Excellence

Sunshade Control

BIDIRECTIONAL
RADIO SYSTEM

Installation and Operating Instructions

◇ Vestamatic®

Safety precautions

·   Please note, that the Vestamatic *Excellence* sunshade control requires an operating voltage of 230 VW, 50 Hz. Therefore, the connection box may only be installed and connected by a qualified professional electrician.

·   If work is performed on sunshade or roof windows, which are controlled by the Vestamatic *Excellence* sunshade control, the operating voltage must be turned off at the connection box.

·   The control was designed for correct use as described in the operating instructions. Any changes or modifications thereof are not permissible and result in loss of all warranty claims.

·   Check the *Excellence* sunshade control for signs of mechanical damage immediately after unpacking. If there is any damage due to the shipping, notify the supplier immediately.
    Do not start up the control in case there is any damage!

·   If safe operation of control or sunshade can not be guaranteed, the *Excellence* sunshade control must be turned off immediately and protected against unintentional operation.

·   If the *Excellence* sunshade control is not connected to a rain or frost protectors, we recommend to set the control (depending on the sunshade design) to manual operation at temperatures below +1 °C (32 °F) for safety reasons. That way, automatic extending (e.g. at sunlight) can be avoided.

·   Make sure to always replace used batteries in the operator and display element with batteries of the same type.
    Caution! Risk of explosion, if incorrect battery types are used. Dispose of used batteries only according to hazardous waste regulations.

·   The use of plug-in power supplies, that are not optionally delivered by the *Excellence* sunshade control manufacturer can cause malfunctions and/or damage to the control and is thus not permissible.

·   Follow the installation and operating instructions carefully.

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Contents

Congratulations for buying the Vestamatic *Excellence* sunshade control. You have purchased a high-quality product that features many practical functions and is manufactured according to the highest quality standards.

Please take the time to read these operating instructions carefully prior to start-up, in order to guarantee optimum effectiveness and reliability.

The delivery extent of the Vestamatic *Excellence* sunshade control includes the following items:

1. Control unit, consisting of
   – connection box
   – operator and display element (touch-screen)
2. Wall mounting plate for operator and display element
3. Mounting material
4. Display cleaning cloth
5. Four batteries (not applicable for 2-wire interface)
6. Installation and operating instructions

In the following, the term "control" is used for the entire system, consisting of connection box (sensor motor box) and operator and display element (touch-screen monitor).

Please note, that the installation of the Vestamatic *Excellence* **sunshade control may only be carried out by a qualified professional electrician.**

If you have purchased a control with radio connection, avoid large metal objects between control and operator and display element and adjacent to the mounting location. Large metal objects can impair the radio connection.

1. Turn off the operating voltage.

2. Remove the connection box cover and mount the housing with the four holes in the housing corners. Mount the housing in such a way, that the cable inlets are located on the lower housing side. Do not mount the connection box in a location exposed to direct sunlight.

3. Connect the power supply cables and external connections according to the wiring diagram (see page 41).

   Mount the control unit out of the range of people, children and animals. All cables must be permanently wired.

   Attention: Currently valid VDE-regulations must be observed when connecting the device, in particular DIN VDE 0100/0700 as well as the currently valid regulations of your local power supplier and the accident prevention regulations.

4. The output is potential-free, which is important when triggering decentralized controls.

5. When directly connecting a motor (230 V~, 50 Hz), make sure to bridge terminal C of the motor output with terminal L of the mains connection.

If you have purchased a control unit with two-wire interface, mount the operator and display element as follows:

– Mount the wall bracket in the desired location. The mounting location of the operator and display element must not be exposed to direct sunlight.
– Remove the left cover from the battery compartment of the operator and display element, by pulling it to the left and off the housing.
– Pierce the circular openings prepared for the cable inlets on the housing rear side.
– Connect the two-wire interface.
– Re-attach the battery compartment cover in its original position.
– Hang the operator and display element onto the wall bracket.
– Connect the voltage supply of the connection box.

Proceed as described in section "First steps".
Ensure you have re-attached the cover!

If you have purchased a radio-controlled unit, perform the installation as follows:

– Turn on the connection box operating voltage.
– Remove the covers from the battery compartment of the operator and display element, by pulling them to the side and off the housing.
– Insert the delivered batteries as indicated.

Proceed as described in section "First steps".
Ensure you have re-attached the cover!

If you have decided on the wall mounting, teach-in the operator and display element to the connection box by performing a 'communication test' (see page 14). That way, you can find a suitable mounting location, that allows for trouble-free communication between touch-screen and connection box.

The mounting location of the operator and display element must not be exposed to direct sunlight.

– Mount the wall bracket in the desired location.
– Re-attach the battery compartment cover in its original position.
– Hang the operator and display element onto the wall bracket.

Important: **For test purposes, the system can be operated in the test mode (see "Extended settings" on page 24).**

Please note, starting-up the control requires opening the connection box. Therefore, start-up must be carried out only by a qualified professional electrician.

Systems with two-wire interface:

Ensure that the slide-switch, located in the terminal cut-out behind the left battery compartment of the operator and display unit, is set in the upper position.

The slide switch in the connection box next to the radio module (for the exact location, please see the wiring diagram) must also be set in the upper position. Other configuration steps are not required.

Radio-controlled systems:

Ensure that the slide-switch, located in the terminal cut-out behind the left battery compartment of the operator and display unit, is set in the lower position.

The slide switch in the connection box next to the radio module (for the exact location, please see the wiring diagram) must also be set in the lower position.

The operator and display element must be "taught-in" to the connection box as follows:

– Activate the operator and display element.
– Insert the batteries in the compartments of the operator and display element or connect the plug-in power supply (available as special accessory) to the operator and display element.

The following message will be displayed on the touch-screen of the operator and display element.

```
     NO
COMMUNICATION!
DEMO  |  LEARN
```

Now, you can select between demo and teach-in mode. In the demo mode, no radio connection between the operator and display element and control unit can be established. Therefore, control operations or configuration steps cannot be performed. If the operator and display element has not been "taught-in" with the connection box, select the teach-in mode by pressing the 'TEACH-IN'-button.

After selecting the teach-in mode, the following message is displayed:

```
 PRESS KEY
ON RECEIVER
[████████      ]
```

Make sure, the supply voltage for the connection box is turned on. If it is not, turn on the operating voltage and wait for at least 5 seconds. Then tap the 'TEACH-IN'-button of the connection box (see wiring diagram) with an **insulated** screwdriver. The red LED next to the button will flash. If the operator and display element recognizes the connection box, the LED will stop flashing and the touch-screen will display the standard user interface. The system is now ready-to-operate.

Taught-in operator and display elements can be deleted by pressing the 'TEACH-IN'-button on the connection box for 5 seconds.

