daikin air conditioning bus (DIII-NET) to the gateway using the **F1** and **F2** poles of the **AC-Port A**.



NOTE

There is no polarity to observe.



NOTE

See the [Wiring diagram \(page 11\)](#).

6.2.4. Connection to Modbus

FOR MODBUS TCP

Connect the Modbus TCP Ethernet cable to the gateway's **Ethernet Port**. The correct cable to use depends on where the gateway is connected:

- **Connecting directly to a Modbus TCP device:** use a crossover Ethernet UTP/FTP CAT5 or higher cable.
- **Connecting to a hub or switch of the LAN of the building:** use a straight Ethernet UTP/FTP CAT5 or higher cable.



NOTE

When commissioning the gateway for the first time, DHCP will be enabled for 30 seconds. During that time, if there is a DHCP server, an IP address will be automatically assigned to the gateway. After that time, the default IP address 192.168.100.246 will be automatically set.



IMPORTANT

If communicating through the LAN of the building, contact the network administrator and make sure traffic on the used port is allowed through all LAN paths.

FOR MODBUS RTU

Connect the Modbus RTU communication cable to the gateway's **EIA-485** port.

The connector for the EIA-485 bus is a green pluggable terminal block labeled **SG** (signal ground), **B-**, and **A+**.



IMPORTANT

Observe polarity.



IMPORTANT

Observe the standard restrictions of the EIA-485 bus:

- Maximum distance of 1200 meters (0.75 miles).
- Maximum of 32 devices connected to the bus.
- A 120 ohms (Ω) termination resistor is needed at each end of the bus. The gateway has an internal bus biasing circuit incorporating the termination resistor. It can be enabled using the DIP switch block (**SW A**) dedicated to the **EIA-485** port:

Position 1

- ON: 120 Ω termination active.
- OFF: 120 Ω termination inactive.

Positions 2 and 3

- ON: Polarization active.
- OFF: Polarization inactive.

For further details, see [DIP Switches \(page 20\)](#).



IMPORTANT

When installing the gateway at the end of the bus with the termination resistor enabled, do not install an additional termination resistor at that end.

**NOTE**

See the [Wiring diagram \(page 11\)](#).

6.2.5. Connection to KNX

Connect the KNX TP communication cable to the gateway's **KNX port**.

**IMPORTANT**

Observe polarity.

**NOTE**

See the [Wiring diagram \(page 11\)](#).

6.2.6. Connection to BACnet

FOR BACNET/IP

Connect the BACnet/IP Ethernet cable to the gateway's **Ethernet Port**. The correct cable to use depends on where the gateway is connected:

- **Connecting directly to a BACnet/IP device:** use a crossover Ethernet UTP/FTP CAT5 or higher cable.
- **Connecting to a hub or switch of the LAN of the building:** use a straight Ethernet UTP/FTP CAT5 or higher cable.

**NOTE**

When commissioning the gateway for the first time, DHCP will be enabled for 30 seconds. During that time, if there is a DHCP server, an IP address will be automatically assigned to the gateway. After that time, the default IP address 192.168.100.246 will be automatically set.

**IMPORTANT**

If communicating through the LAN of the building, contact the network administrator and make sure traffic on the used port is allowed through all LAN paths.

FOR BACNET MS/TP

Connect the BACnet MS/TP communication cable to the gateway's **EIA-485** port.

The connector for the EIA-485 bus is a green pluggable terminal block labeled **SG** (signal ground), **B-**, and **A+**.

**IMPORTANT**

Observe polarity.

**IMPORTANT**

Observe the standard restrictions of the EIA-485 bus:

- Maximum distance of 1200 meters (0.75 miles).
- Maximum of 32 devices connected to the bus.
- A termination resistor of 120 ohms (Ω) is needed at each end of the bus. The gateway has an internal bus biasing circuit incorporating the termination resistor. It can be enabled using the DIP switch block dedicated to the EIA-485 port:

Position 1

- ON: 120 Ω termination active.
- OFF: 120 Ω termination inactive.

Position 2 and 3

- ON: Polarization active.
- OFF: Polarization inactive.

For further details, see [DIP Switches \(page 20\)](#).

**IMPORTANT**

When installing the gateway at the end of the bus with the termination resistor enabled, do not install an additional termination resistor at that end.

**NOTE**

See the [Wiring diagram \(page 11\)](#).

6.2.7. Connection to Home Automation

Connect the Home Automation Ethernet cable to the gateway's **Ethernet Port**. The correct cable to use depends on where the gateway is connected:

- **Connecting directly to a Home Automation device:** use a crossover Ethernet UTP/FTP CAT5 or higher cable.
- **Connecting to a hub or switch of the LAN of the building:** use a straight Ethernet UTP/FTP CAT5 or higher cable.

**NOTE**

When commissioning the gateway for the first time, DHCP will be enabled for 30 seconds. During that time, if there is a DHCP server, an IP address will be automatically assigned to the gateway. After that time, the default IP address 192.168.100.246 will be automatically set.

**IMPORTANT**

If communicating through the LAN of the building, contact the network administrator and make sure traffic on the used port is allowed through all LAN paths.

**NOTE**

See the [Wiring diagram \(page 11\)](#).

6.2.8. Connection to a PC for Configuration

Use the supplied USB Mini-B type to USB Type-A cable to connect the gateway through its **USB** port to a PC to configure it with Intesis MAPS.



NOTE

You can use the **Ethernet Port** to connect the gateway and the PC instead.



NOTE

To know more about the gateway configuration, consult the [Intesis MAPS guide for Daikin](#).



NOTE

See the [Wiring diagram \(page 11\)](#).

6.2.9. Connection to Energy Meters (Digital Inputs)

The **Digital Inputs** connector is a green pluggable terminal block (four poles) placed at the bottom right side of the gateway.



IMPORTANT

The **Digital Inputs** connector is a potential-free contact for energy metering only. It does not support any other kind of third-party elements.

