

Operating Instructions

Busch-Timer®

Comfort timer control element for
blind, light, and relay control

6455-101-500

6455-101-509



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1 Safety



Warning

Risk of death and fire due to electrical voltage of 230 V.

- » Work on the 230 V supply system may only be performed by authorised and qualified electricians.
- » Disconnect the mains power supply prior to installation/disassembly.

2 Intended use

The device is to be used exclusively with the components that are supplied and licensed as described in chapter " 4 Setup and Function".

3 Environment



Environmental damage

Consider the protection of the environment. The device contains valuable raw materials which can be recycled.

- » Used electric and electronic devices must not be disposed of with domestic waste.
- » Therefore, dispose of the device at the appropriate collecting depot.

All packaging materials and devices bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via the authorized collecting depots and disposal companies.

The products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU Directive 2002/96/EC WEEE and 2002/95/EC RoHS)

(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006)

4 Setup and function

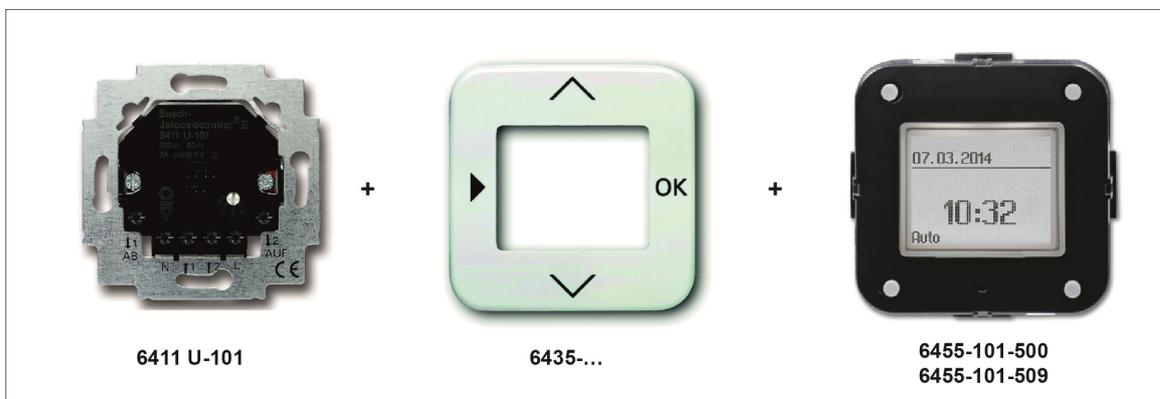
4.1 Types of functions

The timer control element described in these instructions serves for the manual and time-controlled switching of blinds, roller blinds, awnings, light and relays.

4.1.1 Function as control element for blinds

The timer control element serves for the manual and time-controlled switching of blinds. The application "Blind control" is described in the following and the term "Blind" is used representatively also for roller blinds and awnings.

The following modules are used for controlling blinds. The device can only be operated with central cover plate 6435-.... The cover plate is latched onto the control element as a so-called "floating rocker".



Alternative:

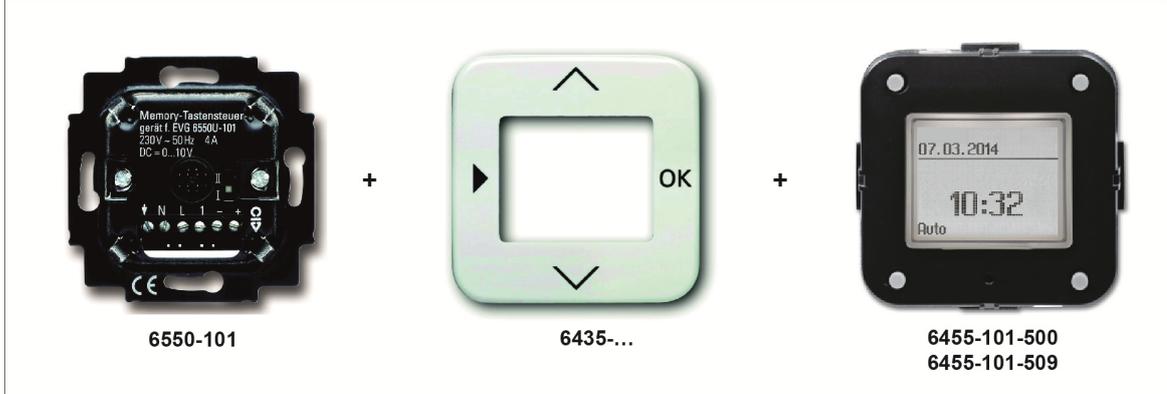


Only one brightness sensor 6414-101 or 6482 (for mounting outdoors) can be connected to the flush-mounted insert 6411 U/S-101. Also the simultaneous connection of a 6413 burglar alert sensor is possible.

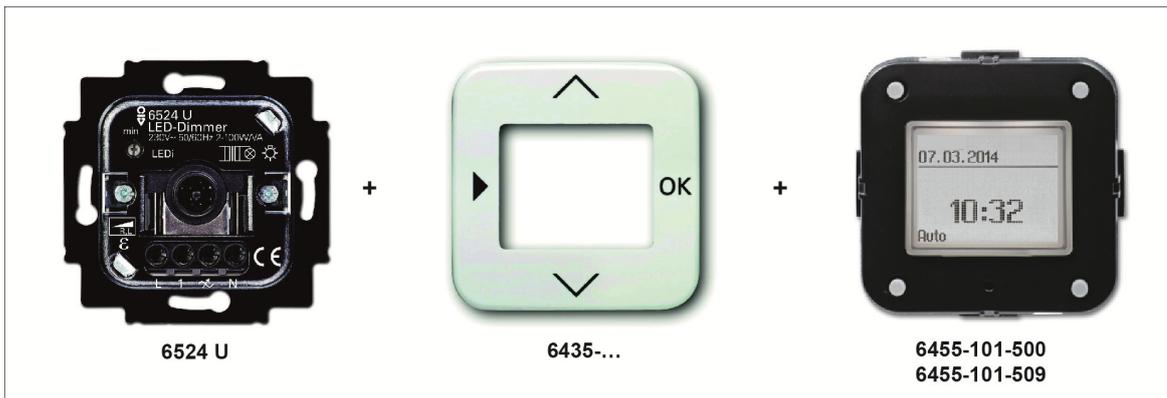
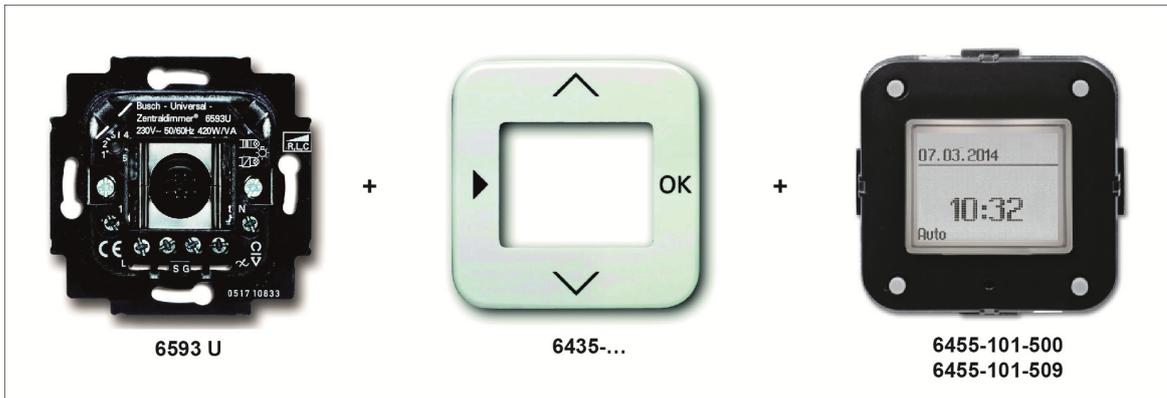
4.1.2 Function as control element for lights

The timer control element serves for the manual and timed switching and dimming of lighting.

The following modules are used for controlling lighting. The device can only be operated with a central cover plate 6435-... The cover plate is latched onto the control element as a so-called "floating rocker".



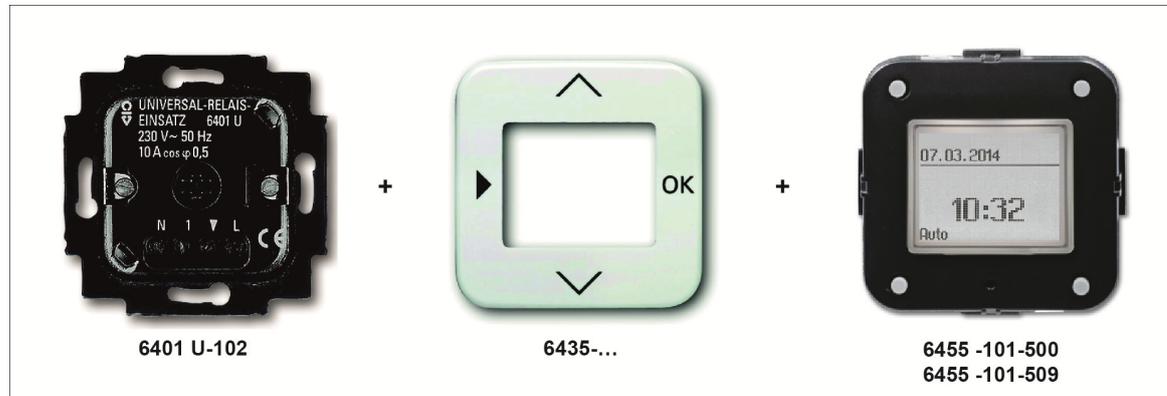
Alternative:



4.1.3 Function as control element for relays

The timer control element described in these instructions serves for the manual and timed switching of electric loads.

The following modules are used for controlling relays. The device can only be operated with a central cover plate 6435-... The cover plate is latched onto the control element as a so-called "floating rocker".



4.2 Features of function and equipment

4.2.1 General functions

- With astro program,
- Individual astro displacement and astro blocking time,
- The shading/lighting can be manually operated at any time,
- Simple setting via high-resolution display with background illumination,
- Factory-set switching times can be individually adjusted,
- Automatic summer/wintertime switch-over (with switch-off function),
- Switching times/programs are safely stored in the event of a mains power failure,
- Power reserve for time and date > 10 years,
- Simple switchover between manual, automatic and holiday mode.

4.2.2 Functions for Venetian blind control

- Combined with flush-mounted insert 6411 U/S-101, sun protection and twilight function,
- Freely adjustable temperature and brightness-dependent sun protection and twilight function,
- Freely adjustable running times for shading and ventilation,
- 6 switching times per day can be freely adjusted for each day of the week (3x UP, 3x DOWN),
- Astro switching times and switching times can be combined.

4.2.3 Functions for light control

- 6 switching times per day can be freely adjusted for each day of the week (3x ON with brightness value, 3x OFF),
- Astro switching times and switching times can be combined,
- When combined with LED dimmer 6524 U, central dimmer insert 6593 U or memory touch controller 6550 U 101, the brightness of the lighting can be adjusted for each ON switching time.

4.2.4 Function for relay control

- 6 switching times per day can be freely adjusted for each day of the week (3x ON, 3x OFF),
- Astro switching times and switching times can be combined.

4.3 Blind control with brightness sensor

The connection of brightness sensors makes the automatic closing of blinds possible as anti-glare during intense sunlight or as protection for furnishings.

A brightness sensor can be attached to the flush-mounted insert with sensor connection, which is attached to the pane with the aid of a suction cup. The blind closes when the set brightness has been reached.

If a set brightness is exceeded for a few minutes, the blind travels down until it covers the sensor. After a period of 15 minutes the sensor is then exposed again as the blind travels briefly up to measure the current brightness.

If the running time is set so that the sensor cannot be covered, the blind stops at the set running time. If the brightness drops below the set value for 15 minutes, the blind travels up again. This means that the function remains independent of whether the brightness sensor is overridden or not.

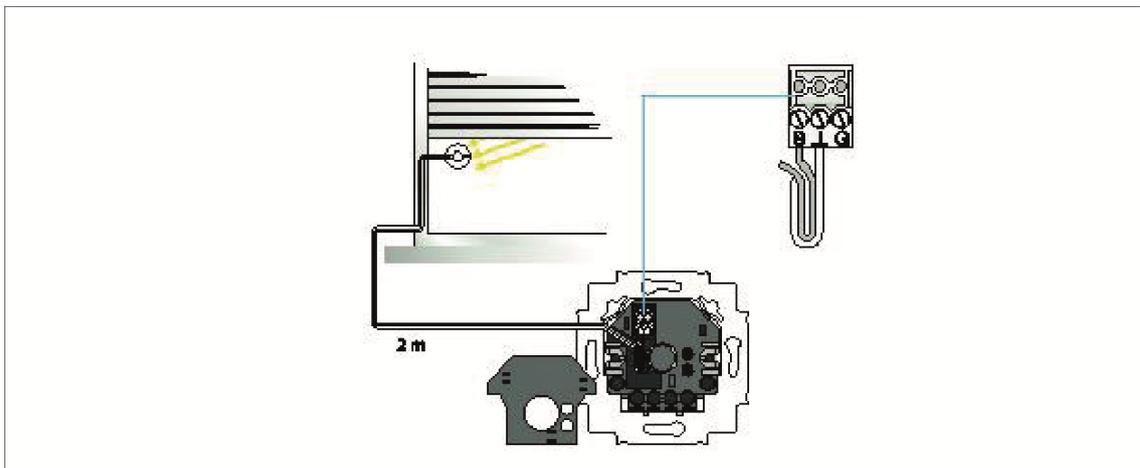


Fig. 1: Connected brightness sensor. The sensor can be attached at any position on the pane.

4.4 Blind control with burglar alert sensor

If the window pane is broken the blind is closed immediately by the burglar alert sensor to prevent the living area from sustaining damage. The display of the comfort timer control element indicates the time when the damage occurred.

The blind can only be raised again manually onsite after the alarm unit has been triggered. Commands via the extension unit or automatic switching times of the timer control element are ignored.

The burglar alert sensor is attached to the pane by means of the enclosed double-sided adhesive tape. For larger glass areas up to four burglar alert sensors can be combined on a single pane and connected to a flush-mounted insert.

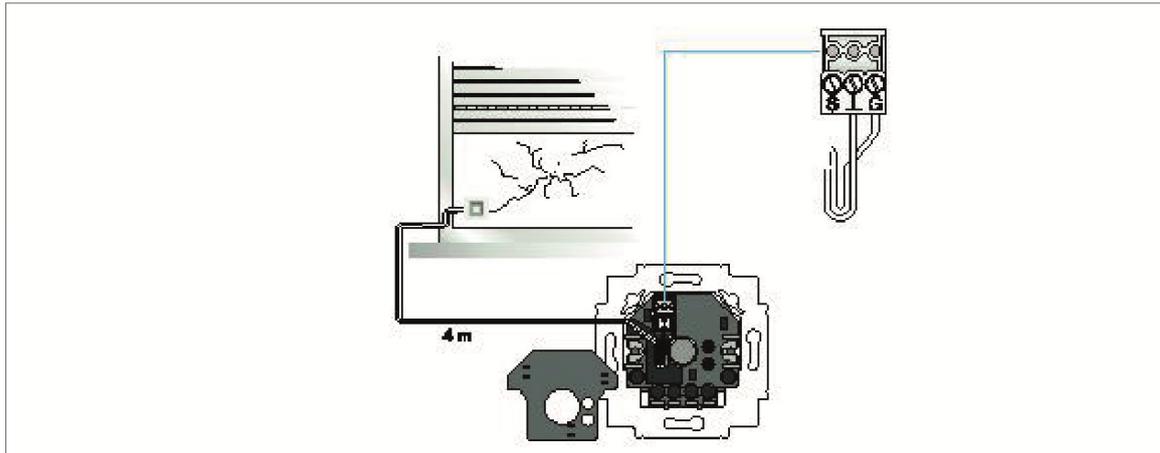


Fig. 2: Connected burglar alert sensor

4.5 Blind control with integrated temperature sensor

The timer control element has an internal temperature sensor for the room temperature. This enables a sun protection function also to be controlled without an additional brightness sensor. The shading moves down automatically when the room temperature rises above a fixed value. If the specified value is not reached for at least 15 minutes, the shading goes up again.

In menu "Special functions >Sensor values>Sun protection" the temperature limit value for the integrated temperature sensor can be set in addition to the brightness limit value (when a brightness sensor has been connected).

In addition, the running time of the shading when the temperature is exceeded can be set. The blind then moves down only partially, for example.

