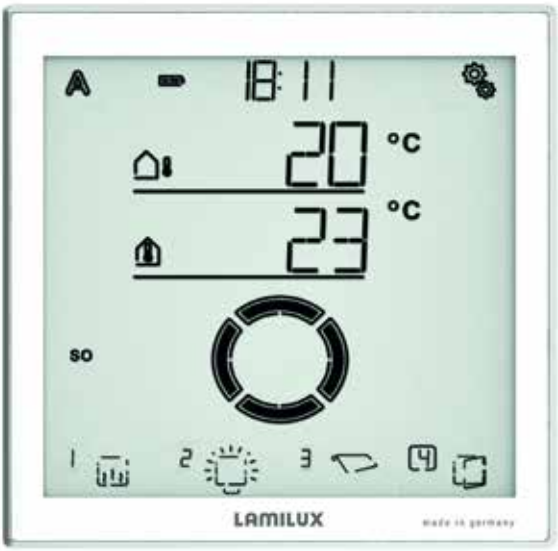


"SMART HOME" CONTROL PACKAGE

OPERATING MANUAL

Customized Intelligence
Serving the customer is our first priority

This document contains the technical data of the Smart Home Control and describes the installation and handling of the system during operation.

The complete manual can be found in the Downloads menu section on www.lamilux.com.

Installation, checking, commissioning and troubleshooting of the device must be carried out by a qualified electrician only (according to VDE 0100).

This document is subject to change and will be adapted to later software versions. The revision number (software version and date) can be found in the footer. If you have a device with a later software version, please check the “Downloads” menu section on www.lamilux.com, to see if a recent version of the manual is available.

EXPLANATION OF SYMBOLS

Safety information

Safety instructions for working on electrical connections, components etc.

DANGER! ... indicates an imminently hazardous situation that will result in death or serious injury if not avoided.

WARNING! ... indicates an imminently hazardous situation that can result in death or serious injury if not avoided.

CAUTION! ... indicates a potentially hazardous situation that can result in minor to moderate injury if not avoided.

ATTENTION! ... indicates a hazard that can lead to damaged property if it is not avoided.

TABLE OF CONTENTS

1. APPLICATION AND FUNCTIONS

The **Smart Home Control** enables easy manual operation of drives and consumers via the touch display. Drives and consumers are connected to the terminal unit of the base set. Optionally up to ten additional drives or consumers can be connected wirelessly.

A weather station can also be connected to the terminal unit, thus allowing for automatic control. The indoor data of the display and the external data of the weather station are used for automatic control. This means that the time, indoor temperature, outdoor temperature, lighting conditions, position of the sun, wind speed and precipitation messages can be considered. Additional interior sensors can be integrated into the system via wireless inputs.

- Automatic shading controls blinds, awnings and shutters to reflect the lighting conditions, taking into account the direction of the sun, defined move delays, temperature locks, wind, rain and frost alarms, the move position, time and night functions.
- Ventilation control actuates sash and sliding windows as a function of the indoor temperature. Outdoor temperature locks like wind, rain and frost alarms, move positions and time functions are considered here.
- Automatic lighting control switches lamps to reflect the outside lighting conditions (day/night) and time. If dimming modules are used, then the dimming level (brightness of the lamp) is considered.
- The heating control system actuates a one- or two-stage heating system as a function of the indoor temperature, taking into account day and night (timer); it has a timer switch for manual heating during night operation.
- Automatic gutter control actuates a heater in a specific outdoor temperature range.
- A daily automatic reset and an automatic reset – a short time after a manual operation – can be set for all outputs.

FUNCTIONS AND PROPERTIES OF THE DISPLAY:

The general accident prevention regulations for power-operated windows, doors and gates, and the VDE installation regulations (or equivalent) must be complied with.

- Control unit with monochrome touch display and internal temperature sensor
- Built-in rechargeable battery with USB charging socket
- The display has a wall mount, but can also be used like a remote control
- Up to 4 displays can be used in the system

FUNCTIONS AND FEATURES
OF THE TERMINAL UNIT:

- Connection for the weather station
- Wired outputs for two 230-V motors, one 24-V motor and one LED Strip Powerbox (Accessories)
- Wireless communication with up to 10 drives/consumers via Elsner RF wireless actuators

- Wireless communication with up to 32 Elsner RF control devices/sensors
- WiFi integration (for app usage) via optional WiFi module

FUNCTIONS AND PROPERTIES OF THE WEATHER STATION:

- Brightness measurement (1 sunlight sensor)
- Temperature measurement
- Wind speed measurement
- Precipitation sensing
- GPS receiver for date/time and installation coordinates (for computing the sun position)

COMPATIBLE WIRELESS ACTUATORS FOR THE SYSTEM:

- Motorised control units RF-MSG-ST, RF-MSG, RF-MSG-PF (as of version 3.7 in all cases) for shading window drives. A group control relay can be used to connect several drives to one RF-MSG if needed
- Switching Relay RF Relay ST, RF Relay UP (both as of version 5.5) for consumers such as lights and single-stage heating
- Dimmers RF-L UN-ST, RF-L LED-ST (as of version 1.4 in each case), RF-L-UP 1-10 V (as of version 1.1) for dimmable lamps
- Heating module RF-HE-ST (as of version 5) for two-stage heating

All wireless actuators as of date of manufacture 14-01-2016 are compatible with the system. The production date can be read off the serial number of the device; it follows a pattern of "DDMMYY serial number".

COMPATIBLE OPERATING UNITS AND SENSORS FOR THE SYSTEM:

- Remote control Remo 8 (as of version 1.8)
- Sensor Corlo P2 RF (as of version 1.0)
- Sensor on the RF-B2-UP interface (as of version 1.0)
- Temperature sensor WGT (as of version 1.0)
- Sensors WG AQS/TH-UP (as of version 1.0) and WGTH-UP (as of version 1.3) for temperature measurement (moisture and CO2 measurement of the sensors is not evaluated)

2. SCOPE OF SUPPLY

- Basic set 303 471 with display including USB connection cable 0.5 m (USB A connector to USB B micro connector) and terminal unit including connectors
- Weather station 303473

3. TECHNICAL DATA

3.1. DISPLAY

The product complies with the provisions of EU directives.

Materials	Composite
Display	Visible diagonal 126 mm
Colours	Painted white/aluminium colour
Installation	Surface mounted with wall holder
Dimensions	approx. 107 x 112 x 14 (W x H x D, mm)
Weight	Approx. 170 g
Ambient temperature	Operation 0...+50°C, Storage -10...+50°C
Ambient humidity	max. 95% rF, Avoid condensation
Operating voltage	3.8 V rechargeable battery
USB charging current:	100 mA
Radio frequency	868.2 MHz
Temperature measuring range	-40°C...+80°C

3.2. CONNECTION UNIT

The product complies with the provisions of EU directives.