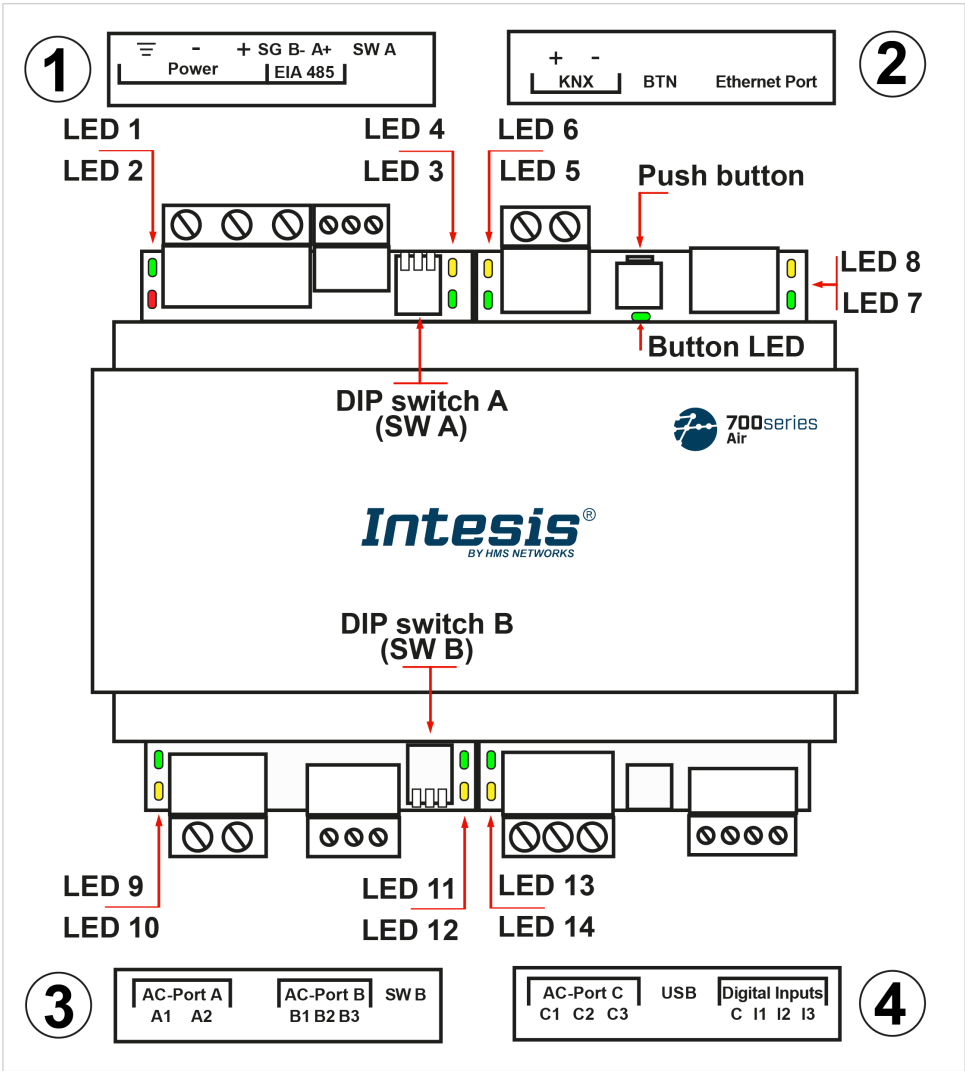


NOTE

See the [Wiring diagram \(page 11\)](#).

6.3. Gateway Layout

Figure 6. Disposition of hardware elements in the gateway



Plastic covers numbered in the image as ①, ②, ③, and ④ can be easily disassembled.



NOTE

LEDs and DIP switches are hidden behind the removable plastic covers and can only be accessed by disassembling the covers.

The following sections explain each element in more detail: LEDs, DIP switches, and the push button.

6.4. LED Indicators

Table 1. LEDs location and behavior

Cover	LED	Color	Description
Top side			
Under frontal cover ①	LED 1 (PWR)	Green	Power on (not programmable)
	LED 2 (ERR)	Red	Blinking: Hardware error
	LED 3	Green	485 Tx (RS485 for Modbus)
	LED 4	Yellow	485 Rx (RS485 for Modbus)
Under frontal cover ②	LED 5	Green	KNX Port Tx
	LED 6	Yellow	KNX Port Rx
	BUTTON LED	Green	KNX: Programming mode on Modbus and Home Automation: Not used
	LED 7	Green	Ethernet link established
	LED 8	Yellow	Ethernet speed
Bottom side			
Under frontal cover ③	LED 9	Green	AC-Port A Tx (HBS)
	LED 10	Yellow	AC-Port A Rx (HBS)
	LED 11	Green	AC-Port B Tx (RS485)
	LED 12	Yellow	AC-Port B Rx (RS485)
Under frontal cover ④	LED 13	Green	AC-Port C Tx (UFO-SLQ)
	LED 14	Yellow	AC-Port C Rx (UFO-SLQ)



NOTE

LEDs are hidden behind the four frontal labeled covers (see the figure [Disposition of hardware elements in the gateway \(page 18\)](#)). These covers are assembled by pressure, so you just need to pull to remove them.

6.5. DIP Switches

The gateway has two DIP switches (see the figure [Disposition of hardware elements in the gateway \(page 18\)](#)):

- DIP switch A (SW A)
- DIP switch B (SW B)

Each DIP switch is dedicated to a 485 port, and its function is to activate or deactivate the termination resistor (position 1) and the polarization (positions 2 and 3) of each port:

Position			Description
1	2	3	
OFF	X	X	120 Ω termination inactive
ON	X	X	120 Ω Termination active
X	OFF	OFF	Polarization inactive
X	ON	ON	Polarization active



NOTE

Default positions are:

- DIP switch A (SW A): **OFF, OFF, OFF** (120 Ω termination and polarization inactive)
- DIP switch B (SW B): **OFF, OFF, OFF** (120 Ω termination and polarization inactive)



IMPORTANT

Observe the **ON** indicator on the DIP switch as a reference.

6.6. Push Button

Find the push button at the top side, between the KNX and the Ethernet connectors (see the figure [Disposition of hardware elements in the gateway \(page 18\)](#)).



NOTE

The button is hidden and only accessible using a thin object like a paper clip.

Common functionality:

RESET FACTORY SETTINGS

1. Push the button.
2. Power on the gateway.
3. Wait four seconds.
4. Release the button.

Functionalities depending on the current project:

- **BACNET**: Push the button to send an I-Am message to all BACnet ports.
- **KNX**: Push the button to switch between normal mode and programming mode.

6.7. Technical Specifications

Housing	Plastic, type PC (UL 94 V-0). Color: Light Grey. RAL 7035 Net dimensions (HxWxD): Millimeters: 90 x 106 x 58 mm / Inches: 3.5 x 4.2 x 2.3"	
Mounting	Wall: Use M3 25 mm (1") length screws. Secure mounting: below 2 meters (6 feet) DIN rail (recommended mounting) EN60715 TH35	
Wires (for power supply and low-voltage signals)	Wire cross-section/gauge per terminal: One core: 0.2 .. 2.5 mm ² (24 .. 14 AWG) Two cores: 0.2 to 1.5 mm ² (24 .. 16 AWG) Three cores: Not permitted Use solid or stranded wires (twisted or with ferrule). For distances longer than 3.05 meters (10 feet), use class 2 cables	
Power	1 x Green pluggable terminal block (3 poles) 12 to 36 VDC +/-10%, Max.: 250 mA 24 VAC +/-10% 50-60 Hz, Max.: 127 mA Recommended: 24 VDC, Max.: 127 mA	
Ethernet	1 x Ethernet 10/100 Mbps RJ45	
Port EIA 485	1 x Green pluggable terminal block (3 poles) SGND (Reference ground or shield) 1500 VDC isolation from other ports	
Port KNX	1 x Orange pluggable terminal block (2 poles): A, B	
AC Ports	AC-Port A (serial, 2 poles): AC bus connection (DIII-NET (F1F2)) AC-Port B (serial, 3 poles): Not used AC-Port C: (serial, 3 poles): Not used	
LEDs	2 x Run (Power/Error) 2 x Port EIA-485 TX/RX 2 x Port KNX TX/TR 1 x Button indicator	2 x Ethernet Link/Speed 2 x AC-Port A TX/RX 2 x AC-Port B TX/RX 2 x AC-Port C TX/RX
Binary inputs	1 x Green pluggable terminal block (4 poles) I1, I2, I3, and Common 1500 VDC isolation from other ports	
Console port	USB Mini-B type 2.0 compliant 1500 VDC isolation	
DIP switches	SW A Position 1: On: 120 Ω termination active Off: 120 Ω termination inactive (default) Position 2 and 3: On: Polarization active Off: Polarization inactive (default)	SW B Position 1: On: 120 Ω termination active Off: 120 Ω termination inactive (default) Position 2 and 3: On: Polarization active Off: Polarization inactive (default)
Push button	1 x Push button Factory reset I-Am message (for BACnet only) Normal mode/programming mode switch (for KNX only)	
Operational temperature	Celsius: 0 .. 60°C Fahrenheit: 32 .. 140°F	
Operational humidity	5 to 95%. No condensation	
Protection	IP20 (IEC60529)	

6.8. Dimensions

NET DIMENSIONS (HxWxD)

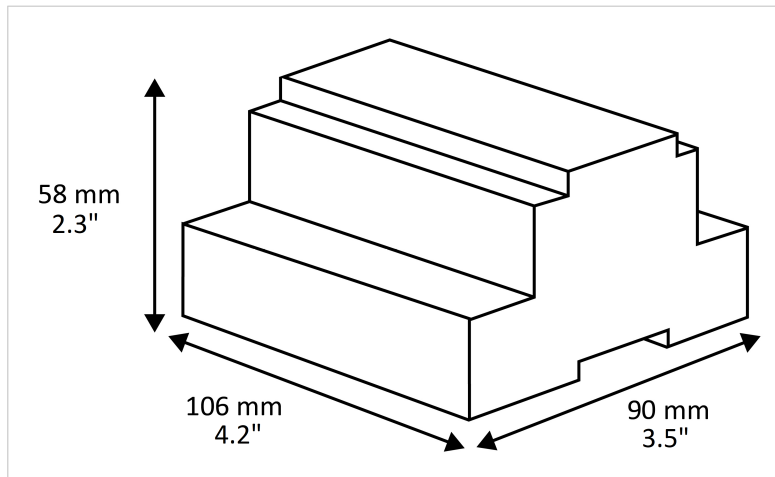
Millimeters: 90 x 106 x 58 mm

Inches: 3.5 x 4.2 x 2.3"



IMPORTANT

Leave enough clear space to wire the gateway easily and for the subsequent manipulation of elements.



