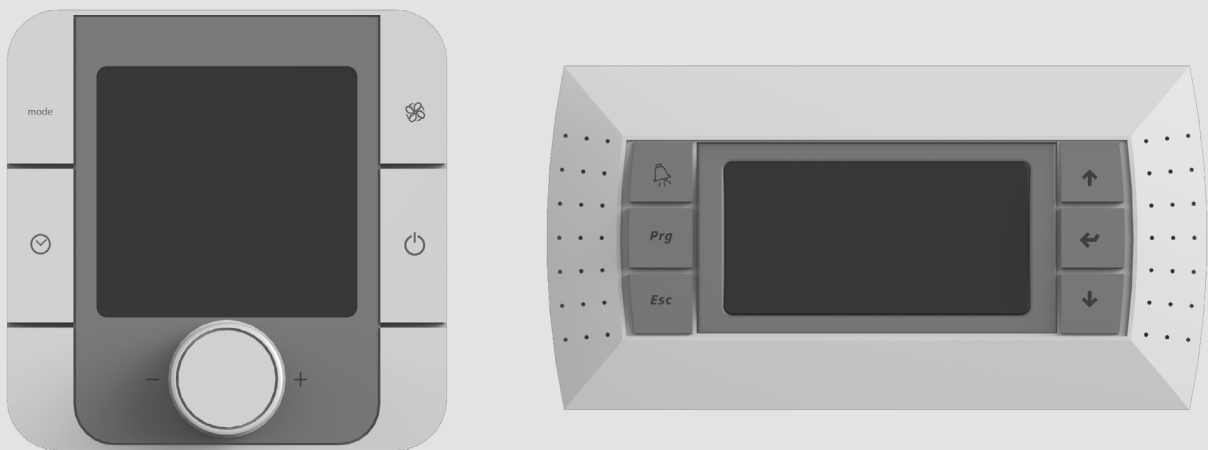


USER'S MANUAL

pGD1(A18)
th-Tune (A17)



Automatic control system for the VUTR air handling units

CONTENTS

| | |
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| Safety requirements..... | 3 |
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| Installation and set-up..... | 5 |
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This user's manual is a main operating document intended for technical, maintenance, and operating staff.

The manual contains information about the purpose, technical details, operating principle, design, and installation of the th-Tune (A17) and pGD1 (A18) unit (-s) and all of its (their) modifications.

Technical and maintenance staff must have theoretical and practical training in the field of ventilation systems and should be able to work in accordance with workplace safety rules as well as construction norms and standards applicable in the territory of the country.

The information in this user's manual is correct at the time of the document's preparation.

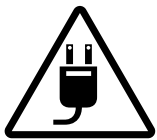
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SAFETY REQUIREMENTS

- Please read the user's manual carefully prior to installing and operating the unit.
- All user's manual requirements as well as the provisions of all the applicable local and national construction, electrical, and technical norms and standards must be observed when installing and operating the unit.
- The warnings contained in the user's manual must be considered most seriously since they contain vital personal safety information.
- Failure to follow the rules and safety precautions noted in this user's manual may result in an injury or unit damage.
- After a careful reading of the manual, keep it for the entire service life of the unit.
- While transferring the unit control, the user's manual must be turned over to the receiving operator.

UNIT MOUNTING AND OPERATION SAFETY PRECAUTIONS



- Disconnect the unit from power mains prior to any installation operations.



- Do not operate the unit outside the temperature range stated in the user's manual.
- Do not operate the unit in aggressive or explosive environments.



- Do not lay the power cable of the unit in close proximity to heating equipment.



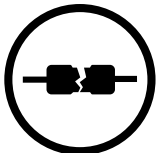
- While installing the unit follow the safety regulations specific to the use of electric tools.



- Do not change the power cable length at your own discretion.
- Do not bend the power cable.
- Avoid damaging the power cable.
- Do not put any foreign objects on the power cable.



- Unpack the unit with care.



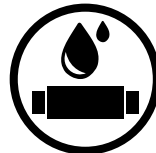
- Do not use damaged equipment or cables when connecting the unit to power mains.



- When the unit generates unusual sounds, odour or emits smoke disconnect it from power supply and contact the Seller.



- Do not touch the unit controls with wet hands.
- Do not carry out the installation and maintenance operations with wet hands.



- Do not wash the unit with water.
- Protect the electric parts of the unit against ingress of water.



- Do not allow children to operate the unit.



- Disconnect the unit from power mains prior to any technical maintenance.



**THE PRODUCT MUST BE DISPOSED SEPARATELY AT THE END OF ITS SERVICE LIFE.
DO NOT DISPOSE THE UNIT AS UNSORTED DOMESTIC WASTE.**

PURPOSE

The automatic control system is designed for controlling industrial and domestic air handling units of the VUTR series. It is rated for continuous operation.



THE UNIT SHOULD NOT BE OPERATED BY CHILDREN OR PERSONS WITH REDUCED PHYSICAL, MENTAL, OR SENSORY CAPACITIES, OR THOSE WITHOUT THE APPROPRIATE TRAINING.

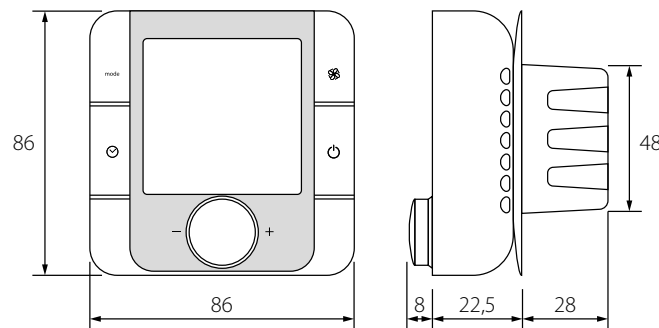
THE UNIT MUST BE INSTALLED AND CONNECTED ONLY BY PROPERLY QUALIFIED PERSONNEL AFTER THE APPROPRIATE BRIEFING.