Touch-screen calibration

After long periods of operation, the touch-screen accuracy may deteriorate and require re-calibration.

Activate the calibration function as follows:

1. Turn off the operating voltage by moving the slide-switch located behind the left battery compartment (in the terminal cut-out) into the opposite position.

2. Press the touch-screen and keep it pressed.

3. Turn the operating voltage back on, by moving the slide-switch back into its original position.

4. Keep the touch-screen pressed for 3 seconds until the operator and display element is activated.

5. When the following screens are displayed, follow their instructions: First press the dot in the upper left corner then press the dot in the lower right corner. Then press the screen again at any position in order to return to normal operation.

CALIBRATE TOUCHSCREEN	CALIBRATE TOUCHSCREEN	CALIBRATION OK!
PRESS THE DOT IN THE LEFT UPPER CORNER	PRESS THE DOT IN THE RIGHT BOTTOM CORNER	PRESS THE SCREEN TO CONTINUE

Please bear in mind, that a touch-screen is a very sensitive component. Pressing it too hard or with sharp-edged objects can cause irreparable damage. Do not touch the touch-screen with pointed or sharp objects.

The operator and display element always displays the main menu first. From this main menu, control functions can be executed and submenus can be accessed.

The operator and display element is divided into several sections. The motor control buttons Up, Stop and Down for motor 1 (left) and motor 2 (right) are located on the left-hand side. In addition, the motor control can either be set to the automatic operating mode 'AUTO' or to the manual operating mode 'MANUAL'. In the manual mode, sun, temperature and time are disabled. Rain is set by the menu option 'Rain Priority'. If the motor operating mode is changed from manual to automatic operation, the sunshade automatically moves into the correct position.

The status indication in the display center shows the currently measured sensor values. Touching this area will indicate details and other measured values.

Pressing the Time button provides information on the current status of the various control functions as well as the current and last executed up/down command of the control.

Pressing the **SET** button will open the 'SET menu', from which all settings can be changed.

Pressing the ; button will indicate additional system data.

Menu General

The structure of most menus is identical. If the amount of displayed data does not all fit on the screen, a scroll bar will be indicated on the left. On this bar, you can scroll to the information not shown on the screen. Four function keys are located in the lower section of the screen. These functional keys can be assigned to various functions. The functions used on the different screens are described below:

▲ Moves the scroll bar up.
▼ Moves the scroll bar down.

◄┘ Back to the previous menu.

1-2 Selection of motor 1 or 2. The large number indicates the currently selected motor.
Pressing this button will toggle between motor 1 and 2.

Battery-powered operator and display elements will automatically shut down, after one minute of stand-by operation, in order to save battery life. Pushing the touch-screen re-activates the operator and display element.

Settings can be entered in a pop-up menu. If settings need to be entered separately for each motor, the respective motor can be selected at the top of the pop-up window. Settings, that were selected via a scroll bar, can be entered by means of the plus and minus buttons or by pressing the status bar. The minimum value is always displayed on the left, the maximum value is displayed on the right.

This menu indicates the measured values. The scroll bar on the right indicates, when more values are available than fit on the screen.

```
SUN 1    =  32 klx
SUN 2    =  15 klx
WIND 1   =   0 m/s
RAIN     = NO
▲   ▼      ↵
```
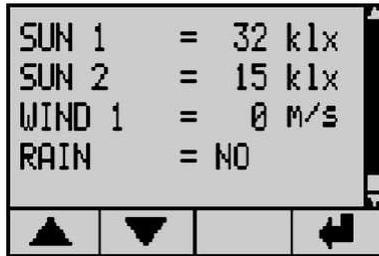
General   Info

The info screen shows the serial-number and software-version of the operator and display element as well as the control unit. Furthermore, this screen provides a status indicator showing the battery charge state and a display indicating the communication quality of the last data transmitted.

```
SN  :  12345
SW  :  3802/3102
🔋                8%
📡               100%
🔑  📡        ↵
```
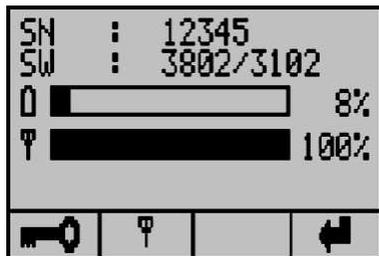
🔑   In this menu, the touch screen remains locked until the correct code (8192) is entered.

📡   This is the menu for the communication test.

Info   Touch-screen lock

On this screen, the touch-screen is locked. The locking function is particularly useful when cleaning the touch-screen. As soon as the correct code is entered or the operator and display element shuts down, the touch-screen is ready for operation again. As a reminder, the code is displayed at the top of the screen.

```
UNLOCK CODE=8192
   CODE:0000

  1 | 2 | 3 | 4 | 5
  6 | 7 | 8 | 9 | 0
```
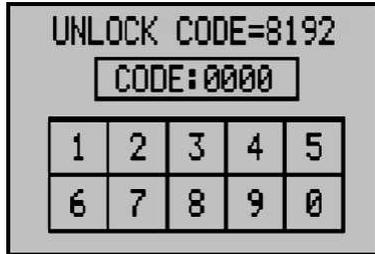
Info   Communication test

In this menu, you can test the communication quality, which is very useful when establishing a radio connection. With this function, you can determine the optimum mounting location for the operator and display element.

```
        ((ı))
         ■
    100%
              ↵
```
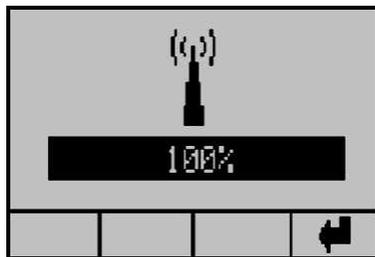
Pressing the clock symbol in the main menu displays the status menu. This menu indicates the motor status and all other functions. The symbols in the columns on the left indicate the function. The symbols next to each function represent their respective status.
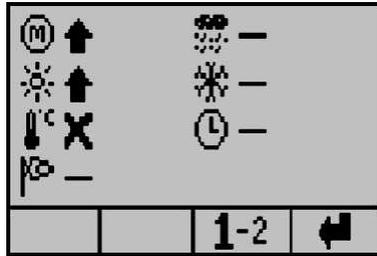
Functions:

⬡(M)   Motor status

☼   Sun function

🌡ᵗᶜ   Temperature function

⚑   Wind function

❉   Rain function

❋   Frost

⬡(L)   Time function

Status display:

⬆   The status of the sunshade or function is Position Up.
       If the motor was triggered to move the sunshade into this direction, this arrow is flashing.

⬇   The status of the sunshade or function is Position Down.
       If the motor was triggered to move the sunshade into this direction, this arrow is flashing.

■   This symbol indicates, that the motor is currently not activated. The sunshade is neither moving up or down.

—   This function is inactive.

