OPTIMAL CLIMATE CONTROL

OPTICLIMATE

PRO3 AND PRO4 SPLIT (INVERTER) SERIES

Installation and User Guide

OPTICLIMATE

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airsupplies

⚠ **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.
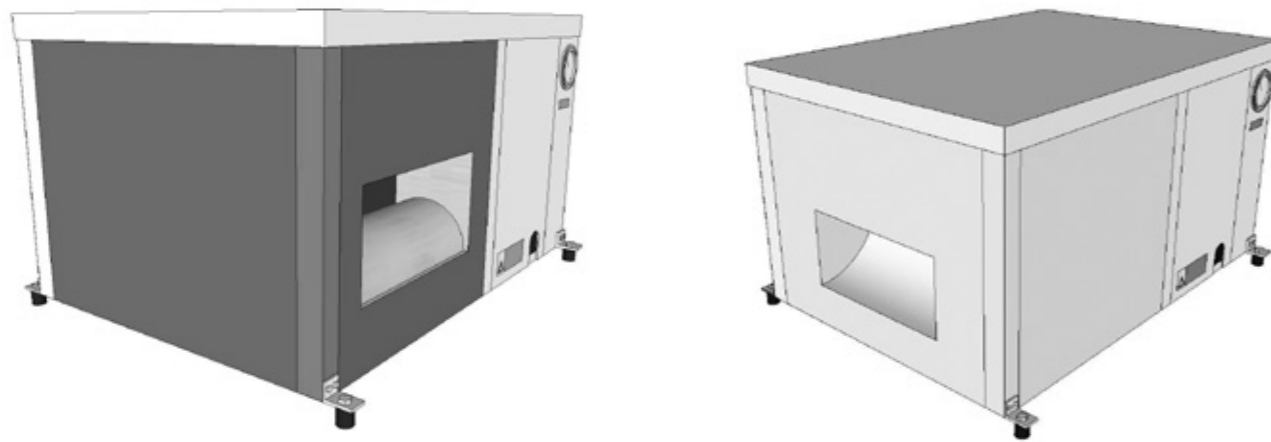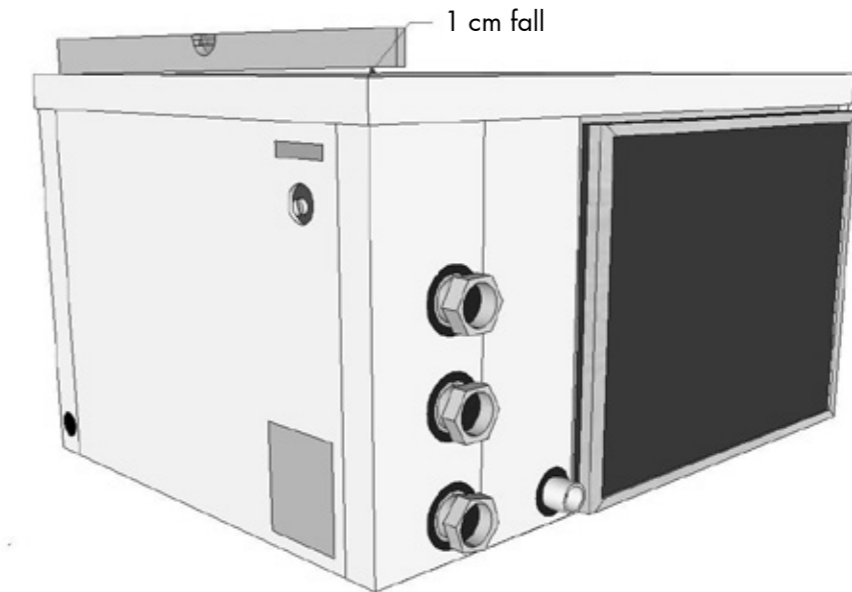

