



Installer manual
AG-WT10
Indoor unit air/air heat pump

Table of Contents

1 Important information	4
Safety information	4
Read before starting the installation	5
Electrical requirements	5
2 Delivery and handling	6
Transport	6
Assembly	6
Supplied components	6
3 Pipe connections	7
General	7
Connecting the cooling circuit	7
4 Electrical connection	8
General	8
Connecting indoor and outdoor unit	8
5 Installation	9
Installation instructions	9
Pump down	11
6 Remote control	12
Positioning remote control	12
Coding remote control for multiple indoor units	12
7 Addressing the indoor unit	15
Addressing via remote control	15
Addressing via DIP switches	16
Automatic addressing	16
Function check	17
8 Disturbances in comfort	18
Troubleshooting	18
9 Accessories	19
10 Technical data	20
Dimensions (mm)	20
Technical specifications	21
Electrical circuit diagram	22
Item register	23

1 Important information

Safety information

This manual describes installation and service procedures for implementation by specialists.

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

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Symbols



NOTE

This symbol indicates danger to machine or person.



Caution

This symbol indicates important information about what you should observe when maintaining your installation.



TIP

This symbol indicates tips on how to facilitate using the product.

Safety precautions



NOTE

- Avoid the use and storage of flammable liquids near the climate unit.
- Never install electric equipment that does not have IPX1 protection (protection against vertical water drops), under the unit.

The manufacturer assumes no liability, if safety the standards or protection preventive measures are not complied with.

Special safety measures

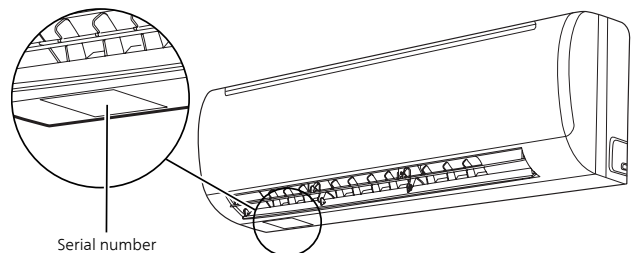
During installation the cooling circuit must be connected first and then the electrical circuit. Perform in reverse order when removing the unit.

During repair

- Disconnect the voltage (via the main switch) before opening the unit to check or repair the electrical parts.
- Keep hands and clothing away from moving parts.
- Clean after completing the work, and check that no metal residue or cable parts have been left inside the unit.
- Vent the premises during the installation and the cooling circuit test. Ensure that no refrigerant gas has leaked out during the installation, as contact with naked flames or heat sources can be toxic or dangerous.

Serial number

The serial number can be found to the left, under the indoor unit.



Caution

You need the product's serial number for servicing and support.

Recovery

Information regarding the correct recycling of the product in accordance with the EU directive 2012/19/EU



Do not dispose of used units with normal household waste. It must be disposed of at a special waste station or dealer who provides this type of service.

Separate waste sorting of an electrical and electronic device makes it possible to prevent adverse effects on the environment and human health, which may occur from inappropriate waste sorting and this also makes it possible to reuse and recycle the material, which leads to a considerable saving of energy and resources.

To emphasize the need for waste sorting and separate handling of these units, there is a symbol of a crossed-out waste bin on the product.

Improper disposal of the product by the user results in administrative penalties in accordance with current legislation.

Read before starting the installation

This heat pump complies with strict safety and function standards.

It is very important that the installer or the service technicians install or repair the system so that it works safely and efficiently.

For a safe installation and good function the following is required:

- Read this instruction manual carefully before starting installation.
- Follow the installation and safety instructions exactly as described and shown.
- Comply with local and national electrical regulations.
- Note all the warning and safety messages indicated in this manual.
- The unit must be connected to a separate supply.

These instructions are sufficient for installation and maintenance. If assistance is required for a particular problem, contact our dealer for further information.

NIBE does not accept any responsibility for damage that occurs in the event of incorrect installation or improper maintenance.

Electrical requirements



NOTE

The electrical discharge can cause serious personal injury or death. Only qualified electricians may handle the electrical system.

- Before installation ensure that the mains supply for the power supply is the same as that indicated on the climate unit's rating plate.
- Each unit must be connected with approved grounded cable.
- The electrical connections must be performed by a specially trained and qualified electrician.
- Ensure a ground connection before the unit is powered.
- Hazardous electrical voltage is used in this electrical circuit. See electrical wiring diagram and its instructions below the connection. Incorrect connections or unsuitable ground connection can cause accidents or death.
- The yellow/green cable must not be used for connections other than ground.
- Tighten the cables securely. Incorrect connections can cause overheating and fire.
- Electrical cables must not come into contact with the cooling pipes, the compressor or fan's moving parts.
- Use separate cables for each type of cable.

2 Delivery and handling

Transport

Take care when lifting and moving the indoor unit.

Assembly

We recommend that this climate unit be installed by an authorised technician in accordance with the supplied installation instructions.



NOTE

- Do not install this climate unit where there are flue gases, flammable gases or a lot of moisture, e.g. in a greenhouse.
- Do not install this climate unit where there is equipment that generates too much heat.
- Do not install the unit in premises where it may be subjected to water splashes (e.g. laundry rooms).
- To protect the climate unit from corrosion, the unit must not be installed where it can be directly exposed to seawater splashes or sulphur fumes.

Selection of installation location for indoor unit



Caution

For optimum comfort, energy saving and function the unit should be positioned as recommended below.

Prevent the following:

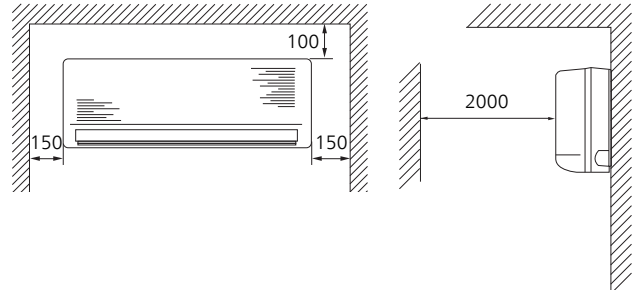
- Proximity to heat sources that can damage the unit's cover.
- The presence of oil vapour (such as in a kitchen or near industrial machinery) because oil contamination can lead to malfunction or deform surfaces, especially the unit's plastic surfaces.
- Premises with unstable surfaces can cause vibrations, noise or water leaks.
- To drill holes in enclosed areas where there are electrical parts or units.

