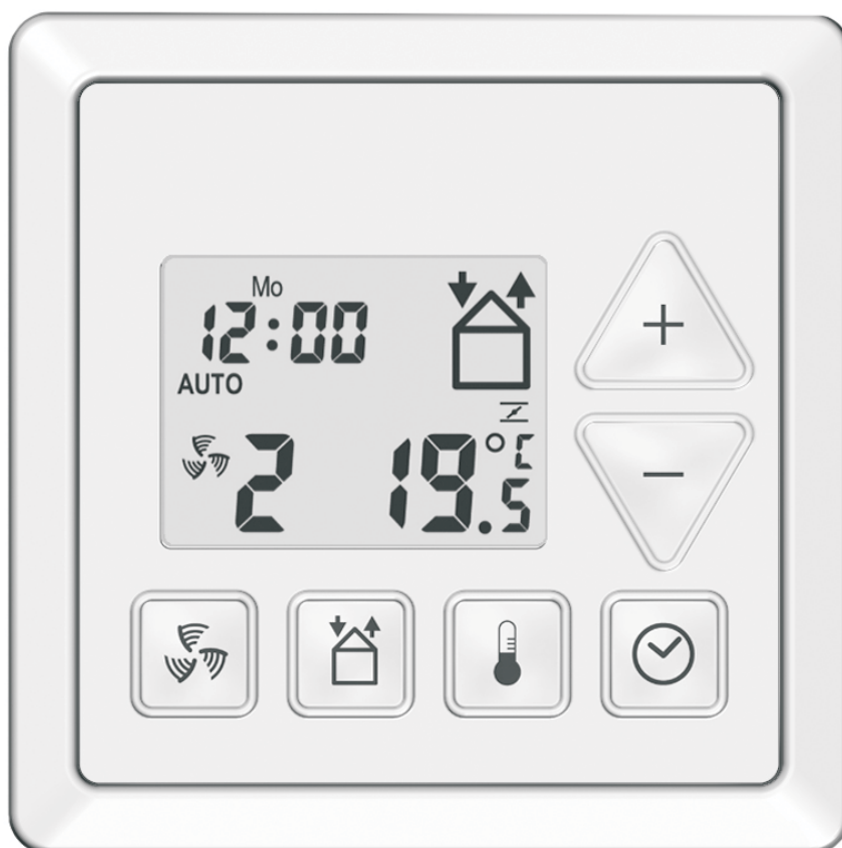


Operating unit

Plastic film keyboard

for santos (F) 370 DC



Instruction manual
Please keep close to the device!

Version 1.0/08.08

Contents

Part A Instruction manual

	Page
1. Available operating aids	1
1.1 Operating unit, plastic film keyboard	1
1.2 Use of the plastic film keyboard.....	3
1.2.1 Setting the date and time	3
1.2.2 Reading and setting the comfort temperature	4
1.2.3 Reading and setting the fan speed	5
1.2.4 Switching the incoming and outgoing air ventilators on and off	6
1.2.5 Setting the ventilation program	7
1.2.6 Setting additional regulators for the P-menus.....	8
1.2.7 Cleaning or replacing filters.....	12
1.3 Malfunctioning	12
1.3.1 Reports of malfunctioning.....	12
1.3.2 What to do in case of malfunctioning?	12
1.4 Additional options	13
1.4.1 CO ₂ -Sensor in the living area.....	13
1.4.2 RH-Sensor in the living area.....	14
2. Instructions for the installer	15
2.1 Starting up the santos 370 DC.....	15
2.2 Access to the P-menus	16
2.3 Setting the air specifications	20
2.4 Malfunctioning.....	21
2.4.1 Reports of malfunctioning on the keyboard display.....	21
2.4.2 Reports of malfunctioning on the keyboard display → eliminate	22

Part B Appendices

Appendix 1 Terminal connection plan santos (F) 370 DC left hand side version with BDE plastic film keyboard

Appendix 2 Terminal connection plan santos (F) 370 DC right hand side version with BDE plastic film keyboard

1 Available operating aids

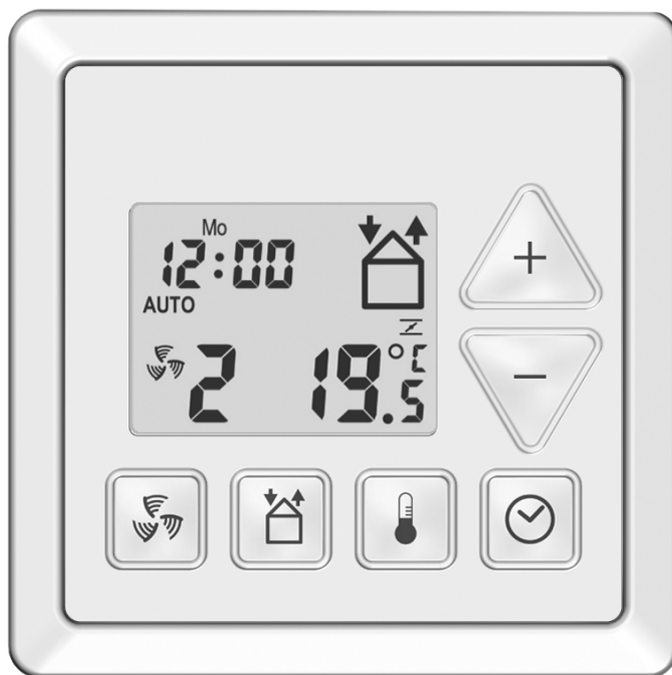
The WRG santos (F) 370 DC, described as santos 370 DC in the text, can be equipped with the following operating aids:

- Plastic film keyboard of santos 370 DC .
- Multiple-contact switch (basic design) for setting the fan speeds.
- Bathroom switch (option) for temporary setting of the highest fan speed.

A detailed description of the operating unit, plastic film keyboard follows in the sections below.

1.1 Operating unit, plastic film keyboard

The plastic film keyboard is mounted on the wall in a room as an operating unit and communicates from there with the santos 370 DC.



The following overview briefly describes what information can be read.



Various keys are provided on the plastic film keyboard for operating and setting the santos 370 DC. These keys are explained below.



This key is used to switch the exhaust hood on or off (not active).

- Press less than for 1 second → ON.
- Länger als 1 Sekunde **drücken** → OUT.



This key is used to switch the feeding in and/or letting out of air on or off.

- Press once → INCOMING OUT (and OUTGOING ON).
- Press twice → INCOMING and OUTGOING OUT.
- Press 3 times → OUTGOING OUT (and INCOMING ON).
- Press 4 times → INCOMING and OUTGOING ON.



You can read or set the comfort temperature with this key.

- Press less than for 1 second → READ.
- Press more than for 1 second → SET.



