komfovent®
domekt

DOMEKT

REGO / RECU

Content

1. ELECTRICAL INSTALLATION MANUAL

Installation works can be performed only by the specialists that have required qualification. During installation following requirements must be fulfilled.

> ⚠ It is recommended to lay control cables separately from power cables in a distance no less than 20 cm.

> ⚠ Connector connection is performed strictly according to numeration given in wiring diagram, or adequate markings (see wiring diagram).

> ⚠ When disconnecting unit sections, do not pull by connecting wires and cables!

> ⚠ Before starting any operations inside the unit, make sure that the unit is switched off and the power supply voltage is shut off.

1.1. Electric Power Supply Connection

Air handling unit voltage is 230V AC; 50 Hz , therefore it is necessary to install the socket with grounding of corresponding capacity (see wiring diagram). Electric power supply cable type is indicated in electric diagram.

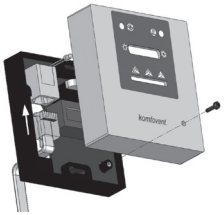
> ⚠ Unit must be connected to the stationary installation by solid cable through 10A circuit breaker with maximum 30mA current leakage relay.

> ⚠ Before connecting unit to the electrical power supply, it is necessary to check whether earthing has been installed properly in conformance with electric safety requirements.

1.2. Control Panel Installation

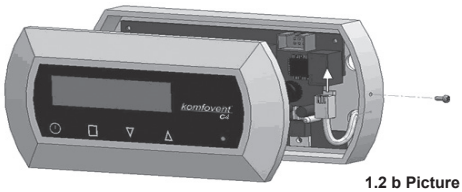
1. Control panel must be installed in the room under given following conditions:
   1.1. ambient temperature 0^0C ... 40^0C;
   1.2. relative humidity limits 20% ... 80%;
   1.3. protection must be ensured from accidentally vertically falling water drops (IP X2).
2. Installation height must be not less than 0,6m from the ground.
3. Control panel connection is projected through the hole in its backside (see 1.2 Picture).
4. Control panel is fixed after screwing two holes on the fastening surface.

C4 Control Panel Connection



1.2 a Picture

C4 PLUS Control Panel Connection



1.2 b Picture

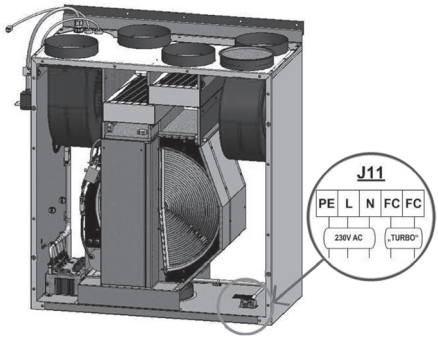
> ⚠ The length of cable connecting control panel and air handing unit can not exceed 20 m (see 1.2 a Picture.) or 150m (see 1.2 b Picture). Electric power supply cable type is indicated in wiring diagram..

> ⚠ When closing the panel window, do not bend the springs inside as this may inhibit the functions of the panel buttons! (1.2 b Picture) Disconnect power supply prior to connecting the control panel!

1.3. Kitchen Hood Connection

Air handling units KOMFOVENT DOMEKT REGO 200VE have possibility of kitchen hood connection (in the functional diagram it is marked by KH). After fishing the cable through the rubber gasket, (located in the wall) it has to be connected to connection box J11 (1.3 Picture).

Kitchen Hood Connection

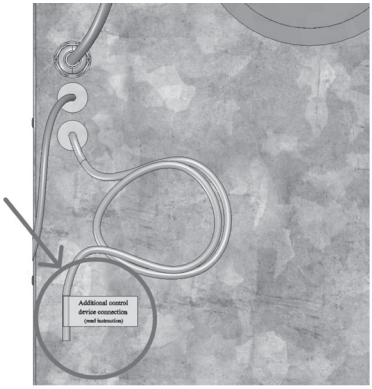


1.3 Picture

1.4. External elements connection

Depending on the model of a Domekt air handling unit and component parts, several additional cables can be led outside the unit for connecting external elements of the automatics:

- **External control contacts.** They are designed in all Domekt units. Outside the unit, a cable is led (see Fig. 1.4a), to which an external control device (switch, sensor, timer, button, etc.) can be connected, i.e. interconnection of normally open contacts (short circuit) will activate the OVR function. A more detailed description of connection possibilities is presented in Chapters 2.6 and 3.6.