Installation

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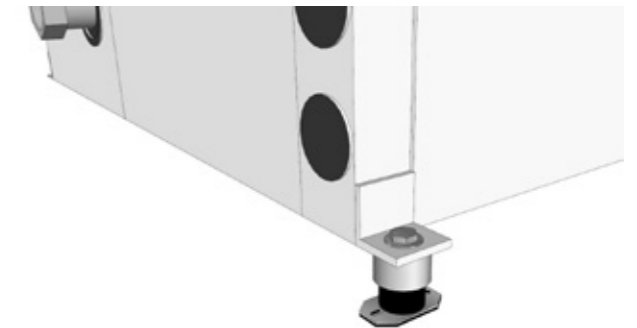
1 cm fall
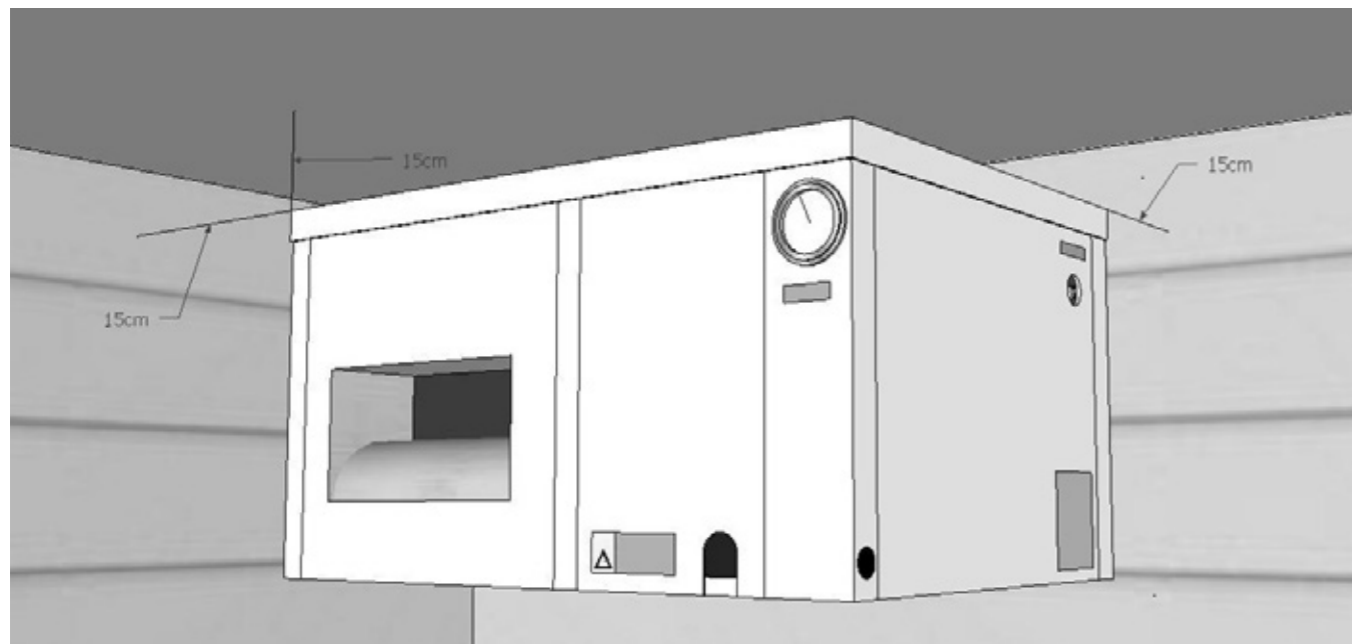
The unit should be mounted in such a way that the side of the condensation drain is at least 1 cm lower than the other side (slope) to ensure that the condensate drains properly. In practice, the 1 cm elevations at all corners – except the corner of the condensate drains – are exactly right for a correct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

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.

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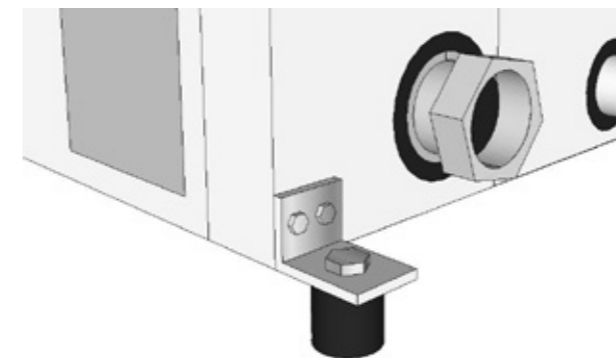
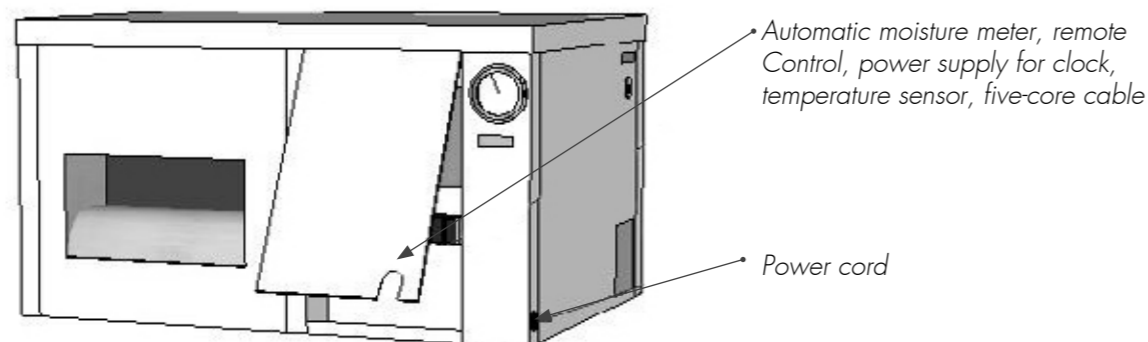Installation of rubbers   Installation of insulating springs