7. Available Protocol Combinations

7.1. Integration into Modbus Systems

7.1.1. Modbus Registers



NOTICE

This part is common for Modbus RTU and TCP.

Functions to read Modbus registers:

- 03 Read Holding Registers.
- 04 Read Input Registers.

Function to write Modbus registers:

- 06 Single Holding Registers.

Modbus register contents are expressed in most significant bit (MSB) .. less significant bit (LSB).

The following tables list all available Modbus registers for the gateway.



NOTICE

Read/Write parameter terminology:

- **R**: Read-only register.
- **W**: Write-only register.
- **RW**: Read and write register.
- **T**: Trigger register.

Table 2. Global registers

Register name	Possible values	Modbus address	R/W
On (all units)	1: Set the units On	0	T
Off (all units)	1: Set the units Off	1	T
Operating Mode Auto (all units)	1: Set Auto Mode	2	T
Operating Mode Heat (all units)	1: Set Heat Mode	3	T
Operating Mode Cool (all units)	1: Set Cool Mode	4	T
Operating Mode Fan (all units)	1: Set Fan Mode	5	T
Operating Mode Dry (all units)	1: Set Dry Mode	6	T
Fan Speed Auto (all units)	1: Set Fan Speed Auto	7	T
Fan Speed Very Low (all units)	1: Set Fan Speed Very Low	8	T
Fan Speed Low (all units)	1: Set Fan Speed Low	9	T
Fan Speed Mid (all units)	1: Set Fan Speed Mid	10	T
Fan Speed High (all units)	1: Set Fan Speed High	11	T
Fan Speed Very High (all units)	1: Set Fan Speed Very High	12	T
Vane Position Horizontal (all units)	1: Set Vane Position Horizontal	13	T

Register name	Possible values	Modbus address	R/W
Vane Position 1 (all units)	1: Set Position 1	14	T
Vane Position 2 (all units)	1: Set Position 2	15	T
Vane Position 3 (all units)	1: Set Position 3	16	T
Vane Position Vertical (all units)	1: Set Vane Position Vertical	17	T
Vane Position Stop (all units)	1: Set Vane Position Stop	18	T
Vane Position Swing (all units)	1: Set Vane Position Swing	19	T
Temperature Setpoint (x10°C) (all units)	-127.9°C .. 127.9°C	20	T
Domestic_hot_water Storage setpoint (x10°C) (all units)	-127.9°C .. 127.9°C	21	T
Ventilation operation mode No meaning (all units)	1-Set Ventilation Operation Mode No meaning	22	T
Ventilation operation mode Auto (all units)	1-Set Ventilation Operation Mode Auto	23	T
Ventilation operation mode Energy reclaim ventilation (all units)	1-Set Ventilation Operation Mode Energy reclaim ventilation	24	T
Ventilation operation mode Bypass (all units)	1-Set Ventilation Operation Mode Bypass	25	T
Heating water setpoint (x10°C) (all units)	-127.9°C .. 127.9°C	26	T
Cooling water setpoint (x10°C) (all units)	-127.9°C .. 127.9°C	27	T

Table 3. Indoor unit registers

Register name	Possible values	Modbus address formula	R/W
Unit On/Off	0: Off 1: On	(IU address[1 .. 64] × 200 + 0)	W/R
Operation mode	0: Auto 1: Heat 2: Cool 3: Fan 4: Dry	(IU address[1 .. 64] × 200 + 1)	W/R
Ventilation operation mode	0: No meaning 1: Auto 2: Energy reclaim ventilation 3: Bypass	(IU address[1 .. 64] × 200 + 2)	W/R
Fan speed	0: Auto 1: Very Low 2: Low 3: Mid 4: High 5: Very High	(IU address[1 .. 64] × 200 + 3)	W/R
Vane position	0: Horizontal 1: P1 2: P2 3: P3 4: Vertical 5: Stop 6: Swing	(IU address[1 .. 64] × 200 + 4)	W/R
Temperature Setpoint (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 5)	W/R
Room Temperature (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 6)	R

Register name	Possible values	Modbus address formula	R/W
Indoor_Unit_Capability Fan speed	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 7)	R
Indoor_Unit_Capability Fan speed steps	1: Fix 2: 2 step 3: 3 step 4: 4 step 5: 5 step	(IU address[1 .. 64] × 200 + 8)	R
Indoor_Unit_Capability Vane	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 9)	R
Indoor_Unit_Capability Vane steps	1: Fix 2: 2 step 3: 3 step 4: 4 step 5: 5 step	(IU address[1 .. 64] × 200 + 10)	R
Indoor_Unit_Capability Dry mode	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 11)	R
Indoor_Unit_Capability Auto mode	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 12)	R
Indoor_Unit_Capability Heating mode	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 13)	R
Indoor_Unit_Capability Cooling mode	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 14)	R
Indoor_Unit_Capability Fan mode	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 15)	R
Indoor_Unit_Capability Reheat	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 16)	R
Indoor_Unit_Capability Space heating	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 17)	R
Indoor_Unit_Capability Space Low noise	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 18)	R
Indoor_Unit_Capability Leaving water setpoint	0: Not exist 1: Exist	(IU address[1 .. 64] × 200 + 19)	R
Unit cooling setpoint upper limit (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 20)	R
Unit cooling setpoint lower limit (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 21)	R
Unit heating setpoint upper limit (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 22)	R
Unit heating setpoint lower limit (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 23)	R
Unit cooling water setpoint upper limit (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 24)	R
Unit cooling water setpoint lower limit (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 25)	R
Unit heating water setpoint upper limit (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 26)	R
Unit heating water setpoint lower limit (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 27)	R
Heating water setpoint (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 28)	W/R
Cooling water setpoint (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 29)	W/R
Indoor Thermostat status	0: Off 1: On	(IU address[1 .. 64] × 200 + 30)	R