1.4 Picture

- **External control box.** If a water heater or a cooler is designed in the Domekt unit, then the unit is fitted with an external control box (see Fig. 1.4b), which is connected to the unit with a JW1 cable. Some elements specified below are connected to the contacts of the box.

> ⚠ The connection diagram of the external elements is presented on the internal side of the doors of the control box.

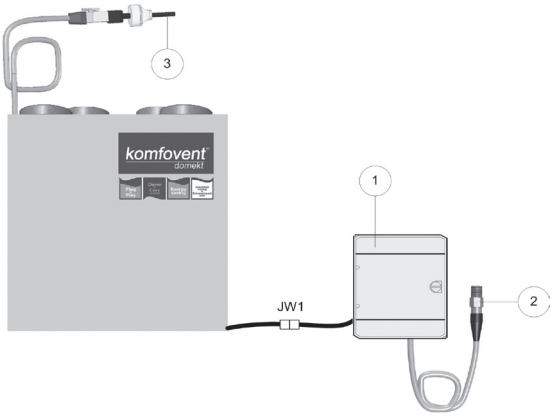
- **Air damper actuator.** Domekt air handling units can be ordered with the prepared connection for air damper actuators. In this case, an additional cable is led outside the unit. 230V AC supply and control voltage is provided for the connection of the actuator.

Note: *For units with water heater the connection of air damper actuators is designed from the external control box; therefore, connection should not be ordered additionally.*

> ⚠ For all units with a water heater, it is recommended to connect an actuator with a spring-return mechanism, i.e. in the case of loss of voltage, the actuator should close the air damper.

- **Supply air temperature sensor.** At units with an electrical heater, the sensor is factory-installed inside the unit. At units with a water heater or a cooler, the sensor is mounted outside; therefore, it is necessary to install it in the supply air duct downstream the water heater (cooler) section. The minimum distance from the air vent of the section to the sensor should be at least two diameters of the circular connection.
- **Return water temperature sensor.** It is connected to the external control box and is mounted on the return water pipe by screwing it into the designated vent. It is recommended to thermally insulate the sensor.
- **Heating/cooling valve actuator.** It is connected to the external control box. For hot/cold water mixing, it is provided connection for actuator with 24V AC supply voltage and 0...10V DC control signal.
- **Circulation pump.** It is connected to the external control box. 230V AC supply voltage is provided. The pump is started up/shut down by the circuit breaker QF1.
- **Feedback signal for heating or cooling.** It is connected to the external control box. By default, the air handling unit is designed to operate with the water heater. However, the design of the control box provides for two terminals, by interconnecting (short-circuiting) of them the heater mode is reversed to the cooler mode.

> ⚠ When the operation of the unit is switched over to the cooler mode, water freezing protection is deactivated. Therefore, when the unit operates in the cooling mode during the winter season, it is necessary to ensure that the water contained in the heater does not freeze.



1.4 b Picture

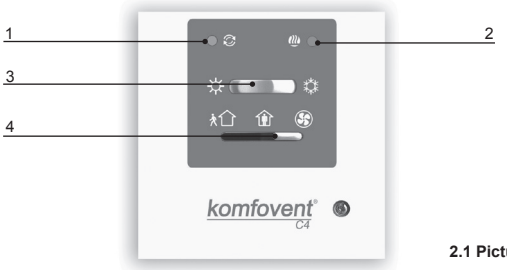
1 – external elements control box;
2 – return water temperature sensor;
3 – supply water temperature sensor.

2. C4 OPERATION MANUAL

2.1. Unit Control

The control panel (see 2.1 Picture) can be installed in any user-friendly place and is intended for remote control of air handling unit. Control panel light diodes indicate unit operation modes. Ventilation intensity, operation modes and are set by the switches.