Housing	Composite
Colour	Grey
Installation	Surface mount
Degree of protection	IP20
Dimensions	approx. 201 x 75 x 121 (W x H x D, mm)
Weight	Approx. 610 g
Ambient temperature	Operation -30...+60°C, Storage -30...+70°C
Ambient humidity	max. 95% rF, Avoid condensation
Operating voltage	230 V AC, 50 Hz
Power consumption	Operation: approx. 10 W
Input	1× weather station
Outputs	2× motor 230 V AC, max. 400 W each 1× motor 24 V, max. 1 A 1× dimmer (0...10V interface)
Radio frequency	868.2 MHz

3.3. WEATHER STATION

The product complies with the provisions of EU directives.

Housing	Composite
Colour	White/translucent
Installation	Surface mount
Degree of protection	IP 44
Dimensions	approx. 62 x 71 x 145 (W x H x D, mm)
Weight	Approx. 80 g
Ambient temperature	Operation -30...+50°C, Storage -30...+70°C
Voltage	24 V DC
Current	max. 105 mA

TEMPERATURE SENSOR:

Measuring range	-30°C ... +50°C
Resolution	0.1 °C
Accuracy	±0.5°C at -30°C ... +25°C ±1.5°C at -30°C ... +45°C

WIND SENSOR:

Measuring range	0 m/s ... 35 m/s
Resolution	0.1 m/s
Accuracy	±15% of the measured value with an incident flow of 45 ° to 315 ° (frontal incident flow corresponds to 180 °)

BRIGHTNESS SENSOR:

Measuring range	0 Lux ... 150,000 Lux
Resolution	1 Lux at 0...255 Lux 4 Lux at 256...2,645 Lux 163 Lux at 2,646...128,256 Lux 762 Lux at 128,257...150,000 Lux
Accuracy	±15% of the measured value at 35 Lux ... 150,000 Lux

4. INSTALLATION/ASSEMBLY

4.1. NOTES ON INSTALLATION

Installation, checking, commissioning and troubleshooting of the device must be carried out by a qualified electrician only (VDE 0100 or similar).

DANGER!
Danger to life due to dangerous electrical voltage (mains voltage)!
There are unprotected live components inside the device.

- Observe the VDE regulations.
- De-energise all needed lines for the assembly, and take safety precautions against unintended activation.
- Do not use the device if damaged.
- Discontinue use of the device or the system, and secure to prevent inadvertent operation, if it is assumed that safe operation is no longer guaranteed.

The device is designed for the intended use only. Any unauthorised modification or failure to observe the instructions will void warranty or guarantee claims.

After unpacking, check the device immediately for any mechanical damage. If transport damage is present, immediately inform the supplier.

The device may only be operated as a stationary system, that is, only in mounted condition, following completion of all installation and commissioning work, and only in the intended environment.

Lamilux is not liable for changes in standards after publication of the operating manual.

4.2. NOTES ON WIRELESS EQUIPMENT

When planning systems with devices that use wireless communication methods, attention must be paid to sufficient wireless reception. The range of wireless controls is restricted by legal regulations for radio equipment as well as by conditions in the building. Avoid sources of interference and obstacles between the transmitter and receiver resulting in the disruption of wireless communication. These include, for example:

- Walls and ceilings (especially concrete and sun protection glazing).
- Metallic surfaces in the vicinity of the mobile nodes (e.g., aluminium construction of a conservatory).
- Other wireless devices and powerful local transmitter systems (e.g., wireless headphones) which transmit on the same frequency (868.2 MHz). Keep a minimum distance of 30 cm between radio transmitters.

4.3. INSTALLING THE DISPLAY

4.3.1 INSTALLATION LOCATION AND PREPARATION

Install and operate the unit only in dry indoor rooms. Avoid condensation.

The internal temperature measurements may be affected by heat and cold sources in the vicinity. For an accurate measurement,

- avoid direct insolation
- do not install above a radiator
- avoid drafts from windows/doors

The display is battery operated and communicates wirelessly with the terminal unit. It should be positioned at a conveniently readable height, e.g., 150 cm.

4.3.2 WALL MOUNT INSTALLATION

The wall holder consists of two parts: the wall mount and the attached cover.

FIG. 1
Loosen the cover from the wall holder.

Loosening in non-installed/as delivered condition:
Separate the two parts by holding the outside of the cover and press the centre of the wall mount with your thumbs out.

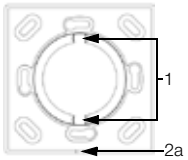


FIG. 2 FRONT VIEW
Attach the wall mounting with suitable fixing material (screws, adhesive pads).

(1) The two recesses in the locking mechanism must be vertical to position the display correctly.

(2a) The notch for detaching the cover should face downward so that it is as unobtrusive as possible.

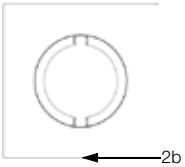


FIG. 3 FRONT VIEW
Clamp the cover on the wall mount from the front.

(2b) Again, the notch to detach the cover should face downwards.

4.3.3 DRILLING PLAN

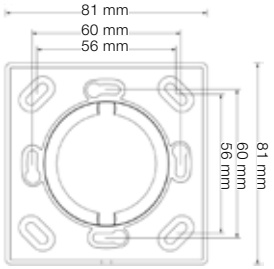


FIG. 4
Not printed to scale!

Use the wall bracket itself as a drilling template!

4.3.4 REMOVING THE WALL MOUNT

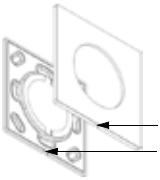


FIG. 5
Loosen the cover in installed condition:

Carefully apply a small screwdriver to the notch to pry open. Take off the cover.

4.3.5 INSTRUCTIONS FOR INSTALLATION AND GETTING STARTED

Never expose the device to water (rain) or dust. This could damage the electronics.

4.4. INSTALLING THE WEATHER STATION

4.4.1 INSTALLATION LOCATION

Choose an installation position at the building where the sensors can measure the wind, rain and sun without impairment. Make sure there are no structural parts attached above the device, from which water could drip onto the rain sensor after it has stopped raining or snowing. The device must not be shaded by the building shell or trees.

The distance around the device must be at least 60 cm. This allows correct wind measurement without air turbulence. At the same time, the clearance prevents splash water (rebounding raindrops) or snow (snowing in) interfering with the measurement. It also prevents bites of birds.

Make sure that an extended awning does not cast a shadow on the device, and that the device is not in the slipstream of an awning.

The temperature measurement can also be affected by external influences, e.g., heating or cooling of the building structure on which the sensor is mounted (insolation, heating pipes, or cold water pipes).

