OPTIMAL CLIMATE CONTROL OPTICLIMATE CONTROL PRO3 AND PRO4 SPLIT (INVERTER) SERIES

Installation and User Guide





PLEASE READ THE FOLLOWING INFORMATION CAREFULLY BEFORE USING THE UNIT: High Temperature Safeguard on page 7 Do not bend the cooling coils! page 9 Delete alarm history on page 12 Dehumidify without cooling pro4 on page 12

Installation

Fan installation (front / side) If the unit is placed in a narrow room or in the ridge of a gable roof, the fan outlet side can be installed at the short side of the unit.

This can be done simply by reversing the dark panels. The fan panel is moved around to the short side of the unit. Loosening the corner bracket will eliminate the need for disconnecting cable connections. It is important, however, to release the outlet air to the fan.



Installation

To guarantee proper air suction, leave at least 15cm of space between the wall and the backside of the unit, where the carbon & dust filters and air inlet are located. At least 15cm of space should also be left between the topside of the unit and the ceiling. Larger spaces are preferred. The unit must stand free from the wall to avoid contact noises.





side (slope) to ensure that the condensate drains properly. In practice, the 1 cm elevations at all corners – except the corner of the condensate drains – are exactly right for a correct fall. Using a spirit level is recommended. The unit should be mounted in such a way that the side of the condensation drain is at least 1 cm lower than the other

To avoid contact noises, the OptiClimate is delivered with rubber shock absorbers as standard issue, that are suitable for suspended installation. If the OptiClimate is going to be placed on a solid base, the rubber shock absorbers supplied with the connection set need to be used.

the supports will ensure that the unit has automatic fall to the condensation drain. Special insulating springs can also be supplied for areas that have to be extra quiet. Placing the insulating springs on



Installation of rubbers

Installation of insulating springs

A thread end, a large washer and a nut must be fitted. (not supplied) The rubber feet with which the OptiClimate is placed on the pallet are use to suspend the unit by means of thread ends.

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ELECTRICAL CONNECTION

ELECTRICAL CONNECTION

Electrical connections



First, the panel at the left side near the manometer should be removed to make the various electrical connections.

can be led through the black feed-through rubber at the side of the unit. cables can be led to the outside through the opening at the bottom of the panel. The power cable for the power supply A five-core cable, automatic moisture meter, remote control and temperature sensor are supplied with the unit. Their



Alarm port

contact can be connected to a GSM detector. The contact can be set to NO (contact open) or NC (contact closed) using the Settings menu. This means that the contact will be opened or closed in case of detection. See the manual of the GSM detector or alarm for this. The printed circuit-board has an alarm port, which is activated (makes contact) in case of a malfunction (error). This

Automatic moisture meter with light cell

through the opening in the panel. The automatic moisture meter should be hung in the room and may NOT be covered. The light cell in the automatic moisture meter automatically switches the OptiClimate from day to night mode. The automatic moisture meter with built-in light cell supplied with the unit is already connected. The cable should be led

Room temperature sensor

The room temperature sensor should be suspended in the space to be cooled. The sensor should be protected against heat radiation but may not be put in the shade. A protective cover over the sensor is sufficient.

The remote control

The remote control contained in the compartment can be hung in the room but can also be hung elsewhere. This way the OptiClimate can also be controlled from outside the room. The four-core cable is already connected and should be led to the outside through the opening in the panel.

Five-core cable

A five-core cable is included to power the outdoor unit, and to connect the temperature sensor in the outdoor unit to the indoor unit. The five-core cable is connected to the terminal strip in the indoor unit and the white junction box on the outdoor unit or, with the larger units, on the power strip behind the terminal cover. The five-core cable should be ted into the panel through the opening, and be connected to the indoor unit as follows.

| Yellow/green | Brown | Blue |
|--------------|-------|------|
| 0 | 0 | 0 |

Black or grey Black or grey on PE on 24 on ∨ V Z

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ELECTRICAL CONNECTION

ELECTRICAL CONNECTION

specified **Power cables** Five different OptiClimate models are available. For your safety and the safety of the OptiClimate, the following specifications should be observed when connecting the power supply: use the circuit breakers and cable thickness

| Model | | | |
|----------|------------------------------------|-----------------|----------------|
| 2000 | PRO3 & PRO4 | 1 phase D16 MCB | 2.5mm2 cable |
| 2000 | PRO3 & PRO4 | 3 phase D16 MCB | 2.5mm2 cable |
| 3500 | PRO3 & PRO4 | 1 phase D16 MCB | 2.5mm2 cable |
| 3500 | PRO3 & PRO4 | 3 phase D10 MCB | 2.5mm2 cable |
| 6000 | PRO3 & PRO4 | 1 phase D25 MCB | 4.0mm2 cable |
| 6000 | PRO3 & PRO4 | 3 phase D16 MCB | 2.5mm2 cable |
| 10000 | PRO3 & PRO4 | 1 phase D35 MCB | 4.0mm2 cable |
| 10000 | PRO3 & PRO4 | 3 phase D20 MCB | 2.5mm2 cable |
| 15000 | PRO3 & PRO4 inverter | 1 phase D50 MCB | 6.0mm2 cable |
| 15000 | PRO3 & PRO4 inverter | 3 phase D35 MCB | 4.0mm2 cable |
| 15000 | PRO3 & PRO4 | 3 phase D25 MCB | 4.0mm2 cable * |
| * The co | mpressor of this unit is divided c | ver 3 phases | |