✗   This function is deactivated.

H   This function has been switched to manual operation.

🕐   This symbol will only be indicated in combination with the symbols : or u and signals, that a delay is activated. The other symbol shows the function status after the delay has elapsed.

With this menu, you can set the contrast of the operator and display element and access other settings. Touch the bar to set the contrast. On the very left of the bar, the contrast amounts to 0 %, on the very right it amounts to 100 %. The changed settings will be immediately displayed.
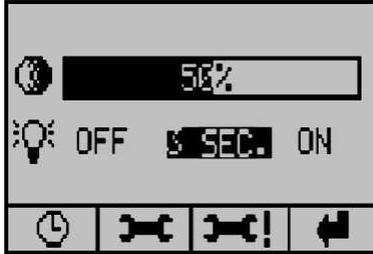
If you have purchased a device with illuminated display, the functionality of the illumination can be set as follows:

OFF	The illumination is permanently turned off.
3 SEC.	When pushing the touch-screen panel, the illumination is turned on and will expire 3 seconds after the control panel has been pushed.
On	When using a power outlet or a control unit, equipped with a 2-wire interface, the illumination is permanently turned on.
⊕	Touching this symbol will open the menu 'Time', in which the current time can be displayed.
✖	Touching this symbol will open the menu 'User Settings.'
✖!	Touching this symbol will open the menu 'Extended User Settings'. **Incorrect settings in this menu can cause damage to the sunshade!**
↵	Back to the previous menu.

On this screen, you can set the time. The time in small digits indicates the current time. The time in large digits is the new time, which can be changed by pressing the hours and the minutes. A pop-up menu will be displayed, in which hours or minutes can be changed by pressing the +/- buttons or the status bar. Changes on the time must be acknowledged with the OK button. Starting the clock with the changed time requires to push the OK button again. That way, the time can be set right to the second. After the correct time has been set, the pop-up menu can be exited by pressing the ,-button.

User settings   General
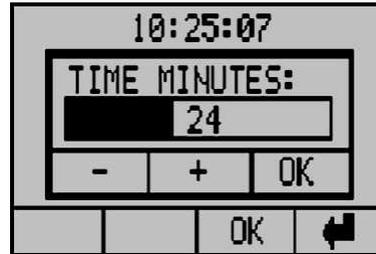
In this menu, you can change all user settings, such as wind, temperature, time, rain, run time and reverse time. Functions with only one setting can be directly changed. Other settings must be changed in a submenu. All settings are changed in a pop-up menu. With the arrows, you can access data currently not displayed on the screen.
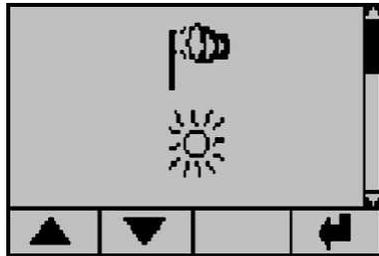
(M)	Wind settings
☀	Sun settings
🌡	Temperature settings
⚑	Time settings
▨	Rain settings
(M)	Run time
⫽	Reverse time

The set wind velocity threshold value must be smaller than the maximum wind value that a sunshade can withstand. If the wind velocity attains or exceeds the set value, the wind functions issues an Up command.

The wind reset delay can be set to the desired value. The wind velocity must be below this threshold value for the duration of the wind reset delay, before a Down command can be issued.

```
WIND THRESHOLD:
 30 km/h

WIND OFF DELAY:
 16 min

                 1-2   ⏎
```

```
WIND THRESHOLD:            WIND THRESHOLD:
 M1   M2                    M1   M2
 WIND THRESHOLD:            WIND OFF DELAY:
    30 km/h                    12 min
  -    +    OK               -    +    OK
           1-2  ⏎                      1-2  ⏎
```

The sun-dependent control can be turned on or off.

In order for the sunshade to extend automatically, the sun intensity must be higher than the sun response value for the duration of the preset sun response delay.

If both the sun- and the temperature-dependent controls are activated, the sunshade will automatically extend only, if the temperature set on the room thermostat is exceeded.

If the sun intensity falls below the Up threshold value over the entire duration of the reset delay, the sunshade automatically retracts after the reset delay time has elapsed.
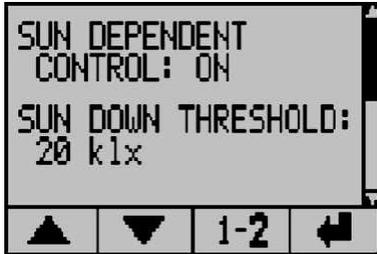
The temperature functions responds to the values entered in the thermostat. If the temperature is too low, the contact is closed and the sunshade will retract after the temperature reset delay has elapsed.

```
TEMPERATURE DEPEN-
DENT CONTROL: ON

TEMPERATURE OFF
DELAY: 5 min

            | 1-2 | ↵
```

```
TEMPERATURE DEPEN-
  M1   M2
| TEMP. DEPENDENT |
| CONTROL: ON     |
| OFF | ON | OK   |
              1-2  ↵
```

```
TEMPERATURE DEPEN-
  M1   M2
| TEMP. OFF DELAY: |
|      5 min       |
|  -  |  +  |  OK  |
              1-2  ↵
```
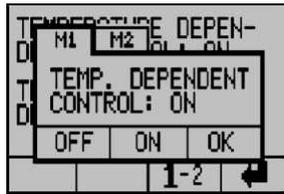
If both the sun- and the temperature-dependent controls are activated, the temperature function will only issue an Up command when the temperature is too low. Other sunshade functions are controlled by the sun function.

With the time function, the sunshade can be stopped in Up or Down position for a certain period of time, even if the automatic mode was previously selected.

In order to change the time, press the hour and minute to adjust the time to be changed. This command remains activated from start to stop time. If start and stop time are identical, a run time command is issued. The time command can be - activated and + deactivated. On the screen-shot below, the Up command is activated and a continuous retract command is issued for the time period between 01:00 and 02:00.

Down function and manual operation are deactivated.

```
       START   STOP
  ↑✓   01:00 - 02:00
  ↓✗   03:00 - 04:00
  H ✗  05:00 - 06:00
              1-2   ↵
```

Example time function:

Your sunshade shall extend at 08:00 in the morning. Until 16:00 in the afternoon it shall not execute any sun- or temperature-dependent commands. After 16:00, the sunshade shall issue a sun-dependent extend or retract command.

In this case, set the time function as follows:

    Time-dependent control up: deactivated
    Time-dependent control down: activated   Start: 0 8:0 0   Stop: 0   8:0 5
    Manual mode: activated   Start: 0 8:0 0   Stop: 1   6:0 0

Rain User settings

For the rain function, only the reset delay can be set. If rain is detected, the sunshade will retract immediately. If no rain signal is applied during the entire duration of the reset delay, the sunshade extends, after the delay time has elapsed, provided that the control is in automatic mode and all pre-conditions for automatic extending are fulfilled.