Magnetic fields, transmitters and interfering fields from electricity consumers (e.g., fluorescent lamps, neon signs, switched mode power supplies, etc.) can interfere or prevent the reception of the GPS signal.

FIG. 6
The device must have at least 60 cm clearance to other elements (building, construction elements, etc.) underneath, at the sides and at the front.

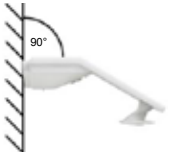


FIG. 7
The device must be mounted on a vertical wall (or a mast).

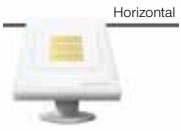


FIG. 8
The device must be mounted horizontally.

FIG. 9
When installed in the northern hemisphere, the device must be oriented to the south.

When installed in the southern hemisphere, the device must be oriented to the north.

4.4.2 DESIGN OF THE DEVICE

FIG. 10
1 GPS receiver in cover
2 Brightness sensor
3 Precipitation sensor in cover
4 Temperature measurement
5 Wind measurement

ATTENTION!
Sensitive wind sensor.

- Remove transport protection labels after installation.
- Do not touch the sensor on the wind measuring element (no. 5).

ATTENTION!
Just a few drops of water can damage the electronics of the device.

- Do not open the device if water (e.g., rain) can penetrate.

4.4.3 INSTALLATION PREPARATION

FIG. 11
Loosen the two screws on the cover (top) and lower part (bottom) with a size 6 Torx screwdriver.

FIG. 12
Pull the cover and base apart, keeping them straight. This releases the plug-in connection between the circuit board in the cover and the connector socket in the lower part.

4.4.4 ATTACHING THE BASE AND BRACKET

Initially install the housing bottom part with the integrated bracket for wall or mast mounting.

WALL MOUNTING

Use fastening material (plugs, screws) that is suitable for the substrate.

FIG. 13
The device is mounted with two screws. Break out the two slots in the lower part of the housing.

FIG. 14a
If you prefer concealed installation of the connecting cable, the cable must exit the wall in the rear panel area (highlighted).

FIG. 14b
If the connecting cable is surface-mounted, the cable lead-through needs to be broken out. The cable is then routed through the bottom of the housing into the device.

FIG. 15
Route the connecting cable through the rubber seal.

DRILLING TEMPLATE

ATTENTION! The data sheet is not printed to scale! A separate, to scale drilling plan is included in the scope of delivery; this can be used as a template.

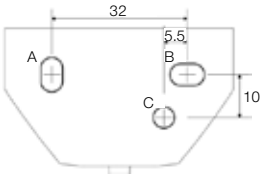


FIG. 16
Dimensions in mm. Technically related deviations possible

A/B2× slot 8 mm × 5.5 mm C position of cable lead-through (rubber seal) in housing

MAST ASSEMBLY

The device will be assembled to the mast with the included stainless steel mounting strap.

FIG. 17
Route the mounting strap through the eyelets in the lower part of housing

FIG. 18
Break out the cable lead-through.

Route the connecting cable through the rubber seal.

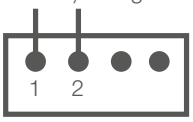
The stainless steel strap works like a cable tie and thus cannot be opened once it has been tightened.

4.4.5 CONNECTION

The connecting terminal is located in the bottom part of the housing.

The supply cable to the weather station can be up to 100 m in length. A typical, UV-resistant telephone cable (A-2Y (L) 2Y 2x2x0.6 or A-2Y (L) 2Y 2x2x0.8) is used for the connection.

FIG. 19
Connect the control/voltage (+24 V DC/GND) to terminals 1/2 P04i-GPS. The terminal assignment is polarity-independent



4.4.6 COMPLETING THE INSTALLATION WORK

FIG. 20
Put the cover on the lower part. This establishes the plug-in connection between the circuit board in the cover and the connector socket in the lower part.

FIG. 21
Screw the cover (top) and lower part (bottom) together.

4.4.7 INSTRUCTIONS FOR INSTALLATION AND GETTING STARTED

Do not open the weather station if water (e.g., rain) can penetrate. Just a few drops of water can damage the electronics.

After installation, remove all existing transport protection labels.

The wind measurement value can only be output about 30 seconds after applying the supply voltage.

4.5. INSTALLING THE CONNECTION UNIT

The operating voltage, the weather station and the drives and devices to be controlled are connected to the terminal unit. Only connect the designated drives or devices to the terminals.

Further drives and devices can be connected to the system via additional wireless actuators.

Multiple drives can be connected at the same time. Note whether the motor manufacturer stipulates a group control relay for parallel connection of motors. Group control relays can be purchased from Lamilux or the motor manufacturer.

ATTENTION!
Material damage caused by parallel connection of unsuitable motors!
Not all drives are suitable for parallel circuitry in drive groups.

- Use appropriate drives or connect the drives via a group control relay.

Motors with a rated input higher than 400 watts must be operated via a relay or contactor with a separate power supply.

Lamilux offers suitable power supplies for DC drives. Where applicable, please specify the motor type, manufacturer and – if available – the technical data in any requests for quotation.

4.5.1 CONNECTION

Connect the mains supply (N/PE/L), weather station (D1/D2), 230-V motors (2/1/PE/N), 24-V motors (1/2) and LED Strip Powerbox (D1/D2/L/PE/N) via the supplied connectors.

ATTENTION!
Material damage caused by incorrect wiring!

Incorrect wiring can cause permanent damage to the device or electronic devices connected to it.

- Note the labelling of the connection terminals and connect the mains supply, weather station, drives and equipment at the intended positions only.

NOTES ON TEACHING IN WIRELESS CONNECTIONS

Teaching of wireless nodes at the terminal unit is facilitated by protecting the terminal unit and wireless actuators/sensors with separate circuit breakers.

To teach the wireless connection to the display, refer to the section Setting up the wireless connection in the manual (basic settings).

The wireless connection to the terminal unit can be set up in two ways:

1. By pressing the programming button. This method may only be performed by a qualified electrician (as per VDE 0100), since the programming button for the wireless connection is located on the PCB in the terminal unit.
2. By switching the supply voltage off and back on.
   To enable this method, the terminal unit should be protected separately (16-A circuit breaker). Other wireless nodes should be supplied with power via other circuit breakers. This means that the power supply to the terminal unit and the other wireless devices can be interrupted independently.