The cables for the supply voltage should be led through the feed-through rubber at the side and connected to the left-hand side of the terminal strip as described in the illustration. The earthing can be connected to the PE terminal or to the screw on the metal housing at the bottom right of the terminal strip.



Inverter models



When connecting the inverter models to 1 phase 230volt, there need to be bridges between L1, L2 and L3. There should also be a bridge between N and D. With a new unit, the bridges are connected.



When connecting the inverter models to 3 phase 400volt, there may not be any bridges between L1, L2 and L3. There may also not be a bridge between N and D. With a new unit, the bridges are always connected.

Note: Failure to observe the above description can cause irreparable damage to compressor/ inverter

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ELECTRICAL CONNECTION

INSTALL / CONNECT THE OUTDOOR UNIT

High temperature safeguard

Using this safeguard, the OptiClimate can switch off the heat sources (e.g. lamps) when the temperature in a room becomes too high. The unit has a terminal that can be connected to the timer of a control panel, for example. The feed wire running to the switch in the timer should be interrupted for this purpose. Terminal 1, for example, is for a Grasslin clock and terminal 4 for a LeGrand timer.



The two ends should be connected to terminals 15 & 16 on the terminal strip in the electrical compartment of the OptiClimate. The OptiClimate supplies the power for the timer.

The OptiClimate supplies the power for the timer. If the room temperature exceeds 35°C, the OptiClimate will interrupt the circuit, switching off the heat sources. **ERROR 15** is then displayed on the remote control.

Always refer to the timer manufacturer's manual if a model other than the one shown is used.



Installing outdoor unit

The outdoor unit should preferably be installed in the open in a cool place (shade), where the unit can suck in air. Leave enough space around the unit to ensure proper air flow. If the air passing through the outdoor unit is warmer, the capacity decreases. If the ambient air exceeds 40°C, an error **E:16** occurs. The unit will simply continue to work. If the outdoor unit is placed near a wall, make sure that the fan blows away from the wall. The fan sucks air through the outdoor unit.

Refrigerant hose connections

2 refrigerant hoses are included. A hose has a large diameter and is connected to the connector "steam" (above) of the indoor unit. The other hose has a slightly smaller diameter and is connected to the "liquid" connector (below).

On the outdoor unit, the hoses should be connected as indicated on the stickers.

Note: Refrigerant hoses may not be kinked or installed at an acute angle. If they are kinked even briefly, they must be thrown away, a 100% leak will occur at this kink. The hoses must be placed flat and must not be pulled. The hoses may not be shortened or extended self. The connections on both the indoor and the outdoor unit should first be tightened by hand. After this, the connections are tightened with two spanners, do not tighten too hard. The hoses should be supported, they may not hang on the indoor or outdoor unit, if they hang they will buckle under their own weight.

Connecting a five-core cable to the outdoor unit

The ourdoor unit has a white waterproof terminal box. The five-core cable coming from the indoor unit should be connected in this.



Blue on blue Yellow / green on yellow / green Brown on brown black or grey on black black or grey on black

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WATER-SIDED CONNECTIONS

PUTTING INTO OPERATION

as feed water. The cooling block has been adjusted to prevent metals or oxides from entering the condensate. This is condensation water drips from the hose, which can be connected to the drain pipe. The condensate can also be used drain. The condensation drain is connected to a sturdy garden hose or a pipeline that does not bend easily. The ideal when the only feed water available is hard water. Discharge of the condensation water The unit will also dehumidify the air during cooling. The moisture extracted from the air comes into the condensation





The drain pipe of the condensation water may not have loops and may not be put under the water level in a drum. If the unit is installed at the same level or lower than the drain or sewer, a condensation lift pump can collect the water. also available. This small lift pump pumps the water through a hose of 9mm to a height of 4 metres into the drain. Stronger pumps are





Drain pump of the condensation water

incorrect drain installation

that too much air is sucked in through the condensation water pipe causing the condensate water not to drain properly. dealer. and ensure that during operation all panels are mounted on the unit. A special syphon can also be mounted. Ask your Then there is too much resistance in the intake system. Dimension hoses of e.g. a plenum box as large as possible The drain to the pump must not be under the water level and the pipe may **not** have loops as shown above. It's possible