Register name	Possible values	Modbus address formula	R/W
Indoor Fan status	0: Off 1: On	(IU address[1 .. 64] × 200 + 31	R
Indoor Heater status	0: Off 1: On	(IU address[1 .. 64] × 200 + 32	R
Indoor Cool/Heat master	0: Slave 1: Master	(IU address[1 .. 64] × 200 + 33	R
Indoor Defrost/Hot start status	0: Off 1: On	(IU address[1 .. 64] × 200 + 34	R
Quiet_mode Low noise On/Off	0: Off 1: On	(IU address[1 .. 64] × 200 + 35	W/R
Domestic_hot_water Storage setpoint (x10°C)	-127.9°C .. 127.9°C	(IU address[1 .. 64] × 200 + 36	W/R
Domestic_hot_water Reheat	0: Off 1: On	(IU address[1 .. 64] × 200 + 37	W/R
Domestic_hot_water Storage started request	0: none 1: started request	(IU address[1 .. 64] × 200 + 38	R
Unit error	0: Normal 1: Error	(IU address[1 .. 64] × 200 + 39	R
Unit Alarm	0: Normal 1: Alarm	(IU address[1 .. 64] × 200 + 40	R
Unit Warning	0: Normal 1: Warning	(IU address[1 .. 64] × 200 + 41	R
Unit error code	0: No Error X: Error	(IU address[1 .. 64] × 200 + 42	R
Filter reset	0: Normal 1: Alarm	(IU address[1 .. 64] × 200 + 43	W/R
Communication status	0: Exist 1: No exist	(IU address[1 .. 64] × 200 + 44	R
User_Interface_Button Fan speed up/down Lock Enable	1: Set Fan Speed Up/Down Lock Enable	(IU address[1 .. 64] × 200 + 45	T
User_Interface_Button Fan speed up/down Lock Disable	1: Set Fan Speed Up/Down Lock Disable	(IU address[1 .. 64] × 200 + 46	T
User_Interface_Button Fan direction up/down Lock Enable	1: Set Fan Direction Up/Down Lock Enable	(IU address[1 .. 64] × 200 + 47	T
User_Interface_Button Fan direction up/down Lock Disable	1: Set Fan Direction Up/Down Lock Disable	(IU address[1 .. 64] × 200 + 48	T
User_Interface_Button Operation mode Lock Enable	1: Set Operation Mode Lock Enable	(IU address[1 .. 64] × 200 + 49	T
User_Interface_Button Operation mode Lock Disable	1: Set Operation Mode Lock Disable	(IU address[1 .. 64] × 200 + 50	T
User_Interface_Button Setpoint up/down Lock Enable	1: Set Setpoint Up/Down Lock Enable	(IU address[1 .. 64] × 200 + 51	T
User_Interface_Button Setpoint up/down Lock Disable	1: Set Setpoint Up/Down Lock Disable	(IU address[1 .. 64] × 200 + 52	T
User_Interface_Button On/Off Lock Enable	1: Set Button On/Off Lock Enable	(IU address[1 .. 64] × 200 + 53	T
User_Interface_Button On/Off Lock Disable	1: Set Button On/Off Lock Disable	(IU address[1 .. 64] × 200 + 54	T
Unit adress	0 .. 15	(IU address[1 .. 64] × 200 + 55	R
Line adress	0 .. 3	(IU address[1 .. 64] × 200 + 56	R
Consumption Yesterday	Wh/kWh	(IU address[1 .. 64] × 200 + 57	R
Consumption Today	Wh/kWh	(IU address[1 .. 64] × 200 + 59	R

Register name	Possible values	Modbus address formula	R/W
Consumption Total	Wh/kWh	(IU address[1 .. 64] × 200 + 61	R
Consumption Yesterday Heat	Wh/kWh	(IU address[1 .. 64] × 200 + 63	R
Consumption Today Heat	Wh/kWh	(IU address[1 .. 64] × 200 + 65	R
Consumption Total Heat	Wh/kWh	(IU address[1 .. 64] × 200 + 67	R
Consumption Yesterday Cool	Wh/kWh	(IU address[1 .. 64] × 200 + 69	R
Consumption Today Cool	Wh/kWh	(IU address[1 .. 64] × 200 + 71	R
Consumption Total Cool	Wh/kWh	(IU address[1 .. 64] × 200 + 73	R

7.2. Integration into KNX Systems

7.2.1. KNX Signals



NOTE

Physical Address: The gateway supports (P/S) and (P/I/S) format levels.



NOTICE

Communication object flags:

- **Ri (Read on initialization):** The gateway requests this signal's updated data after an initialization instead of waiting for a change in the signal.
- **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.

Table 4. Global signals

Object name	Possible values	DTP	Flags
On/Off (all units)	0: Off 1: On	1.001-DPT_Switch (1bit)	W
Operating Mode (all units)	0: Auto 1: Heat 3: Cool 9: Fan 14: Dry	20.105-DPT_HVACContrMode (1byte)	W
Operating Mode (all units)	0: Auto 1: Heat 2: Dry 3: Fan 4: Cool	5.x (1byte)	W
Fan Speed (all units)	0: Auto 1: Very Low 2: Low 3: Mid 4: High 5: Very High	5.x (1byte)	W
Vane position (all units)	0: Horizontal 1: P1 2: P2 3: P3 4: Vertical 5: Stop 7: Swing	5.x (1byte)	W
Vane position Swing (all units)	0: Stop auto vane 1: Set swing vane	1.001-DPT_Switch (1bit)	W
Temperature Setpoint (°C) (all units)	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	W
Domestic_hot_water Storage setpoint (°C) (all units)	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	W

Object name	Possible values	DTP	Flags
Ventilation operation mode (all units) <i>*Only available for compatible VAM models from the HRV series. In case of doubt, use the compatibility tool.</i>	0: No meaning 1: Auto 2: Energy reclaim ventilation 3: Bypass	5.x (1byte)	W
Heating water setpoint (°C) (all units)	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	W
Cooling water setpoint (°C) (all units)	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	W

Table 5. Indoor unit signals

Object name	Possible values	DTP	Flags
Control_On/Off	0: Off 1: On	1.001-DPT_Switch (1bit)	W
Status_On/Off	0: Off 1: On	1.001-DPT_Switch (1bit)	R
Control_Operation mode	0: Auto 1: Heat 3: Cool 9: Fan 14: Dry	20.105-DPT_HVACContrMode (1byte)	W
Status_Operation mode	0: Auto 1: Heat 3: Cool 9: Fan 14: Dry	20.105-DPT_HVACContrMode (1byte)	R
Control_Operation mode	0: Auto 1: Heat 2: Dry 3: Fan 4: Cool	5.x (1byte)	W
Status_Operation mode	0: Auto 1: Heat 2: Dry 3: Fan 4: Cool	5.x (1byte)	R
Control_Ventilation operation mode <i>*Only available for compatible VAM models from the HRV series. In case of doubt, use the compatibility tool.</i>	0: No meaning 1: Auto 2: Energy reclaim ventilation 3: Bypass	5.x (1byte)	W
Status_Ventilation operation mode <i>*Only available for compatible VAM models from the HRV series. In case of doubt, use the compatibility tool.</i>	0: No meaning 1: Auto 2: Energy reclaim ventilation 3: Bypass	5.x (1byte)	R
Control_Mode Cool/Heat	0: Cool 1: Heat	1.100-DPT_Heat/Cool (1bit)	W
Status_Mode Cool/Heat	0: Cool 1: Heat	1.100-DPT_Heat/Cool (1bit)	R
Control_Auto mode	1: Set auto mode	1.001-DPT_Switch (1bit)	W
Status_Auto mode	0: Auto mode not active 1: Auto mode active	1.001-DPT_Switch (1bit)	R

Object name	Possible values	DTP	Flags
Control_Heat mode	1: Set heat mode	1.001-DPT_Switch (1bit)	W
Status_Heat mode	0: Heat mode not active 1: Heat mode active	1.001-DPT_Switch (1bit)	R
Control_Cool mode	1: Set cool mode	1.001-DPT_Switch (1bit)	W
Status_Cool mode	0: Cool mode not active 1: Cool mode active	1.001-DPT_Switch (1bit)	R
Control_Fan mode	1: Set fan mode	1.001-DPT_Switch (1bit)	W
Status_Fan mode	0: Fan mode not active 1: Fan mode active	1.001-DPT_Switch (1bit)	R
Control_Dry mode	1: Set dry mode	1.001-DPT_Switch (1bit)	W
Status_Dry mode	0: Dry mode not active 1: Dry mode active	1.001-DPT_Switch (1bit)	R
Control_Fan speed enumerated	0: Auto 1: Very Low 2: Low 3: Mid 4: High 5: Very High	5.x (1byte)	W
Status_Fan speed enumerated	0: Auto 1: Very Low 2: Low 3: Mid 4: High 5: Very High	5.x (1byte)	R
Control_Fan speed scaling	Thresholds: 0% .. 20% 21% .. 41% 42% .. 62% 63% .. 83% 84% .. 100%	5.001-DPT_Scaling (1byte)	W
Status_Fan speed scaling	Thresholds: 0% .. 20% 21% .. 41% 42% .. 62% 63% .. 83% 84% .. 100%	5.001-DPT_Scaling (1byte)	R
Control_Fan speed very low	1: Set fan speed very low	1.001-DPT_Switch (1bit)	W
Status_Fan speed very low	0: Speed very low not active 1: Speed very low active	1.001-DPT_Switch (1bit)	R
Control_Fan speed low	1: Set fan speed low	1.001-DPT_Switch (1bit)	W
Status_Fan speed low	0: Speed low not active 1: Speed low active	1.001-DPT_Switch (1bit)	R
Control_Fan speed mid	1: Set fan speed mid	1.001-DPT_Switch (1bit)	W
Status_Fan speed mid	0: Speed mid not active 1: Speed mid active	1.001-DPT_Switch (1bit)	R
Control_Fan speed high	1: Set fan speed high	1.001-DPT_Switch (1bit)	W
Status_Fan speed high	0: Speed high not active 1: Speed high active	1.001-DPT_Switch (1bit)	R