4.5.2 OVERVIEW OF CONNECTIONS

FIG. 22
Connection points on the terminal unit

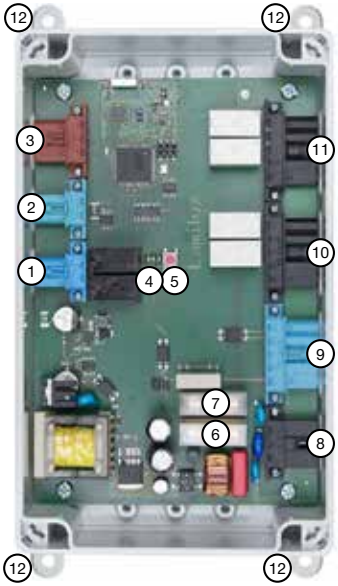


FIG. 23
1 24 V DC Motor connection
2 Weather station connection (polarity independent)
3 not assigned
4 LEDs:
- Power: Indicates control unit operation.
- Weather data: Flashes on receiving a data packet.
- Status: Programming LED.
5 Programming button for teaching wireless connections
6 Fine fuse 6.3 AT (for 230-V motor 1+2, no. 10, 11)
7 Fine fuse 6.3 AT (for dimmer, no. 9)
8 Mains voltage connection 230 V AC, 50 Hz
9 LED Strip Powerbox connection (accessory)
10 Motor connection 1 (230 V AC)
11 Motor connection 2 (230 V AC)
12 Fastening tabs

4.5.3 INSTRUCTIONS FOR INSTALLATION AND GETTING STARTED

Do not open the terminal unit if water (e.g., rain) can penetrate: Just a few drops of water can damage the electronics.

5. OPERATING THE DISPLAY

5. OPERATING THE DISPLAY

5.1. CHARGING THE BATTERY

The display has a built-in rechargeable battery which cannot be removed. The battery charge state is shown by the "Battery" icon:

Charge state very good; device ready for operation.

Charge state good; device ready for operation.

Charge state low; charge battery.

+ audio signal every 15 minutes.
Charge state very low; charge battery.

Charge the display prior to getting started. To charge, connect the display via USB to a mains socket charger or a PC. The charger must deliver a charging current of 200 mA (or more).

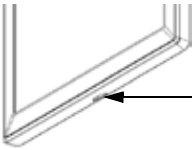


FIG. 24
The USB charging socket is located at the bottom edge of the display.

If the device is not charged in time, the display switches off. If you use a weather station with the system, then automatic mode is not affected by this. Automatic mode continues working without the interior temperature functions.

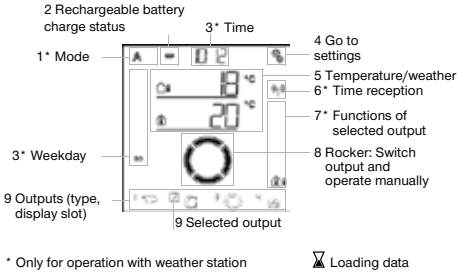
5.2. CARE AND MAINTENANCE

Fingerprints on the display and housing are best removed with a cloth moistened with water, or with a microfibre cloth. Do not use abrasives/cleaning agents or aggressive care products for cleaning.

Dispose the used battery responsibly; do not dispose used batteries as domestic waste.

5.3. DISPLAY AND CONTROL OPTIONS ON THE HOME SCREEN

The display has various areas in which information is displayed and functions can be accessed.



1 – Mode
If a weather station is connected, the current mode of the selected output is displayed here.

The mode is changed by tapping on the area with the symbols (A/Man.).

Pressing and holding in the area with the symbols (A/Man.) switches all outputs to automatic at the same time (press and hold until the high audio signal "long keystroke" is heard).

Automatic mode. Automatic functions of the selected output are active.

Manual mode. Output was operated manually or is switched to manual mode.

After an output has been operated manually, it remains in manual mode.

Automatic mode is inactive. Define an automatic mode reset, to automatically switch the output to automatic mode once a day or a certain time after manual operation (see section General Settings: Automatic Reset in the manual and Automatic Reset for the individual automatic mode descriptions in the manual).

2 – Rechargeable battery charge status
Observe section 5.1. Charging the rechargeable battery, page 16.

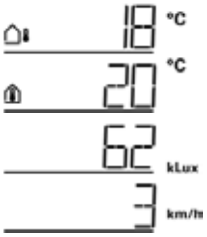
3 – Time, weekday
(only for operation with the weather station)
The time can be displayed as a 12 or 24-hour clock. For more information on setting the clock, see the section Setting the time in the manual.

4 – Settings menus

Press briefly to go to the automatic settings or press for 3 seconds to go to the basic settings.

The automatic settings are described in the section Automatic mode in the manual.
The basic settings are described in the section Basic settings in the manual.

5 – Room temperature and weather data
This area displays the internal temperature value; if you are using the weather station, also the outdoor/weather data. In this case you can toggle between the "Temperature" and "Brightness/Wind" displays by tapping the area with the values.



Temperature display:
- Current outdoor temperature (only when using the weather station)
- Current indoor temperature

Brightness/Wind indicator (only when using the weather station):
- Current brightness (light intensity)
- Current wind speed

For more information on the values for brightness and wind, see section 4.3.6 of the manual. Units for sun and wind, page 181.

6 – Time reception
(only for operation with the weather station)
If the wireless icon appears on the home screen, the controller has received the current time through the GPS receiver built into the weather station within the past 5 minutes.

If no wireless icon appears, then no time signal has been received for more than 5 minutes. The controller's internal clock will keep working.

7 – Functions of the active output
The functions of the selected output are shown in the right margin of the display, for example, the automatic mode status.

You will find a detailed description in section 5.3.1. Meaning of function icons (Automatic status), page 18.

8 – Rocker for manual operation

9 – Outputs
You can use the rocker to move or switch the individual outputs manually. The outputs are shown at the bottom of the screen with the display slot number and type icon. The selected output is indicated by a box around the display slot number.

Note that at this point only those outputs are displayed for which the displays has been enabled (see manual section Display slot in the descriptions of the basic settings for motorised control units (RF-MSG, weather station), for relays (RF relay, RF-HE) and for dimmers (RF-L).

Change the output.

Manually move or switch the selected output.

Selected output is disabled for manual operation (alarm function active).

5.3.1 MEANING OF FUNCTION ICONS (AUTOMATIC STATUS)

If a weather station is used, then the icons show the automatic mode status of the selected output and the alarm functions applicable for manual mode. A function is only displayed if it has been activated for the output.

SHADING (BLINDS, AWNINGS, ROLLER SHUTTERS)

Note that several conditions must be met for an action such as "extend shading". The functions are listed here in order of priority. In other words, the sun protection function is not executed until all previously stated functions have released shading.

A detailed description of the automatic mode functions can be found in the Automatic shading section of the manual.

Alarm functions:
Alarm functions have the highest priority and prevent manual operation of the output.