The unit is now installed and ready to use

Remote Control

Operation



- **|** Temp up / scroll
- = Temp down / scroll
- " Press and release to set the time / press and hold to set the timer
- **FN** = Fan speed
- s I Press and release to read Sensors / press and hold to bring up the Menu
- **R** = Press and release to confirm / press and hold to delete error codes
- **N** = Press and hold to turn automatic light cell mode on/off. Press and release to switch between day and night mode
- **On/Off** Turn unit on/off or confirm menu option

1) On/Off key

a menu selection. The unit is switched On or Off using the On/Off key. The LED will be green when the unit is On. The LED will be red when the unit is Off. In case of malfunctioning, the LED will flash red and green. The On/Off key is also used to confirm

2) Mode key [M]

display will show a lit snowflake in day mode and a sun with drops of water in night mode Pressing the mode key will switch the mode from day mode (cooling) to night mode (heating/dehumidifying). The

• These can be changed later, if required. Temperatures for the **day** and **night** can be set using the mode function

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3) Fan speed key (Fn)

This key is used for selecting the air speed of the fan. The sequence is as follows:



ventilate more or less depending on the need tor cooling The speed changes whenever the Fn key is pressed. If you select the automatic fan mode in the Cool mode, the unit will

By selecting day or night with the mode key a different fan speed can be chosen for both day and night. For the night we recommend the lowest fan speed for heating and dehumidifying. If a great deal must be dehumidified during the night, the fan speed can be set to position 2 or 3.

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PUTTING INTO OPERATION

PUTTING INTO OPERATION

Inverter

less cooling capacity is required. This provides an even more stable climate and prevents the frequent tripping The OptiClimate inverter models adjust the cooling capacity to the need. Non-Inverter models operate on an on / off basis, while the inverter models run the compressor harder/ softer when more or respectively of the unit in case of over capacity.

the compressor also runs at a fixed speed. (resp. low / middle / high). For the night position, we recommend that you to automatic using the remote control (FN). If the fans are set at a fixed speed, the inverter function is switched off and always use the low setting The inverter function operates on the basis of the fan speed. This means that the fan, in the day position, should l be set

4) Temperature setting

display. By pressing it once more, you can set the required temperature. The set temperature will be saved and stored after 3 seconds. Switching between day and night temperatures is done using the **LMJ** mode key. Users can set the temperature from 16°C to 34°C. Pressing the ▲ or ▼ key will show the set temperature SET TEMP on the

5) Time Setting [T] key

Press the [T] key once to select the hours and then press the \blacktriangle or \neg key to change the hours. Press the [T] key again, and the minutes will flash and then press the \blacktriangle or \neg key to change the minutes. Now press the [R] key to confirm the hours and minutes that you entered.

6) Automatic Light Cell setting (Day /Night programme) The automatic moisture meter in the PRO3 series has a light cell, which switches to the day mode when it sees the light is on and to the night mode when the light is off. Only the Day/Night temperatures have to be set, the rest is done automatically

If you want to set the unit manually, the automatic light cell can be switched off and the unit will operate manually. By pressing the **[M]** key for 3 seconds, the mode switches from light cell to manual. By pressing the **[M]** key again for 3 seconds, the mode switches from light cell. If the automatic light cell is activated, the display shows an A

clock icon() appears in the display deactivated. Therefore, install a Timer only if you want to use advanced options. The Timer mode is active when a Note: It is important to note that when the Timer setting is programmed the automatic light cell mode is

The external automatic moisture meter for the light cell should be connected to the terminal strip in the electrical compartment (terminals 12, 14 and 18). Otherwise the unit will remain in the night mode because light is not detected. This is connected by default

7) Timer Setting (DAY/NIGHT programme)

As a general rule, we recommend using the automatic light cell mode. Only set the timer if you do not want to work with the light cell!

day it is. If the timer is set, the display will show the clock icon next to the time. ${igodot}$ This function can be used to set the DAY/NIGHT programme. The programme restarts every day regardless of which

Press the **[1]** key for 2 seconds. When "–", ON becomes visible, you can change the timer setting. Pressing the ▲ or ▼ key will allow you to set the hours of the ON time. Pressing the **[1]** key again will allow you to set the minutes of the ON time. The ON time is the time that the unit will start to cool.

Pressing the **[T]** key again will allow you to set the OFF time. The OFF time is the time that the unit will start to heat/ dehumidify. If the timer is not set yet, the display will show "-:-" or the time that was already set.