This key is used to switch from AUTO to MANUAL ventilation.

- Press less than for 1 second → set the ventilation program.
- Press more than for 1 second → set the date and time.



You can set two functions with these keys.

- In AUTO ventilation → indicate fan speed.
- In MANUAL ventilation → enter setting values.

1.2 Using the plastic film keyboard

The following functions can be set with the plastic film keyboard:

- Reading and setting of date and time.
- Reading and setting of comfort temperature.
- Reading and setting of the fan speed.
- Switching the incoming and outgoing air ventilator on and off.
- Setting your own ventilation program.
- Setting additional ventilation regulators/options in the P menu.

These functions are briefly detailed in the following sections.

1.2.1 Setting date and time

- Date and time can be set using the plastic film keyboard.

Proceed as follows:

1. **Press** the following button for two seconds „☺“.
2. **Wait** till the day, e.g. „Sa“ blinks.
3. **Select** the right day with „+“ or „-“.
4. Now **press** short „☺“.
5. **Wait** till the hours, e.g. „12“ blink.
6. **Select** the right hour with „+“ or „-“.
7. Now **press** short once again „☺“.
8. **Wait** till the minutes, eg. „00“ blink.
9. **Select** the right minutes with „+“ or „-“.
10. **Press** this button „☺“ to leave the menü.



1.2.2 Read and set the comfort temperature

- The comfort temperature can be read and set

using the plastic film keyboard.



The comfort temperature is the temperature at which the santos 370 DC:

- uses the heat exchanger for heat recovery;
- switches on the by pass (and thus avoids the heat exchanger) to (temporarily) stop heat transmission between outgoing and incoming air.

You can read the comfort temperature but also set the desired temperature. The santos 370 DC will then retain this temperature after setting, automatically, if possible. Generally, the comfort temperature corresponds to the temperature you have set on the room thermostat (temperature of your central heating system).

Reading the comfort temperature

Proceed as follows:





- Press** „“.
- Wait**, till the comfort temperature appears.
- Press** again (short) „“, to leave the menu.



You will leave the menu automatically after 30 seconds without pressing.

Setting the comfort temperature

Proceed as follows:

- Press** for two seconds „“.
- Wait** till the comfort temperature, e.g. „20.0“ blinks.
- Select** the desired comfort temperature with „“ or „“.
- Press** again (short) „“, to leave the menu.



1.2.3 Read and set the fan speed

- The fan speed can be read and set using the plastic film keyboard

Reading the fan speed

The current fan speed, for example „2“ is displayed on the plastic film keyboard display in series. The santos 370 DC usually regulates the required fan speed automatically. „AUTO“ appears on the plastic film keyboard display during automatic ventilation.



Setting the fan speed

You can also set the fan speed manually and increase or decrease it in this way. You have a choice of 4 fan speeds. They are:

- Level A → Absent.
- for use during absence.



In level A, the living area is ventilated at the prescribed minimum speed.



If you set level A on the plastic film keyboard, other 3 point switches can probably not be used.

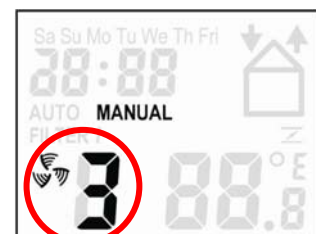
- | | | |
|---------|---|---|
| Level 1 | → | Low speed.
- Use for low ventilation requirement. |
| Level 2 | → | Normal speed.
- Use for normal ventilation requirement. |
| Level 3 | → | High Speed.
- Use this speed when cooking, showering and if additional ventilation is desired. |



The santos 370 DC operates according to the highest fan speed set as far as ventilation is concerned, unless the automatic software control has been set otherwise.

You can set the fan speed as follows:

- Press „+“, to increase the fan speed.
- Press „-“, to decrease the fan speed.



When ventilation is being set manually, „MANUAL“ is displayed on the plastic film keyboard display.

- Press „☺“, to leave the menu.



1.2.4 Setting the operating type



The following operating types can be set using the plastic film keyboard:

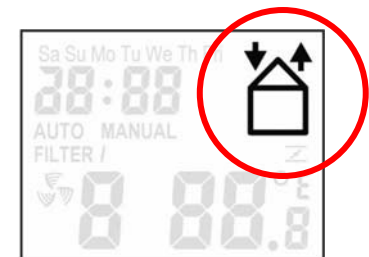
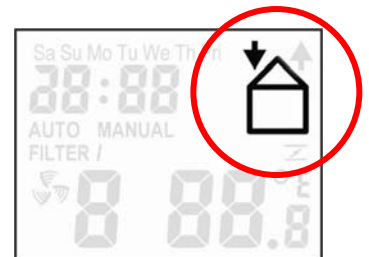
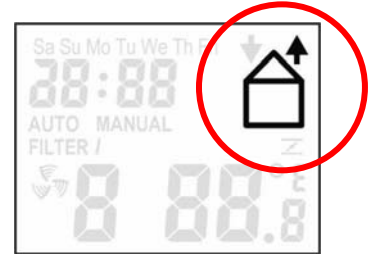
- Incoming and outgoing air
- Only incoming air
- Only outgoing air

Proceed as follows for this purpose:

1. **Press** „“, once to switch off the incoming air ventilator.

You can use this speed when the windows are open in the summer. The fresh air then does not flow into the house through the incoming air valves any longer, but is drawn in through the open windows.

2. **Press** „“, twice to switch off the outgoing air ventilator (and simultaneously) switch the incoming air ventilator on again.
3. **Press** „“, 3 times to switch the incoming and outgoing air ventilators on again.



Please note that when you switch off the incoming or outgoing air ventilators temporarily, you will not have any balanced ventilation with heat and (if available) moisture recovery in your living area.



Do not leave the ventilators switched off for more than 12 hours.

