

Markise Plus



Art.-no.:
01096110

Short description

- Simple operation with large arrow buttons
- Status indicator with LEDs
- Adjustable between manual and automatic operation via slide switch
- Inching mode for exact positioning of blinds
- Motor run time / tilt time can be individually set
- Sensitivity for wind and sun features individually adjustable
- Connection of 1 wind and 2 Lux sensors
- Suitable for operating intelligent, decentralised controls

Variants

- Available as Markise Plus Set Alu (Art.-no. 01096310) (incl. wind and sun measurement station, mounted on aluminium bracket)
- Available as Markise Plus Set Plastic (Art.-no. 01096210) (incl. wind and sun measurement station, mounted on plastic bracket)

Safety precautions



- Contact a professional electrician to install the control system, because the control system requires a power supply of 230VAC, 50 Hz. Make sure to contact a professional electrician for the installation as well as for the setting of the DIP switches on the rear panel of the device.
- Check the control system for signs of mechanical damage after unpacking. If you notice any shipping damage, do not start up the control system and notify your supplier immediately.
- The control system should only be used for the purpose specified by the manufacturer (refer to the operating instructions). Any changes or modifications thereof are not permissible and will result in loss of all warranty claims.
- If the control unit or the connected sunshade cannot be operated without presenting a hazard, it must be switched off and prevented from being switched on unintentionally.
- When performing work on the windows, controls or connected shades, protect them against unauthorised or unintentional operation.

Technical data

Power supply:	230VAC, 50 Hz
Impulse voltage withstand level:	2,5 kV
Rated power:	2 W
Output (retract/extend):	230VAC, 50 Hz
Maximum load:	250VAC, 4A, $\cos \varphi \cong 0.8$ ind.
Align switching time extend:	3–180 seconds
Tilt time:	0–1.95 seconds
Software class:	A
Operating temperature:	0 °C (32 °F) to +40 °C (104 °F)
IP class:	IP 40
Degree of contamination:	2
Dimensions (L x W x H):	69 x 69 x 34 mm
Colour information:	similar to RAL 9016

Conformity:



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Awning/Blind Controller to drive motors 230VAC.

Installation and Operating Instructions

Installation

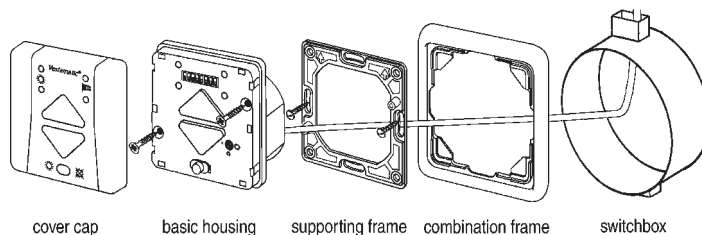


WARNING!

Risk of injury due to improper installation and commissioning. Improper installation and commissioning may lead to personal injury or property damage.

Therefore:

- When connecting the device, observe the currently valid VDE standards (in particular DIN VDE 0100/0700), your local power company's regulations and the current accident prevention regulations.
- Connect the control in accordance with the wiring diagram.



Notes for professional electricians

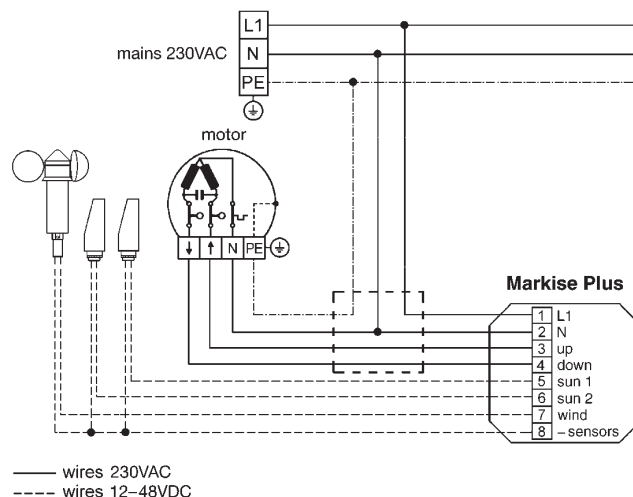
1. Carefully pull to remove the cover cap of the sunshade control.
2. Remove the screws and separate supporting frame from housing.
3. Always mount the delivered supporting frame and please take notice of the frame position. There are several holes available for different switch boxes as well as for the wall mounting. Please note also the position of the combination frame (JUNG Abdeckrahmen, CD 500).
4. Connect the control in accordance with the wiring diagram.
5. Set the operation mode and the wind speed threshold value (see next page).
6. Slide the basic housing carefully into the supporting frame (make sure not to pinch any cables) and tightly fasten the screws.