Example:

The unit must cool between 8:00 AM and 8:00 PM. The ON time should then be set to 8:00 AM and the OFF time to 8:00 PM

PM = after noon (from 12:00 to 24:00 hours) AM = after midnight (from 0:00 to 12:00 hours)

| 1:00 AM equals | 01:00 |
|-----------------|-------|
| 02:00 equals | 02:00 |
| 03:00 equals | 03:00 |
| 04:00 equals | 04:00 |
| 05:00 equals | 05:00 |
| 06:00 equals | 06:00 |
| 07:00 equals | 07:00 |
| 08:00 equals | 00:80 |
| 09:00 equals | 09:00 |
| 10:00 equals | 10:00 |
| 11:00 equals | 11:00 |
| 12:00 PM equals | 12:00 |

Deleting the time when setting the timer (switching off the timer)

Press the [R] key, and the time is deleted. The display will show "-:-". CLOSING: Press the [T] key three times to close immediately or wait 10 seconds to close automatically

The settings of the current time and the timer settings should run synchronously with the times of the control panel.

is used. All clocks must run synchronously when the timer function



8) Using the automatic moisture meter for dehumidifying during the night

active and the automatic moisture meter indicates that the unit should dehumidify, the Drop icon starts to flash. During dehumiditication the electric heating elements will be activated for the PRO3. This is not the same with PRO4 The automatic moisture meter can be set to the required maximum air humidity during the night. If the Night mode is

also dehumidify when no cooling is required. This function can be activated by setting option D:39 to 1 in the menu. **Dehumidification during the day (only PRO4)** Both the PRO3 and the PRO4 will always dehumidify as long as there's a demand for cooling. However, the PRO4 can

If, for example, a constant air humidity and temperature are required continuously in a climatic chamber, cool at night must be activated in the menu option **D:04**. By pressing and holding the **[M]** key the light cell is deactivated and by pressing and releasing the M key a choice must be made for the night setting. The unit can now cool, heat and dehumidify, while also controlling the humidity at a fixed temperature value



The automatic moisture meter

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PUTTING INTO OPERATION

SETTINGS (SET-UP)

9) Reading function for the temperature sensors

spot of the clock. Pressing the ▲ and ▼ keys will allow users to select the reading of the various sensors Press the [S] key and the sensor will show the temperatures. The number and temperature of the sensors will show in the

CLOSING: Press the **[S]** key to close immediately or wait 60 seconds to close automatically

C:01= C:01 = Temperature of cooling block

C:02= Temperature of refrigerant outdoor unit (liquid / return)

C:03= Temperature room 2 (only in case of a dual room configuration, now -40°C)

C:04= Intake (warm) air temperature

C:05= Outlet air temperature

C:06= Temperature of low-pressure (for compressor)

C:07= Temperature of outdoor air (with outdoor unit)

solved automatically, the error code will disappear. **10) Reading function for the error codes** The unit malfunctions if the ON/OFF LED flashes red and green. E:XX will show the actual error code. If the problem is

incorrect setting that is about to come up can be noticed and/or resolved at an early stage will be continuously visible at the bottom of the display, even if the error has been solved. This way a malfunction or The error log (alarm history) in located at the bottom in the display of the remote control. If an error occurs, the error

Deleting the error log (alarm history)

When resolved, errors in the log can be deleted by pressing and holding the [R] key



Note : Keep the alarm history clear so that problems can be easily resolved at an early stage

11) Alarm port

connected to an alarm system or SMS (GSM) detector The printed circuit-board has an alarm port, which makes contact when an alarm or error occurs. This contact can be

2) Compressor Active mode

If the compressor operates, the display will show the Compressor icon at the bottom right-hand side, it will disappear when the compressor is turned off. The compressor only operates during the DAY period, if the set temperature is exceeded, and during the NIGHT period, if the set air humidity is high humidity during the daytime. exceeded. In PRO4, the compressor runs even when there is no cooling demand in case of excessively

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13) Heating Elements Active mode

If the heating elements are turned on, the display will show the Hot Air icon at the bottom right-hand side, it will disappear when the heating elements are turned off. The heating elements only operate during the NIGHT period, if the temperature reaches a value below the set value.

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14) Fan of outdoor unit active. When this symbol appears in the display, the fan(s) on the outdoor unit is running. If you switch off the fan(s), the symbol disappears. The fan(s) on the outdoor unit only run when needed.

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Settings (Set-up)

Use the ▲ or ▼ key to change a setting. You press the CON/OFF1 key to confirm. If you do not want to change anything and exit the menu, press the [R] key. The settings range from D:01 to D:32. Do not adjust settings D:16 to D:22. These are tactory settings

To restore the factory settings, press and hold the **[M]** key until the Settings menu opens. All settings will now be restored to factory settings. Confirm this with the on/off key.

D:01 Switching the heating elements on/off

tor heating, for example, all of these heating elements can also be switched off at the same time Each of these elements can be switched on and off individually in the Settings menu. If a central heating system is used connected to 1 phase and the heating elements of 3-phase systems are divided over all phases. Depending on the model, an OptiClimate has 2 or 3 heating elements. The heating elements of 1-phase systems are

Setting:

- **D:1 = 3** means all three elements will heat
- D:1 = 2 means two elements will heat
- **D:1 = 1** means one element will heat.
- **D:1 = 0** means all elements are off.