THE CHOICE OF UNIT INSTALLATION LOCATION MUST PREVENT UNAUTHORIZED ACCESS BY UNATTENDED CHILDREN.

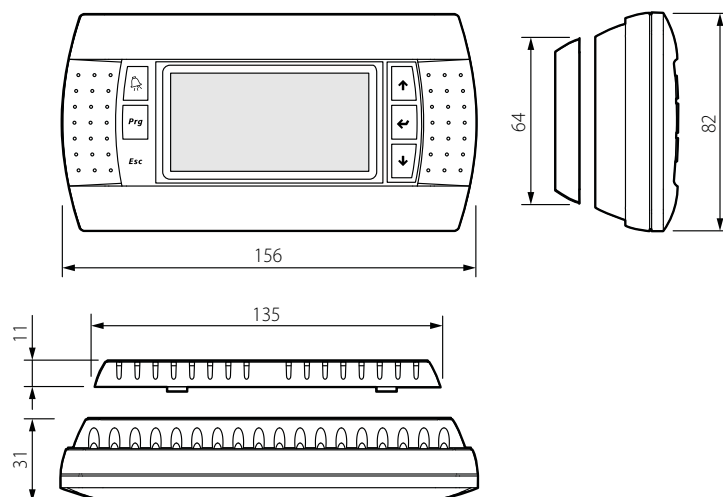
TECHNICAL DATA

| PARAMETER | VALUE | |
|----------------------------|------------------------------------|---|
| | th-Tune (A17) | pGD1 (A18) |
| Storage temperature [°C] | from -20 up to +70 | from -20 up to +70 |
| Storage humidity [%] | from 10 up to 90 (no condensation) | from 10 up to 90 (no condensation) |
| Operation temperature [°C] | from -10 up to +60 | from -20 up to +60 |
| Operation humidity [%] | from 10 up to 90 (no condensation) | from 10 up to 90 (no condensation) |
| Cable | AWG 20 or AWG 22 up to 500 m | phone cable up to 50 m twister pair AWG 22 up to 500 m |
| Ingress protection | IP20 | IP40 |

OVERALL DIMENSIONS OF THE TH-TUNE (A17) CONTROL PANEL



OVERALL DIMENSIONS OF THE PGD1 (A18) CONTROL PANEL

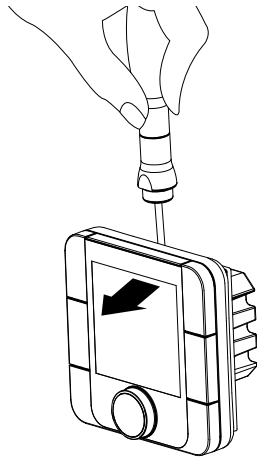


INSTALLATION AND SET-UP

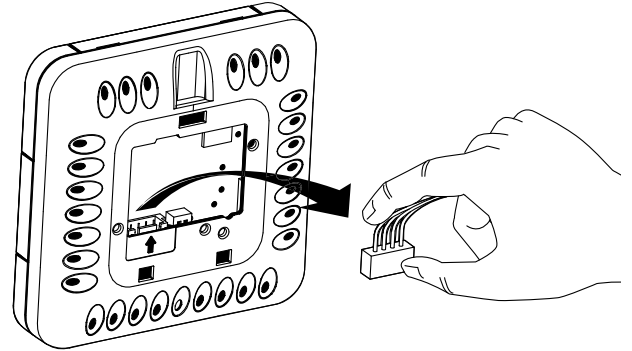
INSTALLATION OF THE TH-TUNE (A17) CONTROL PANEL

To install the rear part of the control panel, use a suitable mounting box (minimum diameter of 65 mm and minimum depth of 31 mm).

1. Use a screwdriver to pull the front and the rear sides of the control panel apart.



2. Disconnect the 4-pin socket from the front part of the control panel.

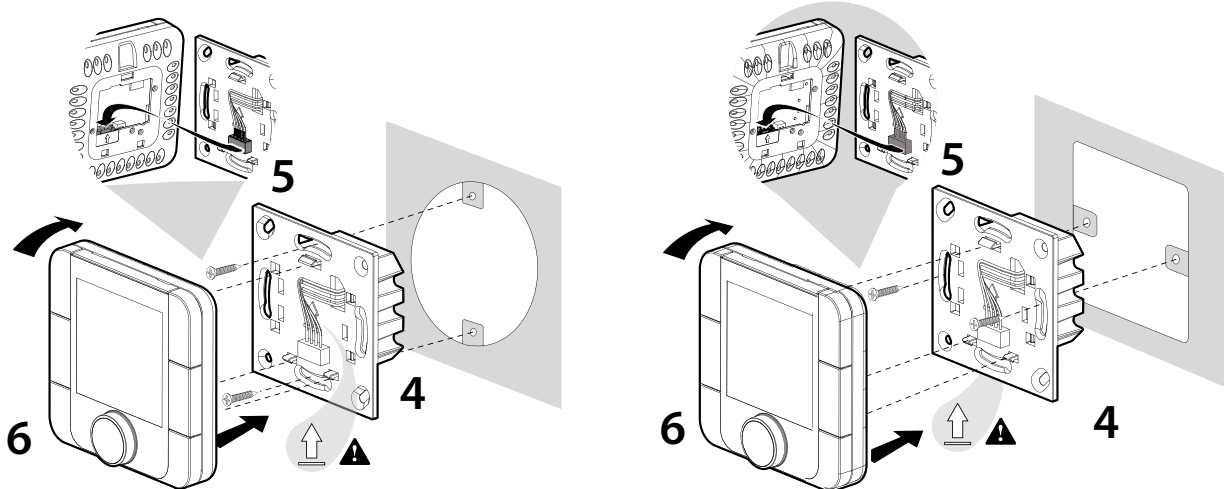


3. Complete the electrical connections as shown in the external wiring diagram.

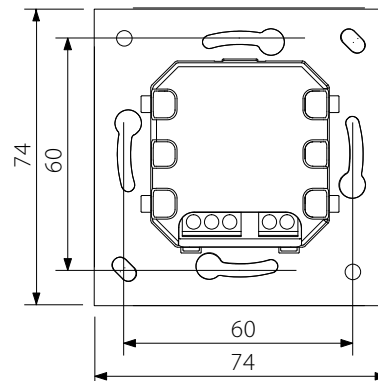
4. Secure the rear part of the control panel in the mounting box using the screws supplied.