Wiring diagram



ATTENTION!

Parallel control of more than one conventional drive motor can only be implemented by means of isolating relays.



Start-up

After setting the operation mode, setting the wind speed threshold and mounted the housing, you can power on the control.

Now the control starts up and indicates this by flashing the LEDs. After this the sensors will be checked. Notice: For a complete wind sensor test, the wind sensor must generate at least one impulse. Maybe you must turn the wind speed sensor by hand. After this the LEDs of the sunshade control change automatically into normal operating status.

Optional the LEDs indicate easy to understand the different status of the sensors. For more information see page 4. Now set the motor run time and if necessary the tilting time of the sunshade and check the running direction with the buttons on the front (see next page). After this set the response to the sun intensity (see next page). Now the sunshade control is ready to control your sunshade.

Setting the operation mode "awning / blind"

There are two operation modes (awning/blind) possible for the sunshade control. The setting is carried out with DIP switch no. 5 on the rear panel of the device.

DIP switch at OFF: Operation mode "awning"

Press the retract or extend button in order to retract or extend the awning. The awning will automatically move up or down at once. The motion can be stopped easily by pressing the opposite button.

DIP switch at ON: Operation mode "blind"

Press the retract or extend button for 2 seconds in order to move the blinds up or down. The blind will move up or down. Simply press the opposite button to stop the motion. If you press the retract or extend button for less than 2 seconds or tap it, the blinds will move up or down only for the duration of the command which provides accurate positioning and adjustment of the slat angle.

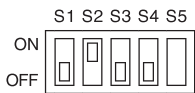
Setting the wind speed threshold value

The setting for the wind speed threshold value depends on size and design of sunshade.

If the measured wind velocity exceeds the preset threshold value, the sunshade will be retracted immediately. Extending the sunshade is only possible after a reset delay of 16 minutes has elapsed.

The preset default setting for the wind speed threshold value is 8 m/s or 28.8 km/h.

(DIP switch on the rear panel of the device)



Example for the DIP switch setting of a wind speed threshold value of 8 m/s (28.8 km/h).

The DIP switch S5 is used to set the operation mode (see chapter "Setting the operation mode awning/blind").

S1	S2	S3	S4	m/s	km/h	Wind speeds on the Beaufort scale
OFF	OFF	OFF	OFF	3	10.8	3 (gentle breeze)
OFF	OFF	OFF	ON	5	18.0	3 (gentle breeze)
OFF	OFF	ON	OFF	6	21.6	4 (moderate breeze)
OFF	OFF	ON	ON	7	25.2	4 (moderate breeze)
OFF	ON	OFF	OFF	8	28.8	4 (moderate breeze)
OFF	ON	OFF	ON	9	32.4	5 (fresh breeze)
OFF	ON	ON	OFF	10	36.0	5 (fresh breeze)
OFF	ON	ON	ON	11	39.6	6 (strong breeze)
ON	OFF	OFF	OFF	12	43.2	6 (strong breeze)
ON	OFF	OFF	ON	13	46.8	6 (strong breeze)
ON	OFF	ON	OFF	14	50.4	7 (moderate gale)
ON	OFF	ON	ON	15	54.0	7 (moderate gale)
ON	ON	OFF	OFF	16	57.6	7 (moderate gale)
ON	ON	OFF	ON	17	61.2	7 (moderate gale)
ON	ON	ON	OFF	18	64.8	8 (fresh gale)
ON	ON	ON	ON	20	72.0	wind sensor monitoring deactivated



NOTE!