D:02 Temperature safeguard

If the room temperature exceeds $\overline{35}^\circ$ C, terminals 15 and 16 on the terminal strip of the unit will switch off the beating elements in the rooms that have to be cooled. The switch-off temperature can be changed using the D:02 setting. The minimum temperature for switching off is 30° C and the maximum temperature is 40° C. If the temperature drops below the set temperature for cooling mode again, the safeguard will switch off and restart the heat sources.

E:15. (also see the fault code list) The safeguard does not affect the operation of the OptiClimate. However, the display will show the error message

D:03 Auto Restart after power interruption

the unit to remain off after a power interruption caused by an external fault, you should change the D:03 setting. If the power is interrupted when the unit is on and the power is restored, the unit will switch on by default. If you want

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SETTINGS (SET-UP)

SETTINGS (SET-UP)

Setting:

D:03 = 0 D:03 = 1interruption. See also the fault code list means Auto Restart is off means Auto Restart is on. This is the default setting. The display will show error code 14 in case of power

D:04 Night cooling (Cool at Night) on/off

Using this setting, the night cooling can be switched on.

D:04 = 0D:04 = 1 means Cool at Night is on. means Cool at Night is off. This is the default setting

warm climates, in a very well-insulated room or with other sources of heat that cannot be switched off If in the timer off mode the minimum temperature is, for example, set to 22°C, the unit will cool the room to 22°C in the night mode. If the room temperature drops below 22°C, the unit will begin to heat the room. This function is useful in When the Cool at Night function is active a moon icon will be shown on the display.

D:05 Pre-Heating on/off.

Pre-heating can be switched on using this setting. D:05 = 0 means Pre-Heating is off. This is the default setting.

D:05 = 1 means Pre-Heating is on.

daybreak (timer is on). At the beginning of the day, the room will be at the right temperature. Besides the advantage of giving the day temperature a jump-start, this also prevents the cold parts of the unit from becoming wet, which reduces If Pre-Heating is switched on, the unit will heat the room up to the set cooling mode (day) temperature one hour before or prevents mould build-up.

Note: Only works in conjunction with the timer and not in the light cell model

D:06 Slow cool-down (post-heating) on/off.

D:06 = 0Slow cool-down (post-heating) can be switched on using this setting. means Slow Cool-Down is off. This is the default setting

D:06 = 1 means Slow Cool-Down is on.

If Slow Cool-Down is switched on, the unit will slowly cool the room until one hour after Note: Only works in conjunction with the timer and not in the light cell mode! the end 오. the day.

D:07 Dual Room (cooling two rooms 12h by 12h) on/off.

D:07 = 0 means Dual Room operation is off. This is the default setting. Using this setting, you can switch on/off the cooling of two rooms alternately.

at the bottom right-hand side. **D:07 = 1** means Dual Room operation is on. If the Dual Room function is active, the display will show the house icon

plenum box, second temperature sensor and an extensive installation/user manual. To use this function, you will have to order a three-way valve and a connection set consisting of a three-way valve,

D:08 Alarm port N.O. (Normally Open) or N.C. (Normally Closed)

D:08 = 0 means N.C. Normally closed. This is the default setting D:08 = 1 Using this setting, the alarm port can be adjusted means N.O. Normally open.

Refer to the user manual for the correct settings of the SMS (GSM) detector or the alarm system that should be connected.

D:09 Not applicable

D:10 Timer port

operate. The setting of the alarm port should then be the standard setting (0 = N.C.). If there is a High Temperature alarm, this alarm will interrupt the timer's signal and the temperature safeguard will still If **D:10=0**, ports 15 and 16 will interrupt the High Temperature alarm. If **D:10=1**, the high temp alarm will not occur through these contacts. With **D:10=1**, port 16 is common and ports 16 & 17 will be each other's alternate contacts. The clock of the OptiClimate (OC) will operate these make-and-break contacts and the clock/timer of the OC can replace the clock on the control panel. The lamps will operate synchronous with the cooling mode of the OC To install a High Temperature safeguard, contact 16 should be aligned with the alarm port on the printed circuit-board.

D:11 Hysteresis of the temperature

Using this setting, you can adjust the hysteresis (bandwidth) of the temperature control. This is the temperature difference required to switch the compressor on and off.

Setting: **D:11 = 2** means the hysteresis is 2. This is the default setting

The hysteresis can be set from 1°C to 4°C in steps of 0.5°C. If, for example, the day temperature is set to 28°C and the hysteresis to 2°C, the unit will start to cool at 29°C and stop cooling at 27°C. To shorten the hysteresis effectively, the resting time of the (D:27)

D:12 Minimum adjustable heating temperature

Using this setting, you can change the minimum adjustable heating temperature. The adjustable values in **D:12** are: default = 16°C, max. = 20°C, min. = 10°C.

D:13 Maximum adjustable heating temperature

Using this setting, you can change the maximum adjustable heating temperature. The adjustable values in **D:13** are: default = 35°C, max. = 50°C, min. = 25°C.