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

Electrical connections

Automatic moisture meter, remote Control, power supply for clock, temperature sensor, five-core cable

Power cord

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

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

Alarm port

Room Temperature sensor AI01
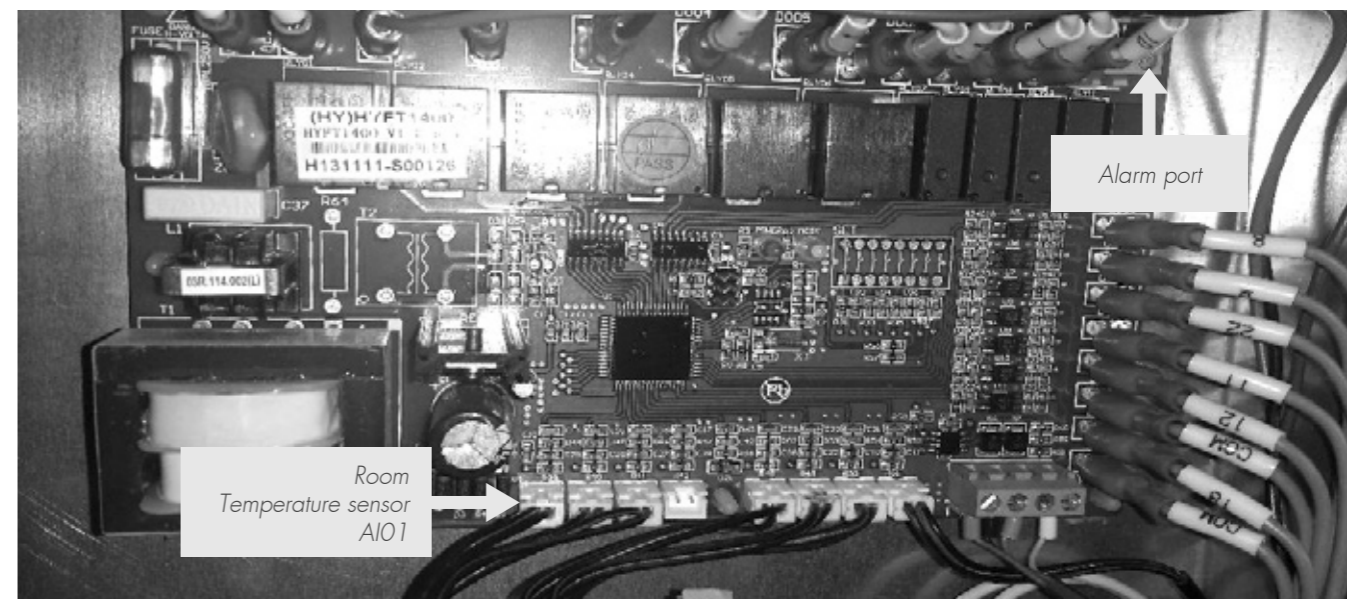
Alarm port
The printed circuit-board has an alarm port, which is activated (makes contact) in case of a malfunction (error). This contact can be connected to a GSM detector. The contact can be set to NO (contact open) or NC (contact closed) using the Settings menu. This means that the contact will be opened or closed in case of detection. See the manual of the GSM detector or alarm for this.

Automatic moisture meter with light cell
The automatic moisture meter with built-in light cell supplied with the unit is already connected. The cable should be led 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.

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 fed into the panel through the opening, and be connected to the indoor unit as follows.