5. Re-attach the four-pin socket.

6. Lay all the cables inside the control panel and install the control panel starting from the bottom. Make sure that none of the internal wires prevent closing with a click.



Overall dimensions of the control panel rear part [mm]

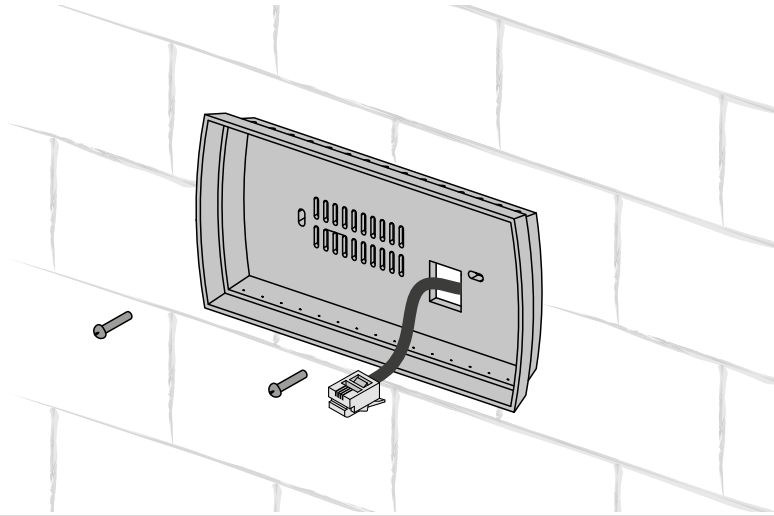


INSTALLATION OF THE PGD1 (A18) CONTROL PANEL

Connect the pGD1 control panel to the controller connector using the 6P6C (PLUG-6P6C-P-C2) phone plug. The maximum length of the phone cable is 50 m.

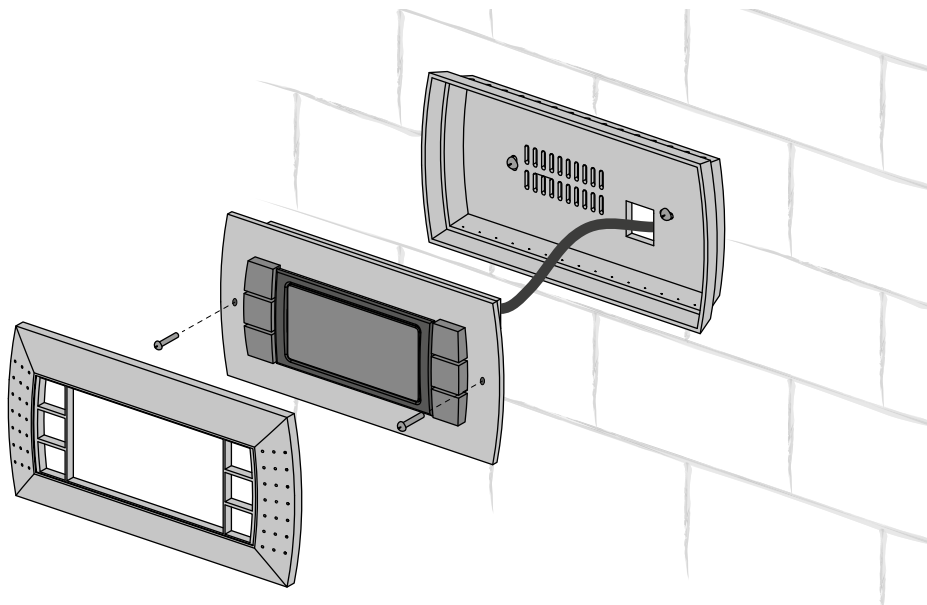
To mount the control panel on a wall, route the phone cable to the selected location.

1. Secure the rear part of the casing in the standard box by means of the round-head screws supplied.



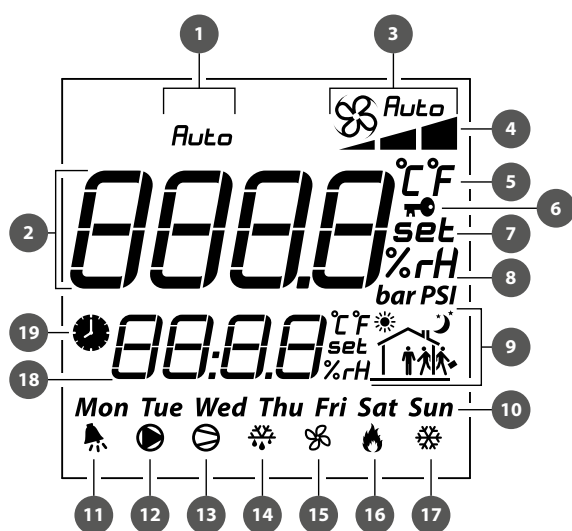
2. Connect the phone cable to the front part of the control panel.

Fix the front part of the control panel to the rear part of the casing with the countersunk screws supplied as shown in the figure below and then install the front bezel by pushing it until it clicks in position.