C4 Control Panel View



2.1 Picture

1. Heat exchanger operation / failure indication diode
2. Electrical air heater operation / failure indication diode
3. “Summer / Winter“ mode setting switch
4. Ventilation intensity selection switch

2.2. Control Panel Indications

Indication Symbol	Light Indication	Description
	Shines	Heat recovery
	Blinks	Heat recovery failure
	Shines	Air heater is operating
	Blinks 3 times per second	Heating function failure
	Blinks 8 times per second	Temperature sensor failure
+	Blinks successively every second	Unit maintenance inspection must be carried out

⚠ More detailed description of failures and and their elimination is provided in chapter 2.9.

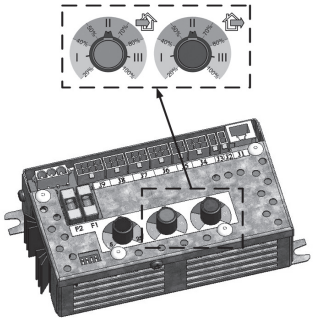
2.3. Ventilation Intensity Setting

Air handling unit has three ventilation intensity levels, which are adjusted by switch (4) on the panel:

– AWAY – HOME – TURBO

HOME ventilation intensity level for supply air , and for exhaust air fans can be adjusted according to particular ventilation system project, from 20 to 100%. Desirable ventilation level is set using potentiometers located on the wall of automatic box inside the unit.

Fans speed selection potentiometers



2.3 Picture

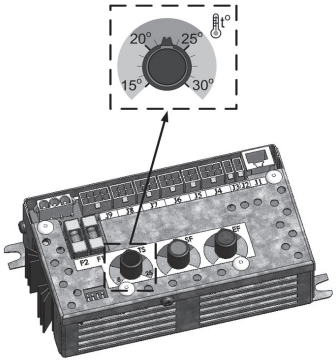
In the table below possible potentiometers configuration is presented:

Setting	Intensity, %
↑	max. 100
Factory setting	60
↓	min. 20

2.4. Temperature Setting

Desirable supply air temperature is set with screw on potentiometer located on the wall of automatic box inside the unit:

Temperature setting potentiometer



2.4 Picture

2.5. "Winter / Summer" Mode

By control panel switch (3) unit operating mode is set:

– „Summer": heater operation is blocked but allowed cooler operation.

– „Winter": cooler operation is available but allowed heater operation.

Note: *When outdoor temperature is near setpoint (15 ... 30°C), to save electric energy "Summer" operating mode should be selected.*

2.6. "OVR" function

"OVR" (Override) function is intended for remote unit control by an additional external device. After the activation of this function the current mode of operation will be ignored and the unit will operate at a set intensity.

Applications of the "OVR" function:

- **Maintenance of CO_2 quantity in room** – by adding an additional CO_2 sensor (with relay), the main user-set ventilation rate at higher CO_2 will be switched to the maximum intensity until the room is ventilated, and then again will return to the user-defined intensity.
- **Maintaining relative humidity in the room** – after contacting the external relative humidity sensor (with relay), automatically switching to maximum or different set ventilation intensity the humidity level desired by the user will be maintained.
- **Ventilation on demand** – when the motion sensor is connected to the control contacts, ventilation will be adjusted according to demand, i.e. if people are indoors, ventilation will be carried out according to the set "OVR" intensity and if there's nobody in the room - the unit will operate according to the main user intensity, for example, the minimum.
- **Ventilation with additional air extraction** – connection of additional extracting device, for example, a kitchen hood or other extraction device without a separate fan, is intended, thus the air extraction is carried out by the unit itself. After the activation of the function the supply and exhaust air fans start operating at maximum intensity.
- **Negative pressure compensation** – intended for systems where air extraction can be carried out in a separate air extraction fan. Thus, for the compensation of negative pressure in room, the "OVR" function can be activated by separate control contacts. After the activation of the function, only supply fan starts operating at maximum intensity and the exhaust air fan goes off.

Note: *To make this function work, namely to stop the exhaust air fan in the "OVR" mode, the jumper No 4 on the automation box should be ON (2.8. Picture).*

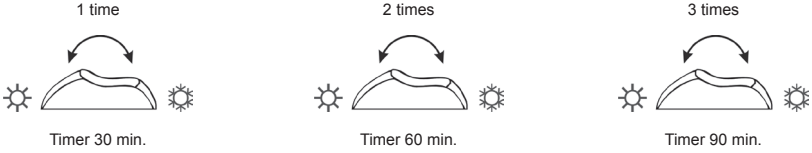
2.7. Activation of the "OVR" Function

The „OVR" function can be activated in two ways:

1. **With the external control device.** Connection is described in chapter 1.4. After connecting (short-circuiting) the FC contacts (see the wiring diagram), the unit will operate in the selected „OVR" mode (see chapter 2.6.), and after their disconnection the unit will return to the previous operating mode.
2. **With the control panel.** In this case there is no need for additional connections to external control devices, the function is activated by the control panel, and the unit will operate in the selected „OVR" mode until the unit internal timer is active.