During start-up, the sensitivity of the rain sensor can be set by means of a wire jumper (refer to wiring diagram, see page 44).

Run time User settings

The run time is the time the sunshade requires to move from the Up into the Down position. The run time for an Up command always amounts to 180 seconds.

The reverse time is executed after a temperature- or sun-dependent up/down-command and after a manual up/down command.

```
┌─────────────────────┐
│  M1   M2  🔋         │
│ TILTTIME            │
│ ┌─────────────────┐ │
│ │    0.0 SEC      │ │
│ ├──────┬─────┬────┤ │
│ │  -   │  +  │ OK │ │
│ ├──────┼─────┼────┤ │
│ │  ▲   │  ▼  │ ↵  │ │
└─────────────────────┘
```

Extended settings   General

The extended settings are used for the configuration of the system, e.g. to set sensors and system functions.

Note: Incorrect settings can cause damage or even destruction of the system!

The settings in this menu apply for both motors!

Since incorrect settings can cause damage to the system, a code protects the menu from unintentional modifications.

```
┌─────────────────────┐
│ ┌───────────────┐   │
│ │ CODE:____     │   │
│ └───────────────┘   │
│ ┌──┬──┬──┬──┬──┐    │
│ │1 │2 │3 │4 │5 │    │
│ ├──┼──┼──┼──┼──┤    │
│ │6 │7 │8 │9 │0 │    │
│ └──┴──┴──┴──┴──┘    │
│ ┌────┬────┬────┬──┐ │
│ │    │    │    │ ↵│ │
│ └────┴────┴────┴──┘ │
└─────────────────────┘
```
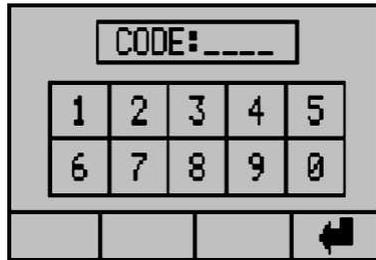
CODE = 2389

After the correct code is entered, the next menu will be displayed.

```
┌──────────────────────┐
│ TESTMODE = OFF     ▲ │
│ WINDSENSORS = 1    ▓ │
│ WIND EXTRA = OFF   ▓ │
│                    ▼ │
│ ┌──┬──┬────┬────┐    │
│ │▲ │▼ │    │ ↵  │    │
│ └──┴──┴────┴────┘    │
└──────────────────────┘
```
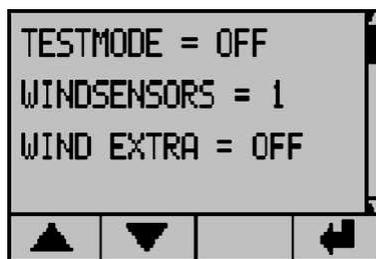
Extended settings   Test mode

In the test mode, all delay times are running 5 times faster than during normal operation. The wind sensor monitoring responds after 90 seconds. The test mode can be turned ON and OFF. The test mode remains activated until it is deactivated by pressing 'OFF'.

```
TESTMODE = OFF
 W   TESTMODE: OFF
 W
    OFF  |  ON  |  OK
 ▲    ▼          ↵
```
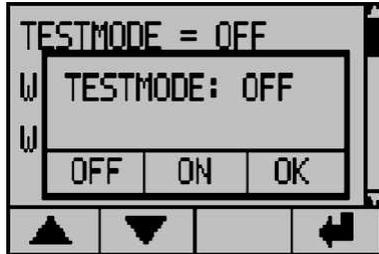
Continuous operation of the control in the test mode is not permissible.

Extended settings   Wind sensors

In this menu, the number (0 – 2) of wind sensors connected to the control unit can be set.

```
WINDSENSORS = 1
 W   WINDSENSORS: 1
 W
       -   |   +   |  OK
 ▲    ▼          ↵
```
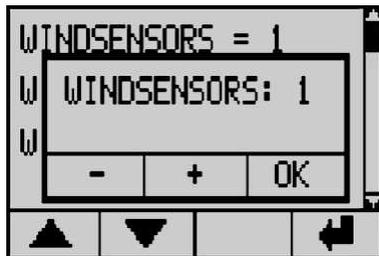
Expanded wind range

In this menu, the user can set the wind velocity range. The standard setting is 10–40 km/h. If the expanded wind range was selected by pressing 'ON', the wind velocity range is 10–100 km/h.

```
WIND EXTRA = OFF
W  WIND RANGE
W  EXTRA: OFF
    OFF  |  ON  |  OK
  ▲  |  ▼  |     |  ↵
```

Wind velocity unit

This option allows for setting the wind velocity in km/h or m/s.

```
WIND UNIT = m/s
W  WIND UNIT:
   m/s
   km/h |  m/s |  OK
  ▲  |  ▼  |     |  ↵
```

This option allows for setting the type of wind sensor connected to the control unit. The available wind sensor type options are standard (unheated) and special (heated).

```
WIND EINHEIT = m/s
W  WINDMESSER
    WM1 (STANDARD)
      -   |   +  |  OK
   ▲  |  ▼  |       |  ↵
```

In this menu, the wind response delay can be set. The wind response delay is the time period, the wind velocity must exceed the threshold before the sunshade retracts. This time can be set between 0–10 seconds. Please note, the sunshade may respond significantly later, if the delay time is increased.

```
WIND ON DELAY
   WIND ON DELAY:
S       0 SEC
S    -   |   +  |  OK
   ▲  |  ▼  |       |  ↵
```

Sun sensors   Extended settings

In this menu, the number (0 – 2) of sun sensors connected to the control unit can be set.

```
SUNSENSORS = 2
S| SUNSENSORS: 2
K|
D|   -   |   +   |   OK
  ▲  |  ▼  |     |  ↵
```
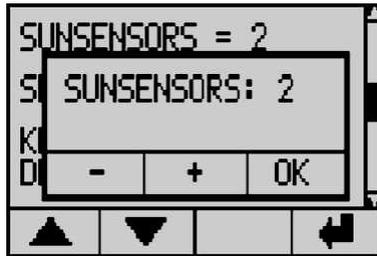
Sun sensor assignment   Extended settings

In this menu, the sun sensors can be assigned.

A: Both motors respond to the sensor, that measures the highest value.
B: Sensor 1 is assigned to motor 1 and sensor 2 is assigned to motor 2.

```
SENSOR ASSIGN = B
K| SUN SENSOR
D| ASSIGN: B
R|   A   |   B   |   OK
  ▲  |  ▼  |     |  ↵
```

Extended settings   External button direct/deadman

In this menu, the functionality of the operating buttons of the standard display, and the up/down buttons (option) connected to the control unit can be set.