D:14 Minimum adjustable cooling temperature

Using this setting, you can change the minimum adjustable cooling temperature. The adjustable values in **D:14** are: default = 16°C, max. = 20°C, min. = 10°C.

D:15 Maximum adjustable cooling temperature

Using this setting, you can change the maximum adjustable cooling temperature. The adjustable values in **D:15** are: default = 35°C, max. = 35°C, min. = 25°C.

D:16 Not applicable

D:17 Anti-freeze protection of the cooling block

Using this setting, you can determine at which temperature the Anti-Freeze alarm of the cooling block is activated. The settings in **D:17** are: default = 0°C, max. = 5°C, min. = -2°C.

D:18 Not applicable

D:19 Not applicable

D:20 Not applicable

D:21 Cooling block too hot

Using this setting, you can determine at which temperature the Cooling block too hot alarm is activated. The settings in **D:21**are: default = 4°C, max. = 0°C, min. = 10°C and 1°C. To activate the alarm, the temperature has to be too high for a certain period of time. The time is determined by D:22. D:21 and D:22 jointly determine when Error 11 is activated.

D:22 Duration of cooling block over heating

Using this setting, you can determine how long it takes before a Cooling block too hot alarm is given. The settings in **D:22** are 30 mins (standard), 40 mins (maximum), 20 mins (minimum). The temperature level is determined by D: 21. D:21 and D:22 jointly determine when E:11 is activated.

D:23 Temperature compensation of the room temperature sensor

be set in 0.5°C increments. Using this setting, you can calibrate the room temperature sensor. The setting can be changed if the indication on the display does not correspond with reality. The settings in **D:23** are: default = 0°C, max. = 5° C, min. = -5° C and can

D:24 Temperature compensation of the cooling block temperature sensor

Using this setting, you can calibrate the cooling block temperature sensor. The settings in **D:24** are: default = 0°C, max = 5°C, min. = -5°C and can be set in 0.5°C increments.

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INSPECTION AND MAINTENANCE

FAULT ANALYSIS AND ERROR MESSAGES

D:25 Temperature of compensating refrigerant return outdoor unit

With this option, the temperature sensor can measure the temperature of the return gas to be calibrated from the outdoor unit. The setting in D:25 is default = 0°C, max. = 5 °C, min. = -5° C and can be set in 0.5°C increments.

D:26 Temperature compensation of the Dual Room temperature sensor With this setting, you can calibrate the second room temperature sensor in the Dual Room configuration. The settings in **D:26** are: default = 0°C, max. = 5°C, min. = -5°C and can be set in 0.5°C increments.

D:27 Resting time of the compressor

Using this setting, you can adjust the resting time between Compressor Off and Compressor On. Setting: **D:27 = 15** means the idle time is 15 seconds. This is the default setting. This setting may be used if the temperature values in the room change too much because of the time that the compressor is in idle mode.

D:28 Not applicable

D:29 Display lighting

0 = Automatic (default) Using this option, you can switch the lighting in the display of the remote control on and off

1 = Always on

D:30 Fan outdoor unit on / off.

This option determines at which Liquid / Return refrigerant temperature the fan(s) of the outdoor unit will switch on. The default setting is 27°C. The setting can be changed from 23°C to 33°C.

D:31 Waiting time of outdoor unit fan

In case of high ambient temperatures, it may be desirable to change the time to 10 seconds,. In case of cold outdoor temperatures, the setting should be 30 seconds. With this function, the waiting time can be set and then the fan will run on the outdoor unit after the compressor is switched on. The standard setting is 30 seconds. (3). The time can be changed between 0 and 90 seconds, (0 to 9).

D:32 Outdoor air temperature too high.

Standard setting is 40°C. The setting can be changed from 35°C to 45°C

D:33 Temperature of compensating intake (warm) air Standard setting is 0°C. The setting can be changed from -5°C to +5°C.

D:34 Temperature of compensating outlet (cold) air Standard setting is 0° C. The setting can be changed from - 5° C to + 5° C

D:35 Temperature of compensating refrigerant low pressure side Standard setting is 0°C. The setting can be changed from -5°C to +5°C

Standard setting is 0°C. The setting can be changed from -5°C to +5°C D:36 Temperature of compensating outdoor air temperature sensor

D:37 Buzzer on / off

0=off / 1=on

D:38 Celsius / Fahrenheit 0=C/1=Fh

D:39 Super dehumidification in day mode is on / off. 0=ott / 1=on

Inspection and maintenance

dust should be removed using a vacuum cleaner. Frequently check whether all couplings are properly tightened. Also check that there are no leaks. The dust filter at the backside of the unit should be checked every 10-12 weeks for dust accumulation. If the filter has a layer of dust, the

The carbon filter should be replaced every 10-12 weeks in order to guarantee proper operation of the unit. This is essential and should not be forgotten! If this is not carried out, the filter will break down sooner than normal. To replace the carbon filter, you first have to remove the dust filter.

faults caused by lime deposits are not covered under the warranty. A Note : If you want to work with a humidifier, make sure that it is connected to a reverse osmosis filter or scale filter. Fan

If the dust filter is still clogged with white particles when using a humidifier in conjunction with a scale filter, then an osmosis filter is required. The water is too hard to use with a scale filter. There is no need to use a humidifier if the space is not too large

Fault analysis and error messages

If the unit does not switch on and the remote control display and the LEDs on the printed circuit-board are off, most likely there is no power supply. It is also possible that the internal fuse has blown. This fuse is located near the printed circuit-board in a synthetic housing.