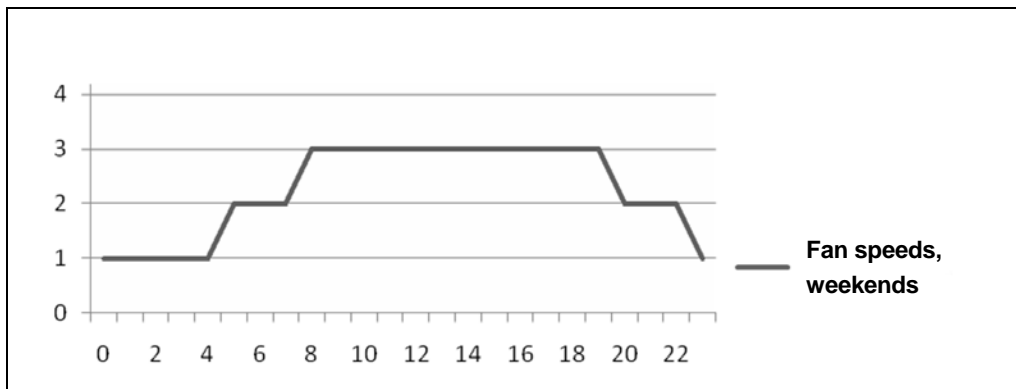
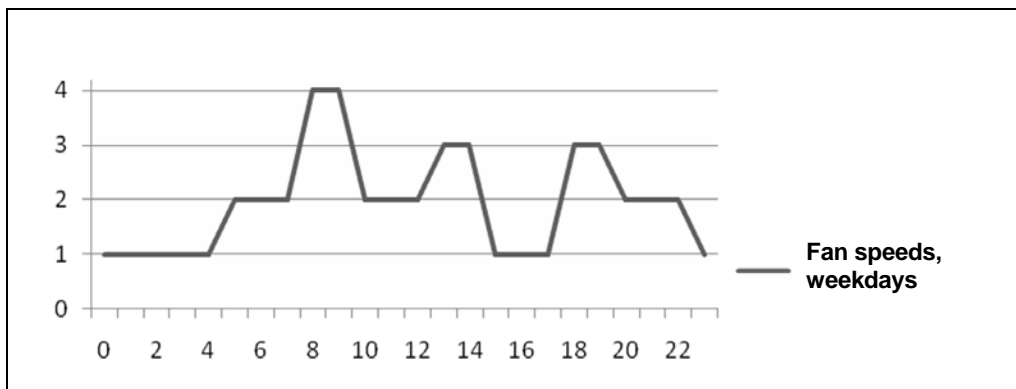
1.2.5 Set ventilation program

- You can set your own ventilation program

using the plastic film keyboard.

A standard ventilation program was set on the santos 370 DC during manufacturing.

This ventilation program offers a suitable ventilation process for most living areas. However, you can change this standard ventilation program, if you wish, and adapt it to your own requirements for ventilation, to a weekday and weekend program, for example.



You can modify/set the ventilation program as follows:

- Press the following buttons at the same time for two seconds, „☺“ and „🔄“.



This only functions if the ventilation mode is set to „AUTO“!

- Wait until day break.
- Program the desired days or a series of days.
 Select the desired day/days with „+“ or „-“

You have the following choices:

Series of days: “SaSu”.

Series of days: “MoTuWeThFri”.


Series of days: “SaSuMoTuWeThFri”.

Individual days: “Sa”, “Su”, “Mo”, “Tu”, “We”, “Th” and “Fri”.





4. Program

the starting time of the desired fan speed.



Press „“.




The setting point number is blinking at the bottom right hand corner.



Select the setting point by pressing „“ or „“.


Press „“, to confirm the setting point.

Select the desired time in hours with „“ or „“.

Press „“.

Wait till the minutes show, eg. „00“.


Select the desired time in minutes with „“ or „“.

Press „“.

Wait till the ventilation symbol blinks.

Select the desired fan speed with „“ or „“.

**5. If you wish, you can program the following ventilation program.**

Press “”, to confirm the ventilation program.

Then, follow steps 3 to 5 for the next ventilation program.

1.2.6 Set additional regulators using the P-Menus

You can with use the plastic film keyboard for following P-menus:

- The status of different ventilation regulators can be read;
- Time delays for different ventilation regulators can be switched on or off;
- Time delays for different ventilation regulators can be set, sing several P-menus of the plastic film keyboard.











In the P-menus, the user can:

- only set the additional regulators P1, P2 and P9 . The other P-menus, P3 to P8 can only be used by the installe.

Access to the P menus





Proceed as follows:

1. **Press** simultaneously on „“ and „“.
2. **Wait** till „P-menu“ appears on the display.
3. **Select** the desired P menu, e.g. „2“ with „“ or „“.
4. **Press** „“, to confirm the P-menu.
5. **Select** the desired P sub-menu, e.g. „23“ with „“ or „“.
6. **Press** „“, to confirm the P sub-menu.



Execute settings in the P-menu

Proceed as follows:



7. **Select** a new value for regulation with „“ or „“.
8. **Press** „“, to save the value.
9. **Repeat** steps 7 to 10 and then step 8 to set several ventilation regulators one after the other.
10. Go back to the P-menu; press on „“ and start again at point 5.



The minimum and maximum values for the available ventilation regulators are stipulated in the software.

Return to the main window

Proceed as follows:

11. **Press** simultaneously on „“ and „“.



Menu P1 → Status of the regulators

		Ventilation regulators
Sub-menu	Description	Activated / Not activated
P10	Menu 20 presently active?	Yes (1) / No (0)
P11	Menu 21 presently active?	Yes (1) / No (0)
P12	Menu 22 presently active?	Yes (1) / No (0)
P13	Menu 23 presently active?	Yes (1) / No (0)
P14	[Not available]	
P15	Menu 25 presently active?	Yes (1) / No (0)
P16	Menu 26 presently active?	Yes (1) / No (0)
P17	[Not available]	
P18	[Not available]	
P19	[Not available]	

Menu P2 → Zeitverzögerungen einstellen

		Time delay values		
Sub-menu	Description	Minimum	Maximum	Standard
P20	[Not available]			
P21	Switching off delay for the bathroom switch (to switch to NORMAL LEVEL). • 'x' minutes after switching on the bathroom switch, the ventilation device returns to the NORMAL LEVEL. Please note: Only for units with a bathroom switch.	0 Min.	15 Min.	0 Min.
P22	Switching off delay for the bathroom switch (to switch to NORMAL LEVEL). 'x' minutes after switching on the bathroom switch, the ventilation device returns to the NORMAL LEVEL. Please note: Only for units with a bathroom switch..	0 Min.	120 Min.	30 Min.
P23	Switching off delay for fan speed 3. When briefly switching on to level 3 (< 3 Sec.), of the HIGHEST LEVEL, the santos	0 Min.	120 Min.	30 Min.