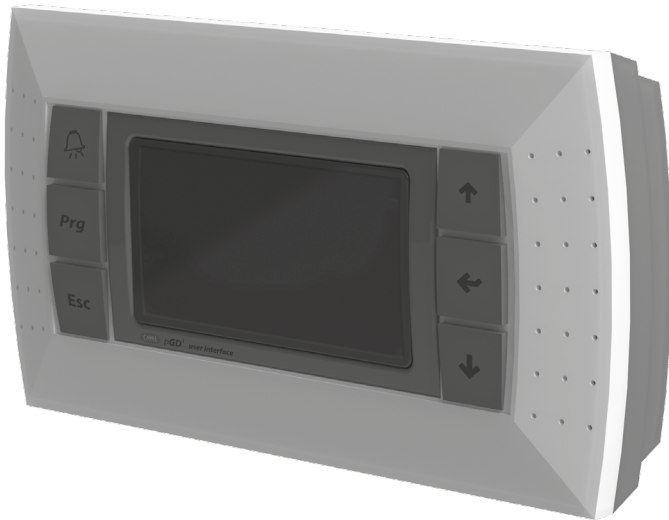

TH-TUNE CONTROL PANEL

| Button | Functions |
|--------|--|
| mode | Operation mode selection: set the operation mode according to the procedure. |
| | Fan speed selection: set the desired speed level (low, high or medium). While the Automatic Speed Reduction mode is enabled the fan speed is set automatically to maintain the supply air temperature higher than the minimum value. When the Auto Speed mode is activated, the fans operate at speed 3 to maintain set air quality parameters on the humidity sensor and/or outdoor air quality sensor 0-10 V and/or the relay sensor. The Automatic Speed Reduction mode is a priority. |
| | Time range on/off: short pressing. Activation is confirmed by a pictogram Access to the clock/time range setup menu: press and hold for 3 seconds. Use the rotary knob to choose the necessary option: setting the current date/time: starts blinking. Turn the knob to make the desired setting and press to confirm. TIMEBAND: setting the time range. Press the knob to set the start time and the corresponding temperature setpoint for each time range individually (you may create up to six time ranges). The pictogram shows the current time of a day status (i.e. Day/Nigh) and the presence or absence of inhabitants in the serviced spaces. Press ESC to exit and return to the standard display mode. After 10 seconds the th-Tune returns to the main menu automatically. |
| | Unit switching on/off. In some menus a short pressing has the same function as ESC. |
| | Enter the desired value and press to confirm. Press to see temperature and humidity values. |


Display symbols:

| |
|--|
| 1. Automatic temperature control mode. |
| 2. Main field. |
| 3. Fan operation mode: Manual/Auto. |
| 4. Fan speed indicator. |
| 5. Temperature measurement unit. |
| 6. Lock function. |
| 7. Setpoint value. |
| 8. Humidity measurement unit. |
| 9. Current time range. |
| 10. Day of the week. |
| 11. Alarm signal. |
| 12. Not applied. |
| 13. CCU operation enable signal. |
| 14. Not applied. |
| 15. Fan operation signal. |
| 16. Operation signal of the electric heating elements. |
| 17. Not applied. |
| 18. Auxiliary field. |
| 19. Unit scheduled operation enabled. |

Upon elapsing of the time to filter replacement the display shows the alarm symbol and **F I L T** in the auxiliary field.



PGD1 CONTROL PANEL

Control with a pGD1 control panel is identical to unit control with a controller.

The main page of the control panel menu displays the following information:

- date and current time
- indoor temperature (use the «Up» button and the «Down» button to see readings of the following sensors: outdoor and supply air temperature, temperature and humidity in an exhaust air duct)
- unit operation mode
- set-point temperature
- selected speed
- fan speed mode
- scheduled operation status (on/off)
- The main page enables access to the user or engineering menu containing extended information specific to the unit operation and detailed parameters for adjustment.

PLAN NETWORK CONFIGURATION WHILE USING AN EXTERNAL CONTROL PANEL (PGD1)

To enable interaction with the control panel, boot up the controller in the pLan mode and assign the following pLan addresses to the controller and the control panel:

- Controller – 1
- Control panel (pGD1) – 30, 31 or 32 (factory default value)

SETTING PLAN ADDRESS FOR A CONTROL PANEL (PGD1)

1. Connect the control panel to the controller and power up the controller.
2. Ignore any information which might show on the display screen. Simultaneously press the «Up», «Down» and «Enter» buttons and hold them for 3-5 seconds.

Once that time has elapsed, the message «Display address setting...32» appears on the display screen.

3. Move the cursor to the address setting field using the «Enter» button.

Use the «Up» and «Down» buttons to set the desired address value and press «Enter».

SETTING CONTROLLER PLAN ADDRESS VIA THE BUILT-IN CONTROL PANEL

1. Power off the controller.
2. Power up the controller and immediately press the «Up» and «Alarm» buttons simultaneously. Hold the buttons pressed until the controller page appears on the screen (wait for about 15 seconds).
3. Use the «Up» and «Down» buttons to set the device address to 1.

| |
|---|
| pLan address: 0 UP: increase DOWN: decrease ENTER: save & exit |
|---|

4. Press «Enter» button within 10 seconds to confirm. Failure to press the button within 10 seconds will cause the controller to close the address setting page automatically while keeping the original address.
5. Upon confirmation the controller will restart with a new pLan address automatically.

SETTING CONTROLLER PLAN ADDRESS VIA THE PGD1 CONTROL PANEL

To set the controller address, use the pGD1 panel to set the pLan control panel (dGD1) address to 0.

To do this, follow the steps described in the «SETTING PLAN ADDRESS FOR A CONTROL PANEL (pGD1)» paragraph above.