Blue   on N
Brown   on 7
Yellow/green   on PE
Black or grey   on 24
Black or grey   on 23

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 specified

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 compressor of this unit is divided over 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.
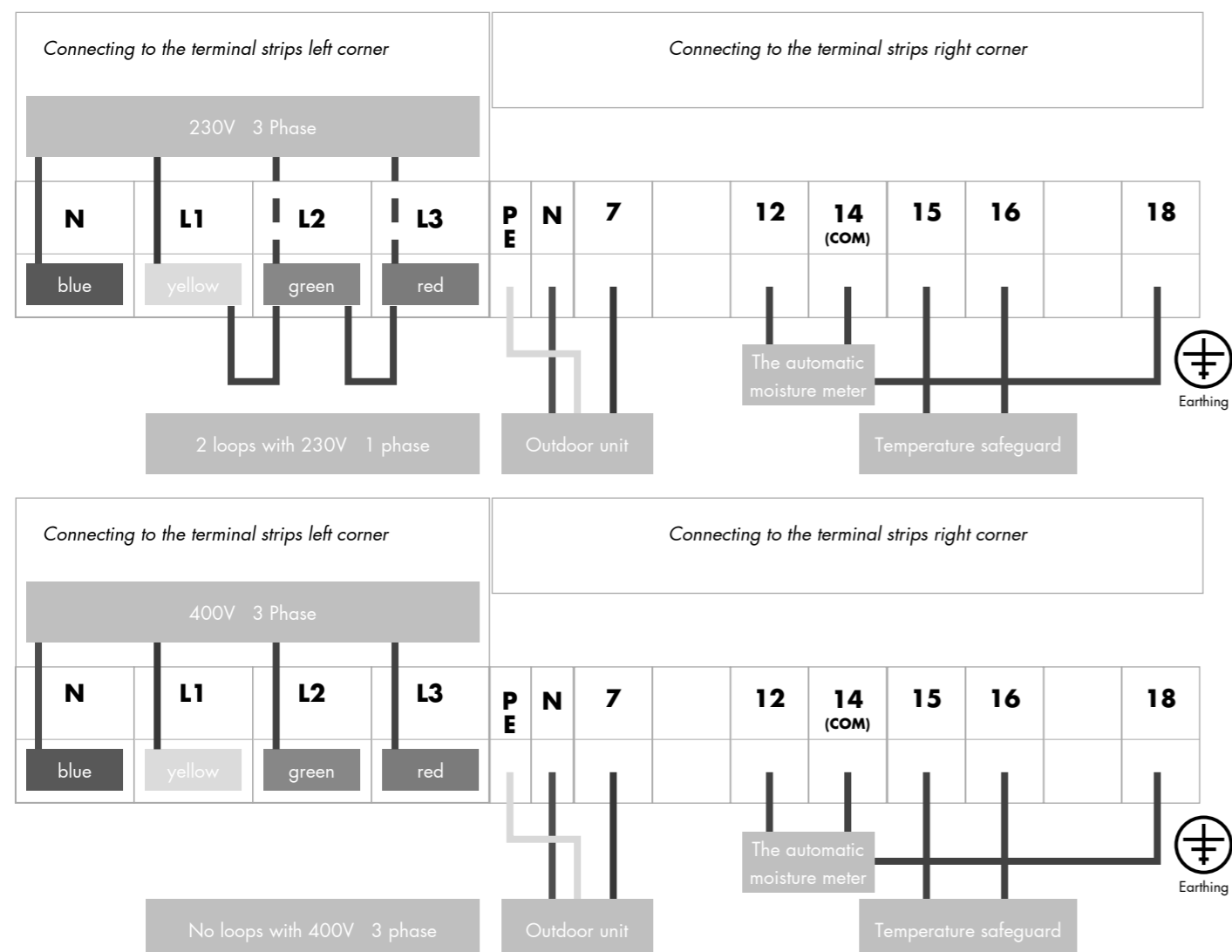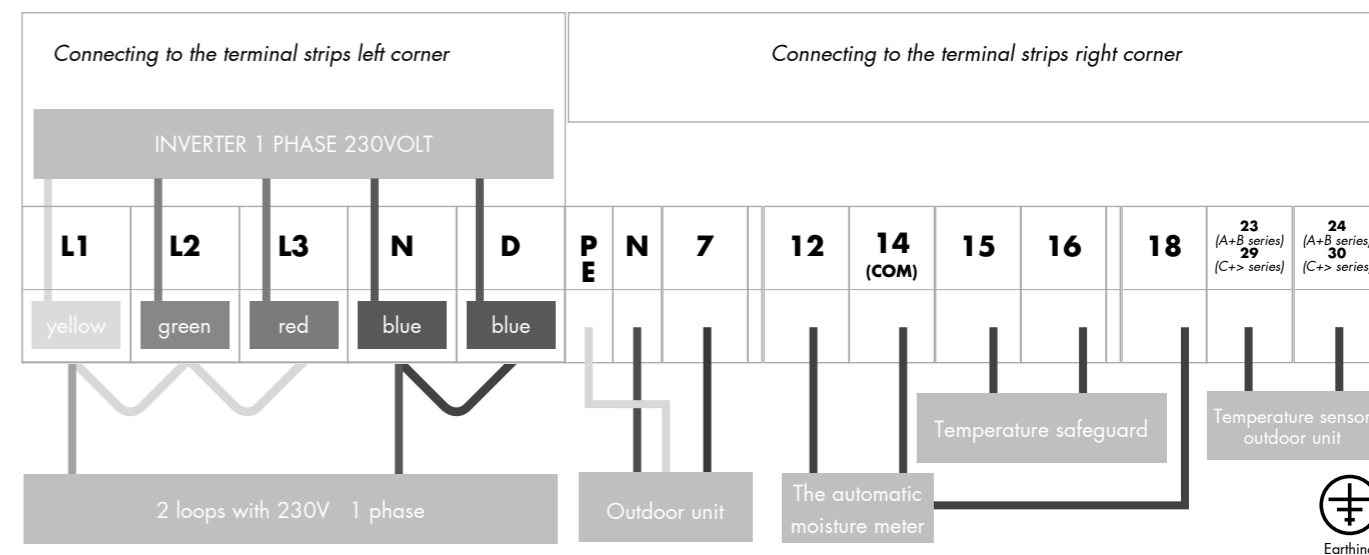
Inverter models