The following is recommended:

- Select the appropriate position from which every angle of the premises can be heated uniformly.
- Check that the surface is sufficiently stable to carry the weight of the unit.
- Select a suitable position to ensure good ventilation and maintenance space around the unit.

Installation area

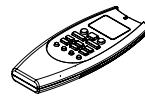
Minimum working and maintenance range (measured in mm):



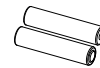
NOTE

Ensure that all pipes and hoses are insulated to prevent the build-up of condensation.

Supplied components



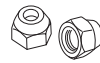
Remote control



Battery
2 x



Flare nut 1/4"

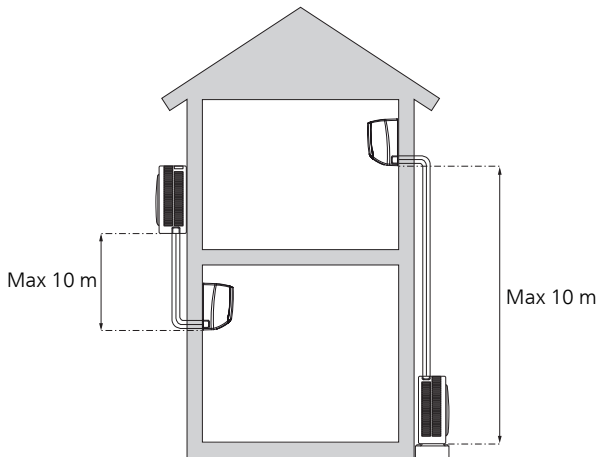


Flare nut 3/8"

3 Pipe connections

General

Only use refrigerant pipes that are seamless, degreased, deoxidized and suitable for a pressure of at least 42 bar. The pipes must be supplied with at least 8 mm vapour-proof insulation.



For information about pipe lengths, see the outdoor unit's installer manual.

For information about pipe dimensions, see section "Technical Specifications" on page 21.

Condensation drain

Any condensation removal line must have an internal diameter of at least 16 mm and be of sufficient length to transport the condensation to an external drain.

Connecting the cooling circuit

- Use the flare method to connect the pipes.
- Lubricate the contact surfaces and hand tighten, then tighten the connections using a torque wrench to obtain a good and secure connection.
- Check carefully that there is no risk of any leakage prior to the function test.



Caution

For further information, see the installation manual for the outdoor unit.

4 Electrical connection

General

Electrical installation and service must be carried out under the supervision of a qualified electrician.

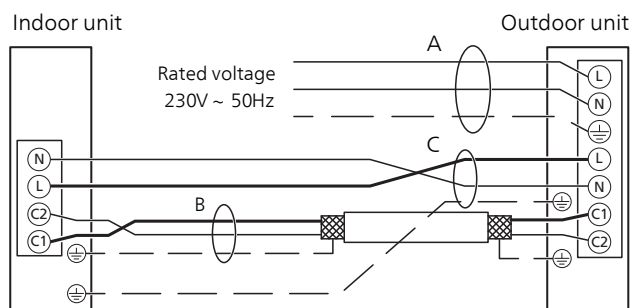
Cut the current with the circuit breaker before carrying out any servicing. Electrical installation and wiring must be carried out in accordance with the stipulations in force.



Caution

Also see the installer handbook for the outdoor unit.

Connecting indoor and outdoor unit



Explanation

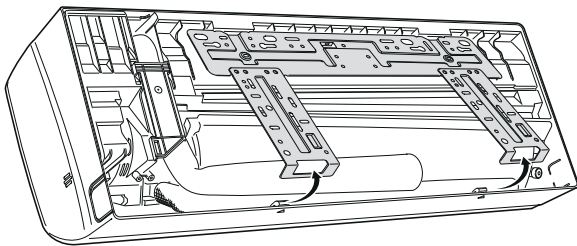
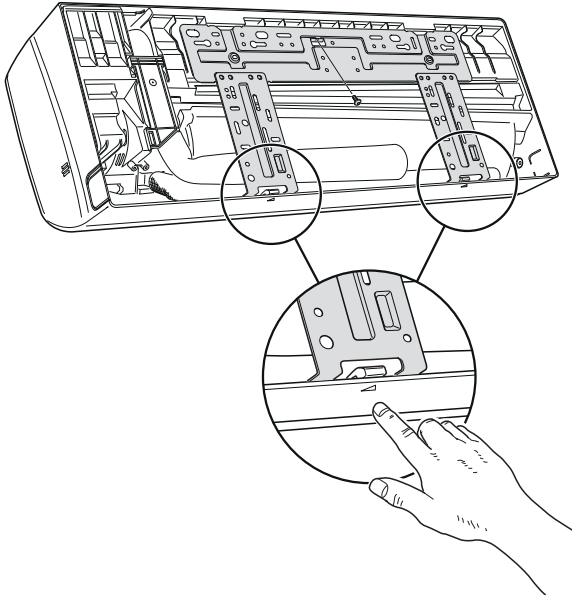
- A** Power supply cable
- B** Communication cable ¹
- C** Connection cable

¹ The communication cable must **always** be screened.

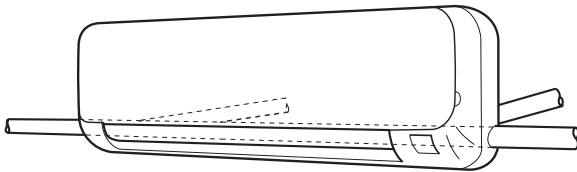
5 Installation

Installation instructions

1. Remove the mounting screw on the unit's wall mounting and press on the hooks, which are marked with triangles, for unhooking the panel.