If no wind sensor is connected, set the wind velocity to 72 km/h, in order to disable the wind sensor monitoring and bridge terminal 7 and 8 by a wire.

Setting the motor run time

The setting for the motor run time depends on size and design of sunshade. The motor run time of the sunshade control can be adjusted to the actual run time of the sunshade. We recommend this adjustment for the sunshade drives to be able to perform a tilting function in the automatic and manual mode to position the slat angle of the blinds directly after the motor run time has elapsed.

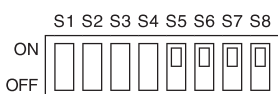
If more than one sunshade control is triggered, the setting of the motor run time and the tilting time depends on the functionality of the series connected motor control units.

The preset default setting for the motor run time extracting is 180 seconds.

The running time retract is general 180 seconds.

(Exception: IDS-Function).

(DIP switch on the front side of the device)



Example for the DIP switch setting: motor run time 180 seconds

The DIP switches S1 – S4 are all designated for setting the tilting pulse (see chapter "Setting the tilting pulse").

S5	S6	S7	S8	motor run time in seconds
OFF	OFF	OFF	OFF	IDS-Function*
OFF	OFF	OFF	ON	10
OFF	OFF	ON	OFF	15
OFF	OFF	ON	ON	18
OFF	ON	OFF	OFF	21
OFF	ON	OFF	ON	24
OFF	ON	ON	OFF	27
OFF	ON	ON	ON	30
ON	OFF	OFF	OFF	35
ON	OFF	OFF	ON	40
ON	OFF	ON	OFF	50
ON	OFF	ON	ON	60
ON	ON	OFF	OFF	80
ON	ON	OFF	ON	100
ON	ON	ON	OFF	120
ON	ON	ON	ON	180

* Only combined with decentralized IDS controller.

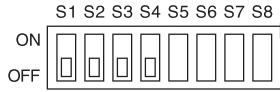
Setting the tilting pulse

The setting for the tilting pulse depends on size and design of sunshade. The sunshade control can send a tilting pulse to the drive connected to the sunshade after the motor run time has elapsed (please see previous page). The sunshade will shortly move into the opposite direction (retract) in order to tighten the awning cloth or accurately position the slat angle of the blinds.

In both operation modes with or without sun, after extending the sunshade a tilting function will be executed. If the extend button would be pushed during the extension of the sunshade, there will be **no** tilting function executed after extending the sunshade. If the motor runtime is set to IDS, there also will be no tilting function executed.

The preset default setting for the tilting pulse is 0 seconds.

(DIP switch on the front side of the device)



Example for the DIP switch setting: no tilting pulse

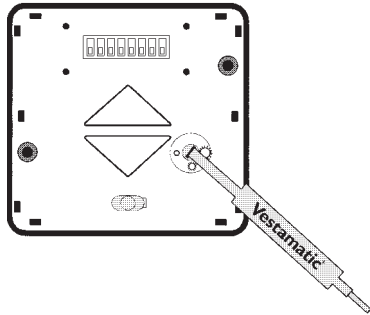
The DIP switches S5 – S8 are all designated for setting the motor run time (please see chapter “Setting the motor run time”, page 2).

S1	S2	S3	S4	Tilting time in seconds
OFF	OFF	OFF	OFF	no tilting
OFF	OFF	OFF	ON	0.34
OFF	OFF	ON	OFF	0.46
OFF	OFF	ON	ON	0.57
OFF	ON	OFF	OFF	0.69
OFF	ON	OFF	ON	0.80
OFF	ON	ON	OFF	0.92
OFF	ON	ON	ON	1.03
ON	OFF	OFF	OFF	1.15
ON	OFF	OFF	ON	1.26
ON	OFF	ON	OFF	1.38
ON	OFF	ON	ON	1.49
ON	ON	OFF	OFF	1.61
ON	ON	OFF	ON	1.72
ON	ON	ON	OFF	1.84
ON	ON	ON	ON	1.95