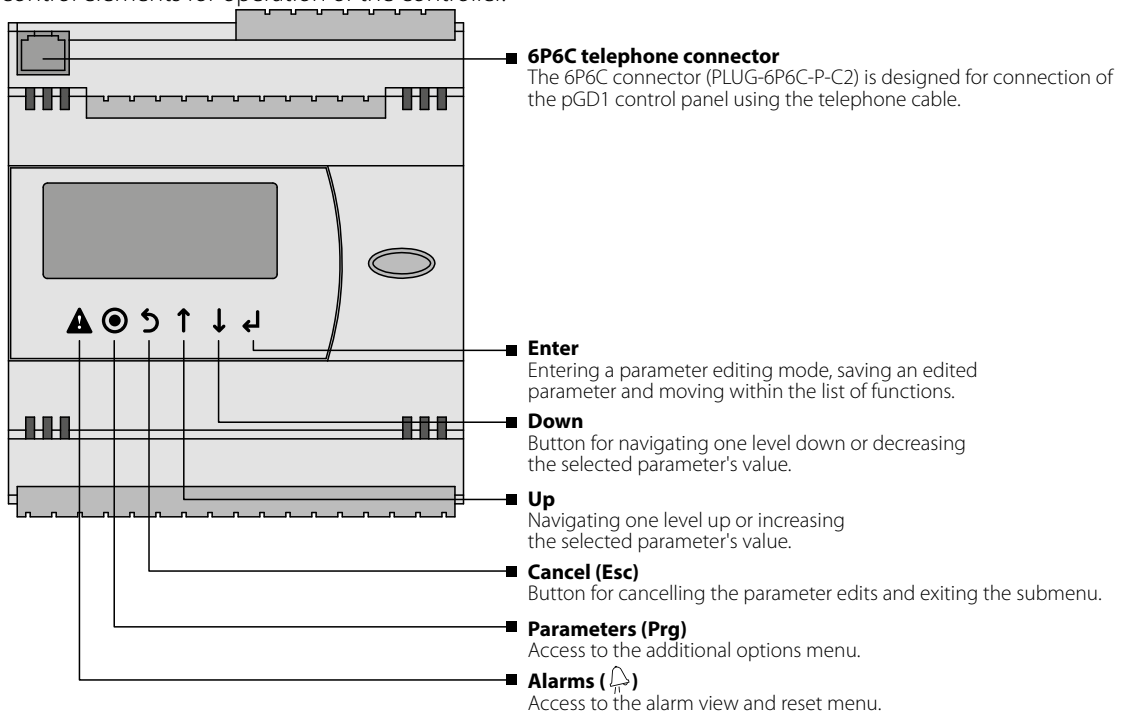
Upon setting the control panel address to zero by using the respective buttons on the external control panel follow the steps described in the «SETTING CONTROLLER PLAN ADDRESS VIA THE BUILT-IN CONTROL PANEL» paragraph.

After setting the controller address set the pLan address of the control panel (pGD1) to 30, 31 or 32.

CONTROLLER FUNCTIONS AND MENU

The controller has the following controls and indicators:

- Backlit LCD display. The display screen shows the current parameters of the system operation, temperature values, pre-set parameters and alarms.
- Buttons: control elements for operation of the controller.



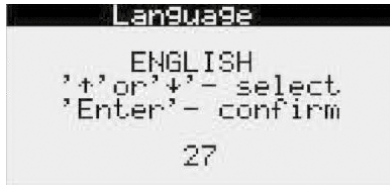
**THE SERVICE SETTINGS ARE PROGRAMMED AT THE FACTORY.
THESE SETTINGS MAY BE CHANGED ONLY BY QUALIFIED SPECIALISTS
UPON ENTERING THE SERVICE PASSWORD.
CHANGING OTHER PARAMETERS DOES NOT REQUIRE A SERVICE PASS-
WORD.**



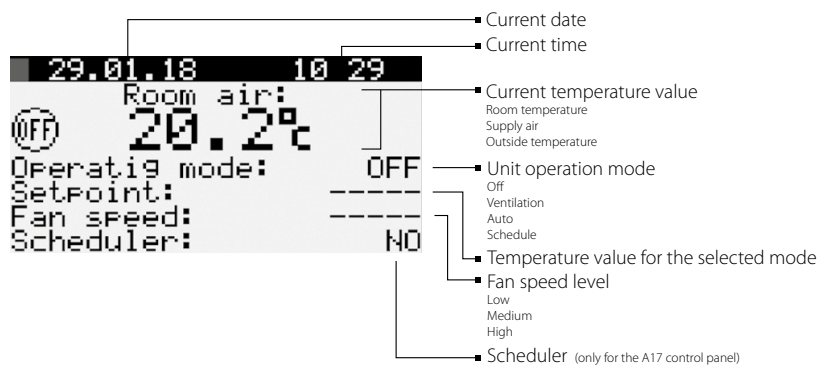
**DEPENDING ON THE UNIT MODEL, SOME MENU ITEMS
CAN BE UNAVAILABLE**

UNIT START

1. Upon starting the unit select the controller interface language by using **↑** and **↓**, and then press **↵**.
2. Once the interface language has been selected, the controller firmware will load.



MAIN MENU



When connecting the th-Tune control panel, the additional menu item «Scheduler» will be displayed in the controller main menu.

To modify the unit operation parameters, move the cursor to the required line using the **↵** button. Then use **↑** and **↓** to set the desired value and then press **↵** to confirm. To exit the parameter change mode without saving the changes, press **↻**.

VIEWING SENSOR READINGS

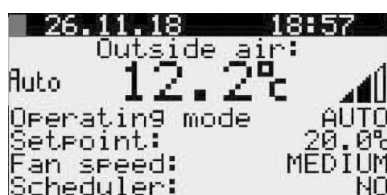
To view the readings from the temperature sensors installed in the unit, move the cursor to the upper left corner by means of the **↵** button and then use **↑** and **↓** to select the necessary sensor for viewing.

1. Room temperature. Readings are taken from the temperature sensor integrated into the control panel or the exhaust duct temperature sensor.





2. Supply air temperature. Readings are taken from the temperature sensor integrated into the supply duct downstream of the heat exchanger and the electric heater.



3. Outside air temperature. Readings are taken from the temperature sensor integrated into the supply duct upstream of the heat exchanger.



UNIT OPERATION MODE SELECTION

The unit has 4 operation modes. To select the desired mode, place the cursor on the «Mode» word using the  button. Then use  and  to set the desired value and then press  to confirm.