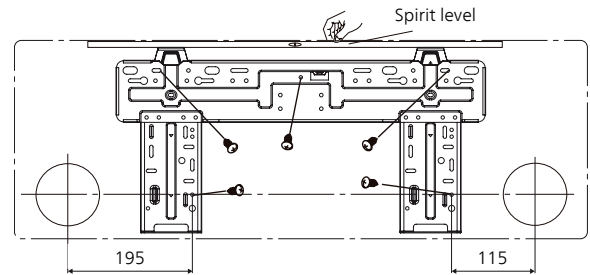


2. The unit can be connected in four directions: straight back (right and left) - right-hand side - left-hand side.

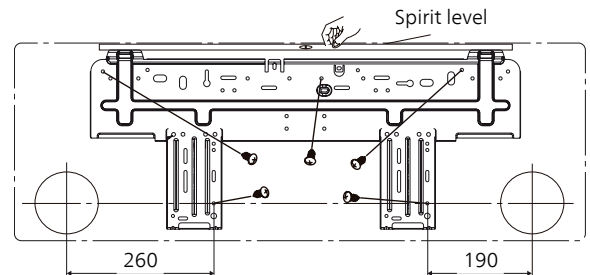


3. Assess and mark the holes for the pipes and screws: the centre point of the holes for the pipes must be in line with the centre point of the holes for the lower screws (see the figure for recommended hole locations).

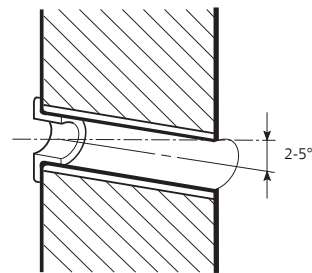
AG-WT10-4



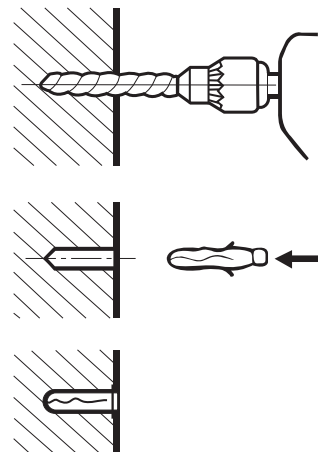
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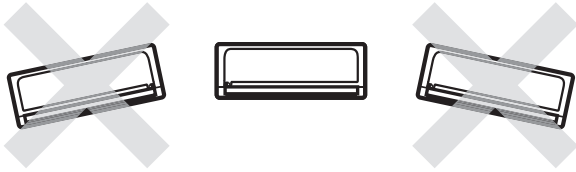
4. Drill a hole at a suitable angle and with a diameter of about 65 mm. Insert and adjust a plastic pipe.



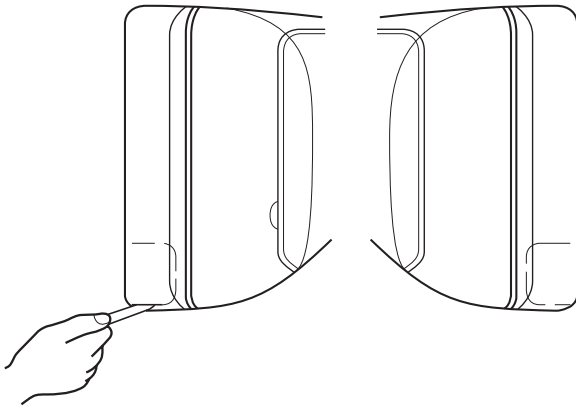
5. Prepare installation of the wall mounting.



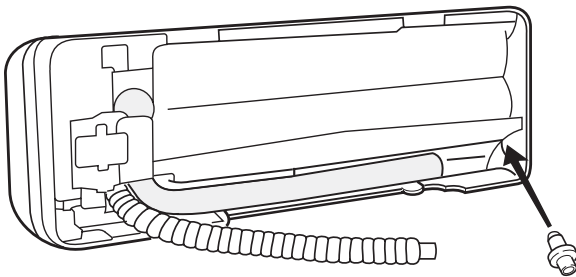
6. Install the wall mounting on the wall using suitable screws. Ensure that the unit is properly mounted on the wall to prevent noise and vibrations.



7. When connecting cooling pipes to the right or left, cut off the casing's groove.

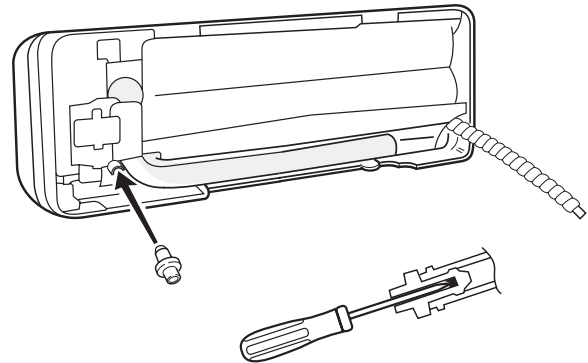


8. Cables for external sensors must enter on the right-hand side. The condensation collection box is equipped with outlet points with pipes on the right-hand side and rubber plug on the left-hand side.

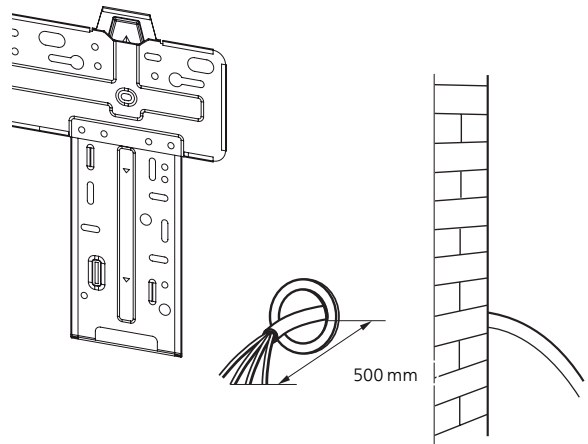


9. To invert condensation removal, remove the condensation drain pipe by turning the metal clamp anticlockwise, then pull out the rubber plug on the other side. Reinstall by inverting the positions, use a suitable tool to reinstall the plug correctly.

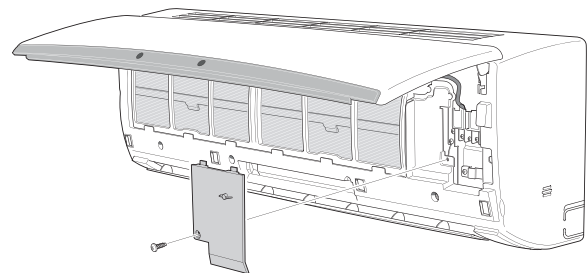
NOTE
To prevent damage to the rubber plug, do not use sharp tools when installing it.