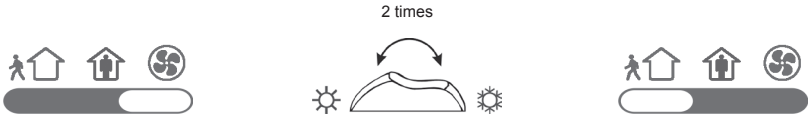
„OVR" mode activation procedure:

- Enable the maximum level with the ventilation intensity selection switch (4) (Picture 2.1.) (before enabling, the unit must operate at a minimum or at normal intensity).
- After enabling the maximum level, switch back and forth the "Summer / Winter" mode setting switch (3) in 5 seconds as many times as the „OVR" function timer has to be active:



- After the timer activation, the required level of ventilation has to be set, in which the unit will operate after the timer is shut down, i.e. when the set „OVR" mode time will expire.

Example. „OVR" mode activation for 1 hour:



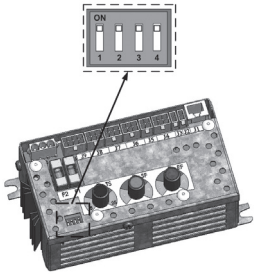
Note: *In order to disable the „OVR" mode before the timer period expires, it is necessary to carry out the above steps (1) and (3), and to omit the step (2).*

2.8. Configuration Of Automation Functions

Switches (2.8. Picture) on the automatic box can be used for the selection of heat exchanger type, heater and the "OVR" function mode. Settings take effect only after rebooting the power supply.

Switch No.	ON	OFF
1	Rotary heat exchanger	Plate heat exchanger
2	Water heater	Electric heater
3	Setting potentiometers (2.3 pic., 2.4 pic.) are active	Setting potentiometers are blocked*
4	"OVR" mode when the exhaust air fan is off	Usual "OVR" mode

Automation configuration switches



2.8 Picture

2.9. Troubleshooting

If the unit is inoperative:

- Make sure the feeding cable is plugged into an electrical outlet.
- Check all safety fuses of the automatic control block. In case of need, replace the faulty fuses with the new ones of the same electric parameters (fuses parameters are in wiring diagram).

If air flow is reduced:

- Check set ventilation intensity level (see chapter 2.3.).
- Check air filters'condition. If needed, replace with the new ones.
- Check supply/exhaust air diffusers adjustment.
- Check for clogging outside air intake grille.
- Check if system ducting is not damaged and there are no extraneous things inside.

If supplied air is too cold:

- Check temperature setting (see chapter 2.4.).
- Check if „Winter" mode is set on the panel.
- Check if there is no failure indication on the control panel (see table 2.9.).
- Check fuse F2 located on the automatic box.

⚠ When unit is operating, control panel light diodes can flash or not, but if at least one light diode blinks, it means that failure is indicated. Please refer to 2.9 table.

⚠ **Before starting any operations inside the unit, make sure that the unit is switched off and the power supply voltage is shut off.**

* - When potentiometers are blocked, all the additional settings of the AHU (temperature, ventilation intensity) can be performed only with connected C4Plus panel.