	<p>370 DC remains on level 3 for the time set in this menu.</p> <p>If the multi-contact switch is used within the subsequent period, the santos 370 DC immediately moves on to the fan speed set then.</p> <p>Please note: Only for units with a 3 point switch.</p>			
P24	<p>Filter warning.</p> <p>The user can indicate, when „FILTER DIRTY“ should appear on the display.</p>	1 Week	26 Weeks	16 Weeks
P25	[Not available]			
P26	[Not available]			
P27 (Option)	<p>Setting the permitted CO₂-concentration.</p> <p>If the CO₂-concentration in the room concerned exceeds the set value [ppm], the incoming and outgoing air ventilators are temporarily switched higher to let more fresh air in.</p>	ppm [800]	ppm [1200]	ppm [1000]
P28 (Option)	<p>Setting the permitted limit value of relative air humidity.</p> <p>If the relative air humidity in the room concerned exceeds the set value [%], the incoming and outgoing ventilators are temporarily switched higher to let in dry/drier air.</p>	0 %	60 %	100 %
P29	[Not available]			

Menü P9 → Status of the regulators (from menu P5)

		Ventilation regulators
Sub-menu	Description	Activated/not activated
P90	Regulator for chimney sweeps active?	Yes (1) / No (0)
P91	By pass open (=yes) / closed (=no)??	Yes (1) / No (0)
P92	[Not available]	
P93	[Not available]	
P94	[Not available]	
P95	Anti-freeze active?	Yes (1) / No (0)
P96	[Not available]	
P97	Moisture regulation active?	Yes (1) / No (0)

1.2.7 Clean or replace filters

The santos 370 DC has been equipped in series with two internal filters. As soon as the relevant indication appears in the display of the plastic film keyboard, you must clean or replace the filters.

“ FILTER / ” → The internal filters (/) must be cleaned or replaced.

The above filter indication then appears on the plastic film keyboard display.



The internal filters are supplied with the santos 370 DC in series. External filters are a part of the air duct system of the ventilation unit and should also be checked at the same maintenance intervals and changed if required.



Disconnect from mains before cleaning/changing the filters.



Connect to mains again after cleaning/changing the filters and press „☑“ to delete the displayed filter message.

1.3 Malfunctioning

1.3.1 Report of malfunctioning on the display

A malfunction code appears on the plastic film keyboard display if there is malfunctioning. The display then always shows an ‚A‘ or an ‚E‘ code with corresponding numbers behind it. You can look up what the report of malfunctioning signifies using the guide to malfunctioning in § 2.4.1.




1.3.2 What to do in case of malfunctioning?

Please contact the installer in cases of malfunctioning. Note the malfunction code that appears on the display screen of the plastic film keyboard. Also make a note of your santos 370 DC type. See the identification plate on the top side of the santos 370 DC for this purpose.



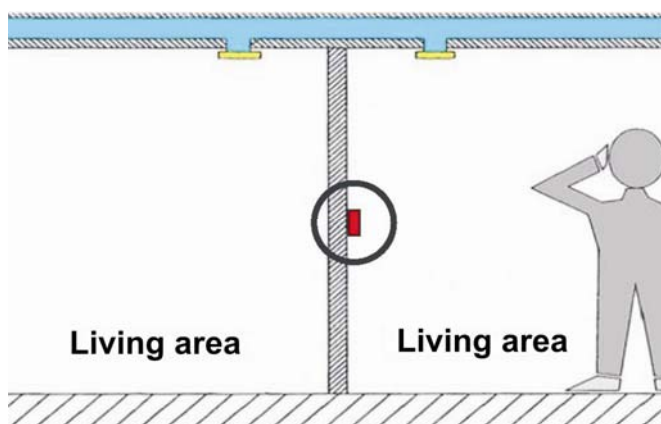
A mains connection must always be established, unless the santos 370 DC has to be shut down due to serious malfunctioning, filter cleaning and replacement or any other mandatory reason. If the mains supply is disconnected, the living area would not be mechanically ventilated any more, which could result in long term moisture and mould problems in the living area. Try to avoid switching off the santos 370 DC for longer periods at all costs.

1.4 Additional option

 **The additional options CO₂-Sensor and/or RH-Sensor are defined by the P27 and P28 menus (§ 1.2.6.). The P80 and P81 menus stipulate the operating type (§ 2.2.).**

1.4.1 CO₂-Sensor in the living area

A CO₂-Sensor can be attached to the santos 370 DC.




The santos 370 DC can regulate the amount of CO₂ in the room with this CO₂-Sensor. A CO₂-Sensor is fixed in one of the rooms to measure the current amount of CO₂ in the room air.

If the proportion of CO₂ is too high compared to the set (and thus maximum permissible) proportion of CO₂, the incoming and outgoing air ventilators are gradually increased to reduce the proportion of CO₂. The air in the room can thus be quickly „exchanged“ through additional ventilation if the amount of carbon dioxide is too high, for example, if you are having a party with a lot of people in the room. Users can set the maximum permissible proportion of CO₂ (within the given scope) themselves in menu P27 using the plastic film keyboard (also see § 1.2.6). The following proportion of CO₂ can be set for this purpose:

Menu P27: Setting the proportion of CO ₂		
• CO ₂ -proportion	Minimal	To be determined ppm
• CO ₂ -proportion	Standard	To be determined ppm
• CO ₂ -proportion	Maximal	To be determined ppm

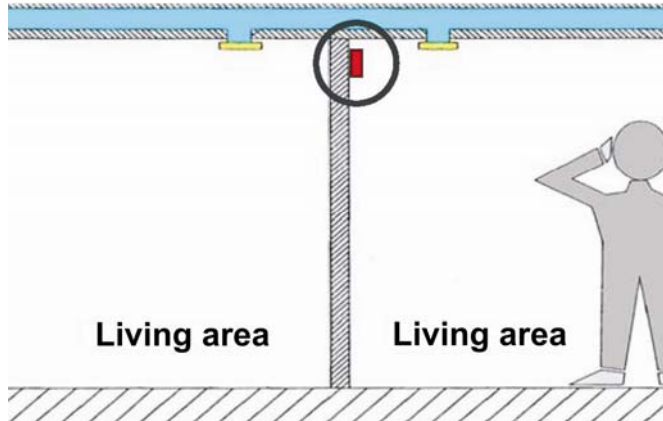


The starting point for this CO₂ regulation is, that generally that outside air is fresh (er) air. The amount of CO₂ can be reduced with this regulation, by (a) sucking in fresh air faster with the incoming air ventilator and (b) letting used air out faster with the outgoing air ventilator. Both ventilators are gradually set back to their starting point in reverse order as soon as the amount of CO₂ in the living area has reached acceptable values again.

 **The CO₂-Sensor must be attached by the installer on the PCP panel at the top of the electronic housing on the santos 370 DC.**

1.4.2 RH-Sensor in the living area

A RH-sensor can be attached to the santos 370 DC.



The santos 370 DC can regulate the amount of relative air humidity in the living area with this RH-sensor. An RH-sensor is hung up in one of the rooms to measure the current degree of air humidity in the room air.

If the degree of moisture is too high compared to the set (and thus maximum permissible) degree of moisture, the incoming and outgoing air ventilators are gradually set higher to reduce the degree of moisture. Living areas with air humidity that is too high, such as the bathroom when taking a shower, for example, are quickly freed from moisture through the additional ventilation. Problems arising from too much moisture are avoided in this way.