Direct: By pressing the Up or Down button, the run time command is directly activated.

Deadman: The Up or Down button must be pressed for 2 seconds before the run time command is activated. Commands with a duration less than 2 seconds, will be executed for as long as the button is pressed.

```
KEY DIRECT/
D┌─────────────────────┐
 │ DIRECT/DEADMAN:     │
R│ DEADMAN             │
 │ ┌────┬─────┬────┐   │
 │ │DIR.│DEAD.│ OK │   │
 │ └────┴─────┴────┘   │
 └─────────────────────┘
   ▲      ▼           ↵
```
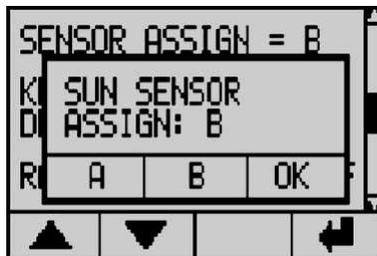
Extended settings   Rain priority

In this menu, the rain and frost functions can also be activated in the manual mode.

OFF: Manual extending in manual mode is also possible at rain and frost.

ON: Manual extending at rain and frost is not possible, even in manual operation.

```
RAIN PRIORITY = OFF
U┌─────────────────────┐
 │ RAIN PRIORITY:      │
 │ OFF                 │
 │ ┌────┬────┬────┐    │
 │ │OFF │ ON │ OK │    │
 │ └────┴────┴────┘    │
 └─────────────────────┘
   ▲     ▼          ↵
```
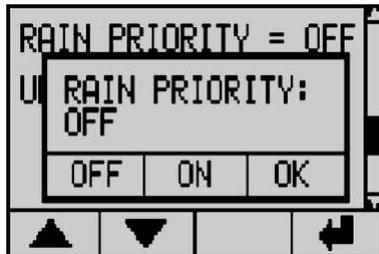
Rain motor 1 Extended settings

In this menu, the rain function for motor 1 can be activated.

OFF: Motor 1 will not automatically retract the sunshade at rain or frost.

ON: Motor 1 will automatically retract the sunshade at rain and frost depending on the 'rain priority' setting.

```
RAIN PRIORITY = ON
R  RAIN ON MOTOR 1:
R  ON
   OFF  |  ON  |  OK
   ▲  |  ▼  |  |  ↵
```

Rain motor 2 Extended settings

In this menu, the rain function for motor 2 can be activated.

OFF: Motor 2 will not automatically retract the sunshade at rain or frost.

ON: Motor 2 will automatically retract the sunshade at rain and frost depending on the 'rain priority' setting.

```
RAIN PRIORITY = ON
R  RAIN ON MOTOR 2:
R  ON
   OFF  |  ON  |  OK
   ▲  |  ▼  |  |  ↵
```

Extended settings   Continuous up command/run time

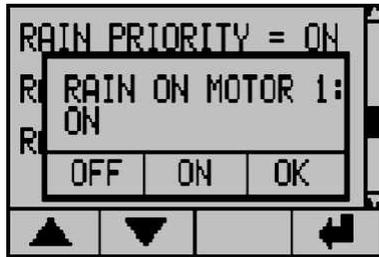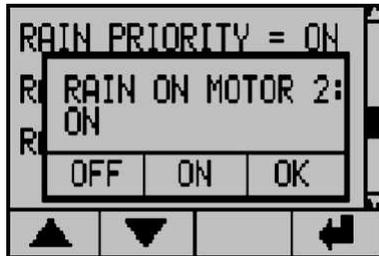In this menu, the function of the external Up outputs can be configured.

CONTINUOUS: An input signal continuously activates the motor for the duration of the applied signal and even beyond the duration of the motor run time.

RUN TIME: An input signal activates the motor for the duration of the set run time.

```
UP CONT./RUNNING
  ┌─────────────────┐
  │ UP CONT/RUN:    │
 D│ RUNNING         │
  ├──────┬─────┬────┤
  │ CONT.│ RUN │ OK │
  └──────┴─────┴────┘
  ▲    ▼         ↵
```

Extended settings   Continuous down command/run time

In this menu, the function of the external Down outputs can be configured.

CONTINUOUS: An input signal continuously activates the motor for the duration of the applied signal and even beyond the duration of the motor run time.

RUN TIME: An input signal activates the motor for the duration of the set run time.

```
DOWN CONT./RUNNING
  ┌──────────────────┐
  │ DOWN CONT/RUN:   │
 M│ RUNNING          │
  ├──────┬─────┬─────┤
  │ CONT.│ RUN │ OK  │
  └──────┴─────┴─────┘
  ▲    ▼         ↵
```

In this menu, the functionality of motor 2 can be configured.

NO: Motor 2 runs in the normal operation mode.

YES: The functionality of the Up and Down button on the operator and display element for motor 2 will be switched, i.e. pressing the Up button will extend (open) the roof window – pressing the Down button will retract (close) the roof window.

```
MOTOR 2 ROOF
  ┌──────────────────┐
  │ MOTOR 2 ROOF:    │
  │ NO               │
L │                  │
  ├──────┬──────┬────┤
  │  NO  │ YES  │ OK │
  └──────┴──────┴────┘
  ▲   ▼         ↵
```

In this menu, the language for the operator and display element can be set. English, Dutch, German and French are the available languages.

```
MOTOR 2 ROOF
  ┌──────────────────┐
  │ LANGUAGE:        │
  │ ENGLISH          │
L │                  │
  ├──────┬──────┬────┤
  │  -   │  +   │ OK │
  └──────┴──────┴────┘
  ▲   ▼         ↵
```

Error and alarm messages

Error and alarm messages are displayed if an error occurs. Press OK to acknowledge the message. After activating the operator and display element, the message will be displayed again. After elimination of the error, the error message will automatically disappear.

Possible error messages:
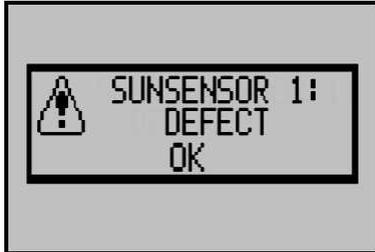
Sun sensor 1 is defective, not connected or short-circuited.
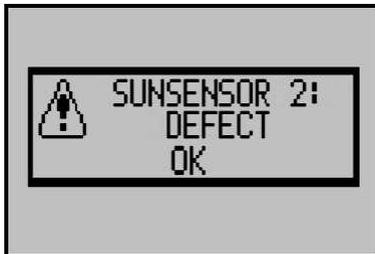
Sun sensor 2 is defective, not connected or short-circuited.