Object name	Possible values	DTP	Flags
Control_Fan speed very high	1: Set fan speed very high	1.001-DPT_Switch (1bit)	W
Status_Fan speed very high	0: Speed very high not active 1: Speed very high active	1.001-DPT_Switch (1bit)	R
Control_Fan speed Auto	1: Set fan speed Auto	1.001-DPT_Switch (1bit)	W
Status_Fan speed Auto	0: Speed Auto not active 1: Speed Auto active	1.001-DPT_Switch (1bit)	R
Control_Vane position enumerated	0: Horizontal 1: P1 2: P2 3: P3 4: Vertical 5: Stop 7: Swing	5.x (1byte)	W
Status_Vane position enumerated	0: Horizontal 1: P1 2: P2 3: P3 4: Vertical 5: Stop 7: Swing	5.x (1byte)	R
Control_Vane position scaling	Thresholds: 0% .. 21% 22% .. 36% 37% .. 50% 51% .. 64% 65% .. 79% 80% .. 93% 94% .. 100%	5.001-DPT_Scaling (1byte)	W
Status_Vane position scaling	Thresholds: 14% 29% 43% 57% 71% 86% 100%	5.001-DPT_Scaling (1byte)	R
Control_Vane position auto	0: Stop auto vane 1: Set auto vane	1.001-DPT_Switch (1bit)	W
Status_Vane position auto	0: Vane auto not active 1: Vane auto active	1.001-DPT_Switch (1bit)	R
Control_Vane position-1	1: Set position-1 vane	1.001-DPT_Switch (1bit)	W
Status_Vane position-1	0: Vane position-1 not active 1: Vane position-1 active	1.001-DPT_Switch (1bit)	R
Control_Vane position-2	1: Set position-2 vane	1.001-DPT_Switch (1bit)	W
Status_Vane position-2	0: Vane position-2 not active 1: Vane position-2 active	1.001-DPT_Switch (1bit)	R
Control_Vane position-3	1: Set position-3 vane	1.001-DPT_Switch (1bit)	W
Status_Vane position-3	0: Vane position-3 not active 1: Vane position-3 active	1.001-DPT_Switch (1bit)	R

Object name	Possible values	DTP	Flags
Control_Vane stop	1: Set vane stop	1.001-DPT_Switch (1bit)	W
Status_Vane stop	0: Vane stop not active 1: Vane stop	1.001-DPT_Switch (1bit)	R
Control_Vane position-horizontal	1: Set position-horizontal vane	1.001-DPT_Switch (1bit)	W
Status_Vane position-horizontal	0: Vane position-horizontal not active 1: Vane position-horizontal active	1.001-DPT_Switch (1bit)	R
Control_Vane position-vertical	1: Set position-vertical	1.001-DPT_Switch (1bit)	W
Status_Vane position-Vertical	0: Vane position-vertical not active 1: Vane position-vertical active	1.001-DPT_Switch (1bit)	R
Control_Vane position-swing	1: Set position-swing vane	1.001-DPT_Switch (1bit)	W
Status_Vane position-swing	0: Vane position-swing not active 1: Vane position-swing active	1.001-DPT_Switch (1bit)	R
Control_Temperature Setpoint (°C)	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	W
Status_Temperature Setpoint (°C)	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Status_Room Temperature (°C)	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Status_Indoor_Unit_Capability Fan speed	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Fan speed steps	1: Fix 2: 2 step 3: 3 step 4: 4 step 5: 5 step	5.x (1byte)	R
Status_Indoor_Unit_Capability Fan direction	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Fan direction steps	1: Fix 2: 2 step 3: 3 step 4: 4 step 5: 5 step	5.x (1byte)	R
Status_Indoor_Unit_Capability Dry mode	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Auto mode	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Heating mode	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Cooling mode	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Fan mode	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Reheat	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Space heating	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Space Low noise	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Status_Indoor_Unit_Capability Leaving water setpoint	0: Not exist 1: Exist	1.001-DPT_Switch (1bit)	R
Unit cooling setpoint upper limit	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R

Object name	Possible values	DTP	Flags
Unit cooling setpoint lower limit	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Unit heating setpoint upper limit	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Unit heating setpoint lower limit	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Unit cooling water setpoint upper limit	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Unit cooling water setpoint lower limit	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Unit heating water setpoint upper limit	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Unit heating water setpoint lower limit	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Control_Heating water setpoint	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	W
Status_Heating water setpoint	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Control_Cooling water setpoint	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	W
Status_Cooling water setpoint	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Control_KNX ambient Temperature (°C)	°C	9.001-DPT_Value_Temp (2byte)	W
Status_Indoor Thermostat status	0: Off 1: On	1.001-DPT_Switch (1bit)	R
Status_Indoor Fan status	0: Off 1: On	1.001-DPT_Switch (1bit)	R
Status_Indoor Heater status	0: Off 1: On	1.001-DPT_Switch (1bit)	R
Status_Indoor Cool/Heat master	0: Slave 1: Master	1.001-DPT_Switch (1bit)	RW
Status_Indoor Defrost/Hot start status	0: Off 1: On	1.001-DPT_Switch (1bit)	R
Control_Quiet_mode Low noise On/Off	0: Off 1: On	1.001-DPT_Switch (1bit)	W
Status_Quiet_mode Low noise On/Off	0: Off 1: On	1.001-DPT_Switch (1bit)	R
Control_Domestic_hot_water Storage setpoint (°C)	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	W
Status_Domestic_hot_water Storage setpoint (°C)	-127.9°C .. 127.9°C	9.001-DPT_Value_Temp (2byte)	R
Control_Domestic_hot_water Reheat	0: Off 1: On	1.001-DPT_Switch (1bit)	W
Status_Domestic_hot_water Reheat	0: Off 1: On	1.001-DPT_Switch (1bit)	R
Status_Domestic_hot_water Storage started request	0: None 1: Started request	1.001-DPT_Switch (1bit)	R
Status_Unit error	0: Normal 1: Error	1.005-DPT_Alarm (1bit)	R
Status_Unit Alarm	0: Normal 1: Alarm	1.005-DPT_Alarm (1bit)	R
Status_Unit Warning	0: Normal 1: Warning	1.005-DPT_Alarm (1bit)	R
Status_Unit error code	0: No Error X: Error	5.x (1byte)	R
Status_FilterSign	0: Normal 1: Alarm	1.005-DPT_Alarm (1bit)	R
Control_FilterReset	0: No reset 1: Reset	1.015-DPT_Reset (1bit)	W