2.9 Table

Failures indicated on the control panel, possible reasons and it elimination

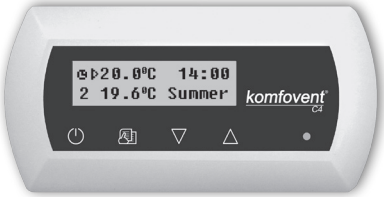
Failure indication	Unit type	Protection tripping description	Possible failure cause	Failure elimination
 Blinks 3 times per second	Unit with rotary heat exchanger	When there is no signal from the rotor's rotation sensor, if the "Winter" season is set, the unit will stop operating in 2 min. And if "Summer" season is set, unit will continue operating.	The belt is broken, fai-lure of the rotor motor or rotor sensor.	Check rotor drive and rotation sensor condition.
	Unit with plate heat exchanger	If the freezing protection of the heat exchanger is activated and is not restored the unit will stop operating.	Temperature of the air passing through plate heat exchanger, dropped lower allowable level.	Check by-pass damper condition and actuator perfor-mance. It is recommended to decrease ventila-tion level.
 Blinks 3 times per second	Unit with electric heater	Unit with electric heater has emergency protection from overheating at 70°C with auto-matic reset and at 100°C with manual reset.	Heater is disconnected due to low air flow.	When heater cools down, protec-tion restores automatically. It is recommended to increase ventila-tion intensity level.
			Electric heater overheating protection is on.	It is possible to restore emergency overheating protection with button "RESET" (located on the heater), only if before heater overheating cause has been clarified and elimi-nated.
	Unit with water heater	In the unit with water heater, when the water temperature falls below the permitted value of +10°C, the unit will stop op-erating.	Failure of the hot water preparation and supply function in the heating system.	Check circulation pump and heat-ing system condition, heating valve actuator performance.
 Blinks 8 times per second	Independ-ent of unit type	If the supply air temperature is not of the permitted values: +5°C …-+45°C, unit will stop operating with 10 min. delay. When temperature exceeds the maximum permitted limits: -30°C...+75°C, the unit stops op-erating immediately.	The supplied air is too cold or too hot.	Check temperature and season set-tings. Check the heat exchanger and heater operation.
			Supply air temperature sen-sor is not connected or bro-ken down.	It is necessary to check sensor con-nections or change the sensor.
 Blinks every second	Independ-ent of unit type	Depending on the intensity of unit operation, at a certain time a periodic inspection message ap-pears on the control panel.	---	After disconnecting the unit from power supply, it is necessary to carry out periodic inspection of the unit, i.e. to check the air filter clogging and the condition of the heat exchanger, the heater and fans.

3. C4 PLUS OPERATION MANUAL

3.1. Unit Control

Control panel (3.1 Picture) is designed for remote air handling unit control, setting and display of controller parameters. Control panel LCD display with backlight allows monitoring various parameters and text messages. Controller light signals indicate unit operation modes and failures. Air temperature, ventilation intensity, operation modes and other parameters are set by the touch sensitive buttons.

General View of the Control Panel



3.1 Picture

Touch sensitive buttons located on the panel mean:

start up and shut down of the air handling unit / return to previous menu window;

entry to parameters change menu / set parameters confirmation;

navigation in the menu / parameters value change.

3.2. Switching on the Unit

After connecting the unit to the electrical power supply, on the control panel LCD displays start-up window, this is shown in the Picture 3.3.

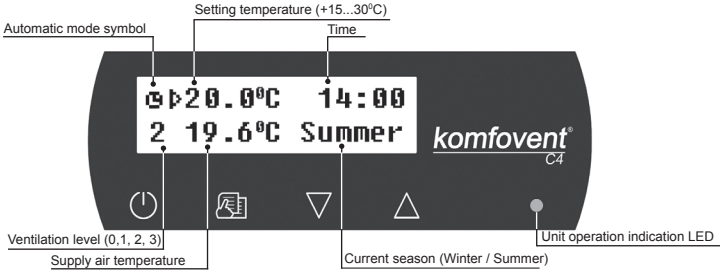
Unit is switched on (off) by touching and holding button for 4 seconds till sound confirms the action. Unit operation is indicated in the control panel by ventilation intensity and LED signals (see further).

3.3. Control Panel Indication

Data is presented to the user on the control panel LCD display by numbers and text messages, also by two colour LED signals.

Controller display start-up window is shown in the 3.3 Picture.

Control Panel Start-Up Window



3.3 Picture

Light Diode Indication:

1. No LED signal indication on the panel – **unit has been switched off.**
2. LED shines steady green and text message is shown – **unit is switched on.**
3. Automatic mode symbol is shown on the panel, while green LED shines – **unit is operating in automatic mode according to weekly schedule.**
4. LED blinks red and green and text message is shown – see 3.9 chapter.
5. LED shines steady red and text message is shown – **emergency unit shut down** (see 3.9 chapter).
6. Nothing is showing on the control panel - **unit does not have electric power supply.**

Note: *By pressing any button on the panel automatically switching on the display backlight. Backlight is off after 30 seconds when no buttons are pressed.*

3.4. Quick Ventilation Level Switchover

Three ventilation levels are projected in the unit. Each of them has its intensity (more detailed settings see in the next chapter). There is possibility to switch ventilation level quickly from start-up window (3.3 Picture).