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.
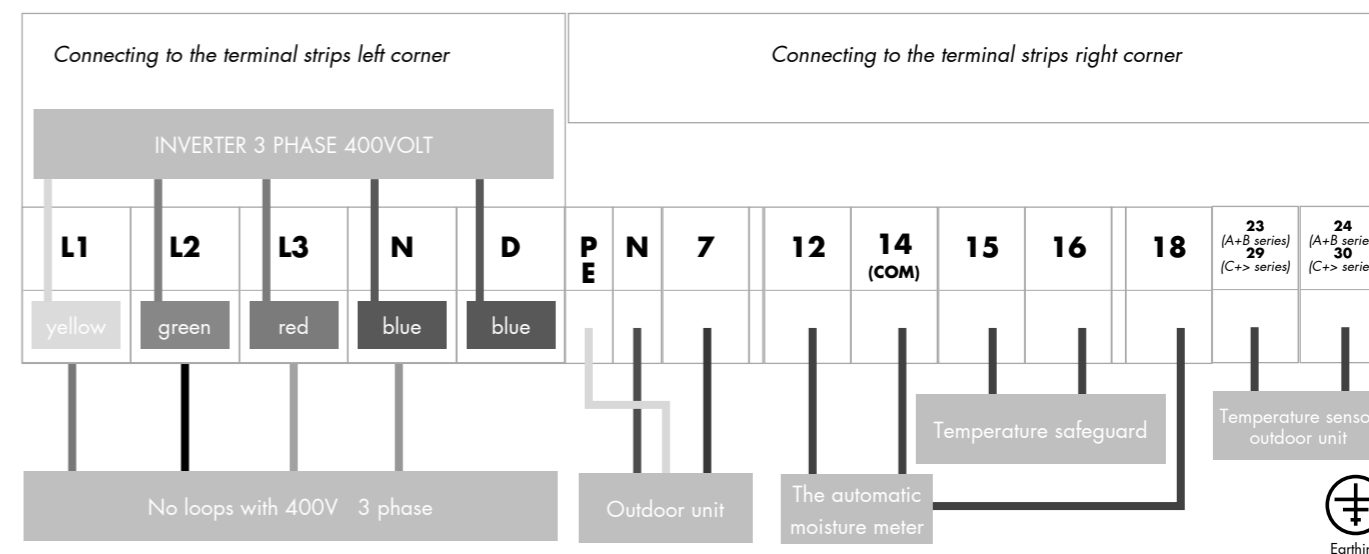

When connecting the inverter models to 3 phase 400volt, there may not be any bridges between L1, L2 and L3. There may also not be a bridge between N and D. With a new unit, the bridges are always connected.

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

ELECTRICAL CONNECTION

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.