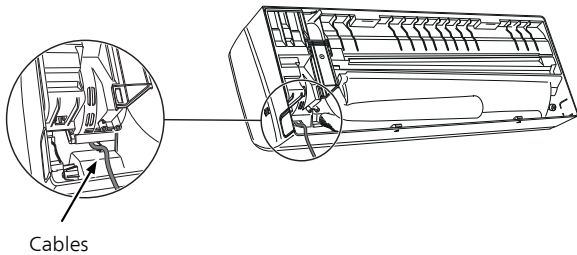
10. Lay the screened communication cable (B) and connection cable (C) between the two units. Check that the cables to the indoor unit protrude at least 500 mm from the wall. See image below.



11. Open the unit's front panel. Remove the screws on the cover to access the terminal block.

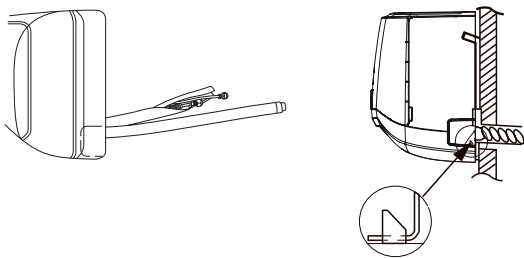


12. Insert the cables via the rear and then route them to the front.



Cables

13. Pipe outlet on rear right-hand side:
Insert the pipes and condensation drain pipe through the hole in the wall. Suspend the unit on the previously installed wall mounting.



NOTE

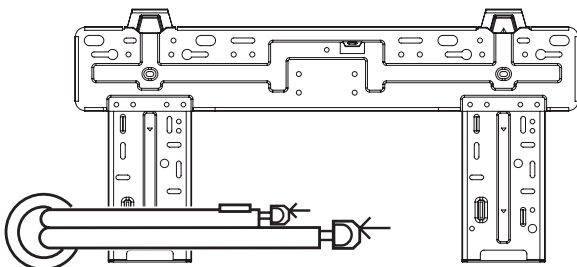
Insulate the hole in the wall to prevent the sensors being affected by the outdoor air.

14. Pipe outlet on rear left-hand side:
Insert the pipes from outside, then bend them to the right.



Caution

Adapt the length of the pipes so that they fit the pipe connections on the indoor unit.



15. Press lightly to hook the unit to the wall mounting.

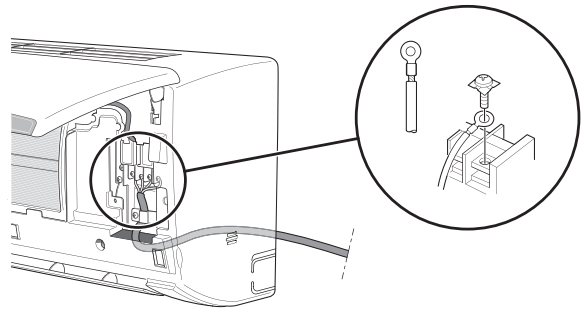


16. Connect the cables to the terminal block. Secure the cable using the cable tie. Also see section "Electrical connection" on page 8.

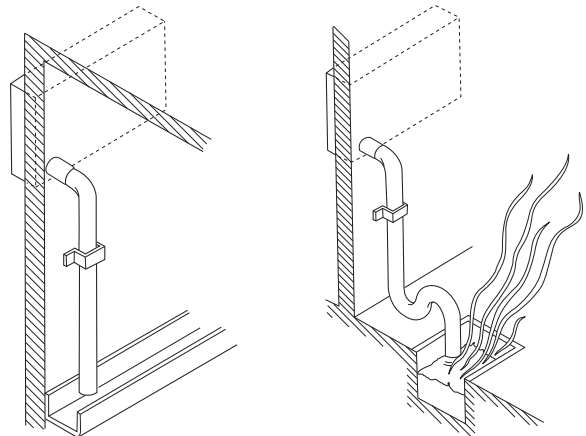


WARNING!

Ensure that all connections are tightened properly on the terminal block. Non-tightened terminals lead to overheating, problems with the heat pump's function and are a fire risk.



17. Lead out the condensation hose and ensure the correct fall. Make a water seal if necessary.



Pump down

See the outdoor unit's installation manual for detailed information regarding "Pump down".

Pump down means retrieving all refrigerant in the outdoor unit without losing the system's filling. This is required when the climate unit is to be removed or during repair of the cooling circuit.

6 Remote control

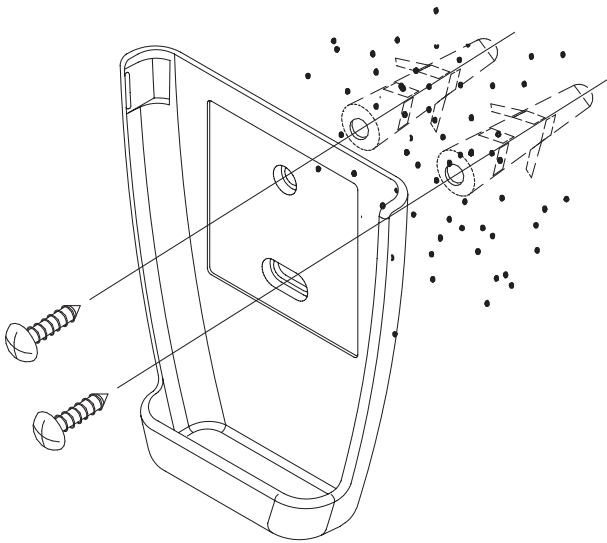
Positioning remote control

To ensure good unit function, avoid installing the remote control under the following conditions:

- Behind a curtain or other covered areas.
- Where it can be met by air blown out from the climate unit.
- On poorly insulated walls.
- In direct sunlight.
- Where it can be subjected to electrical or magnetic interference.
- Where there are obstructions between the remote control and the climate unit.

Position on the wall:

- Hold the remote control in the desired position.
- Check that the remote control communicates with the climate unit from this preset position.
- Secure the holder in the wall with two screws and hang up the remote control.



Coding remote control for multiple indoor units



Caution

Ignore this section if you only have one indoor unit as this describes how to connect your remote control to several indoor units.