To increase ventilation intensity: touch and hold and at the same moment increase ventilation intensity by touching △ button.

To decrease ventilation intensity: touch and hold and at same moment decrease ventilation intensity by touching ▽ button.

> ⚠ If ventilation intensity is changed using quick switchover and unit is operating according to weekly schedule, operation mode automatically is changed to manual mode.

3.5. Unit Programmable Settings

By soft touching button the parameters menu is entered. Menu window is selected by buttons ▽, △ (see further description). When menu window is selected, touch for selecting desirable parameters and select the value with ▽, △. To confirm the changes touch button.

To return to previous menu or to start-up window touch button.

Note: *If touch sensitive buttons are inactive for 1 minute, start-up window is shown.*

1. Unit operation modes setting

Two unit operation modes are possible: manual and automatic. In manual mode unit operates continuously by set ventilation intensity. In automatic mode unit works according to weekly schedule (see further weekly schedule setting).

```
Mode:
→Manual  Auto
```

Note: *If automatic operating mode is selected, there is a symbol* in the start-up window.

2. Setting ventilation level

Ventilation equipment has three levels of ventilation. Fan intensity for every of the free levels can be attributed separately for the supplied and exhausted air from 20 to 100%, in 1% steps.

```
Ventilation:   2
Supp.50% Exh.40%
```

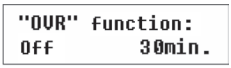
> ⚠ Intensity potentiometers on the automation box inside the air handling unit are not used, their settings have no effect for the unit control when a control panel with touch-sensitive buttons is connected.

3. Activation of the OVR function

Air handling units have the OVR function, which detailed description can be found in chapter 3.6. The OVR function can be activated in two ways:

1. By the external control device. Connection is described in chapter 1.4. After interconnecting (short-circuiting) the FC contacts (see the electrical diagram), the unit will operate in the selected OVR mode and after disconnection it will return to the previous operation mode.

2. By control panel. In this case there is no need for additional connections to external control devices, the function is activated from the panel, and the unit will operate in the chosen OVR mode until the internal timer is active (from 1 to 90 minutes):



"On" - OVR function on.
"Off" - function off.

If the OVR function is active, the start-up window of the remote panel shows the 4th ventilation level. When this function is active, the intensities of the supplied air and separately for the exhausted air fans can be adjusted in the menu window „Ventilation" from 20 to 100%.

4. Setting temperature value

Air handling unit maintains the user-defined temperature. The temperature setting is selected on the menu window:

Intensity potentiometer on the automation box inside the air handling unit is not used, its settings have no effect for the unit control when a control panel with touch-sensitive buttons is connected.

5. Setpoint sliding

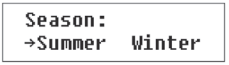
The setpoint can be shifted from -9 to +9°C from the temperature set value at specified by user time period. To set setpoint sliding select menu window:

6. Season setting

For the air handling unit operating in most economical mode, summer and winter seasons have been provided.

Summer": heater operation is blocked but allowed cooler operation.
„Winter": cooler operation is available but allowed heater operation.

To set season select menu window:



Note: *If air temperature during summer season is insufficient, air handling unit can be preset and for "Winter" season mode, its energy expenditures will be minimal.*

7. Day and time setting

For the unit proper operation in automatic mode according to preset weekly schedule the day of the week and time should be set:

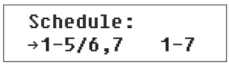
Days notation:
Mo – Monday
Tu –Tuesday
We – Wednesday
Th – Thursday
Fr – Friday
Sa – Saturday
Su – Sunday

8. Weekly schedule setting

Two ways for weekly schedule setting have been projected:

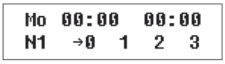
• "1-5/6,7" – simplified schedule setting option: one schedule for all work days and the other for weekend operation;

• "1-7" – weekly schedule setting option: different operation schedule for each day.