Users can set the maximum permissible degree of moisture (within the given scope) themselves in menu P28 using the plastic film keyboard (also see § 1.2.6). The following degrees of moisture can be selected:

Menu P28: Setting the degree of moisture		
• Degree of moisture	Minimal	0%
• Degree of moisture	Standard	60%
• Degree of moisture	Maximal	100%



The starting point for this moisture regulation is, that generally outside air is dry/drier. The degree of moisture can be reduced using this regulation by (a) sucking in dry air faster with the incoming air ventilator and (b) letting moist air out faster with the outgoing air ventilator. As soon as the degree of humidity in the living area has reached acceptable values again, both ventilators are gradually set back at their starting point in reverse order.



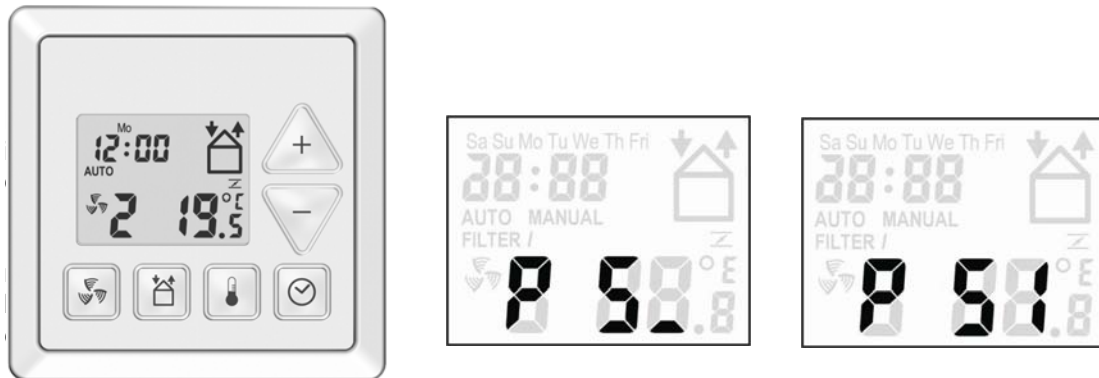
The RH-Sensor must be attached by the installer on to the PCB panel in the electronic housing at the top on the santos 370 DC.

2 Instructions for the installer

This chapter describes how to install the santos 370 DC.

2.1 Starting up the santos 370 D

The santos 370 DC can be started up after installation.



Starting up can take place with the P-menus using the plastic film keyboard. Different settings (especially ventilation controls) can be selected for the santos 370 DC in these P-menus. Below is an overview of the available P-menus:

Menu	Possibilities
P1	Reading the status (from menu P2)
P2	Setting time delays (and message „FILTER DIRTY“ as well as setting values for sensors)
P3	Setting the fan speeds
P4	Reading the temperatures (% and CO ₂ -concentration)
P5	Setting additional controls
P6	[Not available]
P7	Reading and resetting of malfunctions (and system info)
P8	Controlling and regulating
P9	Reading the status (from menu P5)

The P menu, P1, P2 and P9 are accessible for the user and mainly serve the purpose of reading the status and setting time delays. For more detailed information on this, see § 1.2.6. The other P-menus, P3 to P7 can only be used by the installer.





In the P-menus, the user can:

- only set the additional controls P1, P2 and P9. The remaining P-menus, P3 to P7 can only be used by the installer.



2.2 Access to the P-menus

Proceed as follows:

1. **Press** simultaneously on „“ and „“.
2. **Wait** till „P-menu“ appears on the display.









The P-menus, P1, P2 and P9 are now accessible.

3. **Press** simultaneously for two seconds „“ and „“.
4. **Wait** until the „P-menu“ P3 appears on the display.






The P-menus, P3 to P8 are now accessible.

5. **Select** the desired P-menu, eg. „5“ with „“ or „“.
6. **Press** on „“, to confirm the P-menu.
7. **Select** the desired P-sub-menu, e.g. „51“ with „“ or „“.
8. **Press** „“, to confirm the P-sub-menu.



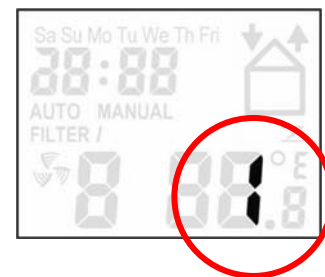
Execute settings in the P-Menus

Proceed as follows:

9. **Select** a value for the parameter with „“ or „“.
10. **Press** „“, to confirm the value.
11. **Repeat** steps 5 to 8 and then step 9 to set several parameters one after the other.





The minimum and maximum values for the setting parameters have been stipulated in the software.



Return to the main window

Proceed as follows:

12. **Press** twice on „“ und „“.



Menu P3 → Setting the ventilation regulators

Sub-menu	Description	Values for ventilation regulators		
		Minimum	Maximum	Standard
P30	Setting the speed (in %) of the outgoing air ventilator at the ABSENT level (only with the plastic film keyboard).	15%	97%	nL / HL 15% / 15%
P31	Setting the speed (in %) of the outgoing air ventilator at the LOW level.	16%	98%	nL / HL 35% / 40%
P32	Setting the speed (in %) of the outgoing air ventilator at the MEDIUM level	17%	99%	nL / HL 50% / 70%
P33	Setting the speed (in %) of the incoming air ventilator at the HIGH level.	18%	100%	nL / HL 70% / 90%
P34	Setting the speed (in %) of the outgoing air ventilator at the ABSENT level (only with the plastic film keyboard)	15%	97%	nL / HL 15% / 15%
P35	Setting the speed (in %) of the incoming air ventilator at the LOW level.	16%	98%	nL / HL 35% / 40%
P36	Setting the speed (in %) of the incoming air ventilator at the MEDIUM level.	17%	99%	nL / HL 50% / 70%
P37	Setting the speed (in %) of the incoming air ventilator at the HIGH level.	18%	100%	nL / HL 70% / 90%
P38	Current speed (in %) of the outgoing air ventilator.	-	-	Current value %
P39	Current speed (in %) of the incoming air ventilator.	-	-	Current value %

Menu P4 → Reading the temperatures and sensor values (%r.F. and ppm)

Sub-menu	Description	Reading temperatures (% and ppm)		
		Minimum	Maximum	Standard
P40	[Not available]			
P41	Comfort temperature	12 °C	28 °C	20 °C
P42	[Not available]			
P43	[Not available]			
P44	[Not available]			
P45	Current value of T1	-	-	Current

	(= Outside air temperature)			value °C
P46	Current value of T2 (= Incoming air temperature)	-	-	Current value °C
P47	Current value of T3 (= Exhaust air temperature)	-	-	Current value °C
P48	Current value of T4 (= Escaping air temperature)	-	-	Current value °C
P49	[Not available]			