Wind sensor 1 has not sent any signals for 48 hours. Rotate the vane anemometer to check the sensor.

```
 ┌─────────────────────────────┐
 │  ⚠ WINDSENSOR 2:            │
 │      TIME OUT               │
 │        OK                   │
 └─────────────────────────────┘
```

Wind sensor 2 has not sent any signals for 48 hours. Rotate the vane anemometer to check the sensor.

```
 ┌─────────────────────────────┐
 │  ⚠ WINDSENSOR 1:            │
 │     CHECK CABLE             │
 │        OK                   │
 └─────────────────────────────┘
```

Wind sensor 1 cannot be detected. Check the wiring. As long as the wind sensor is not detected, the Up command remains activated.

```
 ┌─────────────────────────────┐
 │  ⚠ WINDSENSOR 2:            │
 │     CHECK CABLE             │
 │        OK                   │
 └─────────────────────────────┘
```

Wind sensor 2 cannot be detected. Check the wiring. As long as the wind sensor is not detected, the Up command remains activated.

```
 ┌─────────────────────────────┐
 │  ⚠ BATTERIE LOW:           │
 │      REPLACE!               │
 │        OK                   │
 └─────────────────────────────┘
```

The batteries are almost completely discharged. Replace the batteries and only use batteries of the same type. If the battery charging capacity drops below 10 %, the operator and display element shows maximum contrast in order to ensure optimum readability.
If you have purchased a unit with two-wire interface, the position of the slide switch on connection box and operator unit must be verified (see chapter, "Start-up / First steps").

Maintenance and care

Severely soiled operator and display elements can be cleaned with a moist cloth. Do not use solvent-based or aggressive cleaning agents. Lock the touch-screen before you start cleaning, as previously described in the operating instructions, to prevent undesired system operation.

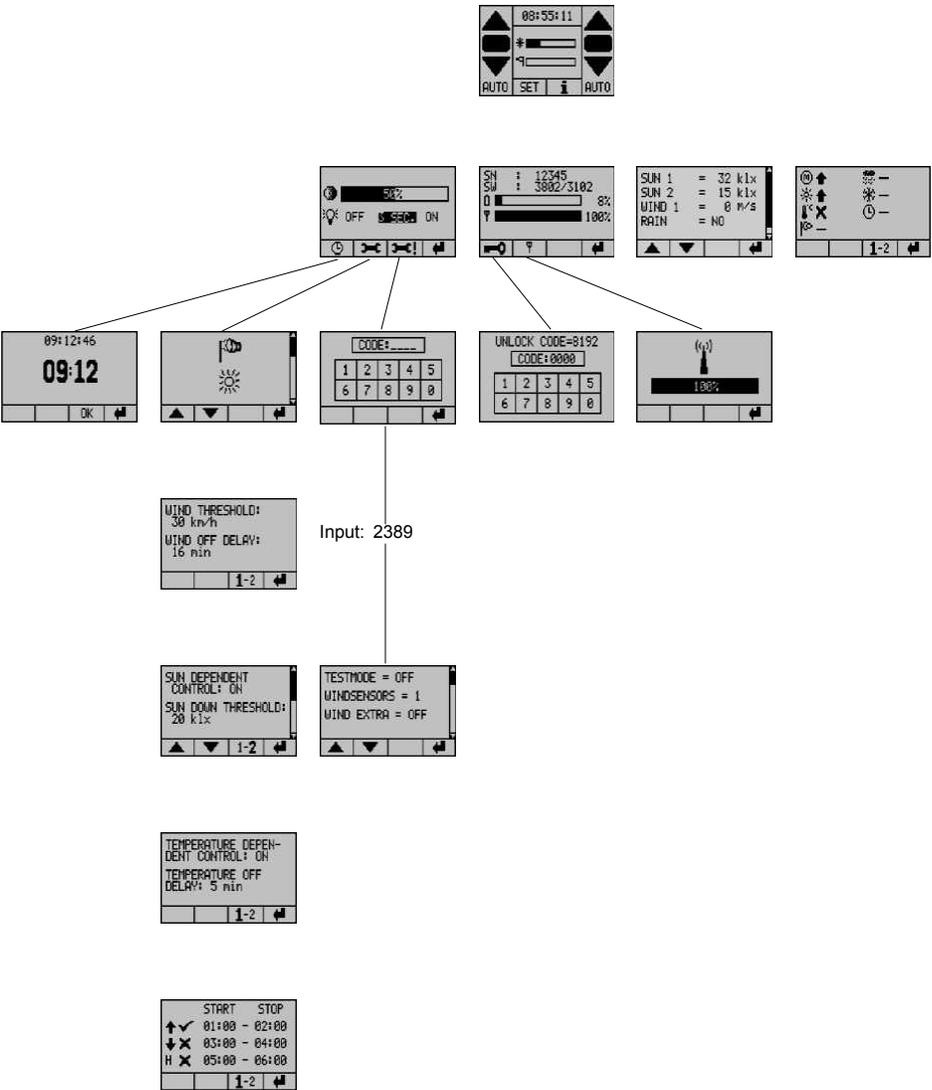Exchange empty batteries to prevent possible leaks (see instructions).

Control unit:

Power supply:	230 V~, 50 Hz
Rated power:	6 W
Fuses:	0.1 A/T (control)
	6.3 A/T (motor circuits)
Output:	potential-free
Maximum load:	4 A, 230 V~, cos f > 0.8
Switching time:	5 – 180 seconds
Operating temperature:	-20 to +50 °C
Storage temperature:	-20 to +70 °C
Relative air humidity:	max. 80 %
IP class:	IP 54
Weight:	approx. 850 g
Dimensions L × W × H:	190 × 155 × 87 mm
Radio specifications:	
Frequency:	433.92 MHz
Modulation:	FSK
Range:	25 m indoor (depending on the ambient conditions)
Wire length 2-wire:	max. 50 m

Operator and display element:

Power supply:	
Battery:	4 × 1.5 VDC (4*AA batteries)
DC-adapter:	9 VDC adapter (use only the Excellence adapter!)
2-wire:	voltage supply from the control unit
Operating temperature:	0 to +40 °C
Storage temperature:	-20 to +60 °C
Relative air humidity:	max. 80 %
IP class:	IPx0
Weight:	approx. 250 g
Dimensions L × W × H:	160 × 105 × 35 mm (depends on the housing)
Battery life:	> 1 year (normal use)
Radio specifications:	
Frequency:	433.92 MHz
Modulation:	FSK
Range:	25 m indoor (depending on the ambient conditions)
Wire length 2-wire:	max. 50 m

The operator and display element can contain pollutant batteries.
The end user is obliged to recycle the battery according to Regulation 91/157/EWG.

