Ventilation control
for SupraBox COMFORT 800 to 3500

SupraBox

Control panel

1   Index

2 General Information

Read the manual carefully! Take care that each user of the electronic system carefully reads the operation manual prior to the initial operation.

The operation manual must be accessible to everyone.

If there are further questions regarding installation, operation or maintenance please consult our sales department.

3 Safety

The following icons show certain hazards or give advice for the safe operation.

Caution! Danger zone! Safety Advice!

Hazardous electricity or high voltage!

Caution! Hot Surface!

Important advice, Information

This unit carries hazardous electric current and controls rotating, mechanical parts. Death, grave physical harm or substantial damage to property may occur, if the instructions of the operation manual are not observed.

Only qualified personnel should work on the units. This personnel must be familiar with all warning instructions and actions to install and use the unit according to the manual. The successful and safe operation of the unit is dependant on the correct transport, assembly, use and maintenance.

Do not install the unit in places with current conducting dust, corrosive or flammable gases, humidity, rain or excessive heat or pollution.

Suprabox Comfort Control is not protected against explosion!

It is strictly forbidden to perform work on live electrical equipment. Protection rating of the open unit is IP21! Contact with dangerous voltage is possible.

The unit operates with alternating current. The current level must correspond to the value on the name plate. The Suprabox Comfort and the integrated switch cabinet must be closed during the operation.

Repairs may only be made by specialists authorized by Rosenberg Ventilatoren GmbH. Only replace circuit breakers, do not repair or bridge them. Only use fuses which are indicated in the wiring diagram. Check the zero-potential using a bipolar voltage tester.

The wiring of the Suprabox Comfort Control must be according to the installation schematic. Wrong connections lead to the destruction of the unit. Deficiencies of electrical installations/assemblies/equipment must be repaired immediately. If there is imminent danger do not operate the unit/assembly in defective condition.

4 Definition of Qualified Personnel

According to the operation manual and the warning instructions, qualified personnel are persons who are familiar with installation, assembly, initialization and operation of the product and have the following qualifications:

- Training or instruction i.e. authorization to switch power and equipment on and off, to ground and to mark circuits and devices according to the standards of safety engineering.
- Training or briefing in maintenance and use of appropriate safety equipment according to the standards of safety engineering.
- Training in first aid.

5 Normal Operation / Scope of validity

5.1 Normal Operation

The unit is intended exclusively for the use indicated in the order confirmation. Other uses or uses above their intended use are prohibited unless contractually agreed upon. The manufacturer is not liable for damages which might occur by use of the product for something other than its intended purpose. The user assumes all risks.

It is part of the intended use to obey the operations described in this manual for the assembly, operation and maintenance.

We point out that this operation manual is only valid for the device and not for the complete installation!

5.2 Scope of validity

The scope of validity of this manual includes the following control versions:

- Temperature and ventilation control for Suprabox Comfort for series 800-2000

6 Description

The control units have been specially constructed for the control of Rosenberg Ventilatoren GmbH compact appliance series Suprabox Comfort and represent the epitome of convenience, safety of use, control and maintenance of the equipment. State-of- the -art DDC technology is utilized. The control units are produced according to the VDE guidelines and meet the requirements of the valid EG-regulation.

The following functions are included in the control system and can be activated if necessary:

- Temperature control of the incoming air and room temperature respectively for the use of PWW/EEH and/or PKW –coils
- Activating the fans continuously
- Activating the fans using a control sensor
- Overriding of the fans on demand by an external switch contact
- Defrosting the WRG in case of frost risk
- Anti-Blocking protection PWW and PKW
- Anti-Freeze protection PWW
- Overheating control EEH
- Adjustable weekly program with 6 circuit times per day
- Adjustable annual program with up to 8 circuit times per year
- External LCD control with clear text display
- Wiring connections for:
  - o Cooling pump cold water
  - o Heating pump hot water
  - o Electric heating
  - o Electric preheating to avoid freezing of the heat recovery
- Remote maintenance through an optional GLT-interface using Modbus RTU (Slave)

6.1   Technical Data

Nominal voltage	230/400 VAC (+25% / -30%)
Control voltage	24VAC disconnected galvanically from the mains voltage
Ambient temperature of the external operating device	-5°C…55°C
IP protection type of the external operating device	IP65
Wire connection from the control to the operating device.	2x2x0,5mm2
	Length maximum: 10m from supply voltage
Conductor	NYM-J 3x2,5mm²
Maximum power of the alarm relay	250V 5A

The alarm relay energizes as soon as the Suprabox is live.

In case of an alarm or the interruption of the voltage supply the relay de-energizes.

6.2   Terminal Configuration

The terminal configuration has to be performed exclusively according to the valid wiring diagram.

6.3   Scope of Delivery of the Control System

Control, integrated in the Suprabox Comfort

External device EVK

Operation Manual of the ventilation control for Suprabox Comfort 800-2000

Wiring diagram

7 Installation

- Unpack the components and check for damages. Inform the supplier immediately about damages.
- Read operation manual and safety instructions carefully. Take care that every user of the Suprabox Comfort Control reads the operation manual before initiation. The operation manual must be accessible to everybody.
- The unit may not be installed in places with current conducting dust, corrosive or flammable gases. Protect the control and operating device from humidity, rain or heat.
- The control is operated with alternating current voltage. Obey the instructions on the type plate.
- Electrical installation of the equipment, the mains voltage and the external operating devices must be made according to the valid circuit diagram.
- Electrical connection may only be made by an authorized electrician according to the VDE regulations and the instructions of the local EVU. Connection must be made exactly according to the circuit diagram and the configuration diagram. Check all screw joints and retighten them if necessary.
- The main switch fixed at the control terminal of the SupraBox Comfort must be freely accessible. The phases must be connected to the main switch.
- The consumer loads (fans, pumps) as well as the control elements (servomotors, valve gears) can be wired with standard cables (NYM).
- The collective alert contact is a changeover contact, which displays malfunctions of the equipment. The relay is energized, if there is voltage supply and no malfunction. In case of alarm message, the relay will de-energize and keeps this status until the malfunction is repaired and the current alert will be acknowledged at the operating device.

7.1 Assembly / Initiation

Preparing the Suprabox for initial operation:

- **Proper mechanical assembly**
- **Electric connection according to instructions**
- **Remove foreign particles in the suction and exhaust area and in the complete Suprabox Comfort.**

The fans must rotate completely smoothly and without jolt at every motor speed.

The control and the electrical accessories must be connected according to the connection diagram. Faulty connections will cause destruction of the unit.

The user is bound to operate the devices only in proper working condition. Danger zones which can exist between the Rosenberg Ventilatoren GmbH units and installations on the customer side, must be safeguarded by the user!