In premises with multiple indoor units all remote controls can control all indoor units if these have retained default setting (code 1). To connect a remote control to one or more specific indoor units, one of the following codes can be selected. The remote control can only control indoor units with the same code, however, you can select to have more than one indoor unit with that code.



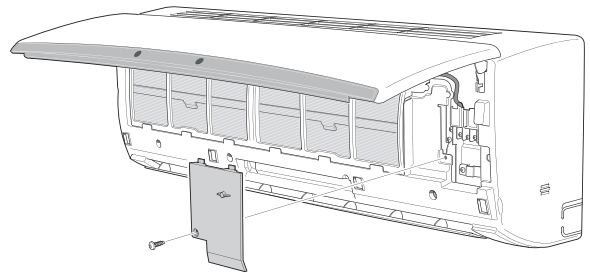
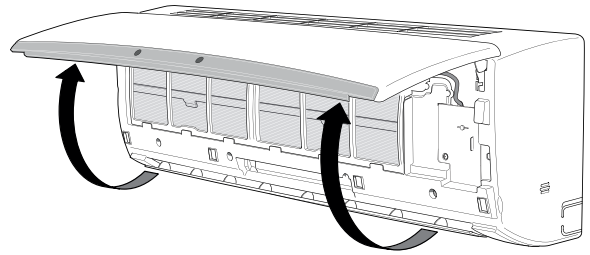
NOTE

The indoor unit and remote control must not be live when adjusting the DIP switches.

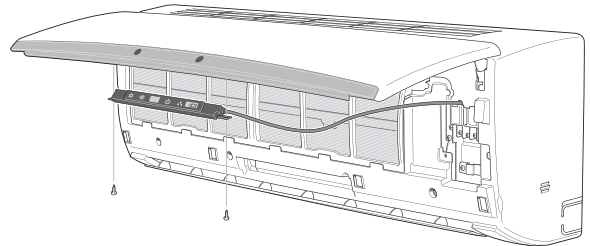
Location of DIP switches

Indoor unit

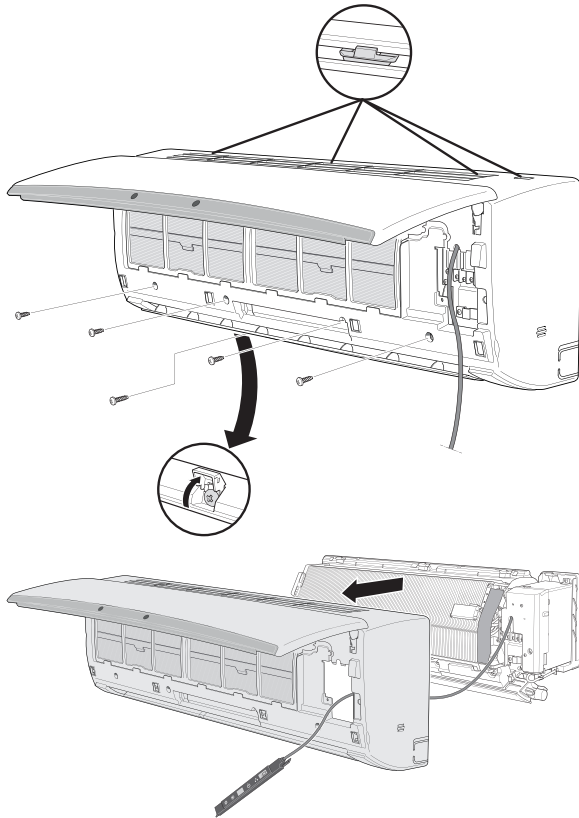
1. Open the unit cover and remove the front panel as illustrated.



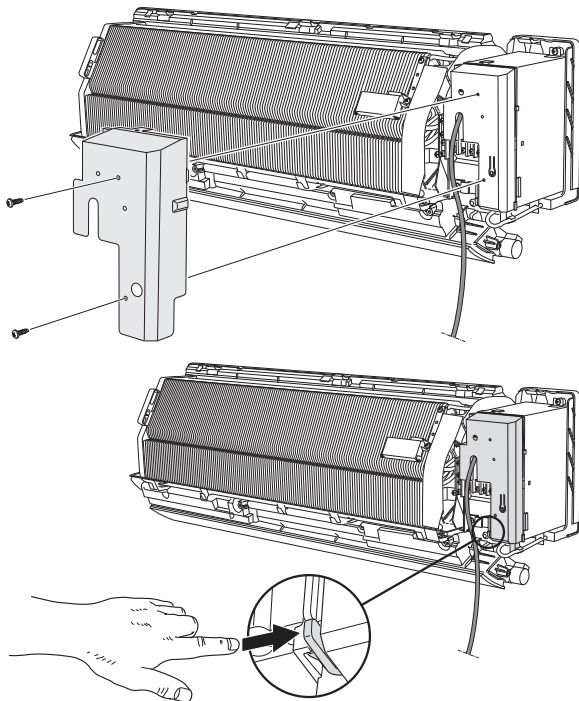
2. Remove the LED ramp from the underside of the cover.



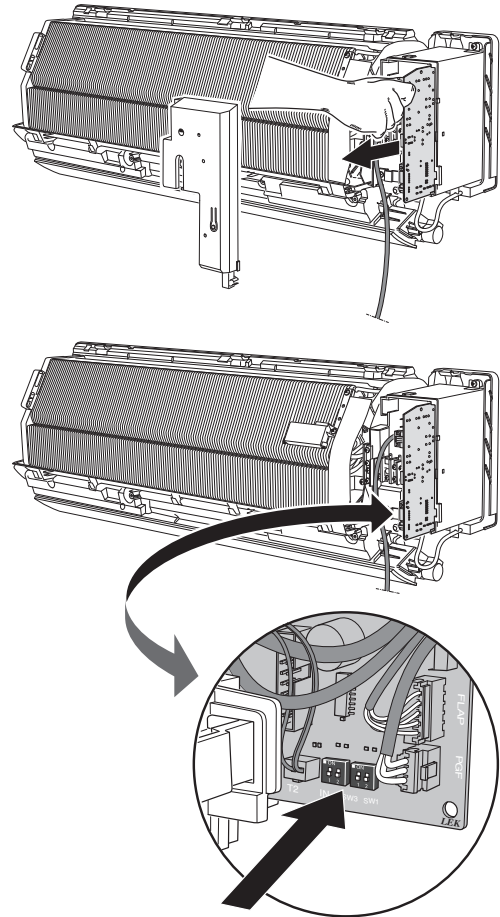
- Remove the mounting screws as illustrated, then unhook the cover by pressing the hooks down on the top of the unit.