5 Operation

5.1 Hints on operation

In the event of a power failure, the internal clock continues to operate for about 10 years. After this the time and date have to be reprogrammed. All other data remain saved. A total of 6 switching times per day can be set (switching times plus additional switching times).

The system changes automatically between winter and summer time. This function can be deactivated.

If the display is on --:--, this can mean the following:

- no time has been set,
- the memory is not occupied,
- the function is not active.

Displayed values can be changed. If no entry is made, the display switches back to the operating mode after 1 minute.

The switching times of * BLOCK, BLOCK-ASTRO, INDIVIDUAL can be combined, e.g. UP in the morning at a fixed time and DOWN in the evening with the ASTRO program.

5.2 Button assignment

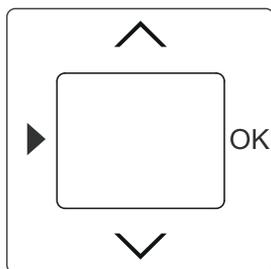


Fig. 3: Button assignment of cover plate

Button	Function	In setting mode	Adjusting values	Reset to factory setting
▶	Calling up menu level and switching to setting mode	Return to operating mode		In operating mode press all buttons of the rocker switch simultaneously for approx. 5 seconds.
^	Blind UP/ Light ON (brighter)/ Electric load ON	Select menu item	Adjust values	
∨	Blind DOWN/ Light OFF (darker)/ Electric load OFF			
OK	Switching operating modes, Switching times today, Displaying sensor values, Confirmation.	Select menu	Accept value	

5.3 Manual operation

Manual operation is always possible.

5.3.1 Manual blind control

You can control the blind manually as follows:

Button	Function	Actuation
	Blind UP	Brief press of the button: - The blind travels to the top end position. - A renewed brief press of the button stops the blind immediately. Long press of the button: - The blind travels up as long as the button is pressed (if necessary, first the stepwise adjustment of the slats).
	Blind DOWN	Brief press of the button: - The blind travels to the bottom end position. - A renewed brief press of the button stops the blind immediately. Long press of the button: - The blind travels down as long as the button is pressed (if necessary, first the stepwise adjustment of the slats).

5.3.2 Manual light control

You can control the light manually as follows:

Button	Function	Actuation
	Light ON (brighter)	Brief press of the button: - The light is switched on with the last brightness value set. Long press of the button: - The brightness increases as long as the button is pressed (maximum 100%).
	Light OFF (darker)	Brief press of the button: - The light is switched off. Long press of the button: - The brightness decreases as long as the button is pressed. The brightness can only be dimmed up to the minimum stop. Switching off is not possible.

5.3.3 Manual relay control

You can control the electrical loads manually as follows:

Button	Function	Actuation
	SWITCHING electric loads	Press of the button: - The electric load is switched.
	SWITCHING electric loads	Press of the button: - The electric load is switched.

5.4 Display and icons

5.4.1 General display for blind, light and relay



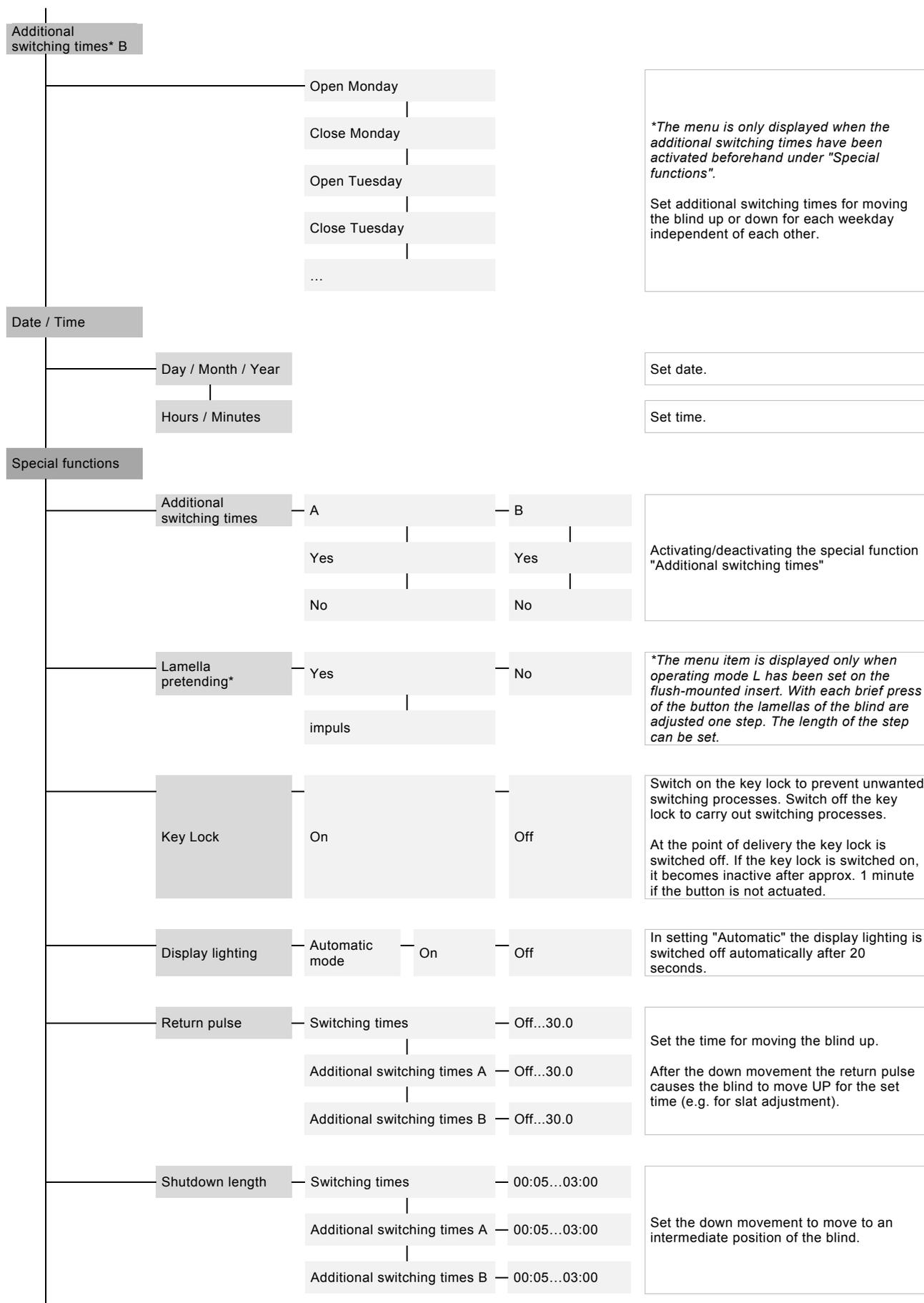
Fig. 4: Display with icons

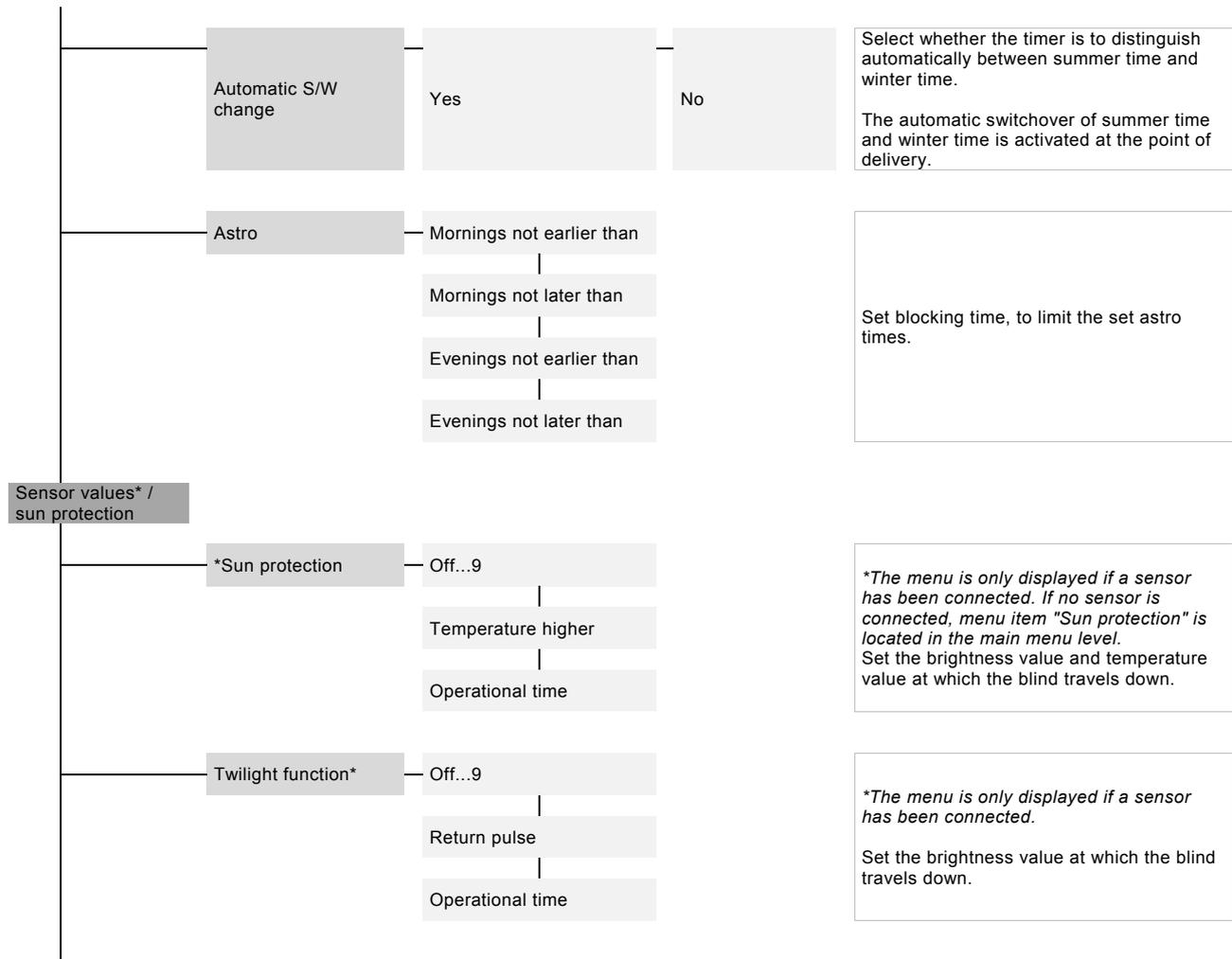
No.	Function
1	Current weekday / info line
2	Info line / date
3	Operating mode
4	Time / switching time
5	Display on the blind insert: Arrows up down during movement time; Display on the light insert: OFF / light value in %; Display on the relay insert: ON / OFF.