7.2 Lead Colours

Main current:			Control wire:	
L1 ⇒ black	N ⇒ blue		24V AC ⇒ red	24V DC ⇒ purple

PE ⇒ yellow/green		24V AC ⇒ red-white	24V DC ⇒ purple-white
		External voltage alarm relay	orange

7.3   Identification of Electric Accessories

Code letter	Types of Accessories	Examples
A	Assemblies	Amplifier as assembly
B	Converter	Measuring converter, microphone
C	Capacities	Condenser
D	Memory, delay device	UND-link, magnetic tape recorder
E	Miscellaneous	Light, heating
F	Protection equipment	Fuse, actuator
G	Generators, power supply	Machine generator, oscillator
H	Annunciator	Signal unit
K	Relays, contactors	Auxiliary contactor, main contactor
L	Inductors	Coil
M	Motors	Polyphase motor, direct current motor
N	Amplifier	Measuring amplifier
P	Measuring amplifier	Voltmeter
Q	High voltage current devices	Circuit breaker, automatic interrupter
R	Resistors	Thermal resistor
S	Switch, selector	Key, rotary switch
T	Transformers	Voltage transformer
U	Modulators	Frequency converter
V	Tubes, semi-conductors	Diodes, Transistors
W	Transmission	Cables, waveguides
X	Clamps	Socket-outlet
Y	Electric mechanics	Break
Z	Escape, Filter, Balance	Compandor

8 Brief Instruction

If there no key is pressed within 60 s the display will automatically switch back to the main display from each submenu.

8.1   Key Configuration

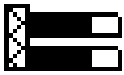|		
	[UP]	Selects the previous parameter or the previous menu button.
	[DOWN]	Selects the next parameter or the next menu button.
	[BACK]	Return to the previous page.
		Changes the Modification of the variable parameter on adjustment of the value.
	[FORWARD]	Selects the following page.
		Modification of the variable parameter on setting the value.
	[OK]	Selects the current value for setting.
		Confirms the setting.
		Selects the alarm list on the main display. (press the key for a longer time).
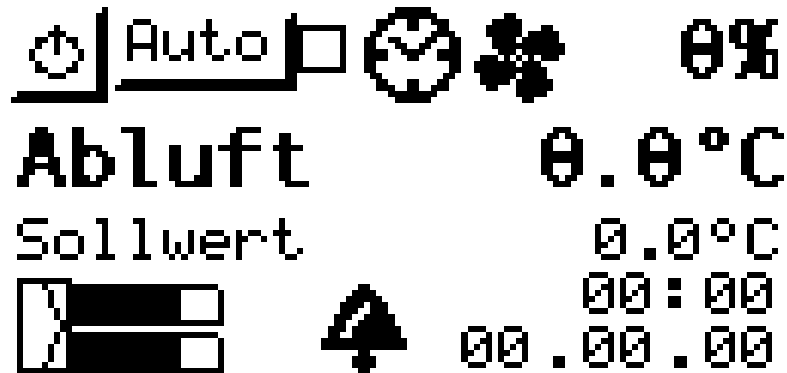
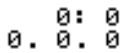|	
	ON: an unaddressed alarm is active.
	Indicates the current pressure loss of the filter (0-100%). When the maximum pressure loss is reached (dirty filter), alarm is indicated.
	Icon for power on and off of the Suprabox Comfort Control.
	The fan rotates, when it is running. The fan flashes when it is in overdrive.
	Displays the current nominal value of the fan. In case that no time program is activated and no automatic operation is selected.
	Displays if a weekly or annual time program is active.
	Displays the date and time.
	Displays the current control temperature and the preset nominal value. Serves for setting the temperature nominal value, in case there is no time program activated.
	Display and switchover of the automatic operation, in case there is no time program activated.
	Automatic operation: The automatic operation can be activated manually or by use of the weekly program.

8.3 Switch On/Off the Unit

The ventilation system is started or stopped by pressing the [OK] key while the ⏻ icon in the upper left corner is highlighted.

Unit OFF → ← Unit ON
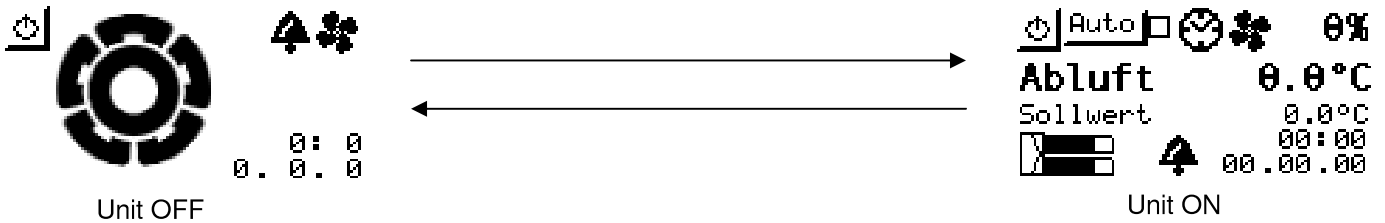
8.4 Setting the Fans

With the [UP] and [DOWN] keys the fan value can be selected in the upper right corner and confirmed with [OK]. The individual display positions can be selected with the keys [FORWARD] and [BACK] and set with [UP] and [DOWN]. The nominal value will be confirmed and saved with [OK].

The nominal value can only be modified if no time program is activated and if at least one fan is set according to the motor speed, pressure or flow rate.

For the **flow rate** the following applies in case of low external pressure:

Suprabox Comfort 800V and 800H: 100% corresponds to max 1000 m³/h

Suprabox Comfort 1100V, 1100H and 1100D: 100% correspond to max. 1400 m³/h

Suprabox Comfort 1500V and 1500H: 100% correspond to max. 1700 m³/h

Suprabox Comfort 1900D: 100% corresponds to max. 2200 m³/h

Suprabox Comfort 2000H: 100% corresponds to max. 2500 m³/h

Suprabox Comfort 2000V: 100% corresponds to max. 2500 m³/h

For the **pressure control** the following applies:

Suprabox Comfort 800V and 800H: 100% corresponds to max 300Pa

Suprabox Comfort 1100V, 1100H and 1100D: 100% corresponds to max. 400Pa

Suprabox Comfort 1500V and 1500H: 100% corresponds to max. 500Pa

Suprabox Comfort 1900D: 100% corresponds to max .600Pa

Suprabox Comfort 2000H: 100% corresponds to max. 600Pa

Suprabox Comfort 2000V: 100% corresponds to max. 700Pa

8.5 Setting the Temperature

Select the temperature nominal value with the [UP] and [DOWN] keys and confirm with [OK]. The individual display positions can be selected with [Forward] and [BACK] and adjusted with [UP] and [DOWN] confirm and save the desired nominal value with [OK].

The nominal value can only be modified if no time program is activated.

8.6 Activating the Automatic Operation

Select the Auto-Icon with the keys [UP] and [DOWN] and confirm with [OK]. When the automatic operation is successfully started, a tick appears in the checkbox next to the Auto-Icon. To deactivate the key [OK] must again be pressed while the Auto-Icon is highlighted.

During the automatic operation the ventilation intensity is automatically calculated. There are two variations:

1. If there is an external sensor for moisture measurement, air quality measurement or pressure measurement with a 0-10V out, the sensor value is applied in order to determine the optimal ventilation demand.

2. If there is no sensor, the ventilation intensity is determined by the heating or cooling demand. The greater the temperature difference, the more must be ventilated. The fans will be operate in three-stages in this case..

8.7 Alarm Display, Alarm Message and Warnings

An alarm message will be generated, when the **exhaust filter is dirty** (the maximum pressure deviation of the exhaust filter).