If there is power (the LED on the printed circuit-board flashes and the remote control display shows E:01), but the unit does not switch on, two of the three phases should probably be switched. It does not matter which ones of the three phases are switched

was installed. Check the technical specifications (page 8) for the correct details. If the fuse circuit breaker burst when the unit has to start cooling, most likely a fuse of the wrong value or incorrect type

If the unit makes strange noises or is cooling poorly, check the manometer to ensure that the pointer is not pointing too far to the right from the centre of the screen and check that the outdoor temperature (C:07) does not exceed 50°C. If that is the case, make sure that the outdoor unit receives more / colder air and check whether the pointer of the manometer drops.

unit has sufficient fall (see the **Mounting** section) using a spirit level. It is also possible that the condensation hose has too many loops/bends or is blocked If water drips from the sides of the unit, you have a problem with the condensation water drainage. Check whether the

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FAULT ANALYSIS AND ERROR MESSAGES

FAULT ANALYSIS AND ERROR MESSAGES

Temperature sensors in the unit.

and navigating with the arrow keys. Typical values of these sensors are; There are 7 temperature sensors connected to the indoor unit. These can be read by pressing and releasing the S button

| C:01 = Temperature cooling block | 5°C - 15°C |
|--|---------------------------|
| C:02 = Temp. refrigerant from outdoor unit (Liquid / return) | 23°C – 35°C |
| C:03 = Temperature of room 2 | - 40° or dual Temp. |
| C:04 = Temperature intake (warm) air | equal ambient temperature |
| C:05 = Temperature (cold) outlet air | 8-16°C lower than C:05 |
| C:06 = Temperature low pressure (for compressor) | Almost equal to C:01 |
| C:07 = Temperature out(door air (with outdoor unit) | Max 40°C |
| | |

Fault code list

observing which LED is burning on the little white cupboard in the top of the electrical compartment Two of the three phases - it does not matter which - should probably be switched. If the unit has operated before, t phases are connected properly. You may have a problem with the power supply (voltage). You can check this Error 01 = Usually means that the phases are crossed (reversal). Only active in the 15000 series. ç Ş ₽

Over voltage = Voltage is too hig Normal = Phases are connected properly and the voltage is correct Reversal = Phase sequence is incorrect (crossed) Phase loss = Phase is interrupted Low voltage = Voltage is too low

Error 02 = Condensate does not drain.

Check the condensation drain for blockage and make sure the unit has sufficient fall towards the condensation drain. Also note that all panels are installed. If the problem continues to exist, install a siphon. (See options on page 21).

Error 03 = Not applicable

Error 04 = Ambient temperature is too low

should be warmer than 4°C. The unit is placed in a cold environment, causing the risk of freezing. The room in which the OptiClimate is installed

Error 05 = Ambient temperature sensor is not connected or is defective

Error 06 = Cooling block temperature sensor is not connected or is defective

Error 07 = Liquid / Return temperature sensor (AlO3) is not connected or is defective

Error 08 = In Dual Room systems, error 08 indicates a problem with the second temperature sensor (A104)

Error 09 = Thermal safeguard of the compressor is activated.

The compressor consumes too much current. Contact the Technical Service department, if the thermal safeguard jumps again after resetting. The thermal safeguard is located at the left-hand side near the printed circuit board in the electrical compartment

Error 10 = Anti-freeze safeguard, the temperature of the cooling block is too low. If the cooling block is colder than 0° C, it can freeze up. The unit stops cooling and starts to defrost. The minimum pressure is 1.3MPa. You might have to increase the pressure slightly to reduce the cooling capacity. See the Settings section to remedy this. The dust/carbon filters may also be blocked or the outlet is too scanty/tight (too few holes or the section to remedy this. hose is too thin). The result is that the unit cannot get rid of its cold air.

Error 11 = Poor cooling.

the compressor may also be faulty. There is no proper cooling. There may be a leak in the cooling system and it needs to be repaired. The condenser of

Error 12 = High pressure protection.