5.5 Overview of the menu structure

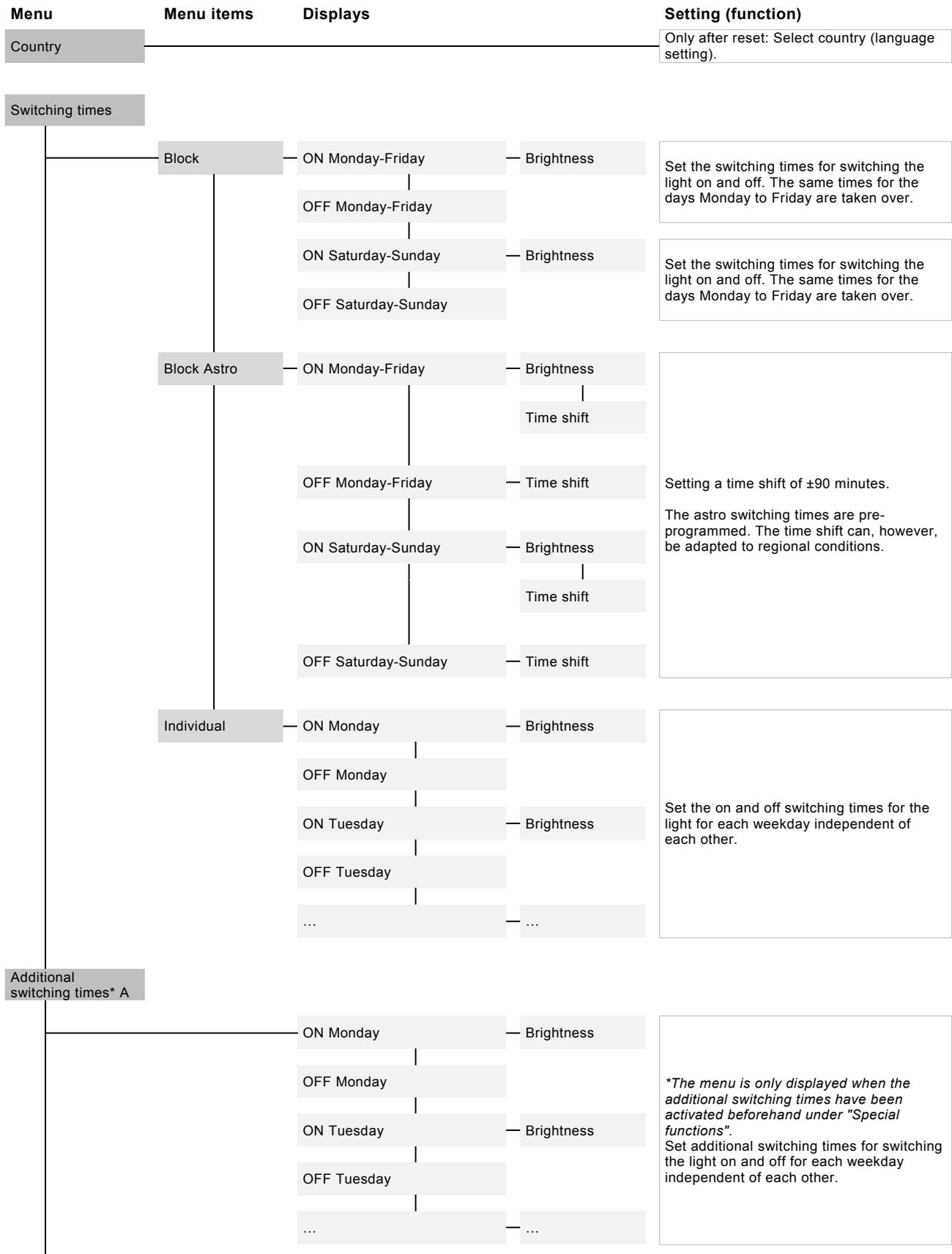
5.5.1 Blind menu structure

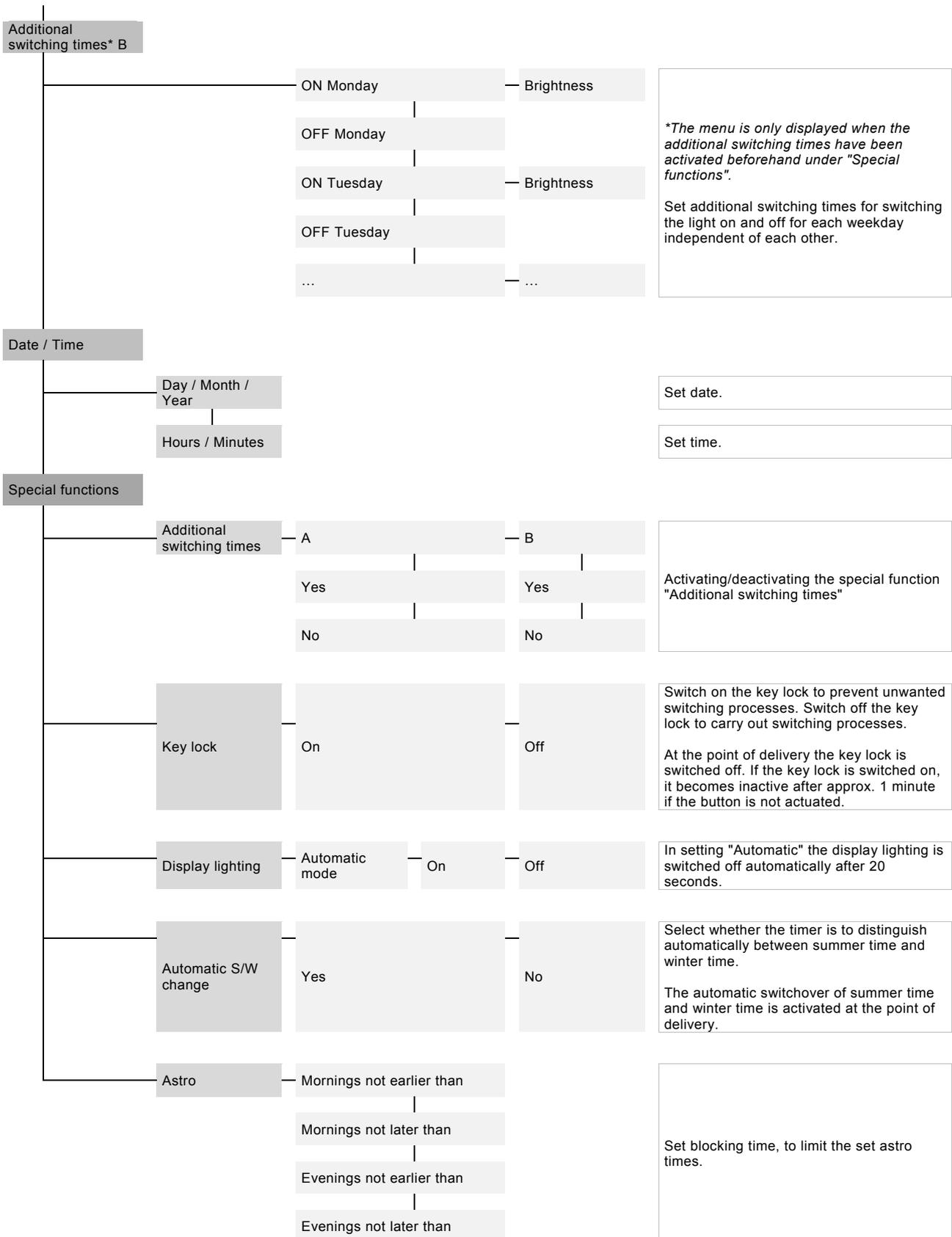
Menu	Menu items	Displays	Setting (function)			
Country			Only after reset: Select country (language setting).			
Switching times	Block	Open Monday-Friday	Set switching times for moving the blind up or down. The same times are taken over for the days from Monday to Friday.			
		Close Monday-Friday				
		Open Saturday-Sunday				
		Close Saturday-Sunday				
		Block Astro		Open Monday-Friday	Time shift	Setting a time shift of ±90 minutes. The astro switching times are pre-programmed. The time shift can, however, be adapted to regional conditions.
				Close Monday-Friday	Time shift	
	Open Saturday-Sunday		Time shift			
	Close Saturday-Sunday		Time shift			
	Individual	Open Monday	Set the switching times for moving the blind up or down for each weekday independent of each other.			
		Close Monday				
		Open Tuesday				
		Close Tuesday				
		...				
		...				
	Additional switching times* A	Open Monday	*The menu is only displayed when the additional switching times have been activated beforehand under "Special functions". Set additional switching times for moving the blind up or down for each weekday independent of each other.			
Close Monday						
Open Tuesday						
Close Tuesday						
...						
...						





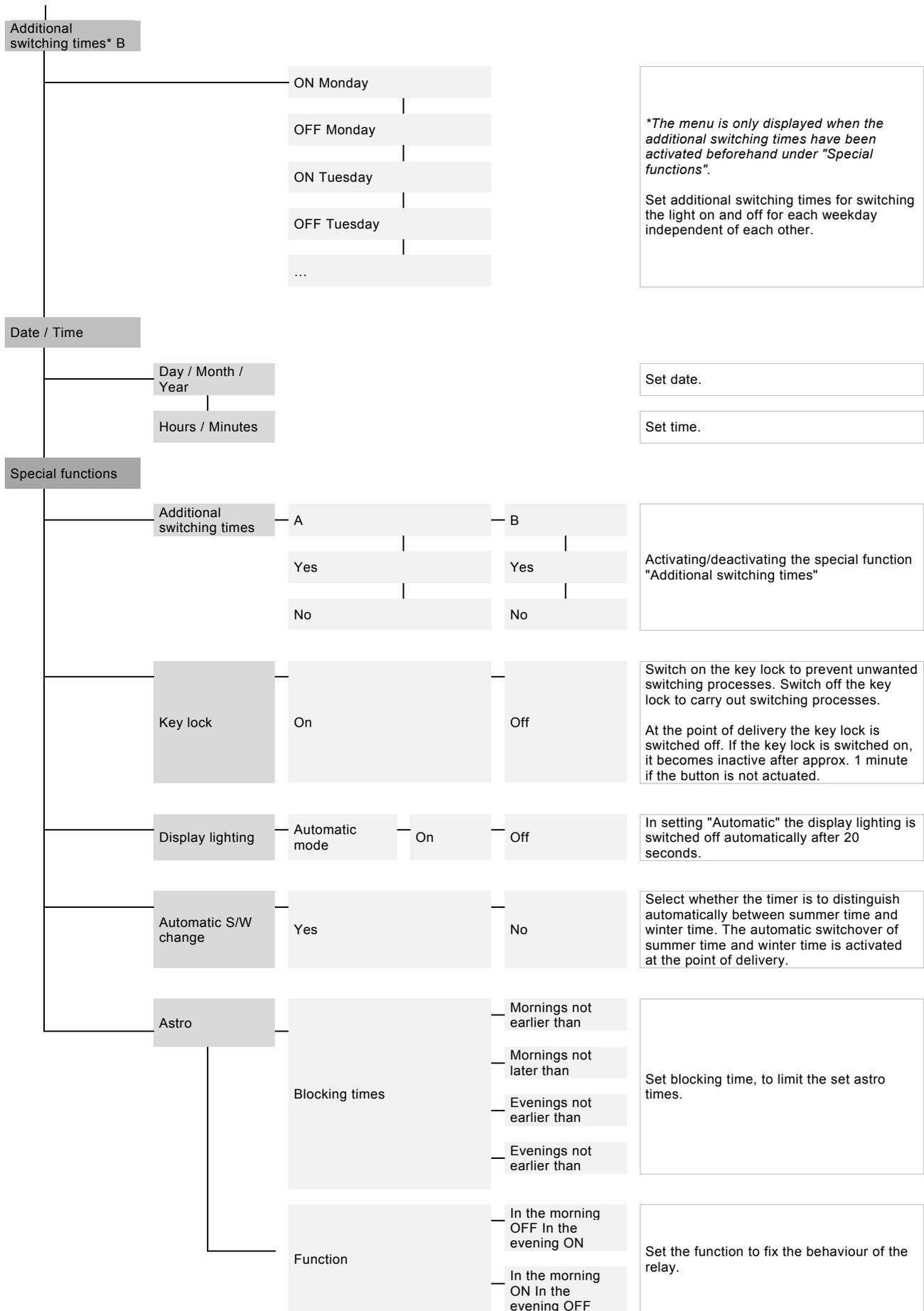
5.5.2 Light menu structure





5.5.3 Relay menu structure

Menu	Menu items	Displays	Setting (function)	
Country			Only after reset: Select country (language setting).	
Switching times	Block	ON Monday-Friday	Set the switching times for switching on and off. The same times for the days Monday to Friday are taken over.	
		OFF Monday-Friday		
		ON Saturday-Sunday		
		OFF Saturday-Sunday		
	Block Astro	ON Monday-Friday	Time shift	Setting a time shift of ±90 minutes. The astro switching times are pre-programmed. The time shift can, however, be adapted to regional conditions.
		OFF Monday-Friday	Time shift	
		ON Saturday-Sunday	Time shift	
		OFF Saturday-Sunday	Time shift	
	Individual	ON Monday	Set the on and off switching times for the light for each weekday independent of each other.	
		OFF Monday		
		ON Tuesday		
		OFF Tuesday		
		...		
	Additional switching times* A	ON Monday	*The menu is only displayed when the additional switching times have been activated beforehand under "Special functions". Set additional switching times for switching the light on and off for each weekday independent of each other.	
		OFF Monday		
ON Tuesday				
OFF Tuesday				
...				



5.6 Commissioning, setting the device

All settings of the device are carried out supported by text-controlled operator prompting. The country has to be set first during initial commissioning. The time and date have been pre-set (GMT+1).



Note...

Values that are to be changed are highlighted in black.

5.6.1 Selecting languages

The language is set via the country selection and the astro time is automatically assigned. The preset time (GMT+1) may need to be adjusted due to the different time zones.



Note...

The astro function daily adjusts the switching times automatically to the yearly process of sunrise and sunset.



Note...

During initial commissioning and directly after the language selection you will be requested to confirm the date and time. The current date and time have been pre-programmed and normally only need to be confirmed.

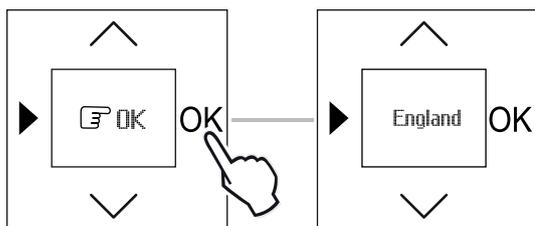


Fig. 5: Selecting the country



Note...

To change the country at a later point in time the device settings must be reset via the reset function. See section 5.7.5 Reset.

5.6.2 Setting date and time

During initial commissioning you will be asked to enter the year directly after selecting the language.

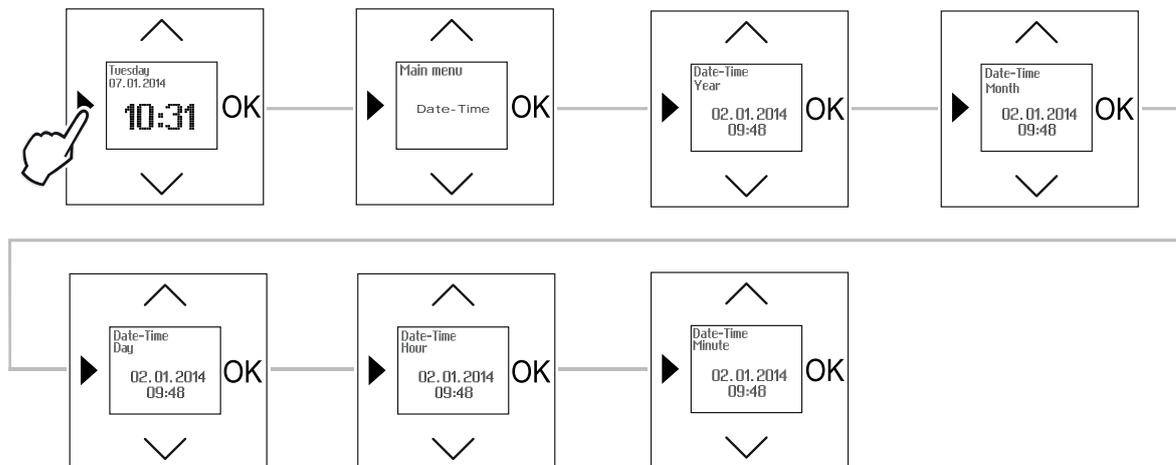


Fig. 6: Setting the date and time

Sequence of operating steps

The first two steps need only be carried out if the date and time are to be changed later.

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. Menu item "Switching times" will be displayed.
^ v	Date-Time	- Select menu "Date - Time" via the arrow buttons.
OK		- Confirm your selection with the OK button.
^ v		- Set the year and confirm with OK. - Set the month and confirm with OK. - Set the day and confirm with OK. - Set the hour and confirm with OK. - Set the minutes and confirm with OK. Then there is an automatic return to the main menu.

5.7 Operating modes

5.7.1 General operating modes

Icon	Operating mode
	MANUAL Control is executed only manually. The user can always switch to the manual mode and back. Automatic switching times, as well as brightness and twilight functions (for blinds), are not carried out.
 AUTO	AUTOMATIC MODE The programmed switching times will be executed automatically.
	HOLIDAY MODE Control is executed as in automatic mode. A random generator shifts the switching times by up to 30 minutes daily.

- » Press the OK button once.
- The current operating mode will be displayed.
- » Press one of the arrow buttons to switch between operating modes.
- » Press the OK button once to confirm the new operating mode.

Manual operation of the blind, the light and the electric load is possible at all times via the arrow buttons.

5.7.2 Blind operating modes

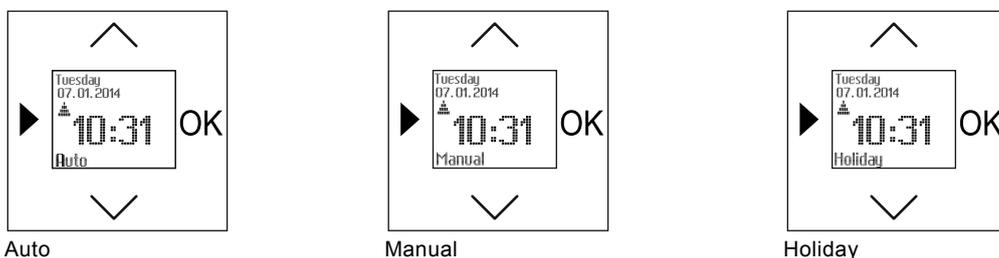


Fig. 7: Display views of blind operating modes



Note...

In operating mode "Manual" the blind does not move automatically, even if switching times have been set.

5.7.3 Light operating modes

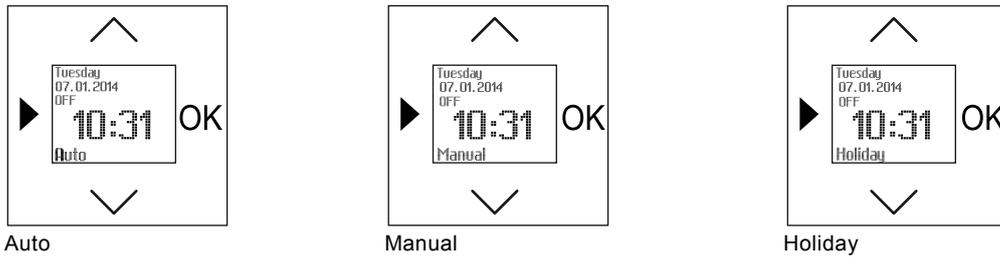


Fig. 8: Display views of light operating modes



Note...

In operating mode "Manual" the light does not switch automatically, even if switching times have been set.

5.7.4 Relay operating modes

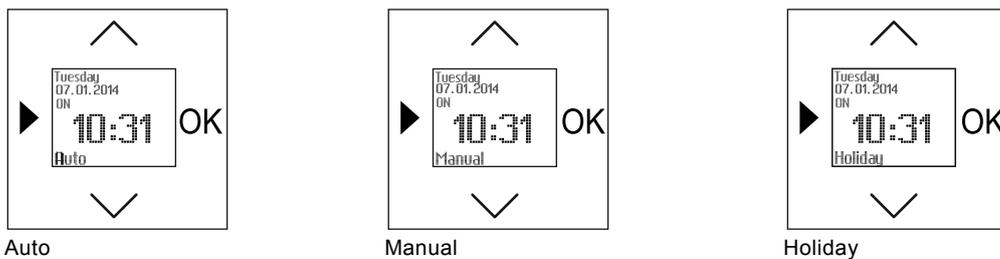


Fig. 9: Display views of relay operating modes



Note...

In operating mode "Manual" the electric load does not switch automatically, even if switching times have been set.

5.7.5 Reset (re-setting to the factory settings).

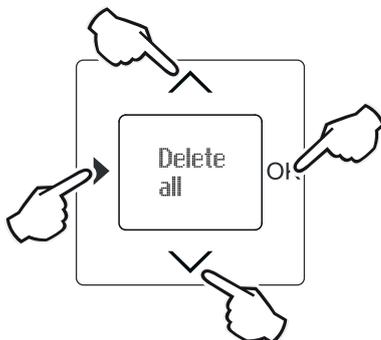


Fig. 10: Reset

- » In the standard view press all 4 buttons simultaneously, or the entire operating surface for more than 5 seconds.
- » Confirm the enquiry "Delete all" with the OK button.
- All settings are deleted.

5.8 Setting switching times

The settings of the switching times that are available and how the menu items are called up is described here. A detailed description of the individual functions is contained in the following sub-sections.

5.8.1 Display switching times today

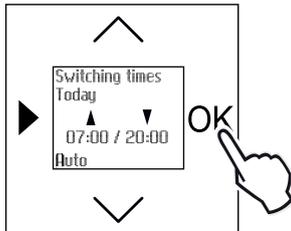


Fig. 11: Switching times today

- » Press the OK button longer than 1 second.
- The switching times for the current day will be displayed.