Menu navigation


```
08:55:11
AUTO  SET  i  AUTO
```

```
50%
OFF  SET  ON
```

```
SN  : 12345
SW  : 3802/3102
0          8%
        100%
```

```
SUN 1  = 32 klx
SUN 2  = 15 klx
WIND 1 =  0 m/s
RAIN   = NO
1-2
```

```
1-2
```

```
09:12:46
09:12
OK
```

```
CODE:____
1 2 3 4 5
6 7 8 9 0
```

```
UNLOCK CODE=8192
CODE:0000
1 2 3 4 5
6 7 8 9 0
```

```
100%
```

```
WIND THRESHOLD:
30 km/h
WIND OFF DELAY:
16 min
1-2
```

Input: 2389

```
SUN DEPENDENT
CONTROL: ON
SUN DOWN THRESHOLD:
20 klx
1-2
```

```
TESTMODE = OFF
WINDSENSORS = 1
WIND EXTRA = OFF
```

```
TEMPERATURE DEPEN-
DENT CONTROL: ON
TEMPERATURE OFF
DELAY: 5 min
1-2
```

```
        START   STOP
  ✓  01:00 - 02:00
  ✗  03:00 - 04:00
H ✗  05:00 - 06:00
        1-2
```

The control unit is delivered with the following preset default parameters. Please have the values adjusted to your system during start-up.

SET menu:

Function		Default setting	Your setting	
Contrast	0 – 100 %	50 %		
Background illumination	OFF / 3 sec. / ON	3 sec.		

User settings:

Function		Default setting	Your setting	
			motor 1	motor 2
Wind threshold value for expanded wind range	10 – 40 km/h 10 – 100 km/h	30 km/h		
Wind reset delay	2 – 20 min.	16 min.		
Sun-dependent control	ON / OFF	ON		
Sun response value Extend	1 – 60 kLux	15 kLux		
Sun response delay	10 – 240 sec.	75 sec.		
Sun response value Retract	1 – 60 kLux	13 kLux		
Sun reset delay	02:00 – 40:00 min.	16:00 min.		
Temperature-dependent control	ON / OFF	ON		
Temperature reset delay	01:00 – 15:00 min.	05:00 min.		
Time control Up	00:00 – 23:59 ON / OFF	00:00 – 00.00 OFF		
Time control Down	00:00 – 23:59 ON / OFF	00:00 – 00.00 OFF		
Time control automatic lock	00:00 – 23:59 ON / OFF	00:00 – 00.00 OFF		
Rain reset delay	1 – 15 min.	2 min.		
Motor run time Down	5 – 180 sec.	90 sec.		
Reverse pulse	0 – 2.0 sec.	0 sec.		

Adjustable values and times

Extended settings:

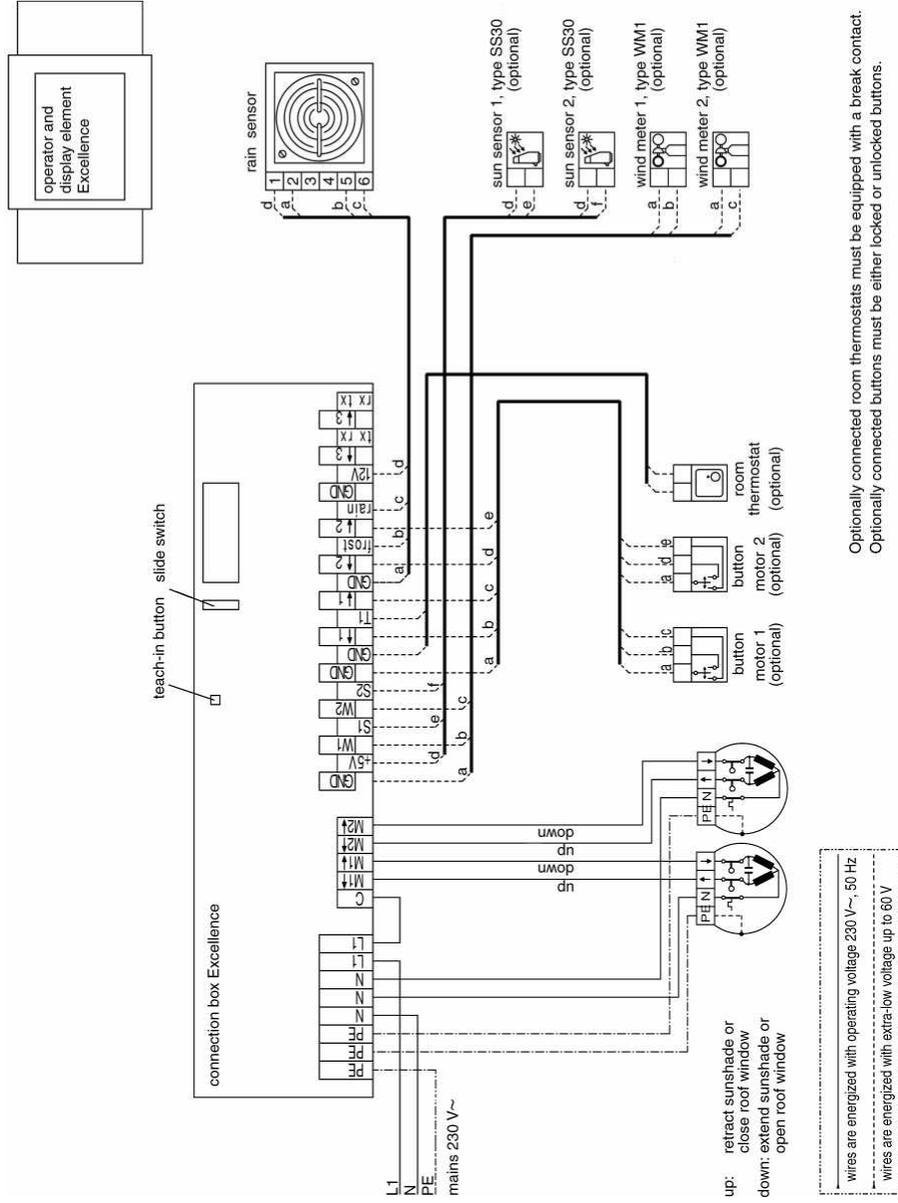| Function	Setting options	Default setting	Your setting
Test mode	ON / OFF	OFF	
Wind meter	0 / 1 / 2	1	
Expanded wind range	ON / OFF	OFF	
Wind velocity unit	km/h / m/s	km/h	
Wind meter type	Standard / heated	Standard	
Wind response delay	0 – 10 sec.	0 sec.	
Sun sensors	1 / 2	1	
Sensor assignment (applicable only for systems with 2 sun sensors)	A / B	B	
Locking after 2 seconds	Direct / deadman	Direct	
Rain priority	ON / OFF	ON	
Rain-dependent control motor circuit 1	ON / OFF	ON	
Rain-dependent control motor circuit 2	ON / OFF	ON	
External Up command	Cont. / run time	Run time	
External Down command	Cont. / run time	Run time	
Motor circuit 2 for roof window	YES / NO	NO	
Language	English / Dutch / German / French	German	