- Remove the two covers that protect the circuit board of the unit.

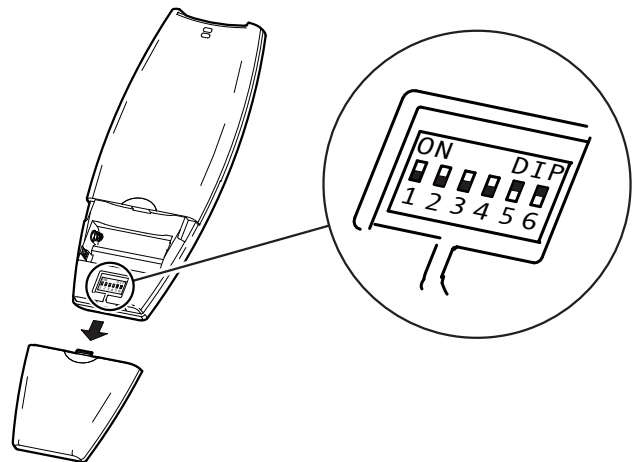


- Pull out the circuit board and position the DIP switches according to the table in section "Setting DIP switches" on page 14.



Remote control

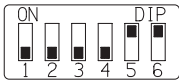
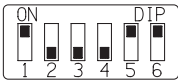
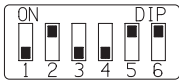
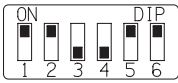
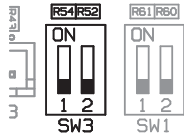
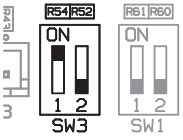
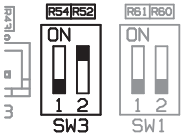
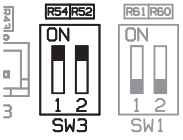
Remove the battery cover on the remote control to access the DIP switches.



Setting DIP switches

- Set the DIP switches on the indoor unit's circuit board (PCB) and remote control (see table).
- Insert the batteries into the remote control.
- Connect power to the indoor unit.
- The system now restarts with the new settings.

Set SW3 (PCB) according to what is indicated in the table.

Code	1	2	3	4
Remote control				
Indoor unit				

7 Addressing the indoor unit

Indoor units included in the multisplit system must be configured correctly to be able to communicate with outdoor units over different channels (indoor unitA, indoor unitB, etc.).

The address for each indoor unit must correspond to the connection between the indoor unit and outdoor unit's cooling circuit; if the indoor unit is connected to the cooling circuitA the address must also be A.

There are three different ways to address the indoor units.

- **Addressing via DIP switch**

The address is assigned via the DIP switches that are on the indoor unit circuit board.

- **Addressing via remote control**

Addressing is via the indoor unit remote control.

- **Automatic addressing**









Each indoor unit is automatically assigned its own address.

If several indoor units are connected to an outdoor unit, the indoor units must be given an address that corresponds to the connection used in the outdoor unit. This is done either using the remote control or by adjusting the indoor unit DIP switches.

Addressing via remote control

When addressing using remote control it is possible to connect up to eight indoor units to one outdoor unit.

Set the remote control according to the table below, direct it towards the desired indoor unit and keep the buttons "FAN" and "iFEEL" pressed for more than five seconds. If the unit has received the command, four beeps are sounded as confirmation. When you have heard the beeps, the unit starts to work with the new address.

Button	Indoor unit							
	A	B	C	D	E	F	G	H
Operating mode ( or )	AUTO							
Set point temperature ( / )	11 °C	12 °C	13 °C	14 °C	15 °C	16 °C	17 °C	18 °C
Air deflector ()	AUTO							
Air filter ()	ON							
Night program ()	OFF							
High power ()	OFF							

Addressing via DIP switches

When addressing using DIP switches it is possible to connect up to four indoor units to one outdoor unit. Set SW1 as indicated in the table.

Indoor unit			
A	B	C	D

Automatic addressing



Caution

Before activating automatic addressing, check that the indoor unit DIP switch for addressing is factory set, in "OFF" mode.

Activating automatic addressing

Activate the climate installation and check that only error code E0 (address missing) is visible on the indoor unit. Start one of the indoor unit remote controls and set it according to the table below.

Button	Setting
Operating mode (or)	AUTO
Set point temperature ()	24 °C
Air deflector ()	AUTO
Air filter ()	ON
Night program ()	OFF
High power ()	OFF

- Hold the "FAN" and iFEEL" buttons down for longer than seven seconds and release them with the remote control directed at one of the indoor unit receivers. Ensure that the signal is only received by one of the indoor units.
- If the signal is received, the indoor module beeps five times.
- After a few seconds, the display on each indoor unit shows the symbol "[]" to confirm that automatic addressing has been activated.



NOTE

During the addressing process the IR receiver is deactivated and the indoor units cannot receive commands from the remote controls.

With automatic addressing activated, each indoor unit is assigned its own address. During the addressing process the system compressor and fans are running. Addressing takes 4-5 minutes per cooling circuit in the outdoor unit.

The outdoor unit stops when all circuits have been checked and the addresses assigned. The indoor units go to standby mode and the IR receivers are activated, regardless of whether the addressing functioned or not. If the indoor units do not display any error codes, the installation is ready for use. If the error code "E0" (address missing) is displayed on any of the indoor units you can either try to address automatically again, or address via the DIP switches or remote control.

Function check



NOTE

It is only necessary to carry out a function check in systems with several indoor units.






Run a function check to ensure that the address settings are correct and that the cooling circuits are correctly connected.

The following steps must be taken with the indoor unit "A". See the section "Addressing the indoor unit" on page 15 to see which of the indoor units is unit "A".



NOTE

The installation's other indoor units must be switched off.

- Activate the climate unit.
- Set the remote control with the following settings:
 - **Operating mode** ( or ): COOLING
 - **TiO₂ air cleaner** (): ON
 - **Set point temperature** (/): 32 °C
- Hold the buttons "FAN" and "iFEEL" pressed for at least five seconds, with the remote control aimed towards the indoor unit IR receiver.