A dirty filter must be replaced. Replacement parts can be ordered under the following part numbers:

Exhaust Air Filter Suprabox 800 H Comfort: FPES080-F500

Exhaust Air Filter Suprabox 800 V Comfort: FPES080-F50V

Exhaust Air Filter Suprabox 1100 H Comfort: FPES110-F500

Exhaust Air Filter Suprabox 1100 D Comfort: FPES110-F50D

Exhaust Air Filter Suprabox 1100 V Comfort: FPES110-F50V

Exhaust Air Filter Suprabox 1500 H Comfort: FPES150-F500

Exhaust Air Filter Suprabox 1500 V Comfort: FPES150-F50V

Exhaust Air Filter Suprabox 1900 D Comfort: FPES190-F50D

Exhaust Air Filter Suprabox 2000 H Comfort: FPES200-F500

Exhaust Air Filter Suprabox 2000 V Comfort: FPES200-F50V

An alarm message will be generated, when **the fresh air filter is dirty** (the maximum pressure deviation of the fresh air filter).).

A dirty filter must be replaced. Replacement parts can be ordered under the following part numbers:

Fresh air filter Suprabox 800 H Comfort: FPES080-F700

Fresh air filter Suprabox 800 V Comfort: FPES080-F70V

Fresh air filter Suprabox 1100 H Comfort: FPES110-F700

Fresh air filter Suprabox 1100 D Comfort: FPES110-F70D

Fresh air filter Suprabox 1100 V Comfort: FPES110-F70V

Fresh air filter Suprabox 1500 H Comfort: FPES150-F700

Fresh air filter Suprabox 1500 V Comfort: FPES150-F70V

Fresh air filter Suprabox 1900 D Comfort: FPES190-F70D

Fresh air filter Suprabox 2000 H Comfort: FPES200-F700

Fresh air filter Suprabox 2000 V Comfort: FPES200-F70V

There is an **error in the exhaust fan**.
Both fans are stopped automatically and only re-started after acknowledgment.

There is an **error in the fresh air intake fan**.

The utilized EC-fans have a fault contact which is opened in case of a fault. The following errors are also indicated in the fault output:
• blocked wheel
• excessive electronics temperature
• excessive motor temperature
• overcurrent faults
• mains undervoltage
• mains overvoltage
• over rev
To ensure a correct restart after an alarm was indicated, the fans should be disconnected from the mains for at least 5 minutes.

The water heater is supplied with a capillary contact, which opens in case the **frost protection temperature** falls below the minimum level. After that the mixing valve of the heating coil will be totally opened, the circulating pump started, the fans stopped and the fresh air ventilation flap closed. When the capillary contact closes, the unit re-starts after a certain time which can be determined. After the frost protection alarm is tripped three times (within 2h) the unit is stopped until it is manually re-started at the operator panel. Before the manual restart the cause of the alarm must be verified.

For the correct operation of a heating or cooling coil an **external temperature sensor** is needed. If a heating or cooling coil is released during the re-start, an alarm will be initiated in case that the duct sensor is missing or not recognized correctly. The unit will be stopped until the error is acknowledged.

Three internal temperature sensors are integrated in the unions of the Suprabox Comfort for the measurement of exhaust air, fresh air (during the operation of the Suprabox Comfort) and to measure the temperature after the heat recovery. An alarm is initiated in case that one or several sensors are incorrectly connected or defective. In case of error the unit will be stopped until it is acknowledged.

The **electric heater** is equipped with an internal **overheat control**. When an alarm is tripped it is indicated as an alarm message on the operation panel and the heater is stopped until the error is acknowledged. The fans will run at high speed for 10 minutes, afterwards the Suprabox is completely stopped until the error is acknowledged.

A **temperature control** is attached at the **pre-heater**. If the temperature of the heating coil exceeds the limit, an error is indicated and the heating stopped until the error is acknowledged. The fans will run at high speed for 10 minutes, afterwards the Suprabox will be completely stopped until the error is acknowledged.

A **smoke alarm** or a signal contact to a **central fire alarm system**/a fire protection flap can be connected to the Suprabox Comfort. The behaviour in case of alarm can be adjusted on startup of the unit. After the alarm is acknowledged, the Suprabox Comfort continues normal operation.

>>Alarm<<

The **differential pressure control** monitors the reverse flow heat exchanger for **frost.** On startup of the unit, the type of defrosting can be determined.

1. If an imbalance of the fans is allowed, in case of frost the fresh air fan will be reduced by 30% in order to encourage defrosting by the warmer exhaust air..

2. If an electric pre-heater is installed and released, it will be activated in case of frost in order to heat the fresh air and thus defrost the heat exchanger.

3. If both variations have been allowed the fresh air will be reduced first. If this is not sufficient the pre-heater will be started after 5 minutes.

4. If no action was successful or neither variation is possible, the Suprabox Comfort will be deactivated and an alarm indicated. It is not necessary to acknowledge the alarm. After 10 minutes the Suprabox Comfort starts the fans automatically.

>>Alarm<<

The internal temperature sensors and continuous pressure sensors are connected to the control by a **bus**. If the bus connection does not work correctly an alarm message is indicated. The Suprabox Comfort will be deactivated until the error is removed and the alarm acknowledged.

Aktive Alarme   0/0
Zuluftvent.
Abluftvent.
Frostschutz
                quittieren

The active alarms will be indicated by pressing and holding [OK] key in the main display. There you can see which type of error has occurred. The removed errors can be acknowledged by pressing the [OK] key as long as the button "acknowledge" is marked.

>>Warnung<<
Betriebs-h
Zuluftventilator

The running time meter of the fresh air fan has reached the limit. The yellow LED at the operation unit stays lit until the meter is reset.

**>>Warnung<<**
Betriebs-h
Abluftventilator

The running time meter of the exhaust fan has reached the limit. The yellow LED stays lit until the meter is reset.

>>Warnung<<
Betriebs-h
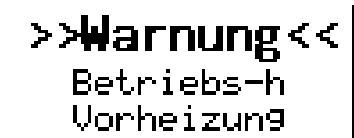Pumpe Heizen

The running time meter of the heating pump has reached the limit. The yellow LED stays lit until the meter is reset.

>>Warnung<<
Betriebs-h
Pumpe Kühlen

The running time meter of the cooling pump has reached the limit. The yellow LED stays lit until the meter is reset.

>>Warnung<<
Betriebs-h
Elektroheizung
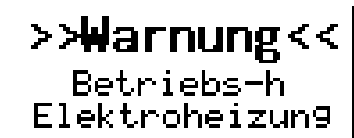
The running time meter of the heating coil has reached the limit. The yellow LED stays lit until the meter is reset.

>>Warnung<<
Betriebs-h
Vorheizung

The running time meter of the pre-heating coil has reached the limit. The yellow LED stays lit until the meter is reset.

8.8　　　　General Settings

In the general settings the weekly program, the annual program and the menu language can be modified. The general settings can be entered without a password. The menu for the selection of the settings can be called up by using the key [FORWARD].

Press [OK] while the ⊕ icon is highlighted in order to call up the language settings.

Press [OK] while the icon is highlighted in order to call up the time settings.

Press [OK] while the icon is highlighted in order to call up the manufacturer information.

Press [OK] while the ⌐° icon is highlighted in order to call up the password entry.

8.8.1　　　　Language Settings

By pressing the [OK] button the value can be selected. The language can be changed by pressing the [UP] and [DOWN] buttons and confirming with [OK].