Setting the response (sun intensity)

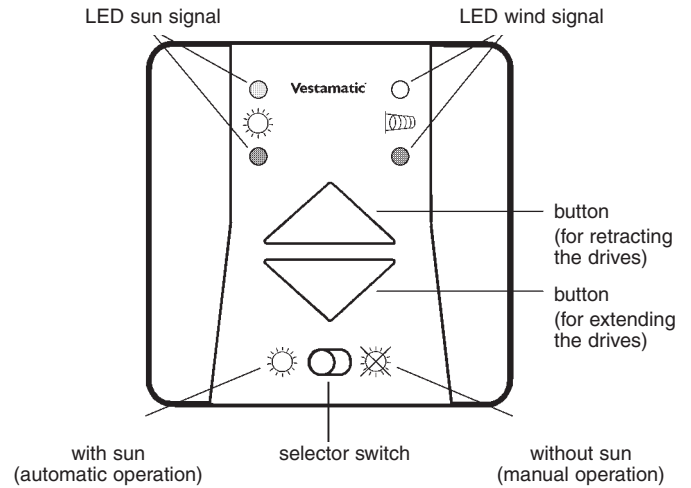
Set the response to the sun intensity with the potentiometer and the delivered adjustment tool. Carefully pull to remove the cover cap of the sunshade control.

- ☀ Sunshade already extends at a low sun intensity (approx. 5 kLux).
- ☀ Sunshade already extends at a medium sun intensity (approx. 20 kLux).
- ☀ Sunshade already extends at a high sun intensity (approx. 50 kLux).



Sun response delay: 1 minute
Sun reset delay: 16 minutes

Overview operating elements



Operation with sun

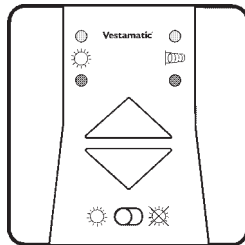
ATTENTION! If the wind velocity exceeds the preset value, extending the sunshade is not possible for safety reasons.

Automatic operation

Push the selector switch to the left in order to activate the sun function (☀).

In this operation mode the sunshade drives extend the sunshade automatically as soon as the preset sun threshold value is attained.

The pre-requisite to extend the sunshade is fulfilled when the signal LED wind (🌬) lit up **green** and the LED sun (☀) lit up or flashing **green**. As soon as one of the LEDs lit up red, the sunshade drives will retract the sunshade.



If the wind speed threshold value is not exceeded, the automatic control of sunshade drives can be interrupted any time by pressing the corresponding direction buttons.

NOTE! If a tilting function has been programmed with the DIP switches, the sunshade drives will shortly move the sunshade in the opposite direction, which will tighten the awning cloth on accurately position the slat angle of the blinds (adjustable tilting time).

Following the functions will be explained more detailed.

Operation without sun

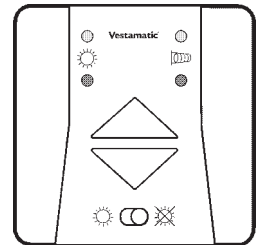
ATTENTION! If the wind velocity exceeds the preset value, extending the sunshade is not possible for safety reasons. Also an extended sunshade will be retracted immediately.

Manual operation

Push the selector switch to the right to disable the sun function (☀). If you press the **retract** or **extend** button, the sunshade drives will retract or extend the sunshade.

Simply press the opposite button to stop the motion, i.e.:

- press the **retract** button, if the awning is moving out,
- press the **extend** button, if the awning is moving in.



Accurate positioning of sunshades is guaranteed because the sunshade will only move in or out after the **retract** or **extend** button has been pressed.

NOTE! A tilting function that was programmed with the DIP switches will also be performed during manual operation.

Wind sensor monitoring

If the externally mounted wind sensor is damaged or has not generated any signals for 48 hours, the wind sensor LEDs of the sunshade control will alternately flash (warning signal) to indicate that the wind sensor must be checked. Gently move the air vanes to verify, if they are running smoothly. If the LED continues start to flash, safe operation of sunshade drives is no longer possible. Shut the sunshade control down and protect it against unintentional operation.