5.8.2 Deleting the current switching time in the setting mode (deleting values)

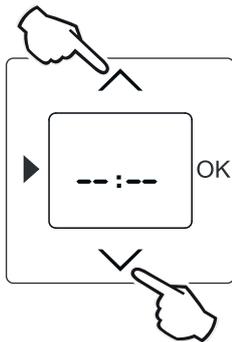


Fig. 12: Deleting the current switching time

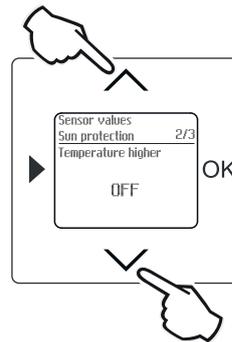


Fig. 13 Deleting the current sensor value

Individual values can be deleted if the respective value is displayed in the setting mode in menu "Switching times" or "Sensor values".

- » Briefly press both arrow buttons simultaneously.
- Only the current value is deleted. The display shows -: - -

5.8.3 Block programming

So that the switching times need not be entered again for each individual day, the BLOCK programming function is available. This means that the switching times are entered once for block (Monday - Friday) and once more for block (Saturday - Sunday).



Note...

Within each block the same switching times apply to each day. If the switching times for each day are to be set independent from each other, see section "Setting individual switching times".

5.8.3.1 Preset blind block switching times

Preset block switching times: Open Monday - Friday: 07:00
Close Monday - Friday: 20:00
Open Saturday - Sunday: 08:00
Close Saturday - Sunday: 21:00

If the display is on --:--, this can mean the following:

- no time has been set
- the memory is not occupied,
- the function is not active.

5.8.3.2 Preset light block switching times

Preset block switching times: ON Monday - Friday: 20:00
OFF Monday - Friday: 07:00
ON Saturday - Sunday: 21:00
OFF Saturday - Sunday: 08:00

If the display is on --:--, this can mean the following:

- no time has been set
- the memory is not occupied,
- the function is not active.

5.8.3.3 Preset relay block switching times

Preset block switching times: ON Monday - Friday: 07:00
OFF Monday - Friday: 20:00
ON Saturday - Sunday: 08:00
OFF Saturday - Sunday: 21:00

If the display is on --:--, this can mean the following:

- no time has been set
- the memory is not occupied,
- the function is not active.

5.8.3.4 Changing blind block switching times

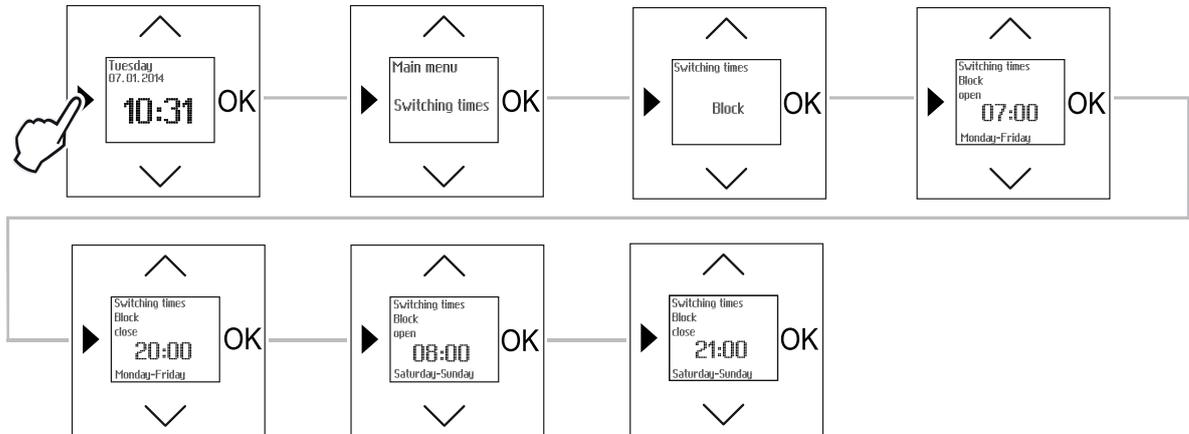


Fig. 14: Menu item - Blind block switching times

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
OK	Block	- Press the OK button to select menu item "Switching times". - Menu item "Block" is displayed.
OK	Open Monday-Friday 07:00	- Press the OK button to select menu item "Block". - You simultaneously switch to menu item "Open Monday-Friday". The display shows 07:00.
^ / v	07:00	- Set the desired up-time via the arrow buttons. In this example the time of 07:00 has been taken over.
OK	Close Monday-Friday 20:00	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Close Monday-Friday". The display shows 20:00.
^ / v	20:00	- Set the desired down-time via the arrow buttons. In this example the time of 20:00 has been taken over.
OK	Open Saturday-Sunday 08:00	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Open Saturday-Sunday". The display shows 08:00.
^ / v	08:00	- Set the desired up-time via the arrow buttons. In this example the time of 08:00 has been taken over.
OK	Close Saturday-Sunday 21:00	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Close Saturday-Sunday". The display shows 21:00.
^ / v	21:00	- Set the desired down-time via the arrow buttons. In this example the time of 21:00 has been taken over.
OK	Block	- Confirm your entry with the "OK" button.
▶		- Press the menu button twice to switch to the standard view.

5.8.3.5 Changing light block switching times

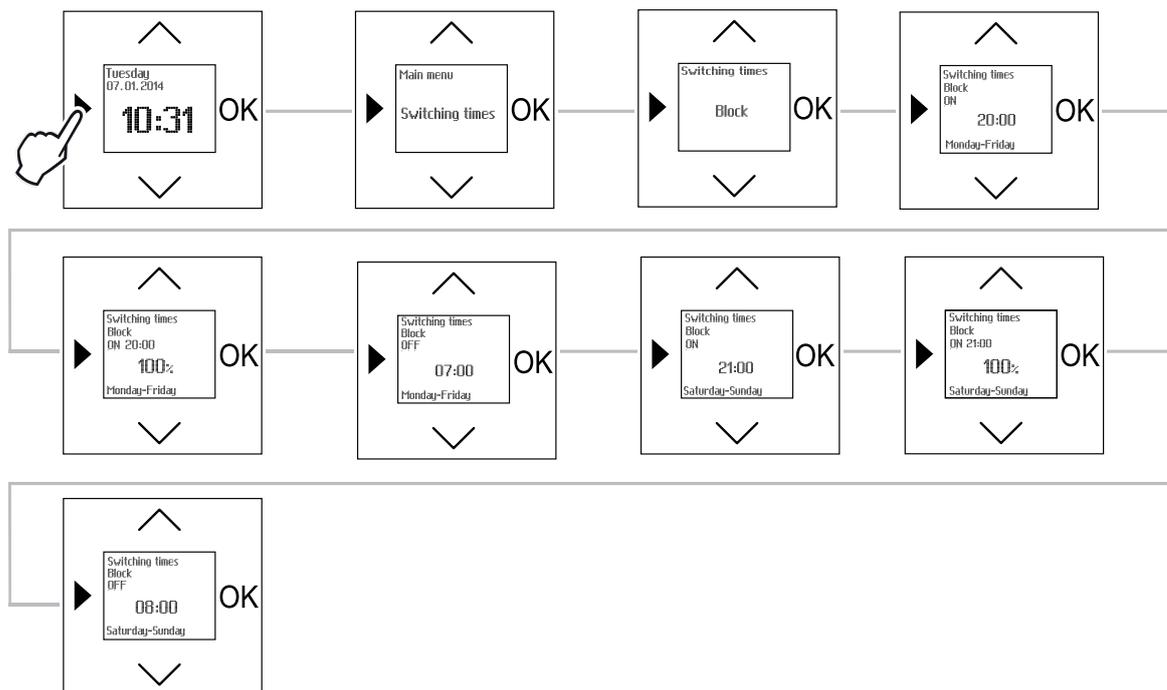


Fig. 15: Menu item - Light block switching times

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
OK	Block	- Press the OK button to select menu item "Switching times". - Menu item "Block" is displayed.
OK	ON Monday-Friday 20:00	- Press the OK button to select menu item "Block". - You simultaneously switch to menu item "ON Monday-Friday". The display shows 20:00.
∧∨	20:00	- Set the desired switch-on time via the arrow buttons. In this example the time of 20:00 has been taken over.
OK	On Monday-Friday 20:00 100%	- Confirm your entry with the "OK" button. - You simultaneously switch to the next menu item.
∧∨	100%	- Set the desired brightness value via the arrow buttons. In this example the value "100%" has been taken over.
OK	OFF Monday-Friday 07:00	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "OFF Monday-Friday". The display shows 07:00.
∧∨	07:00	- Set the desired switch-off time via the arrow buttons. In this example the time of 07:00 has been taken over.
OK	ON Saturday-Sunday 21:00	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "ON Saturday-Sunday". The display shows 21:00.
∧∨	21:00	- Set the desired switch-on time via the arrow buttons. In this example the time of 21:00 has been taken over.
OK	ON Saturday-Sunday 21:00 100%	- Confirm your entry with the "OK" button. - You simultaneously switch to the next menu item.
∧∨	100%	- Set the desired brightness value via the arrow buttons. In this example the value "100%" has been taken over.

OK	OFF Saturday-Sunday 8:00	<ul style="list-style-type: none"> - Confirm your entry with the "OK" button. - You simultaneously switch to menu item "OFF Saturday-Sunday". The display shows 08:00.
↕	08:00	<ul style="list-style-type: none"> - Set the desired switch-off time via the arrow buttons. In this example the time of 08:00 has been taken over.
OK	Block	<ul style="list-style-type: none"> - Confirm your entry with the "OK" button.
▶		<ul style="list-style-type: none"> - Press the menu button twice to switch to the standard view.

5.8.3.6 Changing relay block switching times

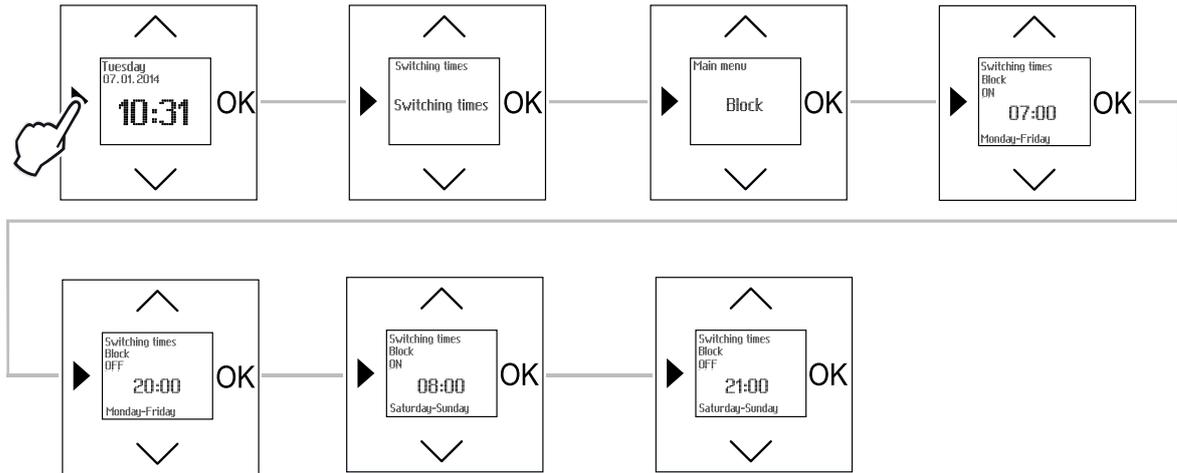


Fig. 16: Menu item - Relay block switching times

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	<ul style="list-style-type: none"> - Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
OK	Block	<ul style="list-style-type: none"> - Press the OK button to select menu item "Switching times". - Menu item "Block" is displayed.
OK	ON Monday-Friday 07:00	<ul style="list-style-type: none"> - Press the OK button to select menu item "Block". - You simultaneously switch to menu item "ON Monday-Friday". The display shows 07:00.
↕	07:00	<ul style="list-style-type: none"> - Set the desired switch-on time via the arrow buttons. In this example the time of 07:00 has been taken over.
OK	OFF Monday-Friday 20:00	<ul style="list-style-type: none"> - Confirm your entry with the "OK" button. - You simultaneously switch to menu item "OFF Monday-Friday". The display shows 20:00.
↕	20:00	<ul style="list-style-type: none"> - Set the desired switch-off time via the arrow buttons. In this example the time of 20:00 has been taken over.
OK	ON Saturday-Sunday 08:00	<ul style="list-style-type: none"> - Confirm your entry with the "OK" button. - You simultaneously switch to menu item "ON Saturday-Sunday". The display shows 08:00.
↕	08:00	<ul style="list-style-type: none"> - Set the desired switch-on time via the arrow buttons. In this example the time of 08:00 has been taken over.
OK	OFF Saturday-Sunday 21:00	<ul style="list-style-type: none"> - Confirm your entry with the "OK" button. - You simultaneously switch to menu item "OFF Saturday-Sunday". The display shows 21:00.
↕	21:00	<ul style="list-style-type: none"> - Set the desired switch-off time via the arrow buttons. In this example the time of 21:00 has been taken over.
OK	Block	<ul style="list-style-type: none"> - Confirm your entry with the "OK" button.
▶		<ul style="list-style-type: none"> - Press the menu button twice to switch to the standard view.

5.8.4 Astro function

The times of sunrise and sunset change during the course of a year. With the astro function the timer automatically adapts the switching times to this change. For example, in the summer the exterior lighting is switched off or the blind is opened a little earlier every morning. In the winter the light is switched on and the blind is closed a little earlier in the evening each day.



Note...

The changes of sunrise and sunset vary around the globe. For a correct time shift of the switching times, the country in which the device is mounted must be set in the timer. The language is set automatically via the country selection, e.g. Germany = German.

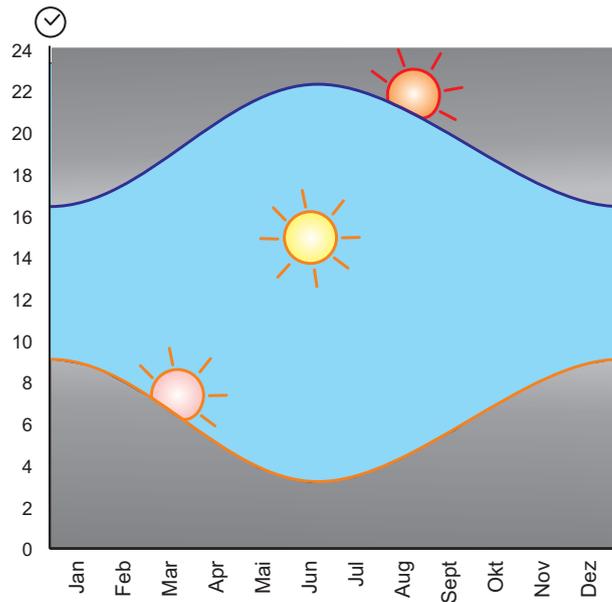


Fig. 17: Astro curve during the course of the year

The astro switching times are designed as blocks for Monday-Friday and for Saturday-Sunday. Also the entry of a time shift (± 90 minutes) is possible in addition to the astro switching time. With the time shift the astro switching time can be adapted to the regional conditions.



Note...

Examples of application for programming the astro function are available on the pages following page 45.