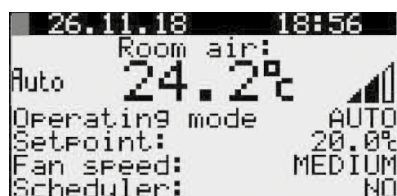
1. **OFF** – the fans and the heat exchanger are disabled. Temperature and speed settings are not available.



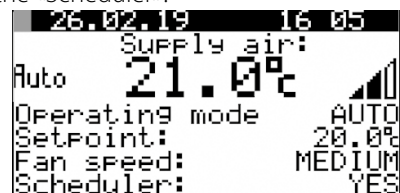
2. **FAN** – the fans run at the pre-selected speed. The heat exchanger and the electric heater are disabled. The temperature settings are not available. This mode can be enabled only from the pGD1 control panel.



3. **AUTO MODE** — the fans, the heat exchanger and the electric heater are enabled. The user may change the temperature and speed settings.



4. **SCHEDULER** — the fans, the heat exchanger and the electric heater are enabled. Temperature and speed settings are available in the «Scheduler».



TEMPERATURE SETTING

To select the set temperature value, place the cursor on «**SETPOINT**» using the  button. Then use  and  to set the desired temperature value and then press  to confirm. Temperature setting range: from +15 °C up to +30 °C.



FAN SPEED SETTING

To select the desired fan speed, place the cursor on «**FAN SPEED**» using the  button. Then use  and  to set the desired fan speed value and press  to confirm.

Three fan speed stages are available: low, medium, high. The fan rotation speed corresponding to each speed stage is set as a percentage of the maximum capacity of each fan via the unit parameter setup menu.





UNIT PARAMETERS

To enter the user parameter menu, press the  button. Use  and  to select the desired menu item and press  to enter.

```
Main menu(service) 1/6
1.System info
2.Set time & scheduler
3.Parameters
```

1. SYSTEM INFORMATION

To view the system information, enter the user parameter menu and select «**SYSTEM INFO**».

The «**SYSTEM INFO**» menu consists of three pages. To navigate between the pages, use the  and  buttons.

```
System info 1/3
Supply fan speed: 070%
Extract fan speed: 070%
Heating: 000%
Heat exchanger: OFF
Preheating: OFF
Compressor: OFF
```

PAGE 1/3 CONTAINS THE FOLLOWING PARAMETERS:

- Current supply fan speed [%]
- Current extract fan speed [%]
- Current state of the heat exchanger:
On — heat exchanger enabled
Off — heat exchanger disabled
- Current heating level of electric heating elements [%]
- Current status of the cooler enable signal:
On — cooler operation allowed
Off — cooler operation denied

The electric heater is not included in a standard delivery but is available as an option.

```
System info 1/3
Supply fan speed: 070%
Extract fan speed: 070%
Heating: 000%
Heat exchanger: OFF
Preheating: OFF
Compressor: OFF
```

PAGE 2/3 CONTAINS THE FOLLOWING PARAMETERS:

- Outside air temperature [°C]
- Supply air temperature [°C]
- Exhaust duct temperature [°C]. When selecting «Main sensor: Exh. Air» in the «Parameter» field.
- Room temperature [°C]. When selecting «Main sensor: in th-Tune» in the «Parameter» field.
- Humidity in the exhaust air duct.
- The level of air parameter in premises [%] when the outdoor air parameter sensor is connected.
- (When connecting the outdoor humidity sensor 0-10 V, the readings will display the humidity level [%] at the installation location of the sensor).

```
System info 2/3
Outside air tem: 00.8%
Supply air temp: 03.6%
Exhaust air tem: 14.6%
Exhaust humidit: 72 %
Indoor sensor : 25 %
```

PAGE 3/3 CONTAINS THE CONTROLLER FIRMWARE INFORMATION.

```
System info 3/3
Software version:
CRVNTmAHBT v2.2.04B
```

2. TIME AND SCHEDULED OPERATION

To set the clock and operation schedule, enter the user parameters menu and select «**SET TIME & SCHEDULER**». **PAGE 1/4** enables setting the unit operation schedule.

The «**SET TIME & SCHEDULER**» menu consists of four pages. To navigate between the pages, use the **↑** and **↓** buttons.

WARNING! With the th-Tune control panel connected the scheduled operation is set via the control panel!

```

Main menu(service) 2/6
1.System info
2.Set time & scheduler
3.Parameters
    
```

```

Scheduler 1/4
Day: MONDAY
Mode Setpoint
1:07:30 AUTO SET1
2:10:00 AUTO SET2
3:15:00 AUTO SET3
4:22:00 OFF ----
Copy to: ALL NO
    
```

Press **←** to select the desired parameter and then set its value using **↑** and **↓**.

SCHEDULE SETUP (ONLY FOR THE PGD1 CONTROL PANEL)

WHEN USING TH-TUNE, THE SCHEDULE IS SET UP ACCORDING TO THE TH-TUNE CONTROL PANEL DESCRIPTION.

1. DAY SELECTION

Use **←** to select the «Day» parameter. Then use **↑** and **↓** to select days of the week for setting the schedule.

```

Scheduler 1/4
Day: MONDAY
Mode Setpoint
1:---:--- ----
2:---:--- ----
3:---:--- ----
4:---:--- ----
Copy to: MONDAY NO
    
```

2. SETTING THE SCHEDULE RECORDING START TIME

Press **←** to start setting the first entry. Then use **↑** and **↓** to adjust the hour for the start of operation according to the first entry.