Object name	Possible values	DTP	Flags
Status_Communication status	0: Exist 1: No exist	1.001-DPT_Switch (1bit)	R
Control_User_Interface_Button Fan speed up/down Lock	0: Enabled 1: Disabled	1.002 DPT_Bool (1bit)	W
Control_User_Interface_Button Fan direction up/down Lock	0: Enabled 1: Disabled	1.002 DPT_Bool (1bit)	W
Control_User_Interface_Button Operation mode Lock	0: Enabled 1: Disabled	1.002 DPT_Bool (1bit)	W
Control_User_Interface_Button Setpoint up/down Lock	0: Enabled 1: Disabled	1.002 DPT_Bool (1bit)	W
Control_User_Interface_Button ON/Off Lock	0: Enabled 1: Disabled	1.002 DPT_Bool (1bit)	W
Status_Unit adress	0 .. 15	5.x (1byte)	R
Status_Line adress	0 .. 3	5.x (1byte)	R
Status_Consumption Yesterday	Wh/kWh	See NOTE	R
Status_Consumption Today	Wh/kWh	See NOTE	R
Status_Consumption Total	Wh/kWh	See NOTE	R
Status_Consumption Yesterday Heat	Wh/kWh	See NOTE	R
Status_Consumption Today Heat	Wh/kWh	See NOTE	R
Status_Consumption Total Heat	Wh/kWh	See NOTE	R
Status_Consumption Yesterday Cool	Wh/kWh	See NOTE	R
Status_Consumption Today Cool	Wh/kWh	See NOTE	R
Status_Consumption Total Cool	Wh/kWh	See NOTE	R

**NOTE**

Consumption signals can report its value in Wh (Data Type 13.010) or in kWh (Data Type 13.013).

7.3. Integration into BACnet Systems

**NOTICE**

You can consult the Protocol Implementation Conformance Statement (PICS) document [here](#).

7.3.1. BACnet Objects

**NOTICE**

This part is common for BACnet MS/TP and BACnet/IP.

Input object types:

- Binary input

Output object types:

- Binary output
- Multistate output

- Analog output

The following tables list all available BACnet objects for this gateway.

Object name	Possible values	Object type	Object instance
On/Off (all units)	0: Off 1: On	4-Binary Output	0
Operating Mode (all units)	1: Auto 2: Heat 3: Cool 4: Fan 5: Dry	14-Multistate Output	0
Fan Speed (all units)	1: Auto 2: Very Low 3: Low 4: Mid 5: High 6: Very High	14-Multistate Output	1
Vane position (all units)	1: Horizontal 2: P1 3: P2 4: P3 5: Vertical 6: Stop 7: Swing	14-Multistate Output	2
Temp Setpoint (all units)	-127.9 .. 127.9°C	1-Analog Output	0
Ventilation operation mode (all units) <i>*Only available for compatible VAM models from the HRV series. In case of doubt, use the compatibility tool.</i>	1: No meaning 2: Auto 3: Energy reclaim ventilation 4: Bypass	14-Multistate Output	3
Heating water setpoint (all units)	-127.9 .. 127.9°C	1-Analog Output	1
Cooling water setpoint (all units)	-127.9 .. 127.9°C	1-Analog Output	2

Object name	Possible values	Object type	Object instance
OXXUXX_On/Off_C	0: Off 1: On	4-Binary Output	(IU address[1 .. 64] × 100) + 0
OXXUXX_On/Off_S	0: Off 1: On	3-Binary Input	(IU address[1 .. 64] × 100) + 0
OXXUXX_OperationMode_C	1: Auto 2: Heat 3: Cool 4: Fan 5: Dry	14-Multistate Output	(IU address[1 .. 64] × 100) + 0
OXXUXX_OperationMode_S	1: Auto 2: Heat 3: Cool 4: Fan 5: Dry	13-Multistate Input	(IU address[1 .. 64] × 100) + 0
OXXUXX_Ventilation_operationMode_C <i>*Only available for compaitble VAM models from the HRV series. In case of doubt, use the compatibility tool.</i>	1: No meaning 2: Auto 3: Energy reclaim ventilation 4: Bypass	14-Multistate Output	(IU address[1 .. 64] × 100) + 1
OXXUXX_Ventilation_operationMode_S <i>*Only available for compaitble VAM models from the HRV series. In case of doubt, use the compatibility tool.</i>	1: No meaning 2: Auto 3: Energy reclaim ventilation 4: Bypass	13-Multistate Input	(IU address[1 .. 64] × 100) + 1
OXXUXX_FanSpeedEnum_C	1: Auto 2: Very Low 3: Low 4: Mid 5: High 6: Very High	14-Multistate Output	(IU address[1 .. 64] × 100) + 2
OXXUXX_FanSpeedEnum_S	1: Auto 2: Very Low 3: Low 4: Mid 5: High 6: Very High	13-Multistate Input	(IU address[1 .. 64] × 100) + 2
OXXUXX_VanePositionEnum_C	1: Horizontal 2: P1 3: P2 4: P3 5: Vertical 6: Stop 7: Swing	14-Multistate Output	(IU address[1 .. 64] × 100) + 3
OXXUXX_VanePositionEnum_S	1: Horizontal 2: P1 3: P2 4: P3 5: Vertical 6: Stop 7: Swing	13-Multistate Input	(IU address[1 .. 64] × 100) + 3

Object name	Possible values	Object type	Object instance
OXXUXX_TemperatureSetpoint_C	-127.9 .. 127.9°C	1-Analog Output	(IU address[1 .. 64] × 100) + 0
OXXUXX_TemperatureSetpoint_S	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 0
OXXUXX_RoomTemperature	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 1
OXXUXX_IndoorUnitCapabilityFanSpeed	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 1
OXXUXX_IndoorUnitCapabilityFanSpeedSteps	1: Fix 2: 2 step 3: 3 step 4: 4 step 5: 5 step	13-Multistate Input	(IU address[1 .. 64] × 100) + 4
OXXUXX_IndoorUnitCapabilityVaneDirection	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 2
OXXUXX_IndoorUnitCapabilityVaneDirectionSteps	1: Fix 2: 2 step 3: 3 step 4: 4 step 5: 5 step	13-Multistate Input	(IU address[1 .. 64] × 100) + 5
OXXUXX_IndoorUnitCapabilityDryMode	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 3
OXXUXX_IndoorUnitCapabilityAutoMode	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 4
OXXUXX_IndoorUnitCapabilityHeatingMode	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 5
OXXUXX_IndoorUnitCapabilityCoolingMode	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 6
OXXUXX_IndoorUnitCapabilityFanMode	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 7
OXXUXX_IndoorUnitCapabilityReheat	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 8
OXXUXX_IndoorUnitCapabilitySpaceheating	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 9
OXXUXX_IndoorUnitCapabilitySpaceLowNoise	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 10
OXXUXX_IndoorUnitCapabilityLeavingWaterSetpoint	0: Not exist 1: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 11
OXXUXX_UnitCoolingSetpointUpperLimit	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 17
OXXUXX_UnitCoolingSetpointlowerlimit	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 18
OXXUXX_UnitHeatingSetpointUpperLimit	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 19
OXXUXX_UnitHeatingSetpointLowerLimit	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 20
OXXUXX_UnitCoolingWaterSetpointUpperLimit	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 21
OXXUXX_UnitCoolingWaterSetpointLowerLimit	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 22