Wind alarm. Shading retracted. In Automatic mode: manual operation may be released again, even if automatic functions are still inhibited by a wind alarm.


Frost alarm (combination of precipitation and low outdoor temperature). Shading retracted.


Rain alarm. Shading retracted.

Timer and night functions:


Timed closing or timed opening active.


Value below threshold for dusk/night. Night closing is performed.

Indoor and outdoor temperature:


Indoor temperature OK. Shading is released.
If the icon is not displared, the indoor temperature lock is active.


Outdoor temperature OK. Shading is released.
If the icon is not displayed, the outdoor temperature lock is active.


Retraction delay running. Shading has been locked due to low indoor temperature.

Sun direction:


Sun in shade area (compass direction). Shading is released.

Solar protection function:


Brightness threshold for shading exceeded; extend delay running. Shading is extended after the delay time, if all other conditions are OK.


Brightness threshold for shading exceeded. Shading is performed if all other conditions are OK.


Value dropped below brightness threshold for shading; retract delay running. Shading retracts after the delay time.


Value dropped below brightness threshold for shading. Automatic solar protection inactive.

WINDOW
Note that several conditions must be met for an action such as "ventilate on indoor temperature". The functions are listed here in order of priority. In other words, temperature-driven ventilation is not executed until all previously stated functions have released ventilation.

A detailed description of the automatic mode functions can be found in the Automatic window ventilation section of the manual.

Alarm functions:
Alarm functions have the highest priority and prevent manual operation of the output.

Wind alarm. Windows closed. Manual mode: Manual operation locked. Automatic mode: Output can be operated if the automatic wind lock is active.

Frost alarm (combination of precipitation and low outdoor temperature). Windows closed.

Rain alarm. Window closed or open in rain position depending on the setting.

Timer functions:

Timed closing or timed opening active.

Outside temperature:

Outdoor temperature OK. Ventilation is released. If the icon is not displayed, the outdoor temperature lock is active.

Ventilation function:

Indoor temperature for ventilation exceeded. Ventilation is performed if all other conditions are OK.

LIGHT

A detailed description of the automatic mode functions can be found in the Automatic lighting section of the manual.

Value dropped below dusk threshold. Light is switched on after a delay of 1 minute. If a lighting period is additionally defined, switching only occurs within that period.

Lighting period active. If dusk switching is additionally defined, switching only occurs at dusk.

HEATING

A detailed description of the automatic mode functions can be found in the Heating section of the manual.

Day mode. The preset day temperature setpoint is effective.

Night mode (night time). The preset night temperature setpoint is effective.

The value dropped below the currently valid temperature setpoint. Heating is on.

GUTTER HEATING

A detailed description of the automatic mode functions can be found in the Automatic gutter heating section of the manual.

Outdoor temperature is within the preset range. Heating is on.

5.4. AUDIO SIGNALS

If a button or a touch-sensitive area is actuated, a short audio signal can be heard. If a key is held down, then you can hear a higher audio signal to confirm that a long keystroke was detected. This applies, for example, for the Settings button to access the basic settings or the SET button for saving. Shortly before the display battery is discharged, you will hear a warning signal every 15 minutes (combination of low and high signal).

5.5. AUDIO SIGNALS

If a button or a touch-sensitive area is actuated, a short audio signal can be heard.

ER

If ER Error is displayed instead of a sensor value, then the connection to a connected weather station is interrupted, or the sensor is defective.

Check whether the weather station still has a voltage supply (fuse). If the problem persists call in a qualified electrician to check the device.

Installation, checking, commissioning and troubleshooting of the device must be carried out by a qualified electrician only (VDE 0100 or similar).

5.6. TABLE:
MEMORY CAPACITY OF OUTPUTS AND INPUTS

You can use the table to enter the taught devices and functions for the individual storage slots, and make notes on the automatic mode settings.

Storage slot.	Type	Display slot	Room	Keyword

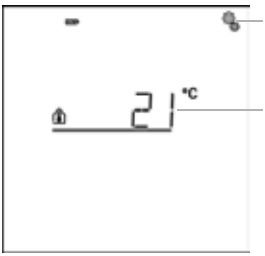
Storage slot.	Type	Display slot	Room	Keyword

6. GETTING STARTED

Installation, checking, commissioning and troubleshooting of the device must be carried out by a qualified electrician only (VDE 0100 or similar).

The display is ready for use immediately after unpacking. You can begin with the basic settings after installing the terminal unit and the wireless modules if applicable.

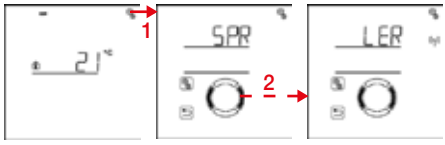
The display will already show the room temperature.



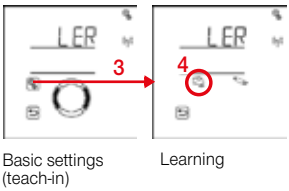
Proceed as follows with the installation of the controller:

1. Installation
2. Basic settings (incl. teaching the wireless nodes), see the General Settings manual.
3. Setting automatic mode, see the Automatic Mode manual. – Only for operation with weather station

6.1. SHORT SETUP
TEACHING THE CONTROL BOX

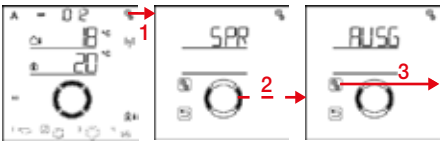


1. On the home screen, tap and hold down the Settings icon (high audio signal) to access the basic settings.
2. Go to the **LER (Teach)** section.



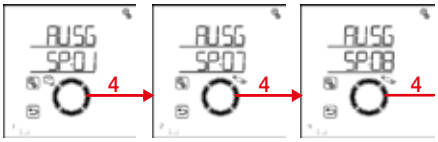
3. Select the **LER** section.
4. Briefly press the weather station icon. Ready for teach-in is indicated by the animated antenna symbol.
5. Switch on the power supply to the terminal unit (16 A circuit breaker in switch cabinet/ fuse box, or press the PRG key inside the housing.

PARAMETRISING THE OUTPUT



Home screen | Basic settings (language) | Basic setting (outputs)

1. On the home screen, tap and hold down the Settings icon (high audio signal) to access the basic settings.
2. Go to the **AUSG (outputs)** section.
3. Select the **AUSG** section.



Outputs (Storage slot 01) | Outputs (Storage slot 07) | Outputs (Storage slot 08)

4. Go to the desired storage slot (output).

Actuate the output with the up/down buttons to discover which motor or consumer is assigned to the storage slot. Note the function in the table 5.6.: Storage slots for outputs and inputs, page 19/20/21.