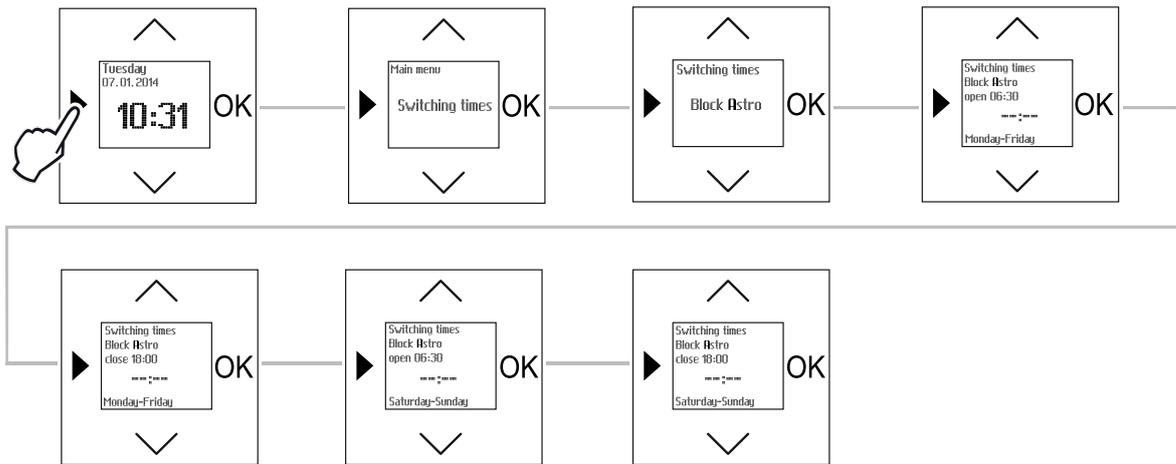


Fig. 18: Menu item Block astro showing the example of blind control

Sequence of operating steps - example of blind control

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
OK	Block	- Press the OK button to select menu item "Switching times". - Menu item "Block" is displayed.
^ v	Block Astro	- Select menu item "Block Astro" via the arrow buttons.
OK	Open Monday-Friday 06:30 --:--	- Press the OK button. - Menu item "Open Monday-Friday" is displayed. The display shows the preset astro time and --:--.
^ v	+0:00	- Press an arrow button once to take over the preset astro time. - +0:00 is displayed.
^ v	+0:20	- Set the time shift for the specified astro time via the arrow buttons. In this example the up-time has been pushed back 20 minutes.
OK	Close Monday-Friday 18:00 --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Close Monday-Friday". The display shows the preset astro time and --:--.
^ v	+0:00	- Press an arrow button once to take over the preset astro time. - +0:00 is displayed.
^ v	+0:20	- Set the time shift for the specified astro time via the arrow buttons. In this example the down-time has been pushed back 20 minutes.
OK	Open Saturday-Sunday 6:30 --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Open Saturday-Sunday". The display shows the preset astro time and --:--.
^ v	+0:00	- Press an arrow button once to take over the preset astro time. - +0:00 is displayed.
^ v	+0:20	- Set the time shift for the specified astro time via the arrow buttons. In this example the up-time has been pushed back 20 minutes.
OK	Close Saturday-Sunday 18:00 --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to the next menu item "Close Saturday-Sunday". The display shows the preset astro time and --:--.
^ v	+0:00	- Press an arrow button once to take over the preset astro time. - +0:00 is displayed.
^ v	+0:20	- Set the time shift for the specified astro time via the arrow buttons. In this example the down-time has been pushed back 20 minutes.
OK	Block Astro	- Confirm your entry with the "OK" button.
▶		- Press the menu button twice to switch to the standard view.

Note on astro function for light control:



Note...

When operating on a flush-mounted dimmer insert the switch-on brightness can be additionally set.

5.8.5 "Individual" switching times

The times for the up and down movement / switch-on and switch-off for each day can be set independent of each other via menu item "Individual".

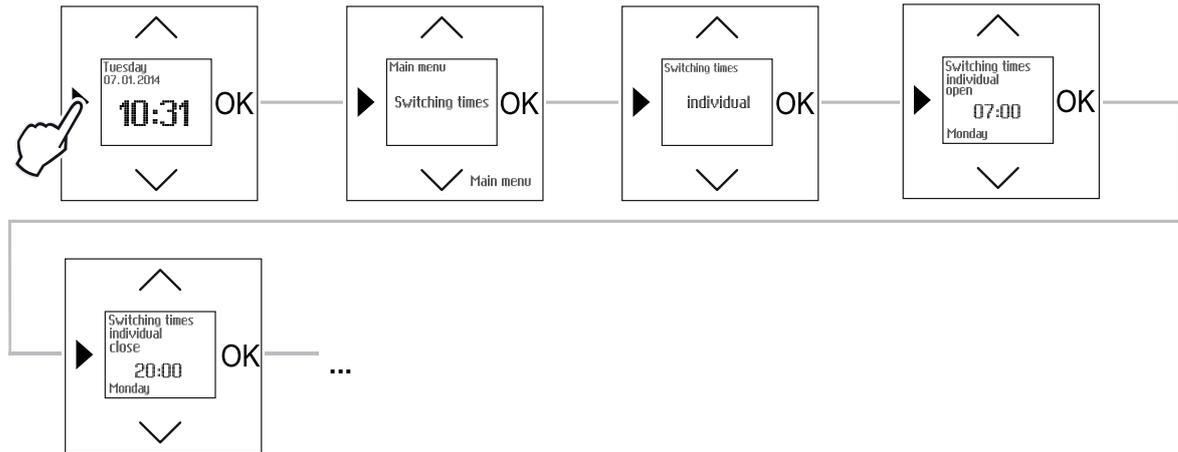


Fig. 19: Menu item - "Individual" switching times showing the example of blind control

Sequence of operating steps - example of blind control

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
OK	Block	- Press the OK button to select menu item "Switching times". - Menu item "Block" is displayed.
^ v	Individual	- Select menu item "Individual" via the arrow buttons.
OK	Open Monday	- Press the OK button. - You simultaneously switch to menu item "Open Monday".
^ v	07:00	- Press one of the arrow buttons. - The display shows the preset up-time 07:00.
^ v	07:30	- Change the time via the arrow buttons. In this example the up-time has been set at 07:30.
OK	Close Monday	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Close Monday".
^ v	20:00	- Press one of the arrow buttons. - The display shows the preset down-time 20:00.
^ v	20:30	- Change the time via the arrow buttons. In this example the down-time has been set at 20:30.
OK	Open Tuesday	- Confirm your entry with the "OK" button. - You simultaneously switch to the next weekday. If desired, use the same procedure for every further weekday.
OK	Individual	- Confirm your entry with the "OK" button.
▶		- Press the menu button twice to switch to the standard view.

5.8.6 Additional switching times

5.8.6.1 Additional switching times for blinds

An additional up and down command can be set for each weekday in menu item "Additional switching times". This makes it possible, for example, to reproduce a lunch break or the blind moves into a ventilation position with the first down-time and with the second down-time it closes completely.



Note...

To enable the additional switching times to be entered, the menu item must first be activated in menu "Special functions". See section 5.9.1.

Only then will the additional switching times appear on the "Menus" level.

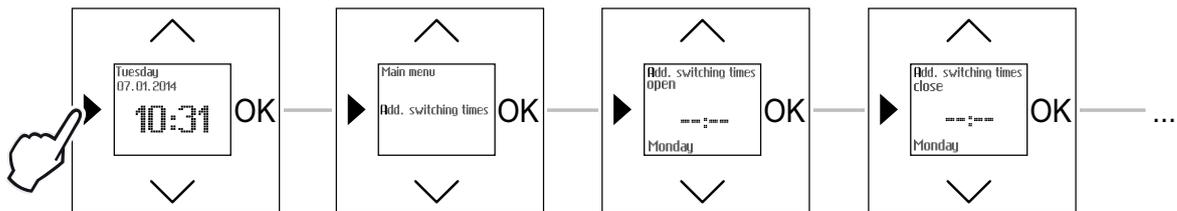


Fig. 20: Menu item - Additional switching times for blinds

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
^ v	Add. switching times	- Select menu item "Add. switching times" via the arrow buttons.
OK	Open Monday --:--	- Press the OK button. - You simultaneously switch to menu item "Open Monday". The display shows --:--.
^ v	Open Monday 07:00	- Press one of the arrow buttons. - The suggested up-time is displayed.
^ v	15:00	- Change the time via the arrow buttons. In this example the up-time has been set at 15:00. No switching time will be set if the display --:-- is confirmed.
OK	Close Monday --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Close Monday". The display shows --:--.
^ v	Close Monday 20:00	- Press one of the arrow buttons. - The suggested down-time is displayed.
^ v	12:00	- Change the time via the arrow buttons. In this example the down-time has been set at 12:00. No switching time will be set if the display --:-- is confirmed.
OK	Open Tuesday --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to the next weekday. If desired, use the same procedure for every further weekday.
OK	Add. switching times	- Confirm your entry with the "OK" button.
▶		- Press the menu button once to switch to the standard view.

5.8.6.2 Additional switching times for light

An additional on and off command can be set for each weekday in menu item "Additional switching times". This makes it possible to reproduce a lunch break, for example.



Note...

To enable the additional switching times to be entered, the menu item must first be activated in menu "Special functions". See section 5.9.1.

Only then will the additional switching times appear on the "Menus" level.

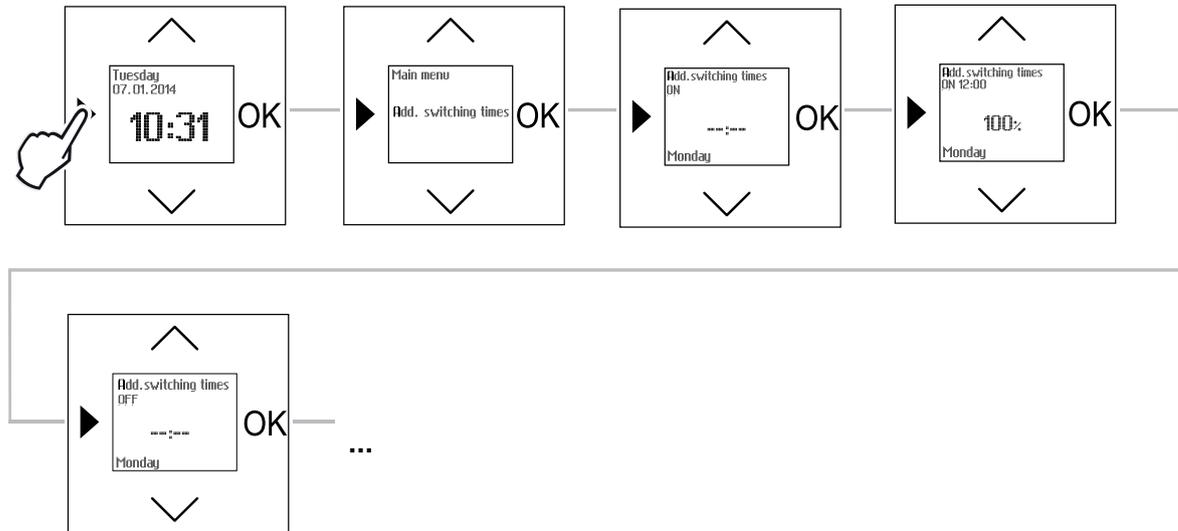


Fig. 21: Menu item - Additional switching times for light

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
^ v	Add. switching times	- Select menu item "Add. switching times" via the arrow buttons.
OK	ON Monday --:--	- Press the OK button. - You simultaneously switch to menu item "ON Monday". The display shows --:--.
^ v	20:00	- Press one of the arrow buttons. - The suggested switch-on time is displayed.
^ v	12:00	- Change the time via the arrow buttons. In this example the switch-on time has been set at 12:00. No switching time will be set if the display --:-- is confirmed.
OK	ON Monday 12:00 100%	- Confirm your entry with the "OK" button. - You simultaneously switch to the next menu item.
^ v	100%	- Set the desired brightness value via the arrow buttons. In this example the value 100% has been taken over.
OK	OFF Monday --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "OFF Monday". The display shows --:--.
^ v	07:00	- Press one of the arrow buttons. - The suggested switch-off time is displayed.
^ v	15:00	- Change the time via the arrow buttons.
OK	ON Tuesday --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to the next weekday. If desired, use the same procedure for every further weekday.
OK	Add. switching times	- Confirm your entry with the "OK" button.
▶		- Press the menu button once to switch to the standard view.

5.8.6.3 Additional switching times for relays

An additional on and off command can be set for each weekday in menu item "Additional switching times". This makes it possible to reproduce a lunch break, for example.



Note...

To enable the additional switching times to be entered, the menu item must first be activated in menu "Special functions". See section 5.9.1.

Only then will the additional switching times appear on the "Menus" level.

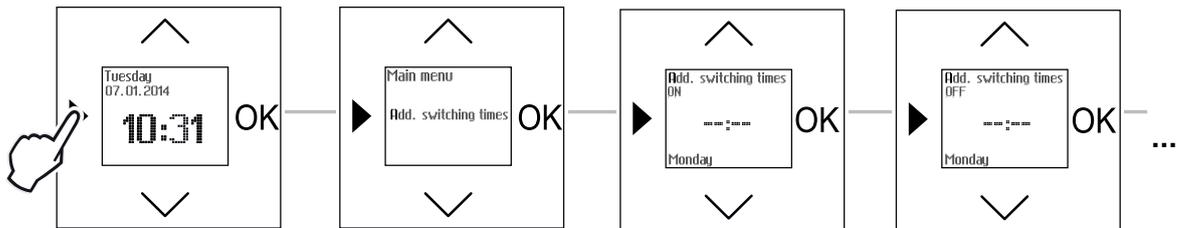


Fig. 22: Menu item - Additional switching times for relays

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
^ v	Add. switching times	- Select menu item "Add. switching times" via the arrow buttons.
OK	ON Monday --:--	- Press the OK button. - You simultaneously switch to menu item "ON Monday". The display shows --:--.
^ v	07:00	- Press one of the arrow buttons. - The suggested switch-on time is displayed.
^ v	12:00	- Change the time via the arrow buttons. In this example the switch-on time has been set at 12:00. No switching time will be set if the display --:-- is confirmed.
OK	OFF Monday --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "OFF Monday". The display shows --:--.
^ v	20:00	- Press one of the arrow buttons. - The suggested switch-off time is displayed.
^ v	15:00	- Change the time via the arrow buttons. In this example the switch-off time has been set at 15:00. No switching time will be set if the display --:-- is confirmed.
OK	ON Tuesday --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to the next weekday. If desired, use the same procedure for every further weekday.
OK	Add. switching times	- Confirm your entry with the "OK" button.
▶		- Press the menu button once to switch to the standard view.

5.9 Special functions

The settings of the special functions that are available and how the menu items are called up is described here. A detailed description of the individual functions is contained in the following sub-sections.

5.9.1 Activating additional switching times

To enable additional switching times to be entered, menu item "Additional switching times" must first be activated. See the following description:

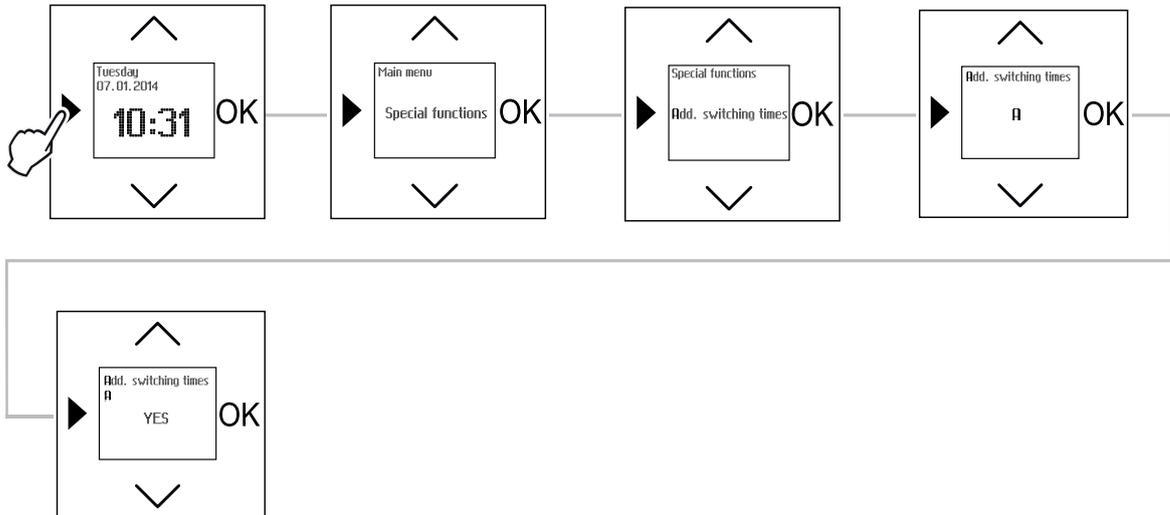


Fig. 23 Menu item - Activating special functions / additional switching times

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
^ v	Special functions	- Select menu "Special functions" via the arrow buttons.
OK	Add. switching times	- Press the OK button. - Menu item "Add. switching times" is displayed.
OK	A	- Press the OK button. - Menu item "A" is displayed.
OK	NO	- Press the OK button to select additional switching time "A". - The display shows "No"
		- Select either "Yes" or "No" with the arrow buttons.
^ v	Yes	- "Yes": Two additional switching times per day can be executed.
	No	- "No": No additional switching times will be executed.
OK	Add. switching times	- Confirm your selection with the OK button. - The selection is stored. Menu item "Add. switching times" is displayed. - When selecting "Yes": The additional procedure for setting the "Additional switching times" is described in section 5.8.6.1 to 5.8.6.3.
▶		- Press the menu button twice to switch to the standard view.

5.9.2 Return puls (only for blind control)

With function "Return puls" you can let the blind move up from the bottom end position until the ventilation slots are open. With this function the blind is, after closing (DOWN command), moved in the UP direction for the set time.

The adjustment range lies between 0.5 and 30 seconds. The return puls is executed only if the blind was started previously from the top end position.