Object name	Possible values	Object type	Object instance
OXXUXX_UnitHeatingWaterSetpointUpperLimit	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 23
OXXUXX_UnitHeatingWaterSetpointLowerLimit	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 24
OXXUXX_HeatingWaterSetpoint_C	-127.9 .. 127.9°C	1-Analog Output	(IU address[1 .. 64] × 100) + 1
OXXUXX_HeatingWaterSetpoint_S	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 14
OXXUXX_CoolingWaterSetpoint_C	-127.9 .. 127.9°C	1-Analog Output	(IU address[1 .. 64] × 100) + 2
OXXUXX_CoolingWaterSetpoint_S	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 15
OXXUXX_StatusIndoor_Thermostat	0: Off 1: On	3-Binary Input	(IU address[1 .. 64] × 100) + 12
OXXUXX_StatusIndoor_Fan	0: Off 1: On	3-Binary Input	(IU address[1 .. 64] × 100) + 13
OXXUXX_StatusIndoor_Heater	0: Off 1: On	3-Binary Input	(IU address[1 .. 64] × 100) + 14
OXXUXX_StatusIndoor_Cool/Heat_Master	0: Slave 1: Master	3-Binary Input	(IU address[1 .. 64] × 100) + 15
OXXUXX_StatusIndoor_Defrost/Hot_Start	0: Off 1: On	3-Binary Input	(IU address[1 .. 64] × 100) + 16
OXXUXX_QuietMode_LowNoise_C	0: Off 1: On	4-Binary Output	(IU address[1 .. 64] × 100) + 1
OXXUXX_QuietMode_LowNoise_S	0: Off 1: On	3-Binary Input	(IU address[1 .. 64] × 100) + 17
OXXUXX_DomesticHotWater_StorageSetpoint_C	-127.9 .. 127.9°C	1-Analog Output	(IU address[1 .. 64] × 100) + 3
OXXUXX_DomesticHotWater_StorageSetpoint_S	-127.9 .. 127.9°C	0-Analog Input	(IU address[1 .. 64] × 100) + 16
OXXUXX_DomesticHotWater_Reheat_C	0: Off 1: On	4-Binary Output	(IU address[1 .. 64] × 100) + 2
OXXUXX_DomesticHotWater_Reheat_S	0: Off 1: On	3-Binary Input	(IU address[1 .. 64] × 100) + 18
OXXUXX_DomesticHotWater_StorageStartedRequest_S	0: None 1: Started request	3-Binary Input	(IU address[1 .. 64] × 100) + 19
OXXUXX_StatusUnit_Error	0: Normal 1: Error	3-Binary Input	(IU address[1 .. 64] × 100) + 20
OXXUXX_StatusUnit_Alarm	0: Normal 1: Alarm	3-Binary Input	(IU address[1 .. 64] × 100) + 21
OXXUXX_StatusUnit_Warning	0: Normal 1: Warning	3-Binary Input	(IU address[1 .. 64] × 100) + 22
OXXUXX_StatusUnit_ErrorCode	0: No Error X: Error	0-Analog Input	(IU address[1 .. 64] × 100) + 2
OXXUXX_FilterSign_S	0: Normal 1: Alarm	3-Binary Input	(IU address[1 .. 64] × 100) + 23
OXXUXX_FilterReset_C	0: No reset 1: Reset	4-Binary Output	(IU address[1 .. 64] × 100) + 3
OXXUXX_StatusCommunication	0: Exist	3-Binary Input	(IU address[1 .. 64] × 100) + 24

Object name	Possible values	Object type	Object instance
	1: No exist		
OXXUXX_UserInterfaceButton_FanSpeedUp/downLock_C	0: Enabled 1: Disabled	4-Binary Output	(IU address[1 .. 64] × 100) + 4
OXXUXX_UserInterfaceButton_FanDirectionUp/ downLock_C	0: Enabled 1: Disabled	4-Binary Output	(IU address[1 .. 64] × 100) + 5
OXXUXX_UserInterfaceButton_OperationModeLock_C	0: Enabled 1: Disabled	4-Binary Output	(IU address[1 .. 64] × 100) + 6
OXXUXX_UserInterfaceButton_SetpointUp/downLock_C	0: Enabled 1: Disabled	4-Binary Output	(IU address[1 .. 64] × 100) + 7
OXXUXX_UserInterfaceButton_On/OffLock_C	0: Enabled 1: Disabled	4-Binary Output	(IU address[1 .. 64] × 100) + 8
OXXUXX_UnitAdress	0 .. 15	0-Analog Input	(IU address[1 .. 64] × 100) + 3
OXXUXX_LineAdress	0 .. 3	0-Analog Input	(IU address[1 .. 64] × 100) + 4
OXXUXX_Consumption_Yesterday	kWh/Wh	0-Analog Input	(IU address[1 .. 64] × 100) + 5
OXXUXX_Consumption_Today	kWh/Wh	0-Analog Input	(IU address[1 .. 64] × 100) + 6
OXXUXX_Consumption_Total	kWh/Wh	0-Analog Input	(IU address[1 .. 64] × 100) + 7
OXXUXX_Consumption_Yesterday_Heat	kWh/Wh	0-Analog Input	(IU address[1 .. 64] × 100) + 8
OXXUXX_Consumption_Today_Heat	kWh/Wh	0-Analog Input	(IU address[1 .. 64] × 100) + 9
OXXUXX_Consumption_Total_Heat	kWh/Wh	0-Analog Input	(IU address[1 .. 64] × 100) + 10
OXXUXX_Consumption_Yesterday_Cool	kWh/Wh	0-Analog Input	(IU address[1 .. 64] × 100) + 11
OXXUXX_Consumption_Today_Cool	kWh/Wh	0-Analog Input	(IU address[1 .. 64] × 100) + 12
OXXUXX_Consumption_Total_Cool	kWh/Wh	0-Analog Input	(IU address[1 .. 64] × 100) + 13

7.4. Integration into Home Automation Systems

7.4.1. Home Automation Signals

The following tables list all available Home Automation signals for this gateway.



NOTE

- **SET:** Command used to control the indoor unit. It is sent by the client.
- **CHN:** Command used to get notifications of changes in the status of a specific function of the gateway. It is sent spontaneously by the gateway itself.
- **GET:** Command used to get the status of a specific function. It is sent by the client.

To know more about the Home Automation protocol, see the [WMP protocol specifications manual](#).

Table 6. Indoor units signals

Name	Possible values	acNum ¹	Commands supported
On/Off	ON OFF	See the note below	SET/CHN/GET
Operation Mode	HEAT COOL FAN DRY AUTO		SET/CHN/GET
Fan Speed	1 2 3 4 5 AUTO		SET/CHN/GET
Vane Position UD	1 2 3 4 5 6 AUTO		SET/CHN/GET
Temperature Setpoint (x10)	°C		SET/CHN/GET
AC Ambient Temperature (x10)	°C		CHN/GET
Unit Error code	0: No Error X: Error		CHN/GET
Error IU	OK ERR		CHN/GET



NOTE

¹ This index must be set according to the Unit ID Index.

For outdoor units, the acNum value must be the same as the minimum indoor unit associated in the CONFIGURATION section.

8. Late Configuration: Change the Gateway's Protocol

Reconfiguring the gateway with a different protocol is very easy:

1. Connect the gateway to the PC and open the configuration tool Intesis MAPS.
2. Select the new template you need.
3. Click **Next** or double-click the template in the list.
4. A message will pop up, asking if you want to save the project currently loaded in the gateway.
5. Click **Yes** or **No**, depending on your needs.
6. Configure the needed parameters and signals for your new project.
7. Send the configuration to the gateway.



NOTE

To know more about the gateway configuration, consult the [Intesis MAPS guide for Daikin](#).