operator and display element Excellence

rain sensor

sun sensor 1, type SS30 (optional)

sun sensor 2, type SS30 (optional)

wind meter 1, type WM1 (optional)
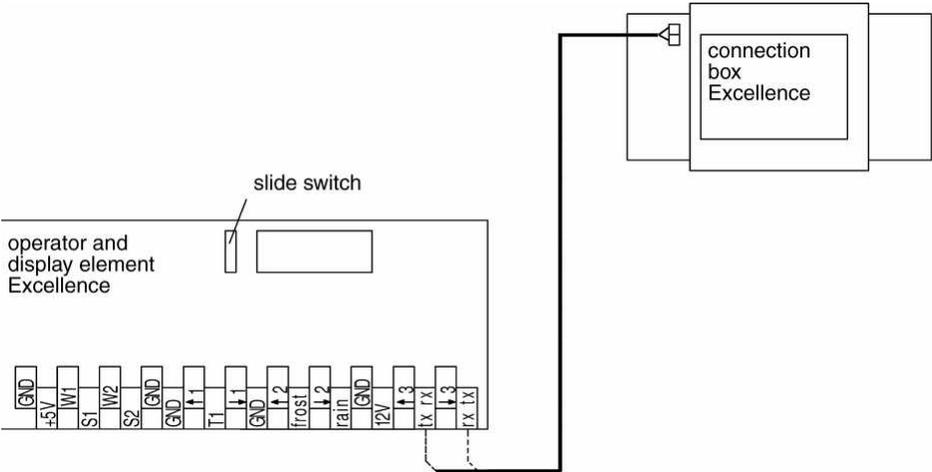
wind meter 2, type WM1 (optional)
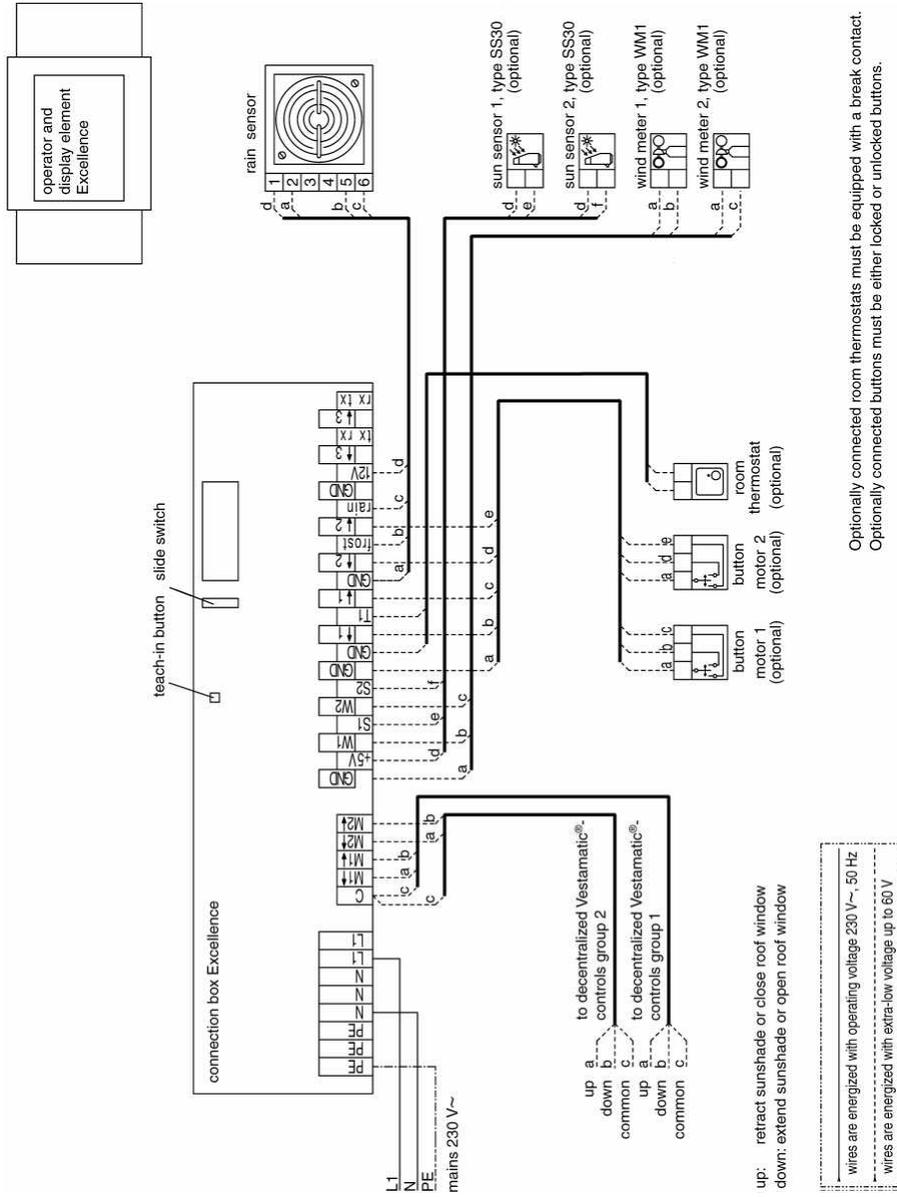
Optionally connected room thermostats must be equipped with a break contact.
Optionally connected buttons must be either locked or unlocked buttons.

connection box Excellence

teach-in button   slide switch

room thermostat (optional)

button motor 2 (optional)

button motor 1 (optional)

L1
N
PE
mains 230 V~

up: retract sunshade or close roof window

down: extend sunshade or open roof window

wires are energized with operating voltage 230 V~, 50 Hz

wires are energized with extra-low voltage up to 60 V

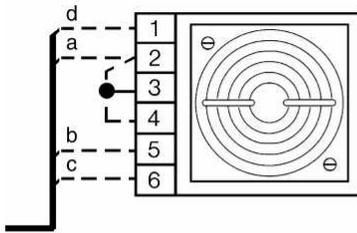# Connection of the operator and display element with two-wire interface

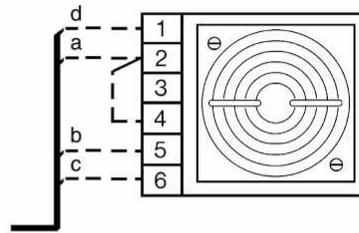# Setting the rain sensor sensitivity

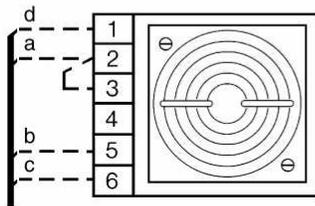Setting: not sensitive

Rain sensor

Setting: normal

Rain sensor

Setting: sensitive

Rain sensor

Setting: very sensitive

Rain sensor