The return puls can be entered separately for the following functions:

- Switching times,
- Additional switching times (when active),
- Twilight function (only with sensor; setting in menu "Sensor values")

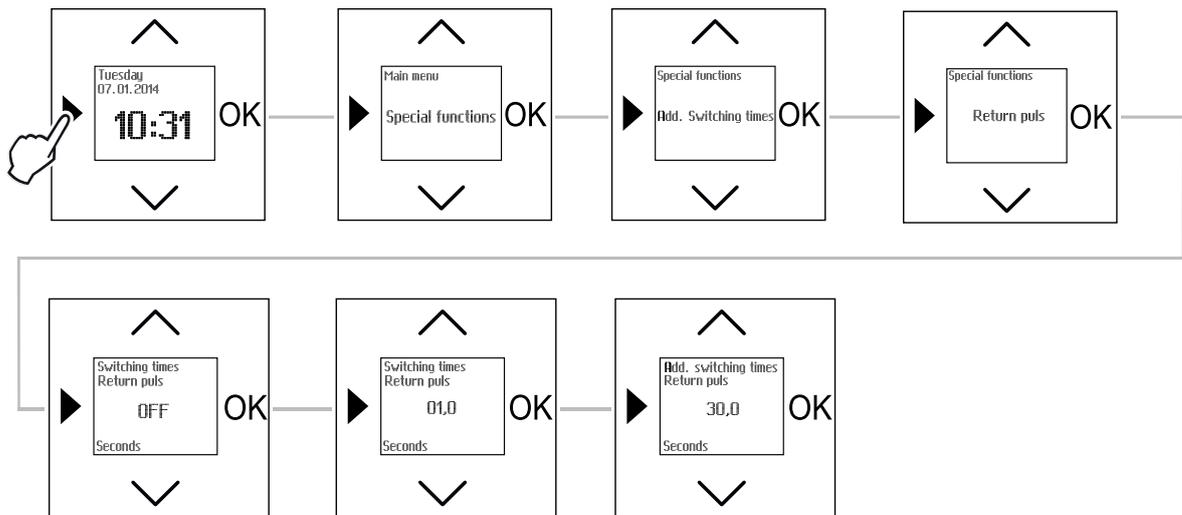


Fig. 24: Menu item – Return puls

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
∧∨	Special functions	- Select menu "Special functions" via the arrow buttons.
OK	Add. switching times	- Press the OK button. - Menu item "Add. switching times" is displayed.
∧∨	Return puls	- Select menu "Return puls" via the arrow buttons.
OK	Switching times Return puls Off	- Confirm your selection with the OK button. - You simultaneously switch to the next menu item "Switching times Return puls". The display shows "Off".
∧∨	20	- Set a return puls from 0.5 to 30 seconds via the arrow buttons. In this example a return puls of 20 seconds has been set.
<i>The following menu item is displayed only if "Additional switching times" has been activated.</i>		
OK	Add. Switching times Return puls Off	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Add. switching times Return puls". The display shows "Off".
∧∨	20	- Set a return travel pulse from 0.5 to 30 seconds via the arrow buttons. In this example a return puls of 20 seconds has been set.
OK		- Confirm your entry with the "OK" button.
▶		- Press the menu button twice to switch to the standard view.

5.9.3 Shutdown length (only for blind control)

With the 'Shutdown length' setting the movement to a freely selectable intermediate position between the upper and lower setting is possible. If necessary, the duration can be reduced by up to 5 seconds. This position can only be moved to from the top end position.

The preset down time of 3 minutes can be especially reduced for the following functions:

- Switching times,
- Additional switching times (when active),
- Twilight function (only with sensor; setting in menu "Sensor values"),
- Sun protection function (only with sensor; setting in menu "Sensor values").

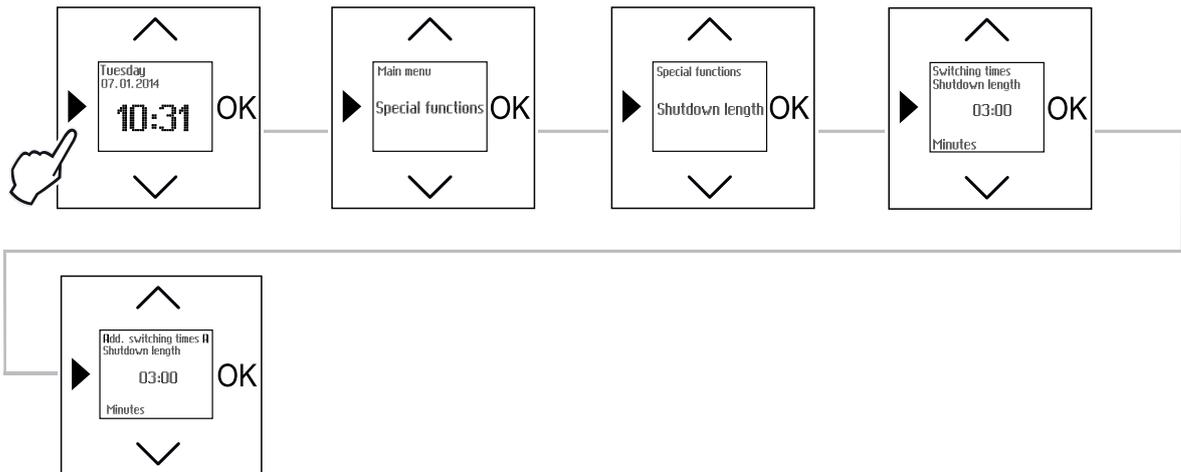


Fig. 25: Menu item – Shutdown length

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
^ / v	Special functions	- Select menu "Special functions" via the arrow buttons.
OK	Add. switching times	- Press the OK button. - Menu item "Add. switching times" is displayed.
^ / v	Shutdown length	- Select menu item "Shutdown length" via the arrow buttons.
OK	Switching times Shutdown length 3:00	- Confirm your selection with the OK button. - You simultaneously switch to the next menu item "Switching times Shutdown length ". The preset duration of down movement is displayed.
^ / v	1:30	- Set the duration of down movement via the arrow buttons. In this example a duration of down movement of 1 minute and 30 seconds has been set.
<i>The following menu item is displayed only if "Additional switching times" has been activated.</i>		
OK	Add. switching times Shutdown length 3:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Additional switching times Shutdown length". The preset duration of down movement is displayed.
^ / v	1:30	- Set the duration of down movement via the arrow buttons. In this example a duration of down movement of 1 minute and 30 seconds has been set.
OK		- Confirm your entry with the "OK" button.
▶		- Press the menu button twice to switch to the standard view.

5.9.4 Astro blocking times

5.9.4.1 Astro blocking time for blinds

The switching times of the astro function can be limited with the "Astro blockage time" function.

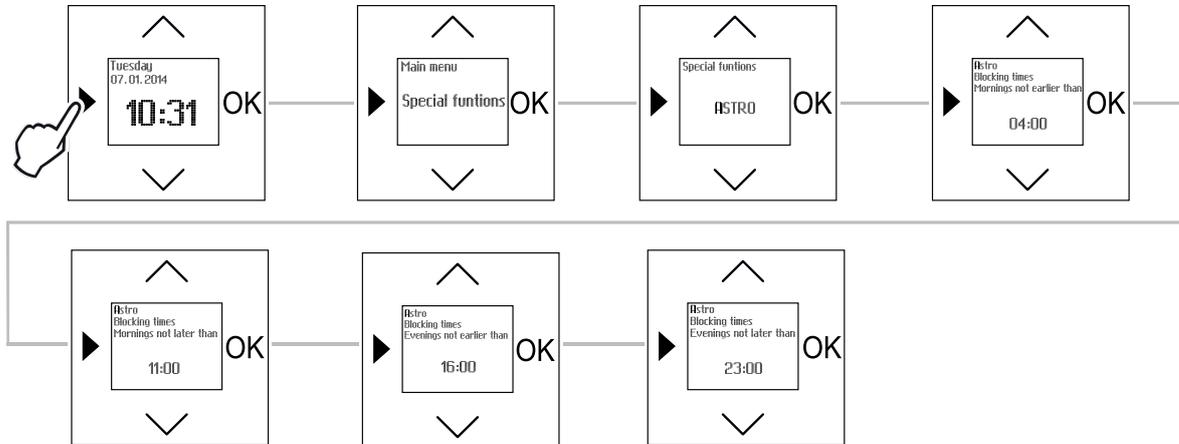


Fig. 26: Menu item – Astro blocking time for blinds

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
^ v	Special functions	- Select menu "Special functions" via the arrow buttons.
OK	Add. switching times	- Press the OK button. - Menu item "Add. switching times" is displayed.
^ v	Astro	- Select menu item "Astro" via the arrow buttons.
OK	Astro Blocking times Mornings not earlier than 04:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Mornings not earlier than". The preset value is displayed.
^ v	6:00	- Set the earliest time via the arrow buttons from which the blind is to be moved up. In this example the time has been set at 6:00.
OK	Astro Blocking times Mornings not later than 11:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Mornings not later than". The preset value is displayed.
^ v	11:00	- Set the latest time via the arrow buttons from which the blind is to be moved up. In this example the preset time of 11:00 has been taken over.
OK	Astro Blocking times Evenings not earlier than 16:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Evenings not earlier than". The preset value is displayed.
^ v	16:00	- Set the earliest time via the arrow buttons from which the blind is to be moved down in the evening. In this example the time of 16:00 has been taken over.
OK	Astro Blocking times Evenings not later than 23:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Evenings not later than". The preset value is displayed.
^ v	21:00	- Set the latest time via the arrow buttons from which the blind is to be moved down in the evening. In this example the time has been set at 21:00.
OK		- Confirm your entry with the "OK" button.
▶		- Press the menu button twice to switch to the standard view.

5.9.4.2 Astro blocking time for light

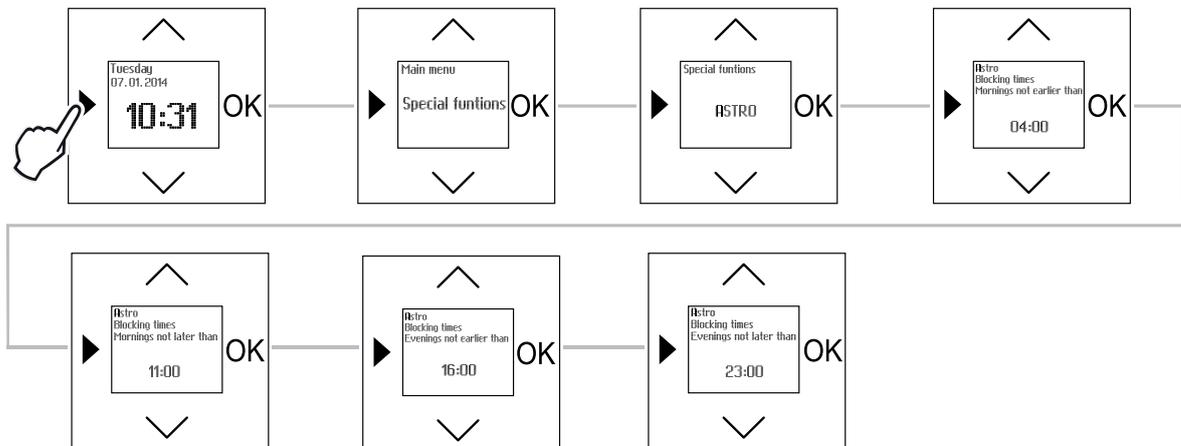


Fig. 27: Menu item – Astro blocking time for light

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
^∨	Special functions	- Select menu "Special functions" via the arrow buttons.
OK	Add. switching times	- Press the OK button. - Menu item "Add. switching times" is displayed.
^∨	Astro	- Select menu item "Astro" via the arrow buttons.
OK	Astro Blocking times Mornings not earlier than 4:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Mornings not earlier than". The preset value is displayed.
^∨	6:00	- Set the earliest time via the arrow buttons from which the light is to be switched off in the morning. In this example the time has been set at 6:00.
OK	Astro Blocking times Mornings not later than 11:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Mornings not later than". The preset value is displayed.
^∨	11:00	- Set the latest time via the arrow buttons from which the light is to be switched off in the morning. In this example the preset time of 11:00 has been taken over.
OK	Astro Blocking time Evenings not earlier than 16:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Evenings not earlier than". The preset value is displayed.
^∨	16:00	- Set the earliest time via the arrow buttons from which the light is to be switched on in the evening. In this example the preset time of 16:00 has been taken over.
OK	Astro Blocking times Evenings not later than 23:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Evenings not later than". The preset value is displayed.
^∨	21:00	- Set the latest time via the arrow buttons from which the light is to be switched on in the evening. In this example the time has been set at 21:00.
OK		- Confirm your entry with the "OK" button.
▶		- Press the menu button twice to switch to the standard view.

5.9.4.3 Astro blocking time for relays

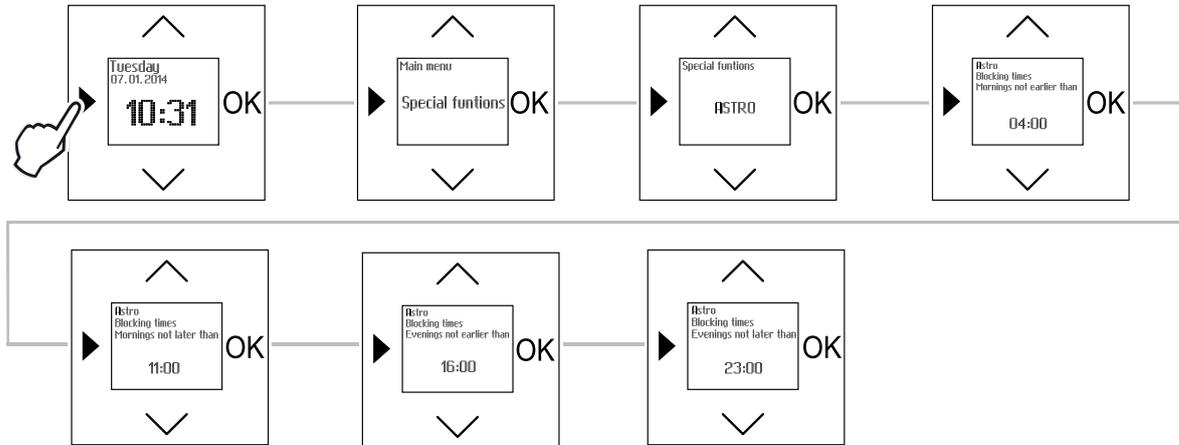


Fig. 28: Menu item – Astro blocking time for relays

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
^/∨	Special functions	- Select menu "Special functions" via the arrow buttons.
OK	Add. switching times	- Press the OK button. - Menu item "Add. switching times" is displayed.
^/∨	Astro	- Select menu item "Astro" via the arrow buttons.
OK	Blocking times	- Press the OK button. - Menu item "Blocking times" is displayed.
^/∨	Function	- Use the arrow buttons to select menu item "Function" if you want to set the switching behaviour of the relay insert. If not, skip the next four working steps.
OK	In the morning OFF In the evening ON	- Press the OK button. Menu item "In the morning OFF / in the evening ON" is displayed.
^/∨	In the morning ON In the evening OFF	- Use the arrow buttons to select the function of the relay insert.
OK	Function	- Confirm your selection with the OK button. - You simultaneously switch back to menu item "Function".
^/∨	Blocking times	- Select menu item "Blocking times" via the arrow buttons.
OK	Astro Blocking times Mornings not earlier than 4:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Mornings not earlier than". The preset value is displayed.
^/∨	6:00	- Set the earliest time via the arrow buttons from which the electric load is to be switched in the morning. In this example the time has been set at 6:00.
OK	Astro Blocking times Mornings not later than 11:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Mornings not later than". The preset value is displayed.
^/∨	11:00	- Set the latest time via the arrow buttons from which the electric load is to be switched in the morning. In this example the preset time of 11:00 has been taken over.
OK	Astro Blocking time Evenings not earlier than 16:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Evenings not earlier than". The preset value is displayed.

	16:00	- Set the earliest time via the arrow buttons from which the electric load is to be switched in the evening. In this example the preset time of 16:00 has been taken over.
OK	Astro Blocking times Evenings not later than 23:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Evenings not later than". The preset value is displayed.
	21:00	- Set the latest time via the arrow buttons from which the electric load is to be switched in the evening. In this example the time has been set at 21:00.
OK	Blocking times	- Confirm your entry with the "OK" button.
		- Press the menu button three times to switch to the standard view.

5.9.5 Sensor values (only blind control)

If a brightness sensor is connected, the blind can be controlled in dependence of the sunlight.

The sun protection function automatically moves the blind down after exceeding the set brightness value or temperature value. The brightness sensor is overridden (darkened), the blind stops and moves up again for the first time after 15 minutes until the sensor again has an "unrestricted view".