It takes about 5 sec for the new language to load. During this time the display is inactive.
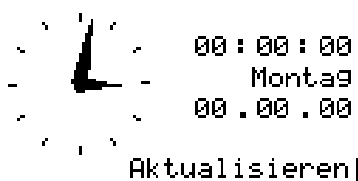
8.8.2　　　　Time and Time Programs

Three time settings are possible:
- Setting of the current date and time
- Setting and activation of the weekly programs
- Setting and activation of the annual program

The current time and date will be specified in the format hh:mm:ss – weekday – dd.mm.yy.

Press the menu button „Update" in order to save the changes.

If the weekly program is already set, it can be enabled without further settings. During the time in which the nominal values are defined by the weekly program, the clock appears on the main display and the corresponding buttons for the nominal value definition are deactivated.

Three possible settings of the weekly program are possible.
- Week: there is one time schedule for the whole week
- -5-2: there is a time schedule for all weekdays. And a second time schedule for the weekends.
- Day: An individual time schedule is set for each day of the week.

```
Sollwert        0/0
Set 0

Lüftung    Man   0%
Temperatur      0.0°C
```

For programming the ventilation there are up to 6 nominal value combinations of temperature nominal value and ventilation nominal value.

In addition the ventilation can be modified from („Man") to automatic („Auto"). If the automatic operation is selected, the percentage of the standard value will not be considered.

```
Einstellungen   0/0
 Zeit          Set
00:00          AUS
00:00          AUS
00:00          AUS
```

For every schedule up to six cycle times can be defined, the last cycle time of the day always ending at 11:59 p.m. A nominal value set can be allocated to each cycle time, the unit can be stopped or the weekly program deactivated.

When entering the cycle times, pay attention that the individual changeover times are set in ascending order.

If two identical numbers are set, only the first will be saved. The individual interval times should therefore last at least 15 minutes.

```
Jahresprogramm

Freigabe        Nein

    Einstellungen  |
```

If the annual program is already set, it can be enabled without further adjustment. During the times in which the nominal values are defined by the annual program, the clock appears on the main display and the corresponding buttons for the nominal value definition will be deactivated.

The annual program overrides the active weekly program.

```
Jahresprogramm  0/0
Start      Stop
 0.Jan.     0.Jan.
Temperatur      0.0°C
Lüftung    Man   0%
Suprabox   Aus  + -|
```

For the annual program there are a maximum of 8 time frames available. The time frames can be released or deleted with the button „+" or „-" Regarding all data between the start and stop data the indicated nominal values are used for the ventilation.

Be aware that the start date must appear prior to the stop date and that there is no turn of the year within one time frame.

In case of overlapping of two registered time frames, the definition of the time frame with the lower indication (right upper corner of the display) will be preferred, this means if the first period lasts from the 1st January until the 1st February and the second period from15th January until 20th January, this second time frame will not be considered.

8.8.3   Manufacturer Information

```
Rosenberg       0.00
   Ventilatoren GmbH
Maybachstr. 1
D-74653 Künzelsau
+49 (0)7940142-0
info@
   rosenberg-gmbh.com
```

Shows address and phone number of Rosenberg Ventilatoren GmbH.

In addition in the upper right hand corner you'll find the current software version of the program.

9 Service-Menu

9.1   Enter the Service-Menu

Suprabox Comfort

Press [OK] while 🔑 is highlighted, in order to call up the password entry.

Passwort eingeben:

abcde

The password for the service-menu is:

*0077

Bestätigen

The following submenus are available:

1. Release ✔
2. Working hour meter ⊠
3. Alarm memory ⚠
4. USB (Program update) ⚡

Freigaben

ⓘ The password will be automatically reset, if no key is pressed for a longer time and the backlight is turned off.

9.2   Release

Pressing [OK] button while ✔ is marked, calls up the display for releasing or blocking individual functions.

Freigaben

```
Freigabe          0/0
Minimalstellung Nein
Vorspülen       Nein
Stützbetrieb-K  Nein
Stützbetrieb-H  Nein
Nachtlüften     Nein
```

The following functions can be released or blocked::

- Minimum setting of the heating valve ->available only for hot water heating.
- Pre-Ventilation -> available only for hot water heating
- Support mode cooling -> available only for cold water cooling and integrated room temperature sensor
- Support mode heating -> available only for hot water heating or electric heating and integrated room temperature sensor.
- Night Ventilation -> available only for integrated room temperature sensor and outside temperature sensor.

In order to be visible and adjustable the individual functions must be released in the technician menu.

ⓘ **Minimal Configuration:**

If the minimal configuration is activated and the outside temperature falls under the limit the heating valve will stay open by the defined value (also when the fans are switched off). The adjustable values can be defined on initial startup.

Pre-Ventilation:

If pre-ventilation is active, the hot water heater will be activated in case the outside temperature falls under the defined limit prior to the fans being activated on startup of the unit.

Support mode:

In support mode the unit will automatically be started when the defined temperature falls below or exceeds the limit and the temperature will be adjusted so that the room temperature which is defined in the technician menu will stay within the limits.

Night Ventilation:

In the summer certain temperature conditions allow an air exchange at night without additional cold water cooling. This is the case when there are high temperatures during the day and a cooling down at night. At night the outside temperature must be higher than 16 °C (thus night ventilation is disabled in winter). At the same time the room temperature must rise to at least 24 °C. The difference between room and outside temperature must be greater than 4 °C. The temperature limits can be modified in the technician menu.

9.3   Working Hours

By pressing the key [OK] while ⊠ is highlighted, the working hours of the corresponding device will be called up on the display.

```
Freigaben
Betriebs-h        0/0
Zuluftvent.        0h
Abluftvent.        0h
Rücksetzen      NeinID
Pumpe Heizen       0h
Rücksetzen      NeinID
```

The working hour meter monitors the following functional units:

- Fresh Air fan
- Exhaust fan
- Heat Pump
- Cooling Pump
- Electric heating
- Pre-heating

The current working hours of the existing functional units will be indicated on the display and can be reset after control/maintenance.

In addition the current pressure loss (in Pa) of each filter will be indicated on the display.

9.4   Alarm Memory

By pressing the key [OK] while ⚠ is highlighted, the alarm memory of the unit will be called up on the display.

```
Freigaben
Alarmspeicher     0/0

abcdefghijklmnopq

Zuluftventilator
```

The alarm memory includes ten memory spaces in which the alarm messages can be saved with date and time. The alarm memory cannot be deleted manually.

9.5 USB

Connection of the USB flash drive:

Open the cover on the left side of the controller board and plug in the USB flash drive in the corresponding port. (see picture)

After the transfer of the data the USB flash drive must be removed and the cover closed in order to avoid invasion of foreign objects.

By pressing the [OK] button while ⚡ is highlighted, the display of data transfer to or from a USB flash drive will be called up.

```
      Freigaben
USB Übertragung

  USB -> Suprabox |

  Suprabox -> USB |
```

The transfer direction can be selected.

```
USB -> Suprabox
    Application |

    Anzeige |

    Verbindungen |

    Parameter |
```

The transferrable data from USB to the Suprabox Comfort are:
- the control program
- the display at the operating unit
- the connections to GLT and the internal modbus sensors
- the parameters which are to be used

Transfer of data to the controller:

Select the data which should be transferred.