Thereafter, press **←** to adjust the minutes and use **↑** and **↓** to set the minute value.

```

Scheduler 1/4
Day: MONDAY
Mode Setpoint
1:07:30 ----
2:---:--- ----
3:---:--- ----
4:---:--- ----
Copy to: MONDAY NO
    
```

3. OPERATION MODE SETUP

After setting the time press the **←** button to set the unit operation mode. Use **↑** and **↓** to select one of the following modes:

- Off
- Ventilation
- Auto
- Scheduler

```

Scheduler 1/4
Day: MONDAY
Mode Setpoint
1:07:30 AUTO ----
2:---:--- ----
3:---:--- ----
4:---:--- ----
Copy to: MONDAY NO
    
```

4. SETPOINT SELECTION

After setting the operation mode press **←** to adjust the setpoint. Use **↑** and **↓** to select one of the preset setpoints. Open the «**SET TIME & SCHEDULER**» menu on page 3/3 to define the setpoints on page 4/4.

```

Scheduler 1/4
Day: MONDAY
Mode Setpoint
1:07:30 AUTO SET2
2:---:--- ----
3:---:--- ----
4:---:--- ----
Copy to: MONDAY NO
    
```

5. ADJUSTING OTHER ENTRIES

Other entries are adjusted similarly.

```

Scheduler 1/4
Day: MONDAY
Mode Setpoint
1:07:30 AUTO SET1
2:10:00 AUTO SET2
3:15:00 AUTO SET3
4:22:00 OFF ----
Copy to: ALL NO
    
```

6. COPYING SCHEDULE ENTRIES TO OTHER DAYS

After programming all the necessary entries they can be copied to any other day of the week as follows:

1. Use **←** to place the cursor on «Copy to».
2. Use **↑** and **↓** to select a day of the week or all days.
3. Press **←** and select «Yes» using **↑** and **↓**.
4. To confirm the copying operation, press the **←** button.

```

Scheduler 1/4
Day: MONDAY
Mode Setpoint
1:07:30 AUTO SET1
2:10:00 AUTO SET2
3:15:00 AUTO SET3
4:22:00 OFF ----
Copy to: ALL NO
    
```

DEFINING EXCEPTION PERIODS

PAGE 2/4

While in the Scheduled operation mode you may need to create a different scheduled operation period between the two set entries.

This is done by setting exception periods.

| Scheduler 2/4 | | | |
|---------------|-------|------|-------|
| Start | Stop | Mode | Setp. |
| 04.05 | 07.10 | FANS | SET1 |
| --- | --- | --- | --- |
| --- | --- | --- | --- |

DEFINING EXCEPTION PERIODS

To select a parameter, press .

Then use and to set the desired parameter value.

| Scheduler 2/4 | | | |
|---------------|-------|------|-------|
| Start | Stop | Mode | Setp. |
| 08.10 | 09.10 | OFF | SET3 |
| --- | --- | --- | --- |
| --- | --- | --- | --- |

SETTING UP SPECIAL DAYS

PAGE 3/4

While in the Scheduled operation mode you may need to set up specific settings for a whole day. This is done by setting up special days.

| Scheduler 3/4 | | | |
|---------------|------|-------|-----|
| Spec.days | Mode | Setp. | |
| D1:--- | --- | --- | --- |
| D2:--- | --- | --- | --- |
| D3:--- | --- | --- | --- |
| D4:--- | --- | --- | --- |
| D5:--- | --- | --- | --- |
| D6:--- | --- | --- | --- |

1. SETTING UP SPECIAL DAY DATE

Select the «DATE» parameter by pressing the button and then use the and buttons to select the day in the month to designate a special day.

| Scheduler 3/4 | | | |
|---------------|------|-------|-----|
| Spec.days | Mode | Setp. | |
| D1:10.--- | --- | --- | --- |
| D2:--- | --- | --- | --- |
| D3:--- | --- | --- | --- |
| D4:--- | --- | --- | --- |
| D5:--- | --- | --- | --- |
| D6:--- | --- | --- | --- |

2. SETTING UP SPECIAL DAY MONTH

Press the button to select the «Month» parameter and then use and to select the month for assigning a special day to.

| Scheduler 3/4 | | | |
|---------------|------|-------|-----|
| Spec.days | Mode | Setp. | |
| D1:10.04 | --- | --- | --- |
| D2:--- | --- | --- | --- |
| D3:--- | --- | --- | --- |
| D4:--- | --- | --- | --- |
| D5:--- | --- | --- | --- |
| D6:--- | --- | --- | --- |

3. SETTING UP SPECIAL DAY MODE

Select the «Mode» parameter by pressing . Then use and to select an operation mode for a special day.

| Scheduler 3/4 | | | |
|---------------|------|-------|-----|
| Spec.days | Mode | Setp. | |
| D1:10.04 | AUTO | --- | --- |
| D2:--- | --- | --- | --- |
| D3:--- | --- | --- | --- |
| D4:--- | --- | --- | --- |
| D5:--- | --- | --- | --- |
| D6:--- | --- | --- | --- |

4. SELECTING SPECIAL DAY SETPOINT

Press to select the «Set.» parameter. Then use and to select a setpoint for a special day.

Once done with the special day setup press to save all settings.

After pressing the cursor will move to the first step of setting up the next special day.

| Scheduler 3/4 | | | |
|---------------|------|-------|-----|
| Spec.days | Mode | Setp. | |
| D1:10.04 | AUTO | SET1 | --- |
| D2:--- | --- | --- | --- |
| D3:--- | --- | --- | --- |
| D4:--- | --- | --- | --- |
| D5:--- | --- | --- | --- |
| D6:--- | --- | --- | --- |

5. SETTING UP OTHER SPECIAL DAYS

Other special days are set up similarly.

| Scheduler 3/4 | | | |
|---------------|------|-------|-----|
| Spec.days | Mode | Setp. | |
| D1:10.04 | AUTO | SET1 | --- |
| D2:03.05 | AUTO | SET2 | --- |
| D3:06.02 | AUTO | SET3 | --- |
| D4:07.06 | AUTO | SET1 | --- |
| D5:02.01 | AUTO | SET1 | --- |
| D6:01.02 | AUTO | SET3 | --- |



SETTING UP SETPOINTS

PAGE 4/4

The setpoints for schedule entries are programmed on page 4/4.