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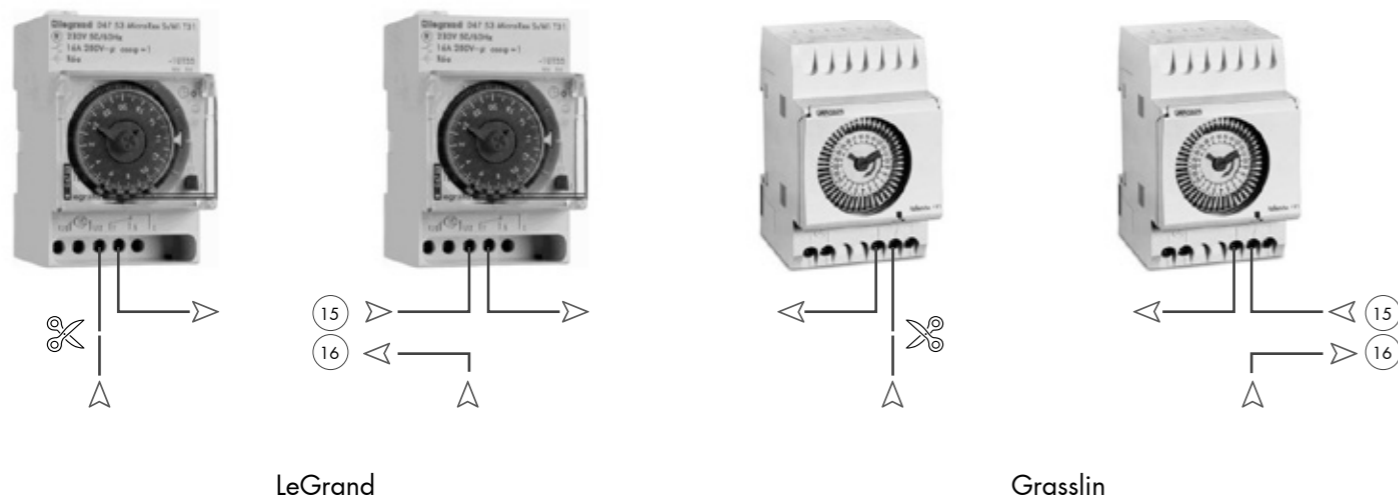
The two ends should be connected to terminals 15 & 16 on the terminal strip in the electrical compartment of the OptiClimate. The OptiClimate supplies the power for the timer.

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.
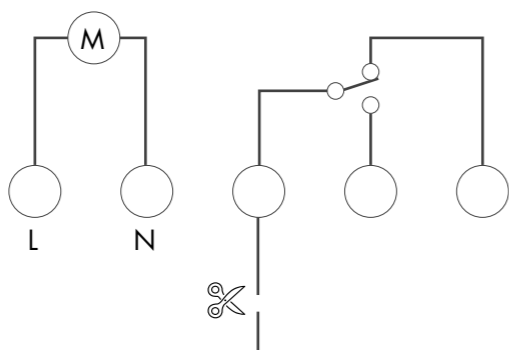
INSTALL / CONNECT THE OUTDOOR UNIT

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

Connection for the outdoor air Temperature sensor

Connection for the fan

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

WATER-SIDED CONNECTIONS
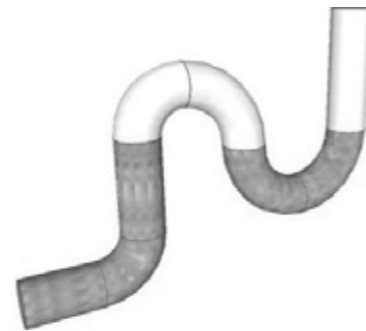
Discharge of the condensation water

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

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. This small lift pump pumps the water through a hose of 9mm to a height of 4 metres into the drain. Stronger pumps are also available.
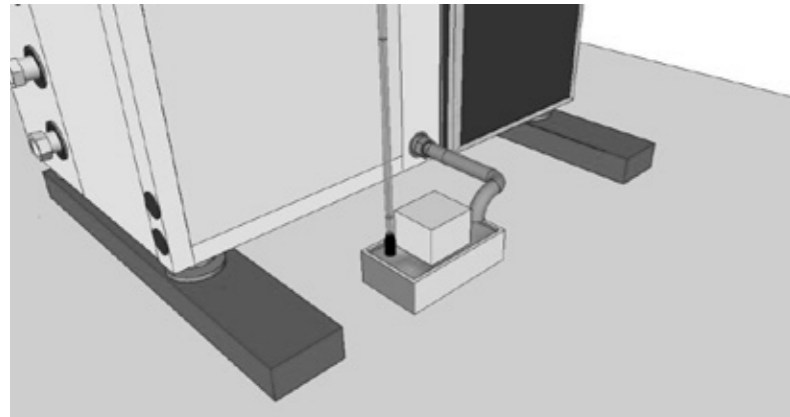
Drain pump of the condensation water   incorrect drain installation

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 that too much air is sucked in through the condensation water pipe causing the condensate water not to drain properly. Then there is too much resistance in the intake system. Dimension hoses of e.g. a plenum box as large as possible and ensure that during operation all panels are mounted on the unit. A special syphon can also be mounted. Ask your dealer.