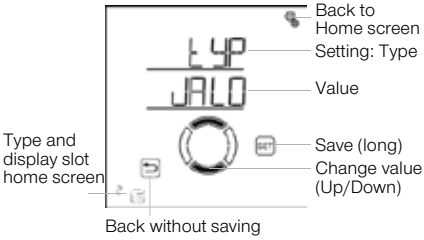
OUTPUT ASSIGNMENTS (SEE CONTROL BOX LABELS):

SP01 = Motor 1 230V
SP02 = Motor 2 230V
SP03 = Motor 24V
SP04 = Dimmer

DETERMINING THE TYPE:

5. Select the setting for the output/storage slot.
6. Select the setting **tYP Type**.

Select **mAR (awning)**, **FEN (window)**, **rOL (shutter)**, **JALO (blind)** or **rES Reserve** (value flashes).



DETERMINING THE DIRECTION OF ROTATION

Setting the direction of rotation defines the safe position of a drive. The correct setting is important for safe operation of automatic mode, e.g., for wind and rain alarms. The direction of rotation must be set independently of the subsequent setting of the manual move direction.

5. Select the setting for the output/ storage slot.

6. Go to the **drEH direction of rotation** setting.

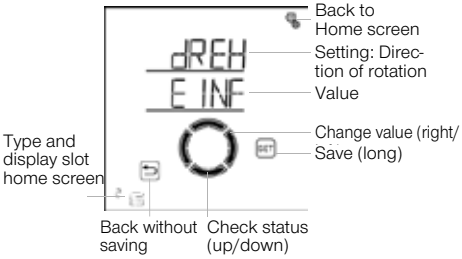
7. Select the **drEH** setting.

SHADING (AWNING, BLIND, SHUTTER):
Type "awning, blind or shutter"

Check the status of the drive when the UP button is pressed. You can move the drive using the up/down keys to do so.

Select EINF retraction if the shading retracts on pressing the UP button.

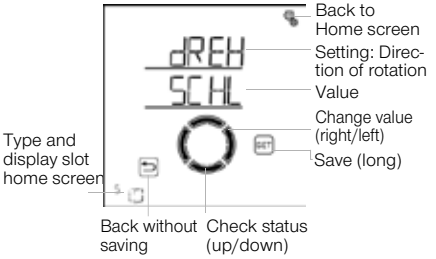
Select AUSF extend if the shading extends on pressing the UP button. The value flashes and is changed in this menu by pressing the right/left buttons as an exception.



WINDOW
Type "Window"

Check the status of the drive when the UP button is pressed. You can move the drive using the up/down keys to do so.

Select SCHL close if the window closes on pressing the UP button. Select OEFF open if the window opens on pressing the UP button. The value flashes and is changed in this menu by pressing the right/left buttons as an exception.



DETERMINING THE MANUAL MOVE DIRECTION:
For drives you can set which button extends and which retracts, or which opens and which closes. This adapts the rocker button assignments to the actual move direction of the drive and thus facilitates operation for the user.

5. Select the setting for the output/ storage slot.

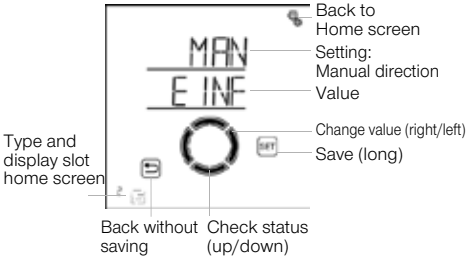
6. Go to the setting **mAN Manual Direction**.

7. Select the **mAN** setting.

SHADING (AWNING, BLIND, SHUTTER):

Type "awning, blind or shutter"

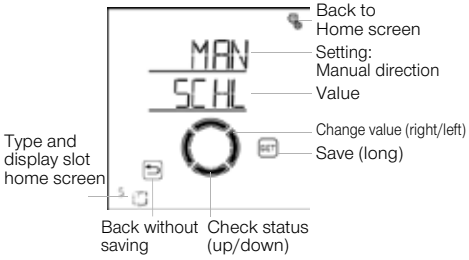
You can move the drive with the up/down keys for test purposes.



WINDOW

Type "Window"

You can move the drive with the up/down keys for test purposes.



DETERMINING THE OPENING/EXTENSION TIME SHADING (AWNING, BLIND, SHUTTER):

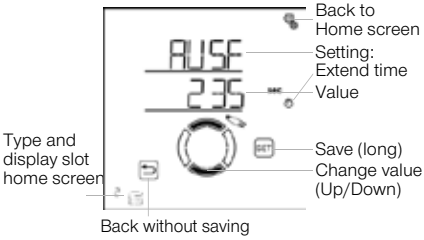
You need to enter the run time for extending/opening and retracting/closing to allow a move position to be precisely approached. For this reason, you need to stop the run time during start-up and set the time now.

5. Select the setting for the output/ storage slot.

6. Go to the **AUSF extend time** setting.

7. Select the **AUSF** setting.

Adapt the value (number flashes). Default 235 seconds, setting range from 0 to 300 seconds.

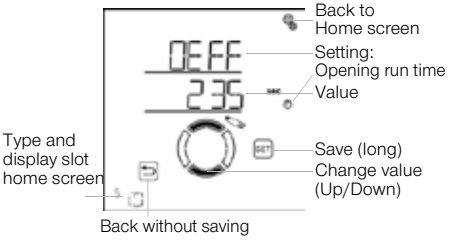


WINDOW

5. Select the setting for the output/ storage slot.

6. Go to the **OEFF opening time** setting.

7. Select the **OEFF** setting.



The outputs can be operated manually to determine the run times. To do this, proceed as per the first 4 steps of "parametrising the output" and measure the times. You can also refer to the operating instructions for the deployed components (ventilation drive, shading) to determine the run times.

DETERMINING THE CLOSING/RETRACTION TIME

5. Select the setting for the output/ storage slot.
6. Go to the **EINF retraction time** setting.
7. Select the **EINF** setting.

Adjust the value, see opening/extension time, increase value by 2 sec.!

Parameterisation must be carried out for each output used. Set unused outputs to reserve in the "Determining the type" step.

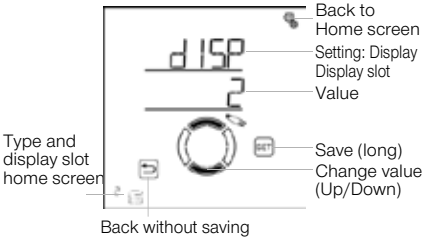
DETERMINING THE DISPLAY SLOT

A display slot on the home screen can be assigned to each output (storage slot). In the lower part of the display, outputs are then shown in this order, and can be selected for manual operation.

While adjusting the outputs, the display slot is shown on the home screen bottom left near the type symbol.