Menu P5 → Setting additional controls

Sub-menu	Description	Values for additional controls		
		Minimum	Maximum	Standard
P50	Chimney suitability	0 (= No)	1 (= Yes)	0
P51	[Not available]			0
P52	[Not available]			
P53	[Not available]			
P54	By pass available. Please note: The santos (F) 370 DC has been fitted with a by pass in series. Leave the value at ,1'.	0 (= No)	1 (= Yes)	1
P55	[Not available]			
P56	Setting of the required amount of air for the living area. nL: „normal air quantity“. HL: „high air quantity“. Please note: The setting of air quantity in P56 (to „nL“ or „HL“) forms the basis for setting the air specifications and thus for setting the ventilators. For more detailed information, see § 2.2 and P30 to P37.	nL	HL	HL
P57	Setting of the santos 370 DC type. Le = Left hand side version. Ri = Right hand side version. Please note: The santos 370 DC is correctly set ex works. Also see the identification plate for this data.	Le	Ri	Li
P58	[Not available]			
P59	Indicate existence of a membrane-moisture-heat-exchanger.	0 (= No)	1 (=Yes) * 2 (=Yes)**	0

* 1 (=Yes) corresponds to the membrane moisture heat exchanger **with** humidity sensor
 ** 2 (=Yes) Membrane moisture heat exchanger **without** moisture sensor

Menu P6 → [Not available]

Menu P7 → Reading of malfunctioning (and system info)

Sub-menu	Description	Values for (malfunctioning) info		
		Minimum	Maximum	Standard
P70	Current software version.	Software version number (without „V“)		
P71	Last instance of malfunctioning.	Code conforms to alarm and malfunctioning message (see § 2.4)		
P72	Instance of malfunctioning before the last one.	Code conforms to alarm and malfunctioning message(see § 2.4)		
P73	Instance of malfunctioning before the next to last one.	Code conforms to alarm and malfunctioning message(see § 2.4)		
P74	Reset einer Störung des santos 370 DC.	0	1	0
P75	Vollständiger Reset. Press „  “, for 5 seconds to execute the full reset. All the original factory settings are set again after a complete reset.	0	1	0
	 After a complete reset the santos 370 DC asks you to reset „nl/HL“ (see P56) and „Le/Ri“ (see P57).  After a complete reset, all settings in menus P2 and P3 and the existing controls P5 and P6 must be reset.			
P76	Santos 370 DC self test.	0	1	0
	Explanatory note The green LEDs of the plastic film keyboard light up one after the other and the 7 segments of the 3 return positions light up one after the other (or at the same time). Users must check themselves whether everything is functioning well, since the software cannot compile this information. Right after activating the self test the santos 370 DC switches to the highest level. The by pass valve also opens and closes right after activating the self test.			

Menu P8 → Controlling and regulating

Sub-menu	Description
P80	0 = control 1 = regulate (analogous input 1)
P81	0 = control 1 = regulate (analogous input 2)
P82	min. setting analogous input 1
P83	max. setting analogous input 1
P84	min. setting analogous input 2
P85	max. setting analogous input 2
P86	positive / negative (input 1)
P87	positive / negative (input 2)
P88	Set point input 1
P89	Set point input 2

2.3 Setting the air specifications

The santos 370 DC must be set after installation.

This can take place based on the air specifications of santos 370 DC provided above.

The standard settings for santos 370 DC, nL are:



Level - ABSENT	15%
Level - LOW	35%
Level - MEDIUM	50%
Level - HIGH	70%

The standard settings for santos 370 DC, HL, are:

Level - ABSENT	15%
Level - LOW	40%
Level - MEDIUM	70%
Level - HIGH	90%

Proceed as follows to set santos 370 DC (after installation):

Set santos 370 DC in the setting mode.

Press simultaneously, for two seconds, on „“ and „“.

Wait till „InR“ appears on the plastic film keyboard display.



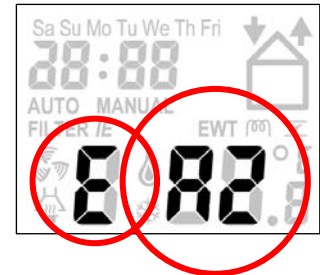
The by pass is always deactivated in the setting mode. After 30 minutes the santos 370 DC will automatically switch off the setting mode again.

2.4 Malfunctioning

When there is malfunctioning of the santos 370 DC:

a report of malfunctioning appears on the display of the plastic film keyboard in most cases.

However, not all reports of malfunctioning appear on the plastic film keyboard display, even if there is an instance of malfunctioning (or a problem). Both types of malfunctioning (or problem) are briefly explained in the following sections.



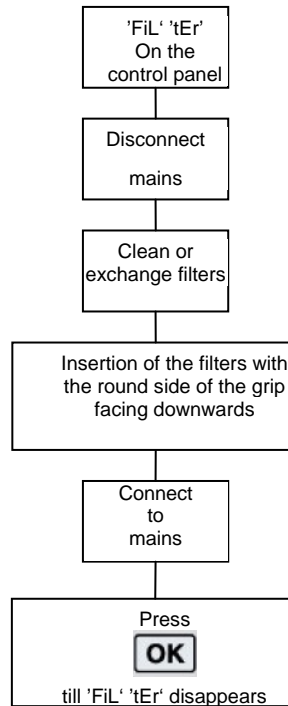
2.4.1 Reports of malfunctioning on the plastic film keyboard display

The following is an overview of reports of malfunctioning shown on the plastic film keyboard display.