If you wish to copy the program and the display again, the program/ application should first be uploaded to the controller.

After a successful upload, the controller must be disconnected from the supply voltage for a short time, in order to save the new settings (turn off the circuit breaker at the Suprabox Comfort for a moment).

When the upload is completed the corresponding message is displayed.

```
     Fertig
```

ℹ It may take some time until the data upload is completed.

In order to prevent the display from automatically returning from the submenu to the main display since no key is pressed, you can press [UP] or [DOWN]

If the display is closed prematurely the completion of the upload cannot be verified.

`Suprabox -> USB`

`Parameter`

From Suprabox Comfort to USB only the current parameters can be transferred.

Data transferred from the controller:

Select the transfer direction Suprabox Comfort to USB on the display and then select „parameter" upload. When the upload has been completed the corresponding message appears.

ℹ **Data Types:**

For the upload of the program from USB to Suprabox Comfort the file names must be the following:

Application: PLCICE.COD

Display: HMIIEC.KBD

Connections: CONNEC.PAR

Parameter: PARAM.DAT or 00PARAM.DAT

ℹ If the parameters have been saved on an USB flash drive directly after initiation, the settings can be saved and uploaded again on the controller if necessary.

`EVK`

`Bios Parameter`
`HMI verwalten`

After the file HMIIEC.KDB has successfully been uploaded on the control board, the new pages must be copied on the operational unit. To ensure this, it is necessary to open the BIOS menu by pressing and holding the two keys [Return] and [DOWN] simultaneously for a long time.

Select the menu „HMI Manager".

`EVK`

`Sprache :  0  ⬆⬇`

If you press the key [OK] while the „HMI Manager" is highlighted, the menu for setting the upload parameters will be called up.

`HMI verwalten`

`EVK              0/ 0`
`Date:abcdefghijkl ⬆⬇`
`Id  :  0`
`Com :Lokale       ▣↱`
`Adr :000.000.000.000`

The following data must be set:

Date: HMIREM.KBD

Id: 0

Com: CAN

Adr: 124

Now use the button with the up arrow: ▣↱ in order to start the upload.

`Upload Remote Seite`

`In Bearbeitung...`

`▓▓▓▓▓▓░░░░`
`0%`

The display indicates the current transfer status in percent.

When the operation unit is completely updated, the new pages can be called up by use of the double arrow button ⬆⬇ .

10 Technician- Menu

10.1 Enter the Technician Menu

Suprabox Comfort

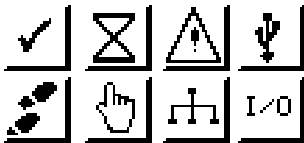Press [OK] while 🔑 is highlighted in order to call up the password.

Passwort eingeben:

The password for the technician level is::

abcde

Supra

Bestätigen

Freigaben

The following submenus are available:

1. Release
2. Working hour meter   ⎫
3. Alarm Memory   ⎬ See service level
4. USB (program update)   ⎭
5. Initiation
6. Manual Operation
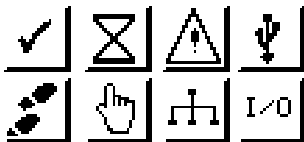7. Bus Settings
8. Current Data

ℹ The password will automatically be reset, if for a longer time no key is pressed and the backlight is turned off.

10.2 Setup

ℹ The individual pages will only be displayed, if the corresponding setting is active in the unit configuration.

Freigaben

The Suprabox Comfort control comes with step-by-step setup support. This can be called up by pressing the key [OK], while the icon 👞 is highlighted.

The setup should always be restarted after a new device has been connected because the setup steps have to be adjusted accordingly as well as the corresponding control function deactivated **before** the device is removed.

Temperaturfühler
Zuluftfühler   erkannt
Außenfühler   erkannt
Raumfühler   erkannt

This view only indicates which temperature sensors are installed. These settings cannot be modified.

Zuluftfühler
Steigung   0
Offset   0

For every correctly connected sensor a page is called up, which helps to adjust the sensor characteristic curve. Differences between the measured temperature and the real temperature can be adjusted.

The modifications go into effect only after restart of the Suprabox Comfort Control.

```
Klappen & Filter
Außenluftklappe    Nein
Fortluftklappe     Nein
Maximaldruck
Außenfilter         0Pa
Abluftfilter        0Pa
```

If an air damper and/or an exhaust flap have been installed, the adjustment must be made at this point.

In addition the maximum pressure loss of both filters can be defined. If this limit is exceeded an alarm will be given.

```
Außenluftklappe
Laufzeit            0s
Invertieren        Nein
Federrücklauf      Nein
```

If an air damper or an exhaust flap has been installed, the running time of the actuator can be adjusted at this point.

The output signal for the control of the damper drives can be inverted, if the flaps are connected with inversion and no longer accessible.

If the fan is supplied with a spring return, it can be set here, thus the controller assumes a closed flap during the re-start of the supply voltage.

```
WRG-Klappe
Laufzeit            0s
```

The running time of the dampers can be set for the WRG–flap.

```
Angeschl. Zubehör
Heizung           Keine
Kühlung           Keine
Vorheizung        Keine
```

For heating, the hot water pump (PWW) or the electric heater (EEH, constant) can be selected.

For cooling, the cold water pump (PKW) can be selected.

As pre-heating electric heating can be selected (EEH, ON / OFF).

```
Regeltemperatur


Ablufttemperatur
```

For the temperature control the incoming air temperature control or the exhaust air temperature control can be selected. Optionally, the room temperature control can be selected. This is required for the comfort functions like the free air ventilation at night.

The room temperature control can only be selected, if an external room temperature sensor is installed.

```
Heizung            0/0
Ventil Laufzeit     0s
Stellsignal      0-10V
Blockierschutz    AusID
Betriebs-h          0h
Frostschutz        0mn
```

This display will only be active if a hot water heater is enabled.

Here the running time of the valve gear and its control signal (0-10V or 2-10V) can be set.

The blocking protection of the hot water heater can be activated. If it is activated, the pump will be started intermittently in order to prevent blocking.

The maximum number of working hours until a warning is given can be determined.

Pre-ventilation and the defined limiting value of the outside temperature can be adjusted and activated.

The minimum setting and the defined limiting value of the outside temperature can be adjusted and activated.

The length of the defrost cycle can be defined in case of a frost alarm.

```
Rücklaufregelung  0/0
Grenztemperatur  0.0°C
Rücklauftemp.    0.0°C
P Band           0.0°C
I Zeit              0s
Abtastzeit         0ID
```

This display will only be active if a hot water heater is enabled and the contact sensor connected.

Here it can be defined at which outside temperature the return control will be activated, which temperature will be set and which parameters will be applied.

```
Heizung            0/0
Nachlaufzeit        0s
Betriebs-h          0h
```

This display will only be active if an electric heater is enabled.

The cool-down time of the fans can be set.

The maximum number of working hours until a warning is generated can be set.

```
Kühlung
Ventil Laufzeit     0s
Stellsignal     0-10V
Blockierschutz   AusID
Betriebs-h          0h
```

This display will only be active if cold water cooling is enabled.

Here the running time of the valve gear and its control signal (0-10V or 2-10V) can be set.

The anti-blocking protection can be activated. If it is activated, the pump will be intermittently started in order to prevent blocking.