If this error message appears, the outside air is too warm + 4°C or the fan of the outdoor unit is not running. It could also be that one of the connections of the cooling hose is not or incorrectly connected

outdoor unit switches on) can also be lowered in increments of 2°C until the problem is resolved. In case of warm If, at very high outside temperatures, the fan(s) in the outdoor unit switch on too late, an error 12 may arise. The outside temperatures, this can be shortened to 10 seconds, for instance. Refer to menu function D:31 standard default of the fan is 30 seconds. In special cases, menu function D30 (temperature at which the fan in the

Error 13 = Low pressure protection.

Check the manometer when the unit is off. Is the pressure lower than 4bar/0.4Mpa? If yes, there is a leak in the cooling system and it must be repaired.

Error 14 = Current interruption alarm

The unit is deprived of current. This alarm, which is only visible in the alarm history at the bottom of the display, indicates that there is a problem with the current.

Error 15 = High ambient temperature safeguard is active.

display. You can delete this by pressing and holding the **[R]** key As soon as the ambient temperature drops below the set day temperature, the unit will switch on the sources of heat and the error code will disappear. The number 15 will, however, continue to be shown in the log at the bottom of the

Ensures that more / colder air is sucked in through the outdoor unit. **Error 16 =** Temperature outdoor air (with outdoor unit) too high 40°C

Error 17 = Temperature sensor AI05 not connected or is defective (no log)

Error 18 = Temperature sensor AI06 not connected or is defective (no log)

Error 19 = Temperature sensor AI07 not connected or is defective (no log)

Error 20 = Temperature sensor AI08 not connected or is defective (no log)

EN

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FAULT CODE OVERVIEW

Optionally available

Vibration isolation springs

ensure nearly 100% contact insulation. No other solutions on the market offer a similar level of contact insulation. Vibration absorbers for extra quiet rooms. These absorbers are meticulously calculated to bear the unit's weight and

Noise damping plate with adhesive layer (2 pieces)

Anti-vibration plates; absorbing plates for extra quiet rooms. These plates can be glued to the flat panels of the unit limit noises radiated by the unit to a minimum. ਰੋ

Condensation water lift pump

Discharge head up to 4 metres. This pump is often used if there is no drain for the condensation water in the vicinity or if the unit is placed lower than the drain. 6mm PVC hose connection

Three-way valve

activated. The High Temperature Safeguard will be active for both rooms simultaneously. Comes with servomotor and additional temperature sensor of 10 metres. This valve enables cooling two rooms 12h by 12h if the Dual Room function is switched on. Each room has its own sensor and it scans the room where the cooling is

Plenum box

dimensions of the suction hoses as large as possible. to three hoses can be connected to the plenum box to suck out the warm air from the room. Always measure the This box can be installed at the backside of the OptiClimate, so that the unit can be placed outside the room. One

Carbon filters (3 pieces) See also Inspection and Maintenance

Long refrigerant hoses

Standard coolant hoses are supplied with a length of 8 meters. Upon request, hoses are also made to a length of 15 meter

EX indoor unit

If the distance between the indoor and outdoor unit is more than 15 meter, a PRO3 PRO4 / split EX (extended range) indoor unit should be used. The EX models are delivered with a standard 15 meter refrigerant hose. As an option, hoses can be up to 30meter

Siphon.

If condensation problems occur and everything is properly connected, a siphon may be installed

Information leaflet PRO4

D:39 can be adjusted in the menu The PRO4 can also dehumidify the room in the day mode when no cooling is required. To activate this function option

Using the arrow keys choose between 0 and 1) Hold the S key pressed. D:01 will appear

2) Repeatedly press and release the S key until D:39 appears.4) Confirm this with the on/off key.

D:39 = 1 dehumidification in day mode is on

D:39 = 0 dehumidification in day mode is off.

The standard setting of D:39 = 0

At night the dehumidification is controlled by the automatic moisture meter. In day mode during cooling the unit always dehumidifies (scientific phenomena). The water released during dehumidification is recycled in the unit ensuring that the electric heating will also not activate. The electric heating elements will only be activated if the night temperature drops below the pre-set night temperature

Keep this error list in the vicinity of the OptiClimate

E:01 Phase monitor (only for 15000 pro3)

E:02 Condensation drain

E:03 Not Applicable

E:04 Ambient temperature too low (<4°)

E:05 Room temperature sensor not connected

E:06 Cooling block temperature sensor not connected

E:07 Liquid/ return sensor not connected

E:08 Room temperature sensor not connected (Dual Room)

E:09 Compressor motor thermal sateguard

E:10 Cooling block anti-freeze safeguard

E:11 Faulty or no cooling alarm

E:12 High pressure safeguard (cooling system)

E:13 Low pressure safeguard (cooling system)

E:14 Power interruption

E:15 High temperature safeguard

E:16 Temperature outdoor air (outdoor unit) too high

E:17 Temperature sensor AI05 not connected or is detective

E:18 Temperature sensor Al06 not connected or is defective

E:19 Temperature sensor Al07 not connected or is defective

E:20 Temperature sensor Al08 not connected or is defective



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MADE IN HOLLAND

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