To trigger the function the brightness must be exceeded for at least 90 seconds. The end position of the blind can be individually selected by the positioning of the sensor on the pane. If the shortfall in brightness is longer than 15 minutes, the blind automatically moves back up.

If no brightness sensor is connected, the blind is controlled only via the installed temperature sensor.



Note...

The integrated temperature sensor serves only as sun protection and not for the temperature control of the room.

The sun protection can only be moved to from the top end position.

5.9.5.1 Display of current brightness values (for available brightness sensor)

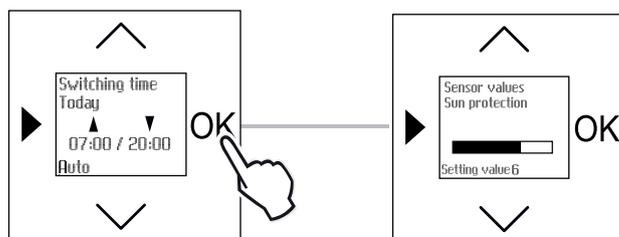


Fig. 29 Display of current brightness values

- » Press the OK button longer than 1 second.
 - The switching times for the current day will be displayed.
- » Press the OK button again briefly.
 - The current brightness values measured by the sensor are displayed (depending on the brightness as "Twilight" or "Sun protection").

5.9.5.2 Sun protection function - blind with brightness sensor

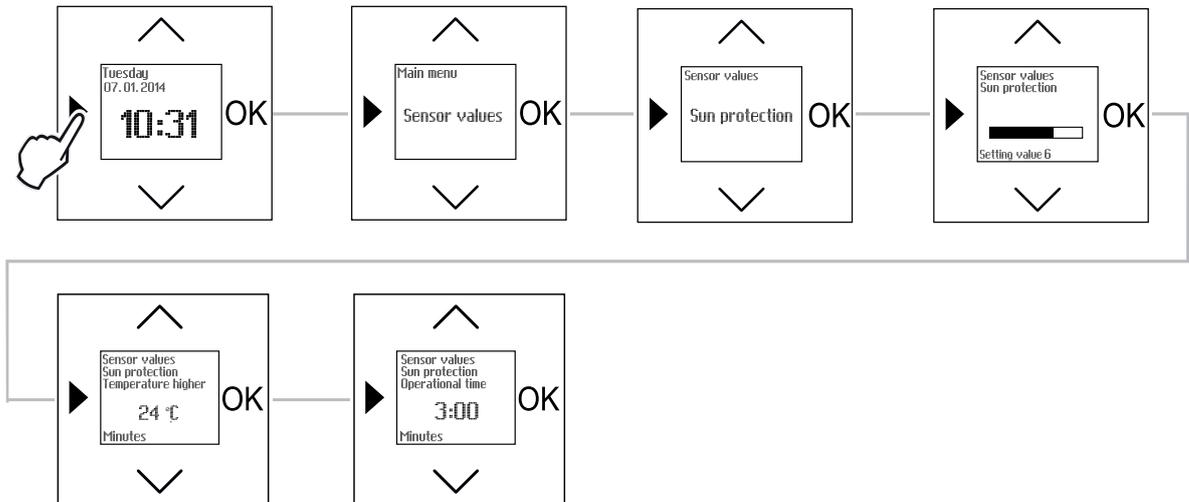


Fig. 30 Menu item - Sensor values / Sun protection (with brightness sensor)

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
^/∨	Sensor values	- Select menu "Sensor values" via the arrow buttons.
OK	Sun protection	- Press the OK button. - Menu item "Sun protection" is displayed.
OK	Setting value	- Press the OK button. - You simultaneously switch to the next menu item.
^/∨	6	- Set a brightness value (1 to 9) via the arrow buttons at which the blind moves down. In this example the value 6 has been set.
OK	Temperature higher OFF	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Temperature higher". The display shows "OFF".
^/∨	24°C	- Set a temperature value between 18 and 26°C via the arrow buttons at which the blind moves down. In this example the value 24°C has been set.
OK	Operational time	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Operational time". The display shows a preset value.
^/∨	2:00	- Set an operational time between 0:05 minutes and 3:00 minutes via the arrow buttons at which the blind moves down. In this example the value 2:00 minutes has been set.
OK		- Confirm your entry with the "OK" button.
▶		- Press the menu button twice to switch to the standard view.

5.9.5.3 Sun protection function - blind without brightness sensor

The sun protection function automatically moves the blind down after exceeding the set temperature value.

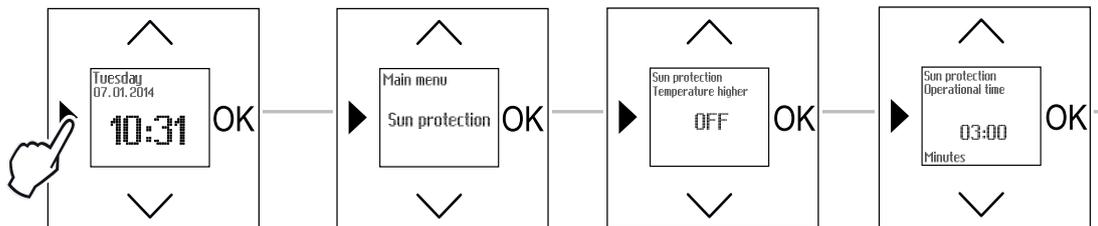


Fig. 31 Menu item - Sensor values / Sun protection (without brightness sensor)

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
∧∨	Sun protection	- Select menu "Sun protection" via the arrow buttons.
OK	Temperature higher OFF	- Press the OK button. - Menu item "Temperature higher" is displayed. The display shows "OFF".
∧∨	24°C	- Set a temperature value between 18.0 and 26.0°C via the arrow buttons at which the blind moves down. In this example the value 24°C has been set.
OK	Operational time	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Operational time". The display shows a preset value.
∧∨	2:00	- Set an operational time between 0:05 minutes and 3:00 minutes via the arrow buttons at which the blind moves down. In this example the value 2:00 minutes has been set.
OK		- Confirm your entry with the "OK" button.
▶		- Press the menu button once to switch to the standard view.

5.9.5.4 Twilight function with brightness sensor

The twilight function closes the blind if the set brightness value falls short for more than 15 minutes. The twilight function is active only starting from 15:00 h.

After closing, the blind will remain closed until the next open command.

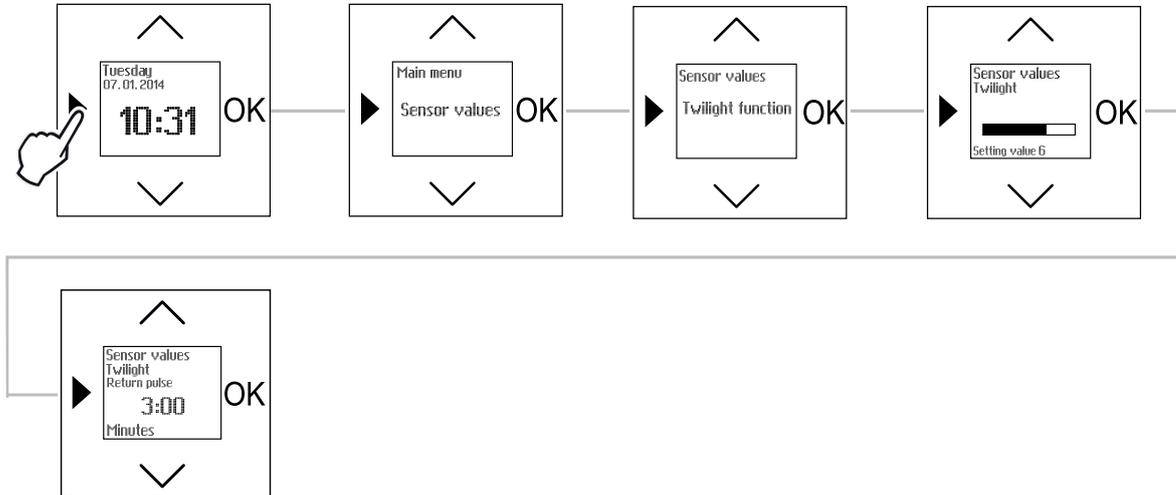


Fig. 32 Menu item - Sensor values / Twilight function (with brightness sensor)

Sequence of operating steps

Button	Display	Entry / Comments
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
∧∨	Sensor values	- Select menu "Sensor values" via the arrow buttons.
OK	Sun protection	- Press the OK button. - Menu item "Sun protection" is displayed.
∧∨	Twilight function	- Select menu item "Twilight function" via the arrow buttons.
OK	Setting value	- Press the OK button. - You simultaneously switch to the next menu item.
∧∨	6	- Set a brightness value (1 to 9) via the arrow buttons at which the blind moves down. In this example the value 6 has been set.
OK	Return puls OFF	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Return puls". The display shows "OFF".
∧∨	20 seconds	- Set a return puls from between 0.5 to 30.0 seconds via the arrow buttons. In this example the value 20 seconds has been set.
OK	Operational time	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Operational time". The display shows a preset value.
∧∨	2:00	- Set an operational time between 0:05 minutes and 3:00 minutes via the arrow buttons at which the blind moves down. In this example the value 2:00 minutes has been set.
OK		- Confirm your entry with the "OK" button.
▶		- Press the menu button twice to switch to the standard view.

6 Examples of application

6.1 Example of light control 1

The lighting (e.g. shop window illumination) is switched on in the morning with 50% brightness (1) and later switched off completely (2). In the evening the lighting switches on with 100% brightness (3), is dimmed down later to 50% (4) and switched off at night (5).



Note...

To implement this example requires LED dimmer insert 6524 U-...

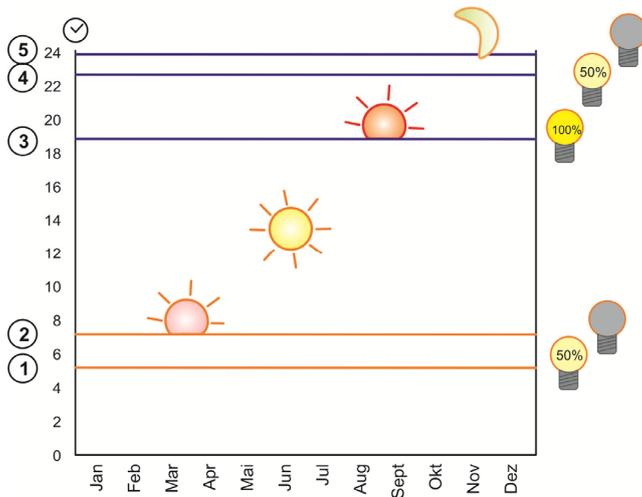


Fig. 33: Example of light control 1

Sequence of operating steps

Button	Display	Entry / Comments
Setting the switch-on time and switch-on brightness (1) and the switch-off time (2):		
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
OK	Block	- Press the OK button. - Menu item "Block" is displayed.
OK	ON Monday-Friday 20:00	- Press the OK button. - You simultaneously switch to menu item "ON Monday-Friday". The preset switch-on time is displayed.
↕	05:00	- Set the desired switch-on time (1) via the arrow buttons. In this example 05:00 has been set.
OK	100%	- Press the OK button. - The preset switch-on brightness of 100% is displayed.
↕	50%	- Set the desired switch-on brightness for (1) via the arrow buttons. In this example 50% has been set.
OK	OFF Monday-Friday 07:00	- Press the OK button. - You simultaneously switch to menu item "OFF Monday-Friday". The switch-off time is displayed.
↕	07:00	- Set the desired switch-off time (2) via the arrow buttons. In this example 07:00 has been set.
OK	ON Saturday-Sunday 21:00	- Press the OK button. - Repeat the process for blocks "On Saturday-Sunday" and "OFF Saturday-Sunday" and adjust the values if necessary.
▶	Switching times	- Press the menu button once to return to the main menu. - Menu item "Switching times" will be displayed.

Activating additional switching times A and B for (3), (4) and (5):		
	Special functions	- Select menu "Special functions" via the arrow buttons.
OK	Add. switching times	- Press the OK button. - Menu item "Add. switching times" is displayed.
OK	A	- Press the OK button. - Menu item "A" is displayed.
OK	NO	- Press the OK button to select additional switching time "A". - The display shows "No"
	Yes	- Select option "YES" with the arrow buttons.
OK	Add. switching times	- Press the OK button to confirm option "Yes". - Menu item "Add. switching times" is displayed.
OK	A	- Press the OK button. - Menu item "A" is displayed.
	B	- Select menu item additional switching time "B" with the arrow buttons.
OK	NO	- Press the OK button to select additional switching time "B". - The display shows "NO"
	Yes	- Select option "YES" with the arrow buttons.
OK	Add. switching times	- Press the OK button to confirm option "Yes". - Menu item "Add. switching times" is displayed.
	Special functions	- Press the menu button once to return to the main menu. - Menu item "Special functions" is displayed.
Setting additional switching time (3):		
	Add. switching times A	- Select menu item "Add. switching times A" via the arrow buttons.
OK	ON Monday --:--	- Press the OK button. - Menu item for additional switching time A "ON Monday" is displayed. The display shows --:--.
	19:00	- Set the desired additional switch-on time (3) via the arrow buttons. In this example 19:00 has been set.
OK	100%	- Press the OK button. - The preset switch-on brightness of 100% is displayed.
OK	OFF Monday --:--	- Press the OK button. - Menu item for additional switching time A "OFF Monday" is displayed. The display shows --:--.
OK	ON Tuesday --:--	- Press the OK button to skip the input. - Menu item "ON Tuesday" is displayed. Repeat the inputs for the following weekdays or skip the input by respectively pressing the OK button.
OK	Add. switching times A	- Confirm the last additional switching time "OFF Sunday" with the OK button. - Menu item "Add. switching times A" is displayed.

Setting additional switching times (4) and (5):		
	Add. switching times B	- Select menu item "Add. switching times B" via the arrow buttons.
OK	ON Monday --:--	- Press the OK button. - Menu item for additional switching time B "ON Monday" is displayed. The display shows --:--.
	19:00	- Set the desired additional switch-on time (4) via the arrow buttons. In this example 23:00 has been set.
OK	100%	- Press the OK button. - The preset switch-on brightness of 100% is displayed.
	50%	- Set the desired brightness for (4) via the arrow buttons. In this example 50% has been set.
OK	OFF Monday --:--	- Press the OK button. - Menu item for additional switching time B "OFF Monday" is displayed. The display shows --:--.
	00:00	- Set the desired switch-off time via the arrow buttons. In this example 00:00 has been set.
OK	ON Tuesday --:--	- Press the OK button. - Menu item "ON Tuesday" is displayed. Repeat the inputs for the following weekdays or skip the input by respectively pressing the OK button.
		- Press the menu button once to switch to the standard view.

6.2 Example of light control 2

The lighting (e.g. garden illumination) is switched on automatically in the evening with the astro function (1). At a fixed point in time (independent of astro switching times) the lighting is switched off again (2).



Note...

To implement this example requires relay insert 6401-...



Note...

Depending on the set behaviour in menu "Function" (Special functions > Astro > function), "Off" or "On" is suggested for the morning or evening switching times.

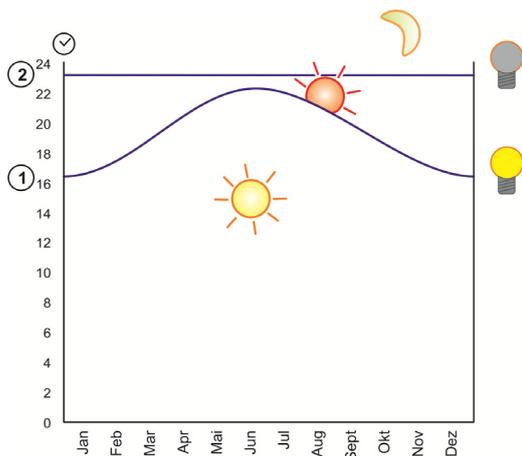


Fig. 34: Example of light control 2

Sequence of operating steps

Button	Display	Entry / Comments
Setting the astro function for switching (1):		
	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
OK	Block	- Press the OK button. - Menu item "Block" is displayed.
	Block Astro	- Select menu item "Block Astro" via the arrow buttons.
OK	ON Monday-Friday 21:35 --:--	- Press the OK button. - Menu item "ON Monday-Friday" is displayed. The display shows the preset astro time and --:-- (for the time shift).
	+0:00	- Press an arrow button once to take over the preset astro time. - +00:00 is displayed. - If desired, set the time shift via the arrow buttons.
OK	OFF Monday-Friday 7:25 --:--	- Press the OK button. - You simultaneously switch to the next menu item "OFF Monday-Friday". The display shows the preset astro time and --:-- (for the time shift).
OK	ON Saturday-Sunday 21:35 --:--	- Press the OK button to skip the menu item. - You simultaneously switch to the next menu item "ON Saturday-Sunday". - Repeat the input steps for blocks "ON Saturday-Sunday" and "OFF Saturday-Sunday" and adjust the values if necessary or skip the input by respectively pressing the OK button.
OK	Block astro	- Confirm the last astro switching time "OFF Saturday-Sunday" with the OK button. - Menu item "Block Astro" is displayed.
Setting the fixed switch-off time (2):		
	Block	- Select menu item "Block" via the arrow buttons.
OK	On Monday-Friday	- Press the OK button. - Menu item "ON Monday-Friday" is displayed.
OK	OFF Monday-Friday	- Press the OK button to skip the menu item. - Menu item "OFF Monday-Friday" is displayed.
	23:00	- Set the desired switch-off time (2) via the arrow buttons. In this example 23:00 has been set.
OK	ON Saturday-Sunday	- Press the OK button. - Menu item "ON Saturday-Sunday" is displayed. - Repeat the input steps for blocks "ON Saturday-Sunday" and "OFF Saturday-Sunday" and adjust the values if necessary or skip the input by respectively pressing the OK button.
		- Press the menu button twice to switch to the standard view.