The maximum number of working hours until a warning is generated can be set.

```
Basiseinstellung 0/0
Totzone         0.0°C
Wartezeit          0s
Temp. min.      0.0°C
Temp. max.      0.0°C
Zuluft min.     0.0°C
```

In the general settings the dead zone for the temperature control is determined as well as the wait time between heating and cooling. In addition the maximum and minimum fresh air temperature for the cascade control and the limits of the temperature nominal value will be defined.

Dead Zone:

The dead zone corresponds to a temperature range around the nominal value. Only if the control temperature is no longer in this range, then the temperature will be newly adjusted.

```
Vorheizung
Verwendung zur
        Enteisung
Betriebs-h          0h
Rücksetzen        Nein
```

The selection has to be made whether the pre-heating should be activated when the WRG (heat recovery) is already frozen, or if it should only be activated at a defined outside temperature as preventative option.

The maximum number of working hours until a warning is generated can be set.

The working hour meter can be reset after maintenance of the heater.

```
Vorheizung



Minimale Laufzeit  0s
```

If pre-heating is used exclusively in case of frost, the duration of the pre-heating time is indicated until the unit stops.

```
Vorheizung



Starttemp       0.0°C
```

If pre-heating is used as a preventative function the lower limit of the outside temperature at which pre-heating starts can be defined here.

```
PI Kaskade
P Band          0.0°C
I Zeit             0s
Abtastzeit          0
Änderungsrate       0
```

The cascade control operates the fresh air temperature in case that room temperature or exhaust air temperature control is selected. For this purpose a P-control or PI-control is available. If the I-time is defined with "0", the I-part is deactivated and the control works like a P-control. The contact time corresponds to the time passed until the cascade control is re-calculated.

With the modification rate the maximum modification of the re-calculation can be restricted in order to avoid jumps in nominal value.

```
PI Heizen
P Band        0.0°C
I Zeit          0s
Abtastzeit       0
Änderungsrate    0
```

This display will only be active if a hot water heater or electric heater has been enabled.

The heater control operates the nominal temperature in case of heating. For this a P-control or PI-control is available. If the I-time is defined with „0"the I-part is deactivated and the control works like a P-control.
The contact time corresponds to the time passing until the heating control is re-calculated.
With the modification rate the maximum modification of the re-calculation can be restricted in order to avoid jumps in nominal value.

```
PI Kühlen
P Band        0.0°C
I Zeit          0s
Abtastzeit       0
Änderungsrate    0
```

This display will only be active if cold water cooling is enabled.

The cooling control operates the nominal temperature in case of cooling. For this two options are available: a P-control or a PI-control. If the I-time is defined with „0", the I-part is deactivated and the control works like a P-control.
The contact time corresponds to the time passing until the cooling is re-calculated.
With the modification rate the maximum modification of the re-calculation can be restricted in order to avoid jumps in nominal value.

```
Nachtlüften         0/0
Außentemperatur  0.0°C
Raumtemperatur   0.0°C
Differenz        0.0°C
Laufzeit          0mn
Freigabe        NeinID
```

This display will only be active if a room temperature sensor and an outside temperature sensor are connected.
The outside temperature and the room temperature correspond to the minimum temperatures, at which night ventilation is still active.
In addition there must be a minimum difference between the room and the outside temperature, which can also be set.
Night ventilation remains active for at least a pre-defined time (if the ventilation is not started manually) and then stops automatically.

```
Stützbetrieb Heizen
Raumtemperatur   0.0°C
Laufzeit          0mn
Freigabe         Nein
```

This display will only be active if a room temperature sensor is connected and a heater is enabled.
The low limit of the temperature and the minimum working hour of the back up mode heater are set.

```
Stützbetrieb Kühlen
Raumtemperatur   0.0°C
Laufzeit          0mn
Freigabe         Nein
```

This display will only be active if a room temperature sensor is connected and cooling enabled.

The upper limit of the temperature and the minimum running time of the back up mode cooling will be set.

```
Ventilatoren
Minimal            0%
Maximal            0%
Ungleichgewicht Nein
Betriebs-h         0h
```

The maximum value and minimum value of the fans is indicated in each case based on the used control versions (air volume, pressure, speed). This restricts the setting of the fans on the main display.
An imbalance of the fans can be blocked or released. If the function is blocked, both fans work with identical values of the air volume. This function avoids a low or excess pressure of the vented room.
The maximum working hours until a warning is given will be set.

```
Betriebsart
Zuluftvent.    Drehzahl
Abluftvent.    Drehzahl
Verhältnis        0%
Festwert          0%
```

This display will only be active, if an imbalance of the fan is tolerated.

It can be selected which fans are controlled:

- Speed Constant

- Pressure Constant (only with appropriate equipment)

- Volume Constant

- Following (Exhaust air follows fresh air based on the air volume with fixed ratio.)

- Constant (constant, air volume not variable)

If the setting is invalid the corresponding information will be indicated and the intolerable value automatically adjusted.

```
Bedarfsteuerung
Typ        Luftqualität
Minimal           0%
Maximal           0%
Freigabe          0%
Endwert           0%
```

This display will only be active if a constant sensor (0-10V) is used for the load control.
The sensor type and the limits of the sensor used are indicated.

Load control based on the sensor value:
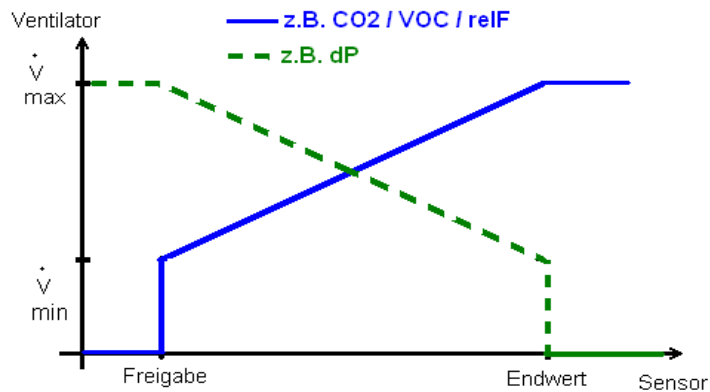


```
Verhalten BSK Alarm

Zuluftventilator    Aus
Abluftventilator    Aus
```

In case of an alarm sent by a central fire alarm system, a smoke alarm or a fire damper, the behaviour of the fans can be defined. It can be selected if the fans should be accelerated to maximum speed or if they should stop and the fresh air/exhaust flap be closed.

The type of operation in case of a BSK alarm must correspond to the current rules and regulations in effect

10.3   Manual Operation
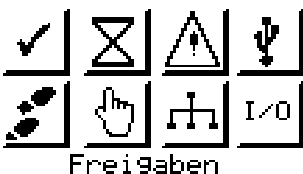
Press [OK] while 🖑 is highlighted in order to call up the manual operation.

```
Freigaben
```

```
Handbetrieb        0/0
DO1              Aus
DO2              Aus
DO3              Aus
DO4              Aus
DO5              Aus
```

The digital and analogue output can be individually set, but only if the parameter release is set to „Yes"(Setting at the end of the input/output list).

The release is reset automatically if for a longer time no key is pressed and the control returns automatically to the main display.