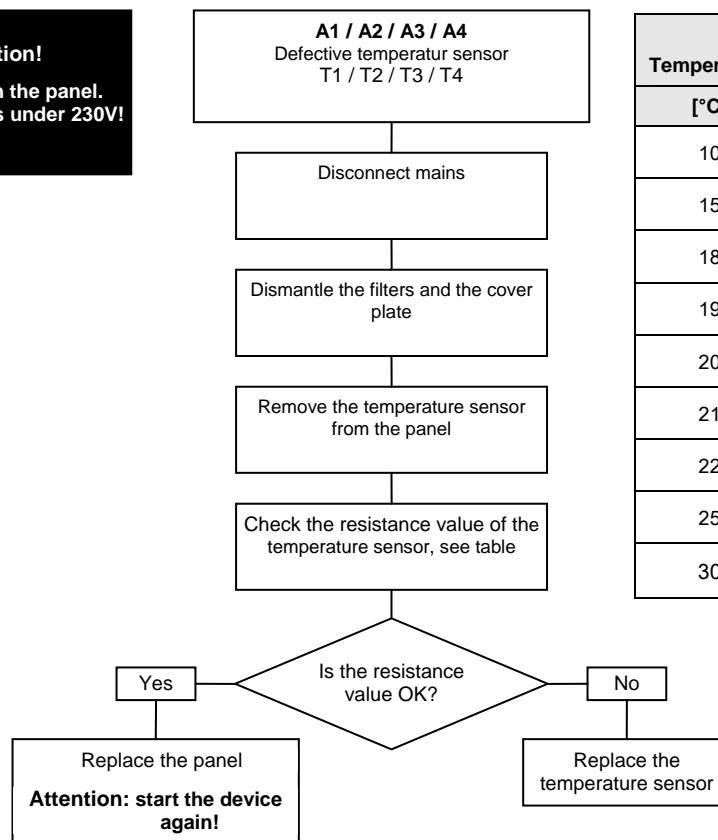
Code	Description
A0	[Not available]
A1	NTC probe T1 is defective (= Outside air temperature)
A2	NTC probe T2 is defective (= incoming air temperature)
A3	NTC probe T3 is defective (= returning air temperature)
A4	NTC probe T4 is defective (= exhaust air temperature)
A5	Malfunctioning of the by pass motor.
A6	[Not available]
A7	[Not available]
A8	[Not available]
A9	[Not available]
A10	[Not available]
E1	Escaping air ventilator is not running (M1).
E2	Incoming air ventilator is not running (M2).
E3	[Not available]
EA1	Enthalpy probe measures too high moisture values.
EA2	No communication with the enthalpy probe.

2.4.2 Reports of malfunctioning on the plastic film keyboard display → eliminate

Below are some tips for eliminating reports of malfunctioning from § 2.4.1, that are shown on the plastic film keyboard display when there are defects.