There is one operation schedule with two setting options.

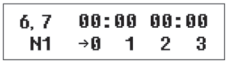
After selecting program for each day of the week "1-7" schedule setting window is introduced:



Each day of the week has 3 events: N1, N2, N3. Settings start from Monday (Mo). When the event of the day is selected, event start and end time is set and ventilation intensity level (0, 1, 2, 3) is assigned.

Before selecting work days and weekend operation mode schedule "1-5/6,7" menu window is introduced:

After event (N1, N2, N3) is selected for work days "1-5", each event start and end time and ventilation intensity is set the same way. The same way three unit operating events are set for the weekend:



Note: *Every event start and end time is set from 0:00 to 24:00 h.*

For instance:

Monday:

N1 from 00:00 to 07:00 2 ventilation level
N2 from 10:00 to 20:00 1 ventilation level
N3 from 20:00 to 24:00 3 ventilation level

9. Language setting

Language selection menu has been projected on the control panel. To set language the last menu window should be selected:

10. Menu locking

The PIN code is provided to lock entering to the parameters setting menu. If the menu is locked, only main parameters can be reviewed also the unit may be switched on or off.

To enter the PIN code, touch ▽ + △ and hold for 4 seconds till corresponding window appears:

To enter the PIN code follow these steps:

1. Touch ▽ or △ to enter the first digit.
2. Touch to go to the second digit.
3. Repeat the steps above to enter the second and the third digits.
4. After third digit is entered touch to confirm the code.
5. Touch ▽ and △ and hold for 4 seconds to save the code into controller memory.

The menu can be unlocked only with the PIN code. If the code is forgotten, contact local service team.

3.6. OVR function

OVR (Override) function is intended for remote unit control by an additional external device. After the activation of this function the current mode of operation will be ignored and the unit will operate at a set intensity.

Applications of the OVR function:

- **Maintenance of CO_2 quantity in room** – by adding an additional CO_2 sensor (with relay), the main user-set ventilation rate at higher CO_2 will be switched to the maximum intensity until the room is ventilated, and then again will return to the user-defined intensity.
- **Maintaining relative humidity in the room** – after contacting the external relative humidity sensor (with relay), automatically switching to maximum or different set ventilation intensity the humidity level desired by the user will be maintained.
- **Ventilation on demand** – when the motion sensor is connected to the control contacts, ventilation will be adjusted according to demand, i.e. if people are indoors, ventilation will be carried out according to the set OVR intensity and if there's nobody in the room - the unit will operate according to the main user intensity, for example, the minimum.
- **Ventilation with additional air extraction** – connection of additional extracting device, for example, a kitchen hood or other extraction device without a separate fan, is intended, thus the air extraction is carried out by the unit itself. After the activation of the function the supply and exhaust air fans start operating at maximum intensity.
- **Negative pressure compensation** – intended for systems where air extraction can be carried out in a separate air extraction fan. Thus, for the compensation of negative pressure in room, the OVR function can be activated by separate control contacts. After the activation of the function, only supply fan starts operating at maximum intensity and the exhaust air fan goes off.

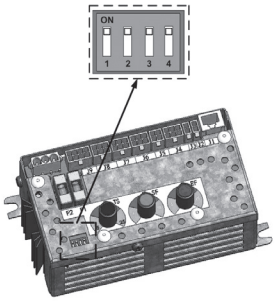
Note: *To make this function work, namely to stop the exhaust air fan in the OVR mode, the jumper No 4 on the automation box should be ON (3.7. Picture).*

3.7. Configuration of automation functions

Switches (3.7. Picture) on the automatic box can be used for the selection of heat exchanger type, heater and fan, and the OVR function mode. Settings take effect only after rebooting the power supply.

Switch No.	ON	OFF
1	Rotary heat exchanger	Plate heat exchanger
2	Water heater	Electric heater
3	Is not used	Is not used
4	OVR mode when the exhaust air fan is off	Usual OVR mode

Automation configuration switches



3.7 Picture

3.8. Troubleshooting

If the unit is inoperative:

- Make sure the feeding cable is plugged into an electrical outlet.
- Check all safety fuses of the automatic control block. In case of need, replace the faulty fuses with the new ones of the same electric parameters (fuses parameters are in wiring diagram).
- Make sure there is no failure message in the control panel. If there is a problem, you must first remove it. To remove the problem, follow the table 3.8 describing failures.
- If nothing is shown on the control panel, check the cable that connects the remote panel to the unit.