10.4 Bus Settings
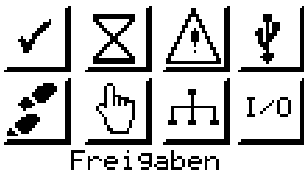
Press [OK] while ⊞ is highlighted in order to call up the bus settings.
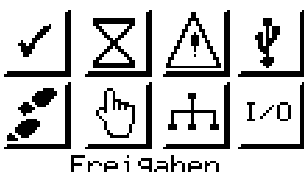
```
Modbus
Adresse        0
Baudrate    9600
Parität    Keine
Storbit        0
Datenbit       0
```

The address of the network controller can be defined as well as the baud rate, the parity, the number of data bits and stop bits.

The changes will become efficient after the reboot of the controller. (Turn the main switch of the Suprabox Comfort off for a moment.)

10.5 Current Data

Press [OK] while „I/O" is highlighted in order to call up current data.

```
I/O            0/0
AI1    0   AI6    0
AI2    0   DI1  Aus
AI3    0   DI2  Aus
AI4    0   DI3  Aus
AI5    0   DI4  Aus
```

The individual analogue and digital values of the input and output are indicated. With the use of the wiring diagram the inputs and outputs can be allocated to the different values. In addition to the input and output, the values of the internal temperature sensor, the air volume of the fans and the pressure loss are also indicated above both filters.

11 List of setting parameters ex works

Service Menu

Temperature nominal value	21.0 °C
Fan nominal value	50%
Automatic operation	OFF
Language	German
Weekly program enabled	NO
Weekly program type	Week
Nominal value sets 1-6 Ventilation	Manual 50%
Nominal value sets 1-6 Temperature	21.0 °C
Nominal value sets 1-6 Temperature	21.0 °C
Setting time schedule Weekly program	00:00-8:00 -> OFF 8:00-12:00 -> Set1 12:00-14:00 -> inactive 14:00-18:00 -> Set1 18:00-22:00 -> Set2 22:00-23:59 -> OFF
Annual program enabled	NO
Setting time schedule Annual program	Start: 01. Jan. Stop: 15. Jan. Temperature: 21.0 °C Ventilation: Man 50% Suprabox: AUS (OFF)

Service-Menu	Minimum configuration enabled	No
	Pre-ventilation enabled	No
	Back up mode cooling enabled	No
	Back up mode heating enabled	No
	Night Ventilation Enabled	No
Technician-Menu	Incoming air sensor	Offset: 0 Increase: 0
	External sensor	Offset: 0 Increase: 0
	Exhaust air sensor	Offset: 0 Increase: 0
	Flaps and Filters	Fresh air flap: No Exhaust air flap: No Maximum pressure external filter: 200Pa Maximum pressure exhaust filter: 200Pa
	Fresh air flap	Operating time: 0s Inversion: No Spring return: No
	WRG-Flap	Suprabox 800H: 150s Suprabox 800V: 75s Suprabox 1100H and 1100V: 150s Suprabox 1100D: 75s Suprabox 1500H and 1500V: 150s Suprabox 1900D: 75s Suprabox 2000H: 150s
	Connected Accessories	Heating: none Cooling: none Pre-Heating: none
	Control Temperature	Fresh air temperature
	Hot water heating	Valve operating time: 170s Control signal: 0-10V Blocking protection: On Operating hours-h: 8760h Frost protection: 5min Minimum setting: 30% Outside temperature: 8.0°C Release: No Pre-Ventilation: 1min Outside temperature: 10.0°C Release: No
	Return Control	Temperature Limit: 5.0°C Return temperature: 25.0°C P Band:20.0°C I share: 0s Contact rate: 0 Modification rate: 0
	Electric Heating	Follow-up time: 30s Operating hours-h: 8760h
	Cooling	Valve operating time: 170s Control signal: 0-10V Blocking protection: On Operating hours-h: 8760h

General Settings	Dead Zone: 2.0 °C Waiting time: 0s Temp. min.: 16.0 °C Temp. max.: 24.0 °C Fresh air min.: 15.0 °C Fresh air max.: 28 °C
Pre-Heating 1	Use for: defrosting Operating hours-h: 8760h
Pre-Heating 2a	Minimum operating time: 300s
Pre-Heating 2b	Start temp.: 0.0 °C
PI Cascade	P Band: 20.0 °C I time: 0 Contact rare: 0 Modification rate: 0
PI Heating	P Band:80.0 °C I time:100s Contact rate: 0: Modification rate: 0
PI Cooling	P Band:80.0 °C I time:100s Contact rate: 0: Modification rate: 0
Night ventilation	Room temperature: 24.0 °C Outside temperature: 16.0 °C Difference: 4.0 °C Operational time: 30min Release: No
Back up mode Heating	Room temperature: 17.0 °C Operational time: 15min Release: No
Back up mode Cooling	Room temperature: 24.0 °C Operational time: 15min Release: No
Fans	Minimum: 30% Maximum: 100% Imbalance: Nein Operational hours-h: 8760h
Mode of Operation	Fresh air fan: Air volume Exhaust fan: Air volume Ratio: 0% Fixed value: 50%
Demand Control	Type: air quality Minimum: 0% Maximum: 100% Release: 40% Final value: 80%
Behaviour BSK Alarm	Fresh air fan: OFF Exhaust fan: OFF
Modbus	Address:1 Baud rate: Parity: Even Stop bit: 1 Data bit: 8

12 Storage, Transport

- See BA 112 AA 11 Operational and maintenance guideline for compact ventilation application of the series Suprabox Comfort of Rosenberg Ventilatoren GmbH.

13   Maintenance, Servicing

⚠️ **Maintenance and servicing should only be done by trained and instructed staff and when taking all relevant rules and regulations into consideration!**

Usually our control box is maintenance free! Under extreme conditions minor maintenance work may be necessary!

Always disconnect the Suprabox Comfort from the supply voltage first.

If repairs are necessary they have to exclusively be made by a Rosenberg Ventilatoren GmbH authorized technician.

All changes and repairs at electric connections may only be made by an authorized electrician.

14 Accessories and Field devices

The **sensors for fresh air or exhaust air temperature** are constructed as duct sensors. The wiring at the switch cabinet should be made using a shielded cable (J-Y(St)Y 4 x 0,6). The shield has to be connected to the switch cabinet and to the ground terminal in the sensor housing. Polarity of the connections at the switch cabinet and at the duct sensor does not affect the measurement precision.
As the Suprabox Comfort is already equipped with sensors in the union, special duct sensors for the use of heat exchangers (e.g. heating coils, cooling coils) are recommended. If a heating/cooling coil of Rosenberg Ventilatoren GmbH is ordered, a corresponding duct sensor is included in the delivery scope of the coil.

Item Code: H42-09926.

The **room temperature sensor** is suitable for wall fastening. The wiring is made with use of a shielded cable like for the duct sensor. Also in this case the polarity does not affect the measurement precision.
The use of a room temperature sensor is pre-condition for the function of the back up mode and ventilation at night.

Item Code: H42-09902

The outside temperature sensor is suitable for wall fastening. As for the duct sensor the wiring must also be made with a shielded cable. Also here the polarity does not affect the measurement.
The use of a room temperature sensor is pre-condition for the function ventilation at night.

Item Code: H42-09914

The **CO2 sensor** can be used in order to keep the CO2 volume of the room low during automatic operation. The CO2 sensor must be wired according to the valid wiring diagram.