5. Select the setting for the output/ storage slot.
6. Go to the **dISP Display display slot** setting.
7. Select the **dISP** setting.

Select the display slot (number flashes) or select OFF if you do not want to display the output on the home screen.



The preset automatic functions are sufficient in most cases. If special adjustments are desired, you can configure them with the help of the manual, which you can download at www.lamilux.com/downloads.

7. OPERATION OF THE WEATHER STATION

7.1. MAINTENANCE OF THE WEATHER STATION

WARNING!
Risk of injury due to automatically moving components!
Automatic control means that system components can start to move thus exposing persons to danger.

- Always disconnect the device from the power supply for maintenance and cleaning.

The device should be regularly checked for soiling twice a year and cleaned if necessary. Heavy soiling can impair the sensor function.

ATTENTION!
The device may be damaged if water enters the housing.

- Do not clean with pressure cleaners or steam jets.

8. WLAN MODULE

8.1. DESCRIPTION

The WiFi module connects the smart home control with the Lamilux Smart Home App. Devices and drives can be operated manually with the app installed on your mobile device. Measured values from sensors inside the system and the weather station can also be viewed.

The WiFi module receives data from the app via the in-house WiFi or mobile internet (VPN). These data are then forwarded by the interface to the Smart Home Control via the wireless link. Similarly, data from the Smart Home Control are transferred to the app.

8.1.1 SCOPE OF SUPPLY

- Interface in housing for CEE 7/4 socket.

8.1.2 TECHNICAL DATA

The product complies with the provisions of EU directives.

Dimensions interface	approx. 67 x 110 x 91 (W x H x D, mm)
Weight interface	Approx. 260 g
Housing material	Plastic, black
Degree of protection	IP20
Ambient temperature	Operation -20...+50 °C, Storage -55...+70°C
Ambient humidity	max. 95% rF, Avoid condensation
Operating voltage	230 V AC (safety plug CEE 7/4)
Radio frequency	868.2 MHz and 2.4 GHz

8.2. NOTES ON GETTING STARTED

8.2.1 NOTES ON INSTALLATION

Installation, checking, commissioning and troubleshooting parts of the electrical installation must be carried out by a qualified electrician only (VDE 0100 or similar).

The device is designed for the intended use only. Any unauthorised modification or failure to observe the instructions will void warranty or guarantee claims.

After unpacking, check the device immediately for any mechanical damage. If transport damage is present, immediately inform the supplier.

The device may only be operated as a stationary system, that is, only in mounted condition, following completion of all installation and commissioning work, and only in the intended environment.

Lamilux is not liable for changes in standards after publication of the operating manual.

8.2.2 REQUIREMENTS

To be able to use the WiFi module, the following criteria must be fulfilled:

- You must have a mobile device (smartphone or tablet) with the Android operating system 4.0.3., Apple iOS 8.0 or higher.
- A Smart Home Control must be set up.
- A router and a configured wireless network (WLAN) must be available. Secure your WLAN against unauthorised access by taking appropriate security measures such as encryption, etc.!

8.2.3 NOTES ON WIRELESS EQUIPMENT

When planning systems with devices that use wireless communication methods, attention must be paid to sufficient wireless reception. The range of wireless controls is restricted by legal regulations for radio equipment as well as by conditions in the building.

Avoid sources of interference and obstacles between the transmitter and receiver result-

ing in the disruption of wireless communication. These include, for example:

- Walls and ceilings (especially concrete and sun protection glazing).
- Metallic surfaces in the vicinity of the mobile nodes (e.g., aluminium construction of a conservatory).
- Other wireless devices and powerful local transmitter systems (e.g., wireless headphones) which transmit on the same frequency (868.2 MHz). Keep a minimum distance of 30 cm between radio transmitters.

8.2.4 INSTRUCTIONS FOR INSTALLATION AND GETTING STARTED

Never expose the device to water (rain). This could damage the electronics. A relative humidity of 95% must not be exceeded. Avoid condensation.

8.3. SETTING UP MODULES, WIFI, APP

The WiFi module connects to your in-house WLAN on one side and additionally establishes a wireless connection to the Smart Home Control.

8.3.1 INSTALLING THE APP

FOR ANDROID DEVICES:

Open the Google Play Store and install the Lamilux Smart Home app.

FOR IPAD/IPHONE:

Open the AppStore and install the Lamilux Smart Home app.

8.3.2 STARTING UP THE WIFI MODULE

The module is plugged into a power socket (CEE 7/4). The supply voltage must be 230 VAC / 50 Hz.

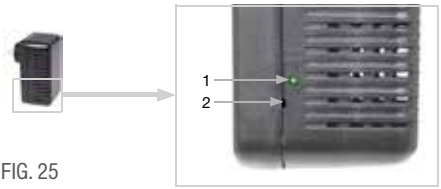


FIG. 25
1 LED
2 Reset button (recessed)

You can determine the current device status via the status LED display at the side:

LED off	Initialisation Initialisation can take up to 1 minute.
LED on	WiFi configuration mode To use the WiFi module, you first need to configure your own wireless settings (section WiFi configuration)

FIG. 26
WiFi settings screenshot

LED flashes regularly at short intervals	Connected to router The WiFi module is now connected to your router. Connect your mobile device to the same wireless network and launch the app.
LED goes out briefly every 2 seconds	No WiFi connection to router. Connection could not be established to your router. You may need to move the WiFi module closer to the router. If you changed your router's access data, reset the module to the factory defaults (Section Resetting the WiFi module to the factory defaults) and proceed to configure as per section WiFi.

FIG. 27
Screenshot no WiFi module

8.3.3 CONFIGURING WIFI

Requirements: The status LED of the WiFi module glows permanently.

List the available wireless networks on your mobile device. Select the network "WLAN-Schnittstelle SOL" (WiFi interface SOL). The mobile device then associates with the WiFi module.

Launch the app. Fields where your can enter your in-house wireless network settings "Network Name (SSID)", "Encryption" and "Key" are displayed.

Now press "Save" in the top right in the menu view. After about 10 seconds, the LED on the WiFi module flashes regularly for a short time. The module is now connected to your WiFi router.

First, again list the available wireless networks and connect to your own wireless network. Then restart the app.

8.3.4 CONNECTING TO THE SMART HOME CONTROL

After successfully completing the WiFi configuration and restarting the Lamilux Smart Home App, a message appears, stating that a Smart Home Control needs to be taught. To do so, briefly interrupt the power supply to the Smart Home Control (switch the circuit breaker on the terminal unit off and back on again).

A short audio signal indicates that the Smart Home Control has been successfully taught.

The interface is now connected to the Smart Home Control and can transmit data to the Lamilux Smart Home App.

The app is now ready for use.