The installation is now running and checks all the installation's address settings and cooling circuits. During the check the "TIMER" lamp flashes and the "OPERATION" lamp goes on and stays on. The checks run for three minutes.

If the units are correctly installed, the unit switches to cooling mode and stops. The installation is now ready for use.

If the units are incorrectly installed, the "STANDBY" lamp flashes. Check the indoor unit address settings and the cooling circuit connections.

8 Disturbances in comfort

In most cases the heat pump detects a malfunction and displays this as an alarm in the display

Troubleshooting

Error code	Possible cause	Action
E0	<ul style="list-style-type: none"> ▪ The unit has not been addressed for the multisplit system. ▪ The operating mode selected does not correspond with that active in the multisplit system (heating mode is selected when the rest of the system is in cooling mode or vice versa). 	<ul style="list-style-type: none"> ▪ Assign the unit an address. See section "Addressing the indoor unit" on page 15. ▪ Change to the operating mode that is active in the multisplit system.
E1	Problem with the outdoor unit.	See section "Disturbances in comfort" in the installer manual for the outdoor unit.
E3	Communication problems between the indoor and outdoor units.	<ul style="list-style-type: none"> ▪ Check that the connection between C1 and C2 on the units' terminal blocks is correct. ▪ Check that the communication cable is screened. ▪ Check that all ground cables are correctly connected. ▪ Check the DIP switch for addressing is in the correct position. See section "Addressing the indoor unit" on page 15. ▪ Check the communication fuse (F2) on the indoor and outdoor unit. ▪ Check that the outdoor unit is activated and functioning correctly. ▪ Check that the power cable is correctly connected to the terminal block. ▪ Check that the circuit board does not have burn marks. ▪ Check that the fan motor functions and that it does not cause a short circuit in the indoor unit circuit board.
E4	Faulty heat exchanger sensor on the indoor unit.	<ul style="list-style-type: none"> ▪ Check that the sensor is connected to the circuit board, according to the electrical wiring diagram. See page 22. ▪ Check if the sensor is damaged and replace if necessary.
E5	Faulty room sensor on the indoor unit.	<ul style="list-style-type: none"> ▪ Check that the sensor is connected to the circuit board, according to the electrical wiring diagram. See page 22. ▪ Check if the sensor is damaged and replace if necessary.
E6	Fault in the fan motor.	<ul style="list-style-type: none"> ▪ Check that the fan motor is connected to the circuit board, according to the electrical wiring diagram. See page 22. ▪ Check that the fan motor is not blocked. ▪ Check if the fan motor is damaged and replace if necessary.
E8	Faulty combination of indoor and outdoor units.	<ul style="list-style-type: none"> ▪ Check that the correct combination of outdoor and indoor units was selected when the installation was installed. ▪ Check if any of the indoor units in the system has a communication error. If so, rectify it first.

9 Accessories

GSM module AG-BU10

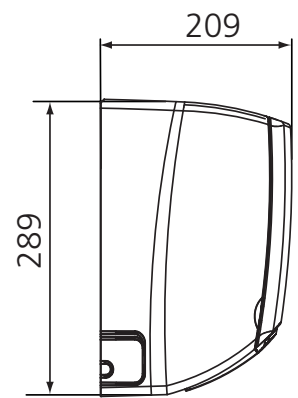
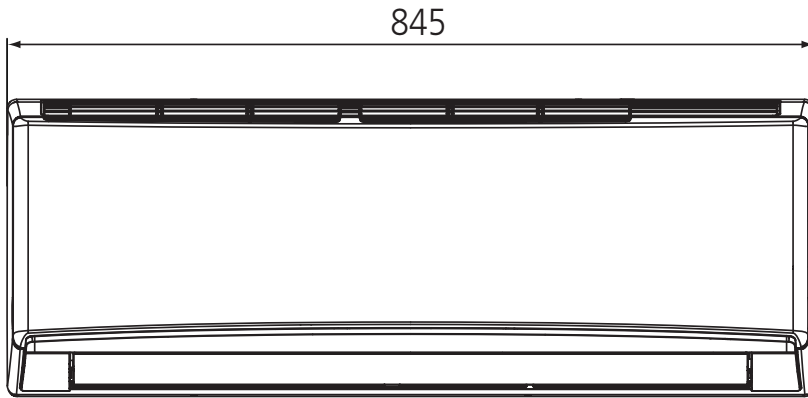
With AG-BU10 you can control the indoor unit via your mobile phone.

Part no. 067 449

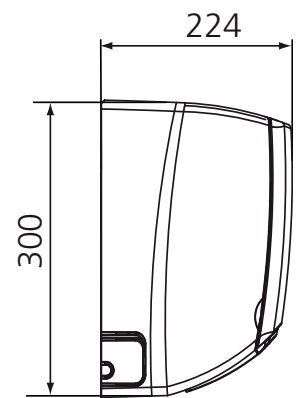
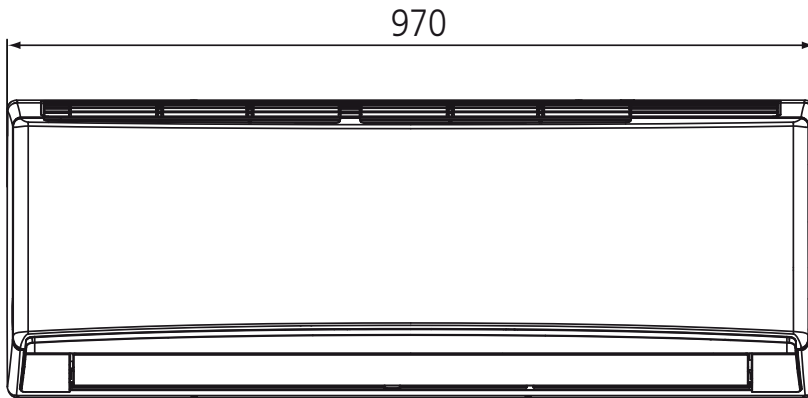
10 Technical data

Dimensions (mm)