Item Code: H42-09933

The **Hygrostat** can be used for the over-modulation of the fans, thus in case of excess of the defined nominal value the ventilation will automatically be switched. The Hygrostat must be connected according to the current wiring diagram.

Item Code: H42-09922

The RS 485 interface for **Modbus RTU** is a plug-in, which will directly be attached at the basic board in order to integrate the Suprabox Comfort Control as slave into the modbus network.

Item Code: H42-00330

Dual **differential pressure sensor** with Modbus – Connection for the use of the pressure constant control of the fans.

Item Code: H40-12500

The **contact thermostat** will be directly attached to the main in the return flow of the hot water coil and controls the return temperature. If the return temperature falls off the defined limit an alarm occurs and the hot water coil will be activated with maximum power in order to avoid freezing.
If a hot water coil of Rosenberg Ventilatoren GmbH is ordered, a contact thermostat is included in the scope of delivery of the coil. The polarity of the connections at the switch cabinet and at the contact thermostat does not affect the function.

Item Code: H40-00024

The function of the **frost protection thermostat** corresponds to that of the contact thermostat with the difference that the capillary tube is fixed directly at the hot water coil in the ventilation duct. The polarity of the connections does not affect the measuring.

Item Code: FST000-0212N

If a return temperature control is applied, the use of a **contact sensor** is necessary. This must be fixed at the return of the hot water coil in the same way as the contact thermostat. The wiring to the switch cabined should be made with use of a shielded cable (J-Y (St)Y 4 x 0,6). The polarity of the connections at the control box and at the contact sensor does not affect the function.

Item Code: H42-09917

The **bypass flap damper servo motor** is pre-assembled in the Suprabox Comfort and finally wired. The **damper servo motor** used for the **bypass flaps** has no limit switch and an overload protection. If the end position of the flap or the motor is reached they stop automatically.

The function of the flaps can be controlled by slightly pushing the house cover. For this the gear must be unlocked and the fan can be moved manually.
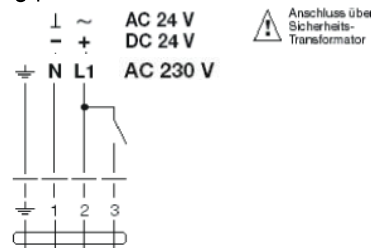
The following wiring diagram for the bypass flap damper servo motor is valid:
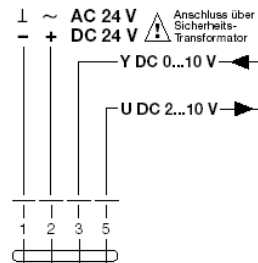
When a **fresh air/exhaust air flap with a damper servo motor with spring return** is used the following picture is valid:
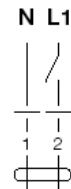
When a **fresh air/exhaust air flap with damper servo motor without spring return** is used, the following picture is valid:

The differential pressure control is used for the frost control of the cross flow heat exchanger. The differential pressure control is applied with a changeover contact. It must be connected to the contacts no.1 and no. 3. The lower pneumatic supply + (P1) at the differential pressure control must be fixed in front of the heat exchanger (exhaust air side). The connection -(P2) at the differential pressure control must be fixed behind the heat exchanger (exit air side). The differential pressure control is always pre-assembled and finally wired ex works.

Item Code: DDW050-0500N

A robust construction was chosen for the Rosenberg-**valve-drive motor** Type AME 435. The servo drive also provides the option of an emergency manual operation. In this case the valve must be adjusted with a control knob installed outside the house. The raw percentage opening of the valve can be read on a scale at any time.
To ensure a correct function the DIP switches attached to the gear must be set as follows:
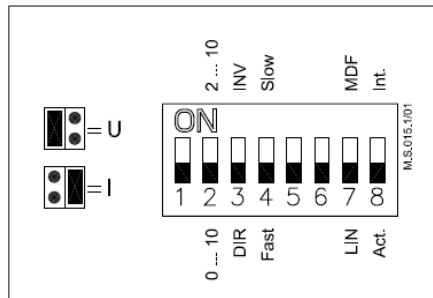
1 -> OFF; 2 -> OFF; 3 -> OFF; 4 -> OFF; 5 -> OFF; 6 -> OFF; 7 -> OFF; 8 ->OFF

Item Code: H81-26010

For the connection of the switch contact controls (e.g. contact thermostat) basically select an opening contact, thus the switch contact is closed during the usual operation.

If field devices of other manufacturers are installed, carefully check the separate protective circuit!

15 Copyright

If there are further questions after you have read the manual, please consult our sales representative.

16 Customer Service, Manufacturer's address

The products of Rosenberg Ventilatoren GmbH are constantly checked for quality and correspond to the relevant regulations.

For all questions regarding our products, consult the originator of your ventilation system at one of our subsidiaries or direct to:

Rosenberg Ventilatoren GmbH

Maybachstraße 1

D-74653 Künzelsau- Gaisbach

Tel.:   07940/142-0

Fax: 07940/142-125

email: Info@rosenberg-gmbh.com

Internet: www.rosenberg-gmbh.com

17 Initial Operation Report

Size	☐ 800 m³/h	☐ 1100m³/h	☐ 1500m³/h	☐ 1900 m³/h	☐ 2000 m³/h
Direction	☐ Horizontal		☐ Vertical		☐ Ceiling assembly
Control Temperature	☐ Fresh air temperature		☐ Exhaust air temperature		☐ Room temperature
Fans	Maximum Value_____		Minimum Value_____		Imbalance:_____
Fresh Air fan	☐ Speed control, checked	☐ Air volume control checked	☐ Pressure control, checked	☐ Fixed value, checked	☐ Follow-up, checked
Exhaust fan	☐ Speed control, checked	☐ Air volume control, checked	☐ Pressure control, checked	☐ Fixed value, checked	☐ Follow-up, checked

☐ Fans free-moving in disconnected status.
☐ Operational Manuals etc. removed from the ventilation/left at the ventilation

☐ Sensor Overmodulation	Sensor type:_____
☐ Sensor Automatic Operation	Sensor type:_____

☐ Bus Plug-In Module connected
☐ Filter flow direction considered
☐ Limiting Value of the differential pressure control for monitoring WRG freeze, checked and set. Value: _____
☐ Fresh air duct sensor placed behind the coil if fresh air heating/cooling is used.
☐ Direction of rotation of the bypass flap checked and set.
☐ Direction of rotation of the outside air/exhaust air flap checked and set (in case that accessories are connected.)
☐ Condensate drain correctly connected (trap, anti-freezing protection)
☐ Hot Water coil connected (flow, return flow correct, valve switching checked)
☐ Function secondary pump and valve gear

☐ Anti-Freeze protection correctly connected and checked.	☐ Anti-freeze thermostat(behind the heating coil)	☐ Contact thermostat (at the return flow, close to the coil)

☐ Cold water cooling coil connected (flow, return flow correct, valve switching checked)
☐ Function secondary pump and valve gear
☐ Electric heating connected
☐ Overheat control and air volume control connected and checked
☐ Electric pre-heating connected
☐ Overheat control and if necessary air volume control (not for integrated PTC) connected and checked

🛈	After initiation the defined parameters should be loaded on an USB flash drive and kept safe.

18 Notes