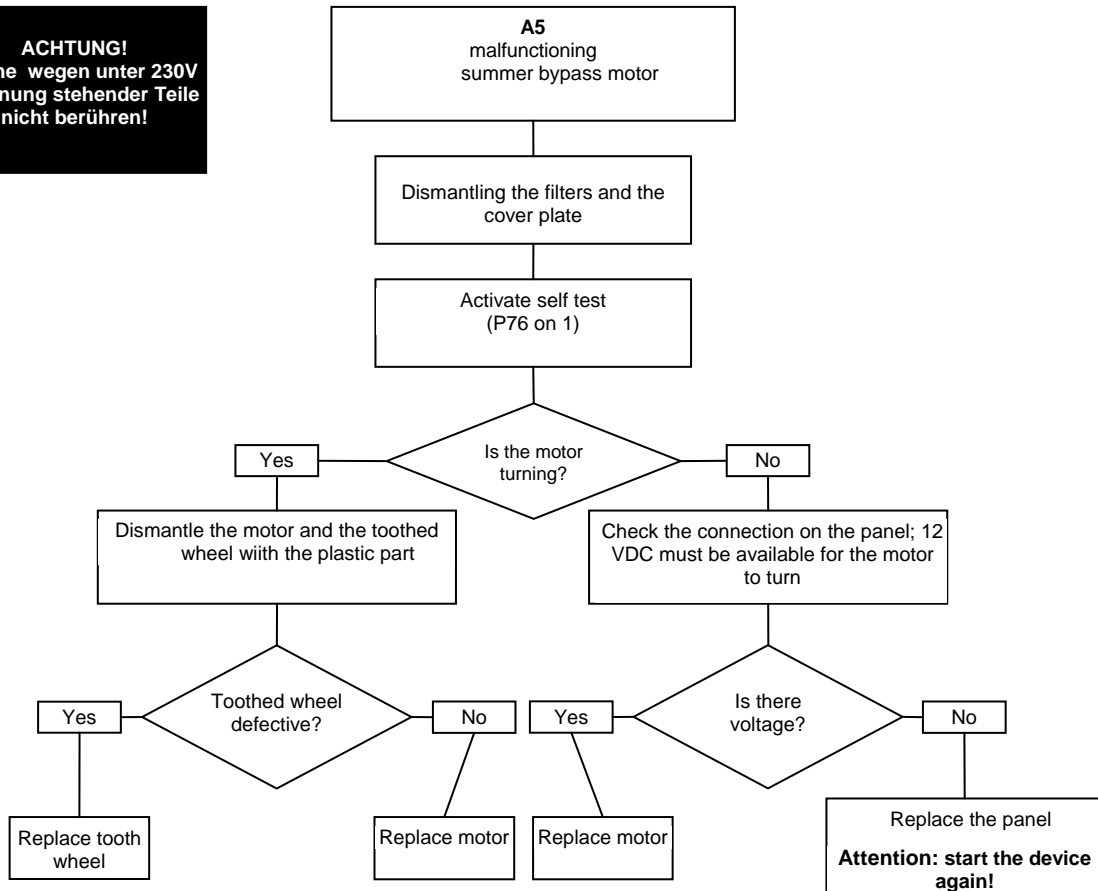


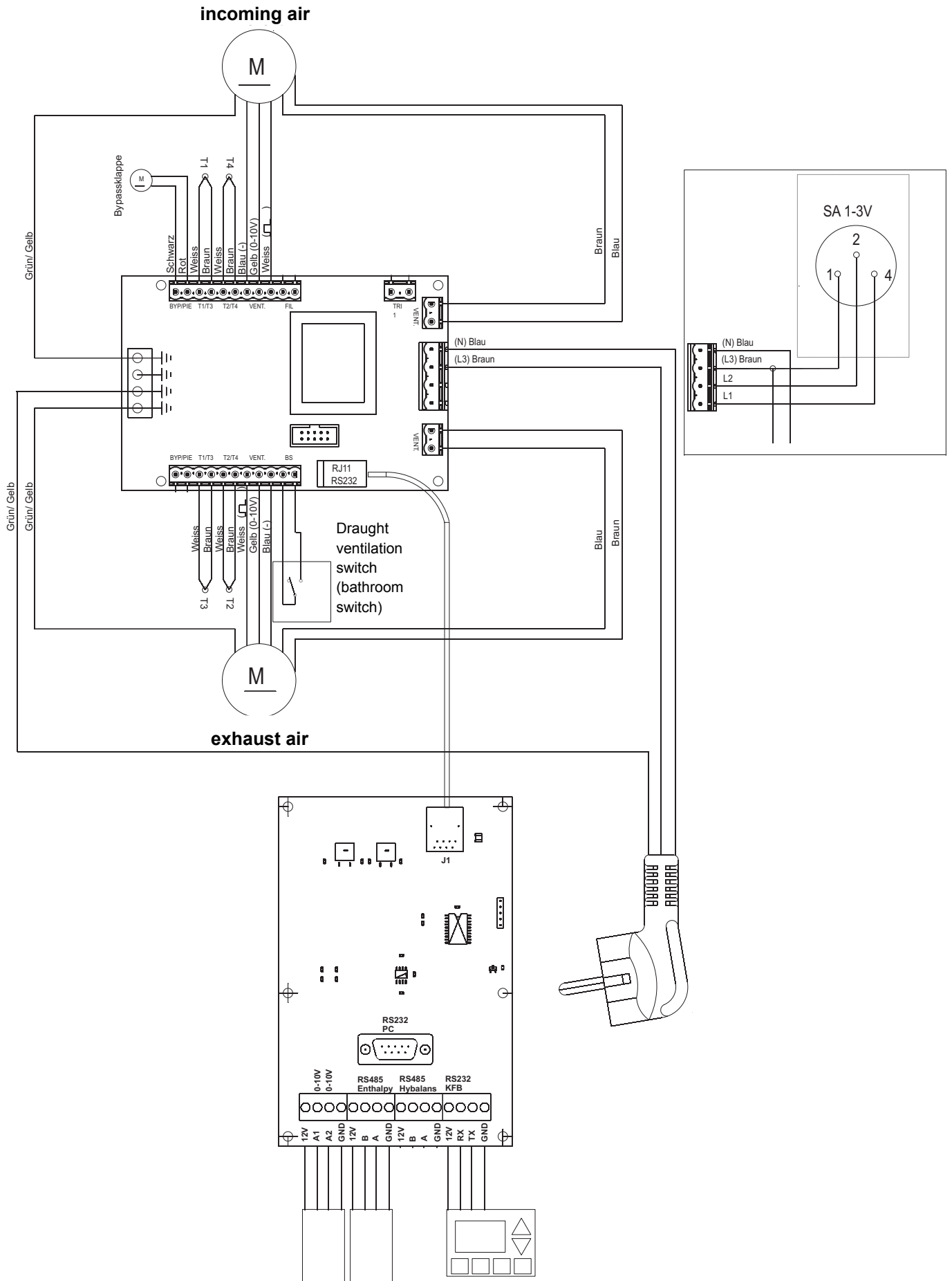
Attention!
 Do not touch the panel.
 There are parts under 230V!



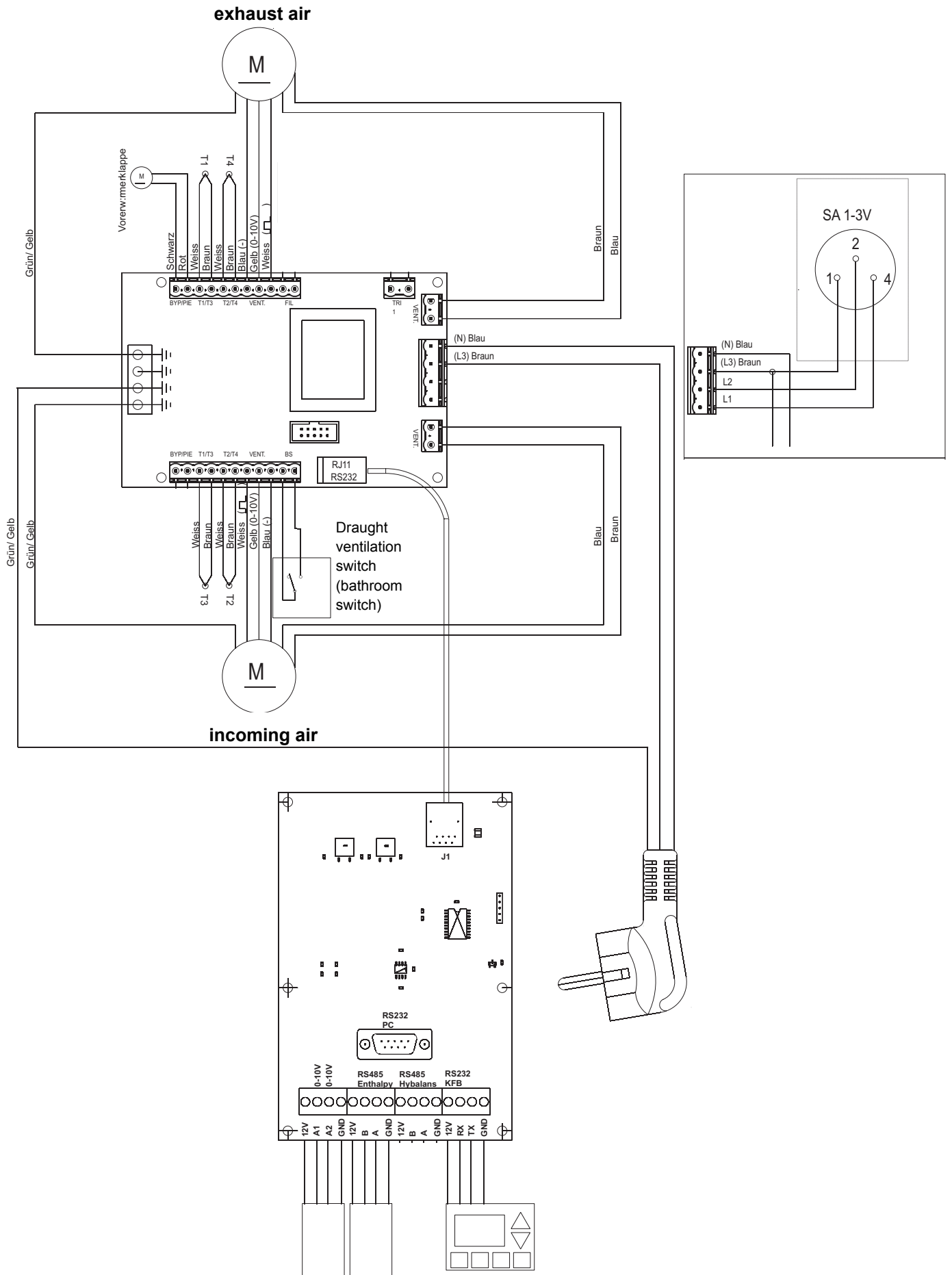
Temperature [°C]	Resistance [KΩ]		
	MIN.	MED.	MAX.
10	19.570	19.904	20.242
15	15.485	15.712	15.941
18	13.502	13.681	13.861
19	12.906	13.071	13.237
20	12.339	12.491	12.644
21	11.801	11.941	12.082
22	11.291	11.420	11.550
25	9.900	10.000	10.100
30	7.959	8.057	8.155

ACHTUNG!
Platine wegen unter 230V
Spannung stehender Teile
nicht berühren!





Appendix 1 Terminal connection plan santos (F) 370 DC, left hand side version with BDE plastic film keyboard



Appendix 2 Terminal connection plan santos (F) 370 DC right hand side version with BDE plastic film keyboard