9. Error Codes

Table 7. Daikin error codes

Error code	Error codeM	Error in the remote controller	Error category	Error description
-1	CommError	N/A	Indoor Unit	Communication Error between the AC unit and the gateway
16	A0	A0		External protection devices activated
17	A1	A1		Indoor unit PCB assembly failure
18	A2	A2		Interlock error for fan
19	A3	A3		Drain level system error
20	A4	A4		Temperature of heat exchanger (1) error
21	A5	A5		Temperature of heat exchanger (2) error
22	A6	A6		Fan motor locked, overload, over current
23	A7	A7		Swing flap motor error
24	A8	A8		Overcurrent of AC input
25	A9	A9		Electronic expansion valve drive error
26	AA	AA		Heater overheat
27	AH	AH		Dust collector error / No-maintenance filter error
29	AJ	AJ		Capacity setting error (indoor)
30	AE	AE		Shortage of water supply
31	AF	AF		Malfunctions of a humidifier system (water leaking)
32	C0	C0		Malfunctions in a sensor system
35	C3	C3		Sensor system of drain water error
36	C4	C4		Heat exchanger (1) (Liquid pipe) thermistor system error
37	C5	C5		Heat exchanger (1) (Gas pipe) thermistor system error
38	C6	C6		Sensor system error of fan motor locked, overload
39	C7	C7		Sensor system of swing flag motor error
40	C8	C8		Sensor system of over-current of AC input
41	C9	C9		Suction air thermistor error
42	CA	CA		Discharge air thermistor system error
43	CH	CH		Contamination sensor error
44	CC	CC		Humidity sensor error
45	CJ	CJ		Remote control thermistor error
46	CE	CE		Radiation sensor error
47	CF	CF		High-pressure switch sensor
48	E0	E0	Outdoor Unit	Protection devices activated
49	E1	E1		Outdoor unit PCB assembly failure
51	E3	E3		High pressure switch (HPS) activated
52	E4	E4		Low-pressure switch (LPS) activated
53	E5	E5		Overload of inverter compressor motor
54	E6	E6		Over-current of STD compressor motor
55	E7	E7		Overload of fan motor / Over current of fan motor
56	E8	E8		Over-current of AC input
57	E9	E9		Electronic expansion valve drive error
58	EA	EA		Four-way valve error

Error code	Error codeM	Error in the remote controller	Error category	Error description
59	EH	EH		Pump motor over current
60	EC	EC		Water temperature abnormal
61	EJ	EJ		(Site installed) Protection device activated
62	EE	EE		Malfunctions in a drain water
63	EF	EF		Ice thermal storage unit error
64	H0	H0		Malfunctions in a sensor system
65	H1	H1		Air temperature thermistor error
66	H2	H2		Sensor system of power supply error
67	H3	H3		High Pressure switch is faulty
68	H4	H4		Low pressure switch is faulty
69	H5	H5		Compressor motor overload sensor is abnormal
70	H6	H6		Compressor motor over current sensor is abnormal
71	H7	H7		Overload or over current sensor of fan motor is abnormal
72	H8	H8		Sensor system of over-current of AC input
73	H9	H9		Outdoor air thermistor system error
74	HA	HA		Discharge air thermistor system error
75	HH	HH		Pump motor sensor system of overcurrent is abnormal
76	HC	HC		Water temperature sensor system error
78	HE	HE		Sensor system of drain water is abnormal
79	HF	HF		Ice thermal storage unit error (alarm)
80	F0	F0		No.1 and No.2 common protection device operates.
81	F1	F1		No.1 protection device operates.
82	F2	F2		No.2 protection device operates
83	F3	F3		Discharge pipe temperature is abnormal
86	F6	F6		Temperature of heat exchanger(1) abnormal
90	FA	FA		Discharge pressure abnormal
91	FH	FH		Oil temperature is abnormally high
92	FC	FC		Suction pressure abnormal
94	FE	FE		Oil pressure abnormal
95	FF	FF		Oil level abnormal
96	J0	J0		Sensor system error of refrigerant temperature
97	J1	J1		Pressure sensor error
98	J2	J2		Current sensor error
99	J3	J3		Discharge pipe thermistor system error
100	J4	J4		Low pressure equivalent saturated temperature sensor system error
101	J5	J5		Suction pipe thermistor system error
102	J6	J6		Heat exchanger(1) thermistor system error
103	J7	J7		Heat exchanger(2) thermistor system error
104	J8	J8		Oil equalizer pipe or liquid pipe thermistor system error
105	J9	J9		Double tube heat exchanger outlet or gas pipe thermistor system error
106	JA	JA		Discharge pipe pressure sensor error
107	JH	JH		Oil temperature sensor error
108	JC	JC		Suction pipe pressure sensor error

Error code	Error codeM	Error in the remote controller	Error category	Error description
110	JE	JE		Oil pressure sensor error
111	JF	JF		Oil level sensor error
112	L0	L0		Inverter system error
115	L3	L3		Temperature rise in a switch box
116	L4	L4		Radiation fin (power transistor) temperature is too high
117	L5	L5		Compressor motor grounded or short circuit, inverter PCB fault
118	L6	L6		Compressor motor grounded or short circuit, inverter PCB fault
119	L7	L7		Over-current of all inputs
120	L8	L8		Compressor over current, compressor motor wire cut
121	L9	L9		Stall prevention error (start-up error) Compressor locked, etc.
122	LA	LA		Power transistor error
124	LC	LC		Communication error between inverter and outdoor control unit
128	P0	P0		Shortage of refrigerant (thermal storage unit)
129	P1	P1		Power voltage imbalance, open phase
131	P3	P3		Sensor error of temperature rise in a switch box
132	P4	P4		Radiation fin temperature sensor error
133	P5	P5		DC current sensor system error
134	P6	P6		AC or DC output current sensor system error
135	P7	P7		Total input current sensor error
141	PJ	PJ		Capacity setting error (outdoor)
144	U0	U0	System	Low pressure drop due to insufficient refrigerant or electronic expansion valve error, etc.
145	U1	U1		Reverse phase, Open phase
146	U2	U2		Power voltage failure / Instantaneous power failure
147	U3	U3		Failure to carry out check operation, transmission error
148	U4	U4		Communication error between indoor unit and outdoor unit, communication error between outdoor unit and BS unit
149	U5	U5		Communication error between remote control and indoor unit / Remote control board failure or setting error for remote control
150	U6	U6		Communication error between indoor units
151	U7	U7		Communication error between outdoor units / Communication error between outdoor unit and ice thermal storage unit
152	U8	U8		Communication error between main and sub remote controllers (sub remote control error) / Combination error of other indoor unit / remote control in the same system (model)
153	U9	U9		Communication error between other indoor unit and outdoor unit in the same system / Communication error between other BS unit and indoor/outdoor unit
154	UA	UA		Combination error of indoor/BS/outdoor unit (model, quantity, etc.), setting error of spare parts PCB when replaced
155	UH	UH		Improper connection of transmission wiring between outdoor and outdoor unit outside control adaptor
156	UC	UC		Centralized address duplicated

Error code	Error codeM	Error in the remote controller	Error category	Error description
157	UJ	UJ		Attached equipment transmission error
158	UE	UE		Communication error between indoor unit and centralized control device
159	IF	IF		Failure to carry out check operation Indoor-outdoor, outdoor-outdoor communication error, etc.
208	60	60	Others	All system error
209	61	61		PC board error
210	62	62		Ozone density abnormal
211	63	63		Contamination sensor error
212	64	64		Indoor air thermistor system error
213	65	65		Outdoor air thermistor system error
216	68	68		HVU error (Venti air dust-collecting unit)
218	6A	6A		Dumper system error
219	6H	6H		Door switch error
220	6C	6C		Replace the humidity element
221	6J	6J		Replace the high-efficiency filter
222	6E	6E		Replace the deodorization catalyst
223	6F	6F		Simplified remote controller error
225	51	51		Fan motor of supply air over current or overload
226	52	52		Fan motor of return air over current / Fan motor of return air overload
227	53	53		Inverter system error (supply air side)
228	54	54		Inverter system error (return air side)
240	40	40		Humidifying valve error
241	41	41		Chilled water valve error
242	42	42		Hot water valve error
243	43	43		Heat exchanger of chilled water error
244	44	44		Heat exchanger of hot water error
257	31	31		The humidity sensor of return air sensor
258	32	32		Outdoor air humidity sensor error
259	33	33		Supply air temperature sensor error
260	34	34		Return air temperature sensor error
261	35	35		Outdoor air temperature sensor error
262	36	36		Remote controller temperature sensor error
266	3A	3A		Water leakage sensor 1 error
267	3H	3H		Water leakage sensor 2 error
268	3C	3C		Dew condensation error
338	M2	M2		Centralized remote controller PCB error
344	M8	M8		Communication error between centralized remote control devices
346	MA	MA		Centralized remote control devices inappropriate combination
348	MC	MC		Centralized remote controller address setting error

**NOTE**

If you detect a non-listed error code, please contact Daikin technical support.