AG-WT10-4



AG-WT10-7



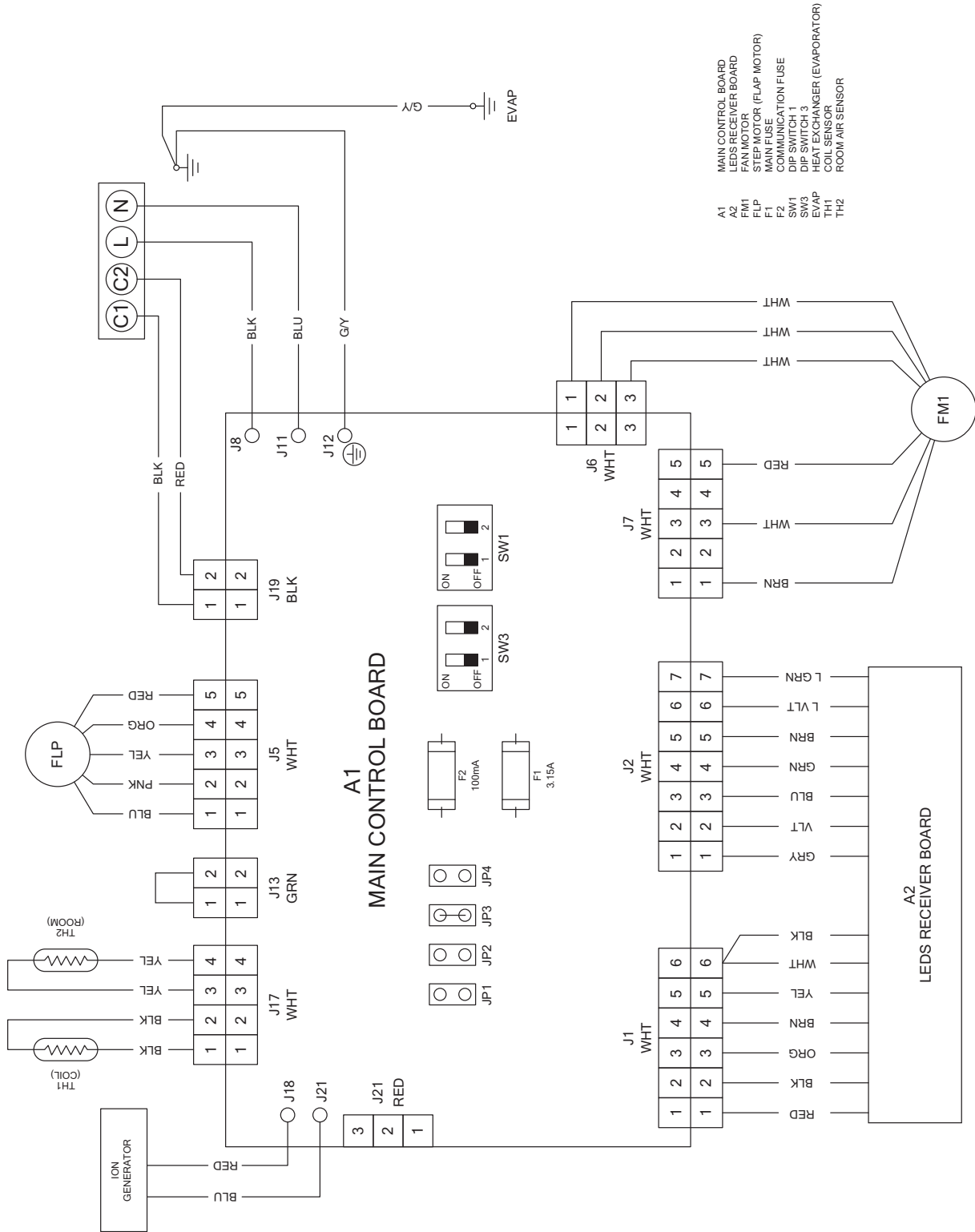
Technical specifications

		AG-WT10-4	AG-WT10-7
Electrical data			
Rated voltage		230 V ~ 50 Hz	
Max. specified power/operating current	kW/A	0.046/0.22	0.079/0.35
Pipe connections			
Pipe connection (liquid)	mm (inches)	6.35 (1/4")	
Pipe connection (gas)	mm (inches)	9.52 (3/8")	12.7 (1/2")
Min. thickness refrigerant pipe	mm	0.8	
Dimensions and weight			
Weight	kg	10	14
Width	mm	845	970
Height	mm	289	300
Depth	mm	209	224
Recommended working range ¹⁾			
Min/max outdoor temp. during cooling	°C	-20/50	
Min/max indoor temp. during cooling	°C	10/32	
Min/max outdoor temp. during heating	°C	-20/24	
Min/max indoor temp. during heating	°C	0/27	
Miscellaneous			
Sound pressure level, fan speed low-high ²⁾	dB(A)	25/31/39/42	36/39/42/46
Airflow	m ³ /h	330-660	520-800
Dehumidification	l/h	1.5	2.0
Part No.		069 133	069 134

¹⁾ Access to full capacity is guaranteed within the heat pump's working range. Operation outside the recommended working range is possible as the internal protective functions ensure that the heat pump will not be damaged.

²⁾ Sound pressure level measured at 2 m, according to ISO 9614.

Electrical circuit diagram



11 Item register

Item register

A

- Accessories, 19
- Addressing the indoor unit, 15
 - Function check, 17

D

- Delivery and handling, 6
 - Assembly, 6
 - Transport, 6

E

- Electrical connection, 8
 - Electrical connection, 8

F

- Function check, 17

I

- Important information, 4
 - Electrical requirements, 5
 - Safety information, 4
 - Serial number, 4
- Installation, 9
 - Installation instructions, 9
 - Pump down, 11

P

- Pipe connections, 7
 - Condensation removal, 7
 - Connecting the cooling circuit, 7

R

- Remote control, 12
 - Positioning remote control, 12
 - Programming remote control, 12

S

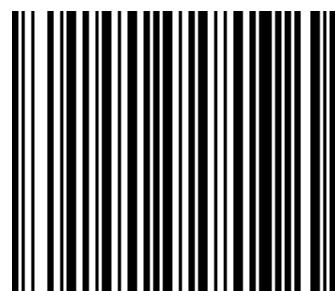
- Safety information
 - Safety precautions, 4
 - Symbols, 4
- Safety precautions, 4
- Serial number, 4
- Supplied components, 6
- Symbols, 4

T

- Technical data, 20
 - Dimensions, 20
 - Technical specifications, 21

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