👍 The unit is now installed and ready to use

PUTTING INTO OPERATION

Remote Control

Operation

↑ =   Temp up / scroll

↓ =   Temp down / scroll

T =   Press and release to set the time / press and hold to set the timer

FN = Fan speed

S =   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

M =   Press and release to switch between day and night mode. Press and hold to turn automatic light cell mode on/off.

On/Off Turn unit on/off or confirm menu option.

1) On/Off key

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 a menu selection.

2) Mode key (M)

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

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

3) Fan speed key (Fn)

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

Automatic   Low   Medium   High

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

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.

Inverter

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 less cooling capacity is required. This provides an even more stable climate and prevents the frequent tripping of the unit in case of over capacity.

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

4) Temperature setting

Users can set the temperature from 16°C to 34°C. Pressing the ▲ or ▼ key will show the set temperature SET TEMP on the 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 **[M]** mode key.

5) Time Setting **[T]** key

Press the **[T]** key once to select the hours and then press the ▲ or ▼ key to change the hours. Press the **[T]** key again, and the minutes will flash and then press the ▲ or ▼ 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 manual to light cell. If the automatic light cell is activated, the display shows an **A**.

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

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!

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

Press the **[T]** 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 **[T]** 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

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

1:00 AM equals	01:00	1:00 PM equals	13:00
02:00 equals	02:00	2:00 PM equals	14:00
03:00 equals	03:00	3:00 PM equals	15:00
04:00 equals	04:00	4:00 PM equals	16:00
05:00 equals	05:00	5:00 PM equals	17:00
06:00 equals	06:00	6:00 PM equals	18:00
07:00 equals	07:00	7:00 PM equals	19:00
08:00 equals	08:00	8:00 PM equals	20:00
09:00 equals	09:00	9:00 PM equals	21:00
10:00 equals	10:00	10:00 PM equals	22:00
11:00 equals	11:00	11:00 PM equals	23:00
12:00 PM equals	12:00	12:00 AM equals	00:00

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.

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

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

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

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 also dehumidify when no cooling is required. This function can be activated by setting option D:39 to 1 in the menu.

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

PUTTING INTO OPERATION

9) Reading function for the temperature sensors

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

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)

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 solved automatically, the error code will disappear.

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

Deleting the error log (alarm history)
When resolved, errors in the log can be deleted by pressing and holding the **[R]** key.

Error codes
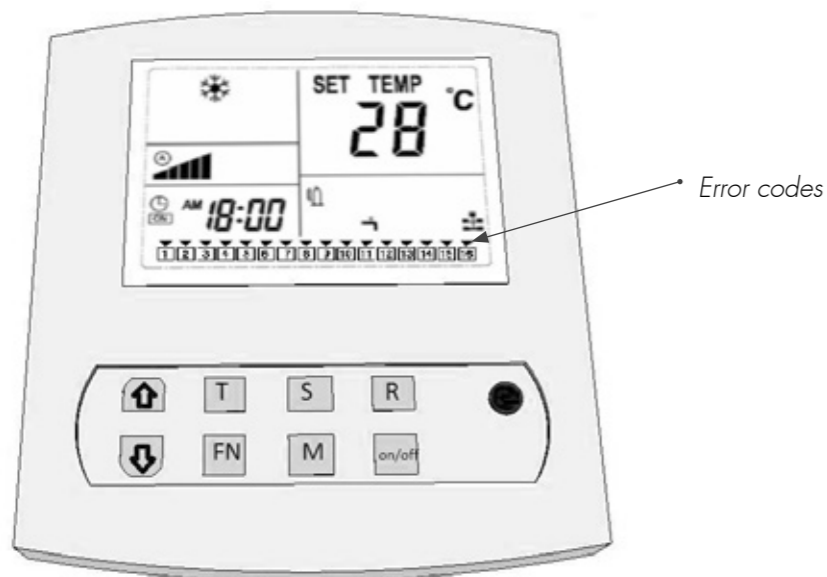
⚠ **Note :** Keep the alarm history clear so that problems can be easily resolved at an early stage!

SETTINGS (SET-UP)

11) Alarm port

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

12) 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 exceeded. In PRO4, the compressor runs even when there is no cooling demand in case of excessively high humidity during the daytime.

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.

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.

Settings (Set-up)

This menu allows you to change certain settings and to set the heating, temperature safeguard, auto restart and hysteresis. Pressing the **[S]** key for more than 6 seconds will open the Settings menu. The display will show a capital D: followed by a number from 01 to 32. Briefly pressing the **[S]** key allows you to scroll through the settings. The first setting is D:01, the second setting is D:02, etc.