Alternatively, the Smart Home Control can be taught by pressing the PRG button inside the housing.

However, this may only be done by a qualified electrician, as the PRG button is inside the terminal unit.

WARNING!
Electrical voltage!
The programming button of the terminal unit is located inside the housing and thus in the vicinity of unprotected live components.

- The device may only be taught in this way by a qualified electrician (as per VDE 0100).

8.3.5 RESETTING THE WIFI MODULE TO THE FACTORY SETTINGS

The factory settings can be restored by pressing the reset button. The initialisation must be complete for this; identifiable by the LED status (LED is glowing or flashing).

Hold down the recessed reset button on the side of the device next to the LED with a pointed object for 5 seconds.

8.4. USING THE APP

The app has two sections: Overview and Operations.

8.4.1 OVERVIEW

FIG. 28
Screenshot Overview page

This shows you a list of all the occupied slots on the Smart Home Control. The corresponding slot is selected by tapping and the view changes to the Operations page. You can additionally change the display name in the app.

CHANGING THE NAME IN IOS:

- Click "Edit" in the top left.
- Tap on the red circle with a minus sign to the left of the item.
- Alternatively: Swipe the item to the left with your finger.
- This opens the "Edit" menu to the right of the item. Tap "Edit" and enter the new name.

Either confirm by pressing "OK" or close the input window by pressing "Cancel".

CHANGING THE NAME IN ANDROID:

- Press and hold the desired item until a text box with keyboard appears.
- Confirm by pressing "OK" or tap the screen outside the keyboard section to cancel.

8.4.2 CONTROL AND DISPLAY PAGE OF THE APP

Switch to the next/previous position by swiping to the right or left with your finger in the upper half of the view.

On the left in the top menu bar you can find the “<Overview” button to get back to the overview page.

FIG. 29
Drive example

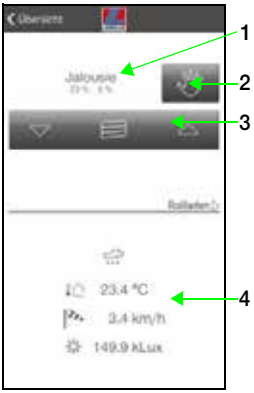
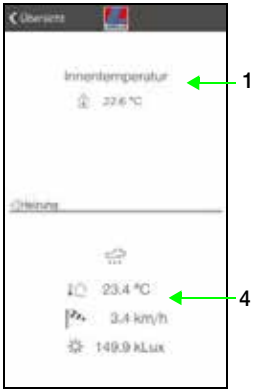


FIG. 30
Sensor example



8.4.2.1 OPERATIONS AND DISPLAY PAGE IN THE APP

The top half of the display shows the functions of the selected drive or device, or the data of the indoor sensor.

1 Text display:

- Name
- For shading and windows: current move position
- For heating and lights: current status (if applicable dimming brightness)
- For sensors: current values

2 Button manual/automatic:

- Tap the button to switch between manual mode and automatic mode

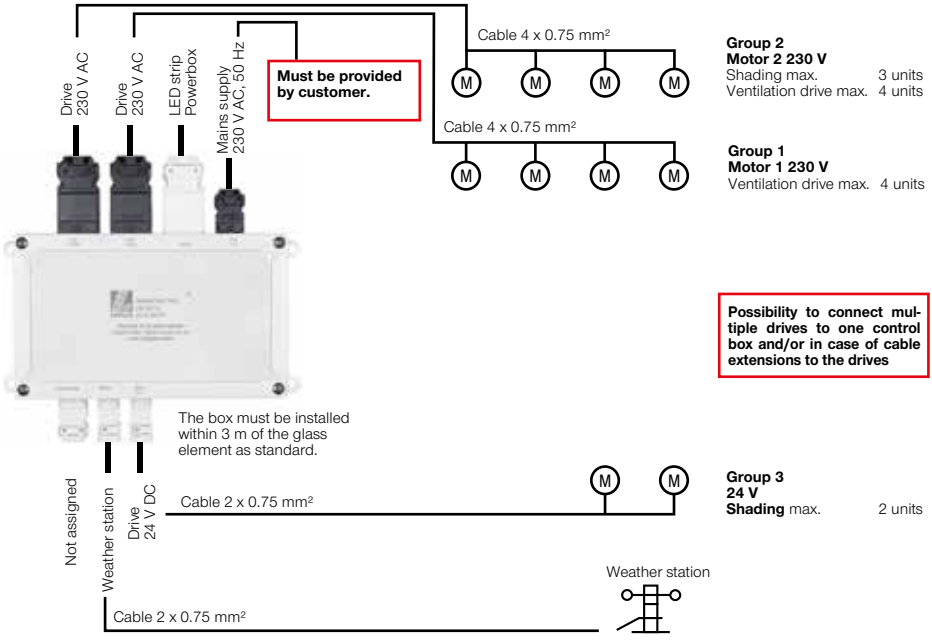
3 Rocker:

- Tapping the rocker lets you trigger short move commands or switching commands
- If you want a drive to move permanently up/down, hold down the rocker switch for at least one second

4 Weather data

- Rain (yes/no)
- Brightness
- Wind force
- Outdoor temperature

9. WIRING DIAGRAM



10. CONNECTOR

VOLTAGE SUPPLY/SUPPLY CABLE

MOTOR 230 V

VOLTAGE SUPPLY/SUPPLY CABLE

MOTOR 24 V

Connection is polarity-independent!

Scan this to discover more about LAMILUX daylight systems!


ROOFLIGHT DOME F100


ROOFLIGHT DOME F100 ROUND
GLASS ELEMENT F100 ROUND


CONTINUOUS
ROOFLIGHT B


GLASS ARCHITECTURE PR60


SMOKE AND HEAT EXHAUST
VENTILATION SYSTEMS


BUILDING CONTROL SYSTEMS


GLASS ELEMENT F


CONTINUOUS
ROOFLIGHT W|R


CONTINUOUS
ROOFLIGHT S


RENOVATION


SMOKE LIFT TWIN


FIBRE-REINFORCED
COMPOSITES

The technical data printed in this brochure was accurate when this brochure went to press and is subject to change without notice. Our technical specifications are based on calculations and supplier specifications, or have been determined by independent testing authorities within the scope of applicable standards.
Thermal transmission coefficients for our composite glazing were calculated using the finite element method with reference values in accordance with DIN EN 673 for insulated glass. Based on empirical values and specific characteristics of the plastics, a temperature vector of 15 K was defined as the vector between the outer surfaces of the material. Functional values refer to test specimens and the dimensions used in testing only. We cannot provide any further guarantees of technical values. This particularly applies to changes in installation locations, or if dimensions are re-measured on site.

LAMILUX

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