Furthermore the cable connection is checked continuously. In case of a failure it will be displayed by the LED. The red LED will be lit up with a short break.

The sunshade will be retracted immediately and not be operable until the cause of the failure is eliminated.

Keep in mind that working at the control is only permitted to professional electricians.

Lux sensor monitoring

Only if one lux sensor is connected, the cable connection and the lux sensor will be checked continuously. In case of a failure, it will be displayed by the LEDs. The control will be still operable. In case of a defect the red lux sensor LED lights up with a short break (warning). Now you have got to check the lux-sensor or the wiring. In case of connection a second lux sensor, the lux sensor monitoring will be switched off automatically.

Keep in mind that working at the control is only permitted to professional electricians.

Wind sensor (LED)

LED is lit up green: No wind alarm.

LED is lit up red: Wind alarm – the sunshade drives have retracted the sunshade. They cannot be extended even if the sun LED flashes green.

LED flashes red: (reset delay is active) The wind speed threshold has been exceeded, but it's not exceeded at present. No wind alarm is present. The awning can be extended after the delay time has elapsed (16 minutes).

Important: If the wind speed threshold value is exceeded, the sunshade will retract without delay and cannot even be extended by pressing the extend button.

Red and green LED alternately flash: Warning! Please check the wind sensor, because it generated no signals for 48 hours (please see chapter "Wind sensor monitoring").

Red LED light up with a short break: Warning! Please check the wind sensor or the wiring of the wind sensor. The sunshade will be retracted immediately and blocked in retracted position until the cause of the failure will be eliminated.

Lux sensor (LED)

LED is lit up green: The preset sun threshold value is attained.

LED flashes green: (reset delay is active) The sun threshold value has been exceeded, but it's not exceeded at present. The awning drives will retract the awning after the delay time (16 minutes) has elapsed.

LED is lit up red: The preset sun threshold value is not attained.

LED flashes red: (response delay is active) The preset sun threshold value is exceeded. If no wind alarm is applied, the sunshade drives will extend the sunshade after the delay time (1 minute) has elapsed.

Red LED light up with a short break: Warning! Please check the lux sensor or the wiring of the lux sensor (please see chapter "Lux sensor monitoring").



NOTE!

Sunshade drives will only retract or extend the sunshades when the time for response or reset delay has elapsed without any delay.

Accessories

The following accessories are optionally available for the sunshade control:

Lux sensor LS 30	Article-no. 01161210
Wind sensor WS XS	Article-no. 01100310
Mounting Bracket Plastic "WISO Bracket Plastic" for wind sensor and lux sensor	Article-no. 01271020
Windsensor WS XS Alu	Article-no. 01100410
Mounting Bracket Aluminium "WISO Bracket Alu" for wind sensor and lux sensor	Article-no. 01100510

The following versions of cover frames are available:

JUNG CD 500, Cover frame, one-fold	Article-no. 01400201
JUNG CD 500, Cover frame, two-fold	Article-no. 01400202
JUNG CD 500, Cover frame, three-fold	Article-no. 01400203
JUNG CD 500, Cover frame, four-fold	Article-no. 01400204
JUNG CD 500, Cover frame, five-fold	Article-no. 01400205

For surface-type installation please use our

Surface-type housing, similar RAL 9016	Article-no. 01400250
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For controlling two drives, we recommend our isolating relays:

Relais MC TR 2A	Article-no. 01054120
Relais MC TR 2S	Article-no. 01054220
Relais MC TR 2S FMT	Article-no. 01054230
Relais MC TR 2S/MR	Article-no. 01054520

Disposal of waste

The disposal of electrical equipment and batteries in household waste is strictly forbidden.



The symbol (dustbin crossed out, in line with WEEE Appendix IV) indicates separate collection of electrical and electronic products in EU countries. Do not dispose of the device or battery in your household waste. Ask your town or local council about the return and collection systems available in your area to dispose of this product.