SETTING UP SETPOINTS

Press  to select a parameter.



Then use  and  to set the desired parameter value. You may set up to three entries. Set the fan speed and temperature for each setpoint.

| Scheduler | | 4/4 |
|-----------|-----------|-------------|
| Setpoints | | |
| # | Fan speed | Temp. Setp. |
| 1 | LOW | 20.0% |
| 2 | MEDIUM | 22.0% |
| 3 | HIGH | 23.0% |

UNIT PARAMETER SETUP




| Main menu(user) | 3/3 |
|-------------------------|-----|
| 1. System info | |
| 2. Set time & scheduler | |
| 3. Parameters | |

To set unit parameters, enter the user parameters menu and select «**PARAMETERS**».

The «**PARAMETERS**» menu consists of four pages. To navigate between the pages, use the  and  buttons.

FAN SPEED SETUP

| Parameters | 1/4 |
|---------------------------|-----|
| Sensing: Exh-t air temp | |
| F1. Exh. fan speed1: 040% | |
| F2. Sup. fan speed1: 040% | |
| F3. Exh. fan speed2: 070% | |
| F4. Sup. fan speed2: 070% | |
| F5. Exh. fan speed3: 100% | |
| F6. Sup. fan speed3: 100% | |

Use  to select supply or exhaust fan speed as necessary and then press  and  to set the speed value as a percentage of the maximum speed.

After that press  to save the settings.




The «**SENSING**» parameter allows changing the temperature measuring location for determining the value and for further processing in the program.

If the unit serves a number of spaces, the parameter value should be set to «**EXHAUST AIR**».

When selecting the parameter «**IN THE TH-TUNE**» the control panel must be installed in spaces where the air is supplied by the unit.

SETTING UP TEMPERATURE SETPOINTS

| Parameters |
|--|
| T1. Sup. fan speed decrease temp. setpoint: 15.0% |
| T4. Supply air temp. diff. to return to set speed: 10.0% |

Press  to select a temperature setpoint. Then use  and  to define the temperature setpoint value.

After that press  to save the settings.

T1 is the setpoint for the supply air temperature at which the unit will switch to a lower speed in case of failure to attain the set temperature conditions.

T4 is the temperature increase relative to **T1** for switching to the pre-programmed speed.

TEMPERATURE REGULATOR OPERATION SETUP

| Temperature controller |
|------------------------------------|
| G2(winter).. 0 |
| G3(summer).. 1 |
| Temperature control: |
| 0: supply air temp(SAT) control. |
| 1: RAT control with SAT limitation |

For «**WINTER**» and «**SUMMER**» modes it is possible to select the type of the temperature regulator.

If the temperature regulator type value is «0», the temperature is controlled by supply air temperature.

If the temperature regulator type value is «1», the temperature is controlled by room temperature.

SENSOR OPERATION SETUP

```

Parameters 4/6
CF7.Disable duct
humidity sensor: N
CF8.Disable sensor
0-10V room: N
CF9.Input type digital
humidity sensor:DIRECT
    
```

SENSOR OPERATION SETUP

```

Parameters 5/6
F7.Setpoint humidity
exhaust for fan
control: 60 %
F8.Setpoint parameter
sensor indoor
for fan control: 60 %
    
```

HOOR METER OPERATION

```

Parameters 6/6
Reset of operating
hours counter: No
Max.operating time
to filter replacement:
03000hours
    
```

In the event of alarm, the controller display shows the pictogram.

```

28.02.19 14:35
Room air: 28.2°C
Operati9 mode: AUTO
Setpoint: 20.0°C
Fan speed: MEDIUM
Scheduler: NO
    
```

The controller resets the alarm automatically on detecting that its cause has been eliminated.

```

Active alarms
No active alarms
    
```

You may enable/disable the humidity sensor in the exhaust air duct via software in the **CF7** parameter.

CF8 - enable/disable outdoor sensor 0-10V:

CF9 - change the input type of the outdoor relay humidity sensor.

(WARNING! When a kitchen hood is connected, you must select the «DIRECT» sensor type).

F7— setpoint for controlling humidity based on the exhaust duct sensor readings.

F8— setpoint for controlling fan operation based on the outdoor sensor readings (0-10V).

When the filter replacement period expires (3 000 hours by default), the system will generate a filter replacement alert.

To reset the filter replacement alerts once the filters have been replaced, press the button to make the following menu selection:

1. To reset the timer, select «**YES**» in the «**RESET OF OPERATING HOURS COUNTER**» parameter.

2. To change the filter replacement interval, select the desired time and press .

ALARMS



To respond to an alarm, press the button to enter the active alarms menu.

```

Active alarms
E28
Electric heater
overheat protection.
    
```

The active alarms can be reset manually. To reset an alarm manually, press in the active alarms menu and enter the alarm control menu.

```

Alarm management
Active alarms:04
Press key:
'←' to view active
alarms list
'⊙' to view history
'▲' to reset alarms
    
```

The alarm management menu enables the following actions:

- viewing the current alarm list
- viewing the alarm history
- reset alarms

FILTER REPLACEMENT.

```

Active alarms
E18
Max.operating time
is reached.
Filter replacement
is required.
  
```

When filter replacement is required, the system will generate a filter replacement alert.

When this message appears, maintain or replace filters and reset the hour meter in the controller menu (p. 22).

ALARM CODES

| ALARM CODE | DESCRIPTION |
|------------|--|
| E01 | Fire alarm |
| E02 | Intake air sensor failure |
| E04 | Supply air sensor failure |
| E07 | Exhaust air sensor failure |
| E08 | Fan failure |
| E13 | Analogue input in manual mode |
| E14 | Analogue output in manual mode |
| E15 | Digital input in manual mode |
| E16 | Digital output in manual mode |
| E17 | Low supply air temperature |
| E18 | Filter replacement required |
| E28 | Electric heater overheating protection |