6.3 Example of blind control 1

The blind is moved down in the evening with the astro function (1) and moved up in the morning at a fixed point in time (2).



Note...

To implement this example requires the blind control II-insert 6411 U-101-...

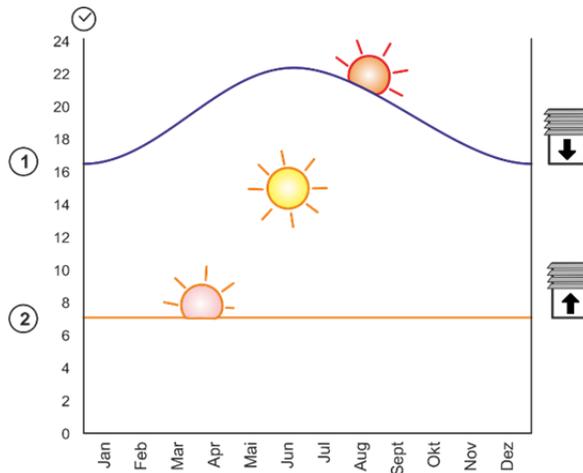


Fig. 35: Example of Venetian blind control 1

Sequence of operating steps

Button	Display	Entry / Comments
Setting the astro function for closing in the evening (1):		
	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
OK	Block	- Press the OK button. - Menu item "Block" is displayed.
	Block Astro	- Select menu item "Block Astro" via the arrow buttons.
OK	Open Monday-Friday 07:25 --:--	- Press the OK button. - Menu item "Open Monday-Friday" is displayed. The display shows the preset astro time and --:-- (for the time shift).
OK	Close Monday-Friday 18:35 --:--	- Press the OK button to skip the menu item. - Menu item "Close Monday-Friday" is displayed. The display shows the preset astro time and --:-- (for the time shift).
	+0:00	- Press an arrow button once to take over the preset astro time. - +00:00 is displayed. - If desired, set the time shift via the arrow buttons.
OK	Open Saturday-Sunday 07:25 --:--	- Confirm your entry with the "OK" button. - You simultaneously switch to menu item "Open Saturday-Sunday". - Repeat the input steps for blocks "Open Saturday-Sunday" and "Close Saturday-Sunday" and adjust the values if necessary or skip the input by respectively pressing the OK button.
OK	Block Astro	- Confirm the last astro switching time "Close Saturday-Sunday" with the OK button. - Menu item "Block Astro" is displayed.

Setting the fixed up-times in the morning (2):		
	Block	- Select menu item "Block" via the arrow buttons.
OK	Open Monday-Friday	- Press the OK button. - Menu item "Open Monday-Friday" is displayed.
	07:00	- Set the desired up-time via the arrow buttons. In this example 07:00 has been set.
OK	Close Monday-Friday	- Press the OK button. - Menu item "Close Monday-Friday" is displayed.
OK	Open Saturday-Sunday	- Press the OK button to skip the menu item. - You simultaneously switch to menu item "Open Saturday-Sunday". - Repeat the input steps for blocks "Open Saturday-Sunday" and "Close Saturday-Sunday" and adjust the values if necessary or skip the input by respectively pressing the OK button.
		- Press the menu button twice to switch to the standard view.

6.4 Example of blind control 2

The blind is moved up in the morning at a fixed point in time (1) and half closed in the evening at a fixed point in time (2). The blind is later completely closed via an additional switching time (3).

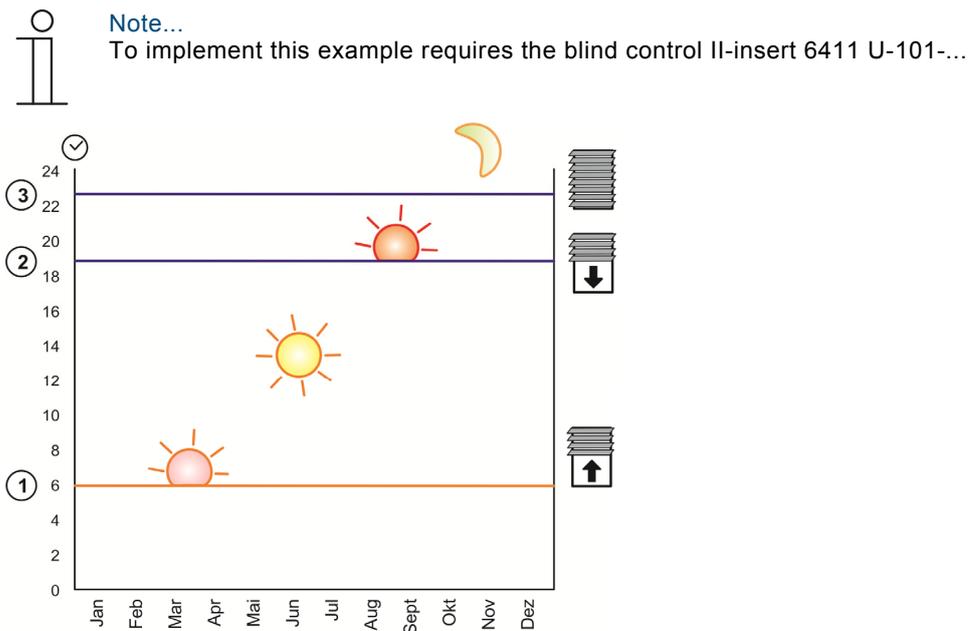


Fig. 36: Example of Venetian blind control 2

Sequence of operating steps

Button	Display	Entry / Comments
Activating additional switching time A for (3):		
	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
	Special functions	- Select menu item "Special functions" via the arrow buttons.
OK	Add. switching times	- Press the OK button. - Menu item "Add. switching times" is displayed.
OK	A	- Press the OK button. - Menu item "A" is displayed.
OK	NO	- Press the OK button to select additional switching time "A". - The display shows "NO".
	YES	- Select option "YES" with the arrow buttons.

OK	Add. switching times	<ul style="list-style-type: none"> - Press the OK button to confirm option "Yes". - Menu item "Add. switching times" is displayed.
▶	Special functions	<ul style="list-style-type: none"> - Press the menu button once to switch back to the main menu. - Menu item "Special functions" is displayed.
Setting the fixed up-time in the morning (1) and the fixed down-time in the evening (2):		
OK	Block	<ul style="list-style-type: none"> - Press the OK button. - Menu item "Block" is displayed.
OK	Open Monday-Friday	<ul style="list-style-type: none"> - Press the OK button. - Menu item "Open Monday-Friday" is displayed.
∧∨	06:00	<ul style="list-style-type: none"> - Set the desired up-time (1) via the arrow buttons. In this example 06:00 has been set.
OK	Close Monday-Friday	<ul style="list-style-type: none"> - Press the OK button. - You simultaneously switch to menu item "Close Monday-Friday".
∧∨	19:00	<ul style="list-style-type: none"> - Set the desired down-time (2) via the arrow buttons. In this example 19:00 has been set.
OK	Open Saturday-Sunday	<ul style="list-style-type: none"> - Press the OK button. - You simultaneously switch to menu item "Open Saturday-Sunday". - Repeat the input steps for blocks "Open Saturday-Sunday" and "Close Saturday-Sunday" and adjust the values if necessary or skip the input by respectively pressing the OK button.
▶	Switching times	<ul style="list-style-type: none"> - Press the menu button once to switch back to the main menu. - Menu item "Switching times" will be displayed.
Setting the duration of down movement in the evening (partly closed) (2).		
∧∨	Special functions	<ul style="list-style-type: none"> - Select menu "Special functions" via the arrow buttons.
OK	Add. switching times	<ul style="list-style-type: none"> - Press the OK button. - Menu item "Add. switching times" is displayed.
∧∨	Shutdown length	<ul style="list-style-type: none"> - Select menu item "Shutdown length" via the arrow buttons.
OK	Switching times Shutdown length 3:00	<ul style="list-style-type: none"> - Confirm your selection with the OK button. - You simultaneously switch to the next menu item "Switching times Shutdown length". The preset duration of down movement is displayed.
∧∨	1:30	<ul style="list-style-type: none"> - Set the Shutdown length via the arrow buttons. In this example a shutdown length of 1 minute and 30 seconds has been set.
OK	Add. switching times Shutdown length 3:00	<ul style="list-style-type: none"> - Confirm your selection with the OK button. - You simultaneously switch to the next menu item "Add. switching times Shutdown length". - The preset duration of down movement is displayed.
OK	Shutdown length	<ul style="list-style-type: none"> - Press the OK button to skip the menu item. - The display shows "Shutdown length"
▶	Special functions	<ul style="list-style-type: none"> - Press the menu button once to switch back to the main menu. - Menu item "Special functions" is displayed.
Setting additional switching time for evening (3):		
∧∨	Add. switching times A	<ul style="list-style-type: none"> - Select menu item "Add. switching times A" via the arrow buttons.
OK	Open Monday	<ul style="list-style-type: none"> - Press the OK button. - Menu item "Open Monday-Friday" is displayed.
OK	Close Monday	<ul style="list-style-type: none"> - Press the OK button to skip the input. - You simultaneously switch to menu item "Close Monday".
∧∨	23:00	<ul style="list-style-type: none"> - Set the desired down-time (3) via the arrow buttons. In this example 23:00 has been set.
OK	Open Tuesday	<ul style="list-style-type: none"> - Confirm with the OK button. - You simultaneously switch to the next menu item "Open Tuesday". - Repeat the input steps for the other days and adjust the values if necessary or skip the input by respectively pressing the OK button.
▶		<ul style="list-style-type: none"> - Press the menu button once to switch to the standard view.

6.5 Example of blind control 3

The blind is moved up in the morning with the astro function, yet not earlier than at a fixed point in time (1). The blind is moved down in the evening with the astro function, yet again not earlier than at a fixed point in time (2).



Note...

To implement this example requires the blind control II-insert 6411 U-101-...

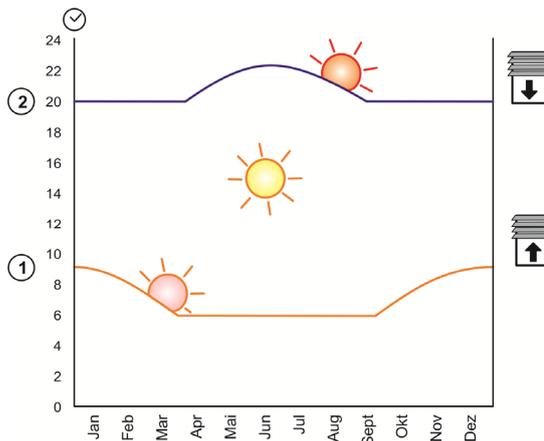


Fig. 37: Example of Venetian blind control 3

Sequence of operating steps

Button	Display	Entry / Comments
Setting the astro switching times for morning (1) and evening (2):		
▶	Switching times	- Press the menu button (longer than 1 second) to switch to the setting mode. - Menu item "Switching times" will be displayed.
OK	Block	- Press the OK button. - Menu item "Block" is displayed.
∧∨	Block Astro	- Select menu item "Block Astro" via the arrow buttons.
OK	Open Monday-Friday 07:25 --:--	- Press the OK button. - Menu item "Open Monday-Friday" is displayed. The display shows the preset astro time and --:-- (for the time shift).
∧∨	+0:00	- Press an arrow button once to take over the preset astro time (1). - +00:00 is displayed. - If desired, set the time shift via the arrow buttons.
OK	Close Monday-Friday 20:25 --:--	- Press the OK button. - You simultaneously switch to the next menu item "Close Monday-Friday". - The display shows the preset astro time and --:-- (for the time shift).
∧∨	+0:00	- Press an arrow button once to take over the preset astro time (2). - +00:00 is displayed. - If desired, set the time shift via the arrow buttons.
OK	Open Saturday-Sunday 07:25 --:--	- Press the OK button. - You simultaneously switch to the next menu item "Open Saturday-Sunday". - Repeat the input steps for blocks "Open Saturday-Sunday" and "Close Saturday-Sunday" and adjust the values if necessary or skip the input by respectively pressing the OK button.
▶	Switching times	- Press the menu button once to switch back to the main menu. - Menu item "Switching times" will be displayed.

Setting the astro blocking time for morning (1) and evening (2):		
	Special functions	- Select menu item "Special functions" via the arrow buttons.
OK	Add. switching times	- Press the OK button. - Menu item "Add. switching times" is displayed.
	Astro	- Select menu item "Astro" via the arrow buttons.
OK	Astro Blocking times Mornings not earlier than 04:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Mornings not earlier than". The preset value is displayed.
	6:00	- Set the earliest time via the arrow buttons from which the blind is to be moved up. In this example the time has been set at 6:00.
OK	Astro Blocking times Mornings not later than 11:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Mornings not later than". The preset value is displayed.
OK	Astro Blocking times Evenings not earlier than 16:00	- Press the OK button to confirm the input. - You simultaneously switch to menu item "Evenings not earlier than". The preset value is displayed.
	20:00	- Set the earliest time via the arrow buttons from which the blind is to be moved down in the evening. In this example the time has been set at 20:00.
OK	Astro Blocking times Evenings not later than 23:00	- Confirm your selection with the OK button. - You simultaneously switch to menu item "Evenings not later than". The preset value is displayed.
OK		- Press the OK button to confirm the input.
		- Press the menu button twice to switch to the standard view.

7 Technical data

General	
Power reserve	10 years
Protection type	IP 20
Ambient temperature	0 ... 35°C

8 Mounting / Installation



Warning

Electric voltage! Risk of death and fire due to electrical voltage of 230 V.

- » Work on the 230 V supply system may only be performed by authorised and qualified electricians.
- » Disconnect the mains power supply prior to installation/disassembly.



Notes on electrical connection...

Prerequisite for mounting or attaching the timer control element is that the flush-mounted insert has been installed and electrically connected beforehand. The electrical connection is described in the separate instructions of the flush-mounted insert.

8.1 Mounting

- » Attach the cover to the timer control element.
 - » Attach the timer control element together with the cover frame to the flush-mounted insert.
- Ensure that the plug-in connection on the rear side does not get jammed.
- If mounting is difficult, check whether a burr has formed at the lock-in opening of the flush-mounted insert and remove it.
- The device is now mounted.

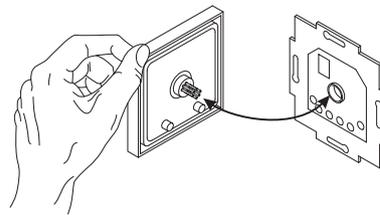


Fig. 38: Attaching the timer control element

8.2 Dismantling

- » Pull off the timer control element.
 - » If the device is already mounted or assembled, pull off the timer control element from the flush-mounted insert with the aid of the cover frame.
- Pull off the control element only with your hands.
- Do not lever parts off with screwdrivers or similar hard objects. This damages the device.
- When pulling off, first the resistance of the plastic clamps must be overcome.

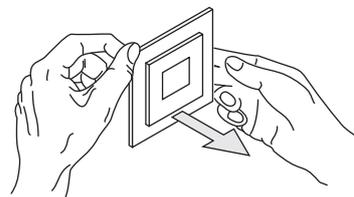
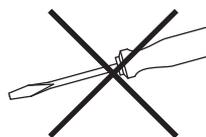


Fig. 39: Wall mounting: Pulling off the timer control element

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Note

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