If air flow is reduced:

- Check set ventilation intensity level (see chapter 3.5.).
- Check air filters' condition. If needed, replace with the new ones.
- Check supply/exhaust air diffusers adjustment.
- Check for clogging outside air intake grille.
- Check if system ducting is not damaged and there are no extraneous things inside.

If supplied air is too cold:

- Check temperature setting (see chapter 3.5.).
- Check if „Winter" mode is set on the panel.
- Check if there is no failure indication on the control panel (see table 3.8.).
- Check fuse F2 located on the automatic box.

> ⚠ If the unit has been stopped and there is red light diode signal on the controller, and text message is shown meaning failure, failure needs to be eliminated!

> ⚠ **Before starting any operations inside the unit, make sure that the unit is switched off and the power supply voltage is shut off.**

After failure has been eliminated and power supply connected, text message appears about previous failure. If there are no more failures, unit is switched on by pressing ⏻ button; unit continues operating by preset mode. However if the failure has not been eliminated, unit either starts operating and after some time it stops again, or it does not operate and failure message is indicated.

3.8 Table

Failures indicated on the control panel, possible reasons and it elimination

Message	LED	Protection tripping description	Possible Failure Cause	Failure Elimination
Service time	Red and green blinking	Depending on the intensity of unit operation, at a certain time a periodic inspection message appears on the control panel.	-	After disconnecting the unit from power supply, it is necessary to carry out periodic inspection of the unit, i.e. to check the air filter clogging and the condition of the heat exchanger, the heater and fans.
Low supply air temperature	Red light	If the supply air temperature falls below the permitted value: +5°C, unit will stop operating with 10 min. delay.	Malfunction of the heat exchanger and/or heater.	Check temperature and season settings. Check the heat exchanger and heater operation.
Supply air overheating	Red light	If the supply air temperature is above the permitted value: +45°C, unit will stop operating with 10 min. delay.	Malfunction of the heat exchanger and/or heater.	Check temperature and season settings. Check the heat exchanger and heater operation.
Heater off	Red and green blinking	Unit with electric heater has protection from overheating at 70°C, which can be activated if the heater blow-cooling is insufficient. Unit operation is not terminated.	Heater is disconnected due to low air flow.	When heater cools down, protection restores automatically. It is recommended to increase ventilation intensity level.
Electric heater overheating	Red light	Unit with electric heater has emergency protection from overheating at 100°C, which can be activated in case of the heater failure. Unit operation is terminated.	Electric heater overheating protection is on.	It is possible to restore emergency overheating protection with button “RESET” (located on the heater), only if before heater overheating cause has been clarified and eliminated.
Return water low temperature	Red light	In the unit with water heater, when the water temperature falls below the permitted value of +10°C, the unit will stop operating.	Failure of the hot water preparation and supply function in the heating system.	Check circulation pump and heating system condition, heating valve actuator perfor-mance.
Frost possibility	Red light	In the unit with plate heat exchanger, if the freezing protection of the heat exchanger is activated and is not restored, the unit will stop operating.	Temperature of the air passing through plate heat exchanger, dropped lower allowable level.	Check by-pass damper condition and actuator performance. It is recommended to decrease ventilation level.
Rotor stopping	Red light	When there is no signal from the rotor’s rotation sensor, if the “Winter” season is set, the unit will stop operating in 2 min.	The belt is broken, failure of the rotor motor or rotor sensor.	Check rotor drive and rotation sensor condition.
Rotor stopping	Red and green blinking	When there is no signal from the rotor’s rotation sensor, if the “Summer” season is set, the warning message appears in 2 min. on the control panel. The unit operation is not terminated.	The belt is broken, failure of the rotor motor or rotor sensor.	Check rotor drive and rotation sensor condition.
B1 sensor failure	Red light	When temperature exceeds the maximum permitted limits: -30°C...+75°C, the unit stops operating immediately.	Supply air temperature sensor is not connected or broken down.	It is necessary to check sensor connections or change the sensor.

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