Use the ▲ or ▼ key to change a setting. You press the **[ON/OFF]** 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 factory 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

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

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 35°C, terminals 15 and 16 on the terminal strip of the unit will switch off the heating 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.

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

D:03 Auto Restart after power interruption
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 the unit to remain off after a power interruption caused by an external fault, you should change the D:03 setting.

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

D:04 Night cooling (Cool at Night) on/off.
Using this setting, the night cooling can be switched on.
D:04 = 0   means Cool at Night is off. This is the default setting.
D:04 = 1   means Cool at Night is on.

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 warm climates, in a very well-insulated room or with other sources of heat that cannot be switched off.
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.

If Pre-Heating is switched on, the unit will heat the room up to the set cooling mode (day) temperature one hour before 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 or prevents mould build-up.

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

D:06 Slow cool-down (post-heating) on/off.
Slow cool-down (post-heating) can be switched on using this setting.
D:06 = 0   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 the end of the day.
Note: Only works in conjunction with the timer and not in the light cell mode!

D:07 Dual Room (cooling two rooms 12h by 12h) on/off.
Using this setting, you can switch on/off the cooling of two rooms alternately.
D:07 = 0   means Dual Room operation is off. This is the default setting.
D:07 = 1   means Dual Room operation is on. If the Dual Room function is active, the display will show the house icon at the bottom right-hand side.

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

D:08 Alarm port N.O. (Normally Open) or N.C. (Normally Closed)
Using this setting, the alarm port can be adjusted.
D:08 = 0   means N.C. Normally closed. This is the default setting.
D:08 = 1   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
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. If there is a High Temperature alarm, this alarm will interrupt the timer's signal and the temperature safeguard will still operate. The setting of the alarm port should then be the standard setting (0 = N.C.).

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
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 be set in 0.5°C increments.

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.

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
Using this option, you can switch the lighting in the display of the remote control on and off.
0 = Automatic (default)
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 Rest period fan outdoor unit.
This option determines the time at which the fan in the outdoor unit turns on and off. The setting is standardly at 2 (general outdoor temperature setting) and can be adjusted from 1 to 3.

We advise;
> 1= for use FAN speed controller
> 2= General setting for above the 5*C outside temperature
> 3= Winter setting for temperatures below 5*C outside temperature

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

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

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=off / 1=on

D:40 Antifreeze security C06.
With this option, the temperature can be altered, by which an E10 is generated.
The setting of D40 is 0*C by default. the minimum setting is 0*C and the max setting is 20*C.

D:41 Antifreeze security inverter (only 15000inverter model).
With this option, the anti-freeze security can be turned on or off. The standard setting is 0. If the anti-freeze security is turned on (1), the compressor's rotational speed will be reduced in case of a cooling block temperature that is too low, so the unit will not freeze. This option is used in case of low return-air-temperatures. (<26*C)

D:42 Antifreeze security inverter setpoint.
The temperature can be set here, by which the inverter lowers the compressor's rotational speed (see D41)
The setting is 4*C by default. This can be set from 1 to 6 *C.

Inspection and maintenance

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 dust should be removed using a vacuum cleaner.

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.

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

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

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.

If water drips from the sides of the unit, you have a problem with the condensation water drainage. Check whether the

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.

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

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

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

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

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

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 (AI03) is not connected or is defective

Error 08 = In Dual Room systems, error 08 indicates a problem with the second temperature sensor (AI04).

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 hose is too thin). The result is that the unit cannot get rid of its cold air.

Error 11 = Poor cooling.
There is no proper cooling. There may be a leak in the cooling system and it needs to be repaired. The condenser of the compressor may also be faulty.

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

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.
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 display. You can delete this by pressing and holding the **[R]** key.

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

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

20

EN

21

OPTIONALLY AVAILABLE / INFORMATION LEAFLET PRO4

Optionally available

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

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 to limit noises radiated by the unit to a minimum.

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
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 activated. The High Temperature Safeguard will be active for both rooms simultaneously.

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

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 15meter 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

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

1) Hold the S key pressed. D:01 will appear
2) Repeatedly press and release the S key until D:39 appears.
3) Using the arrow keys choose between 0 and 1
4) Confirm this with the on/off key.

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

FAULT CODE OVERVIEW

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 safeguard

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 defective

E:18 Temperature sensor AI06 not connected or is defective

E:19 Temperature sensor AI07not connected or is defective

E:20 Temperature sensor AI08 not connected or is defective

OPTICLIMATE

Amsterdam, the Netherlands
www.opticlimate.nl

MADE IN HOLLAND