

Operating Instructions Busch-Timer®

Standard
timer control element
6456-500



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1 Safety



Warning

Electric voltage!

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

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

2 Intended use

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

3 Environment



Consider the protection of the environment!

Used electric and electronic devices must not be disposed of with domestic waste.

- The device contains valuable raw materials which can be recycled. 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

The timer control element serves for the manual and time-controlled switching of roller shutters and blinds.

4.1 Modules



Note

The device can only be operated with a central cover plate 6435-....

4.1.1 Blind control

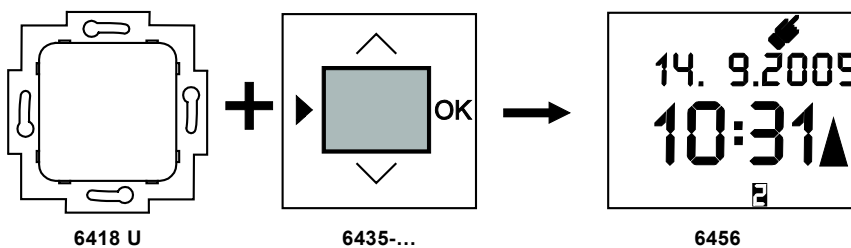


Fig. 1: Module for blind control

The timer is used for blind control in connection with flush-mounted insert 6418 U.

4.2 Features of function and equipment

- With astro program
- Individual astro displacement and astro blocking time
- The shades can be manually operated at any time
- Easy adjustment using menu and text-based display
- Factory-set switching times can be individually adjusted
- Automatic summer/wintertime switch-over
- Switching times/programs are safely stored in the event of a mains power failure
- 14 hours power reserve for time and date (maintenance-free as a capacitor)
- Simple toggling between manual / automatic / holiday mode
- Control element is adjustable without flush-mounted insert
- 2 switching times per day can be freely adjusted for each day of the week
- Astro switching times and switching times can be combined

5 Operation

5.1 Hints on operation

In the event of a power failure, the internal clock continues to operate for about 14 hours. After this the time and date have to be reprogrammed. All other data remain saved.

The operating element can be removed from the flush-mounting insert for approximately 20 minutes and adjusted separately.

A total of 2 switching times per day can be set:

Preset block switching times

- Mon–Fri open: 07:00
- Mon–Fri close: 20:00
- Sat–Sun open: 08:00
- Sat–Sun close: 21:00

The system changes automatically between winter and summer time.

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

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

The times of the menus BLOCK, ASTRO, INDIVIDUAL can be combined with one another.

5.2 Key assignment

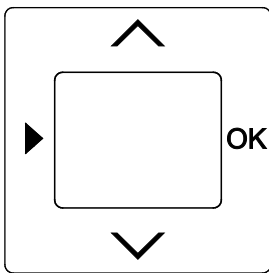


Fig. 2: Button assignment of cover plate

Button	Function	In setting mode	Adjusting values	Deleting switching times
▶	Calling up menu level and switching to setting mode	Return to operating mode		Press all buttons of the rocker switch simultaneously for approx. 5 seconds
▲	Blind UP (bright)	Select menu item	Adjust values	
▼	Blind DOWN (dark)			
OK	Confirmation	Select menu	Accept value	

5.3 Manual operation

Manual operation is always possible. You can control the blind manually as follows:

Button	Function	Actuation
▲	Blind UP (bright)	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 button press: - The blind travels up as long as the button is pressed.
▼	Blind DOWN (dark)	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 button press: - The blind travels down as long as the button is pressed.

5.4 Display and icons

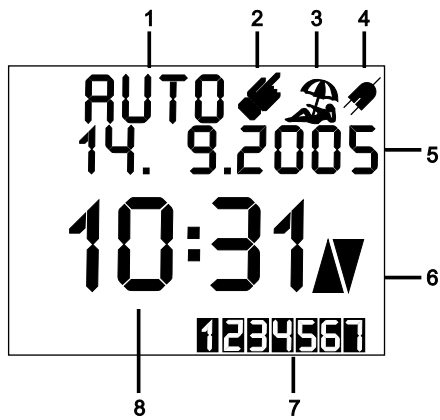


Fig. 3: Symbols

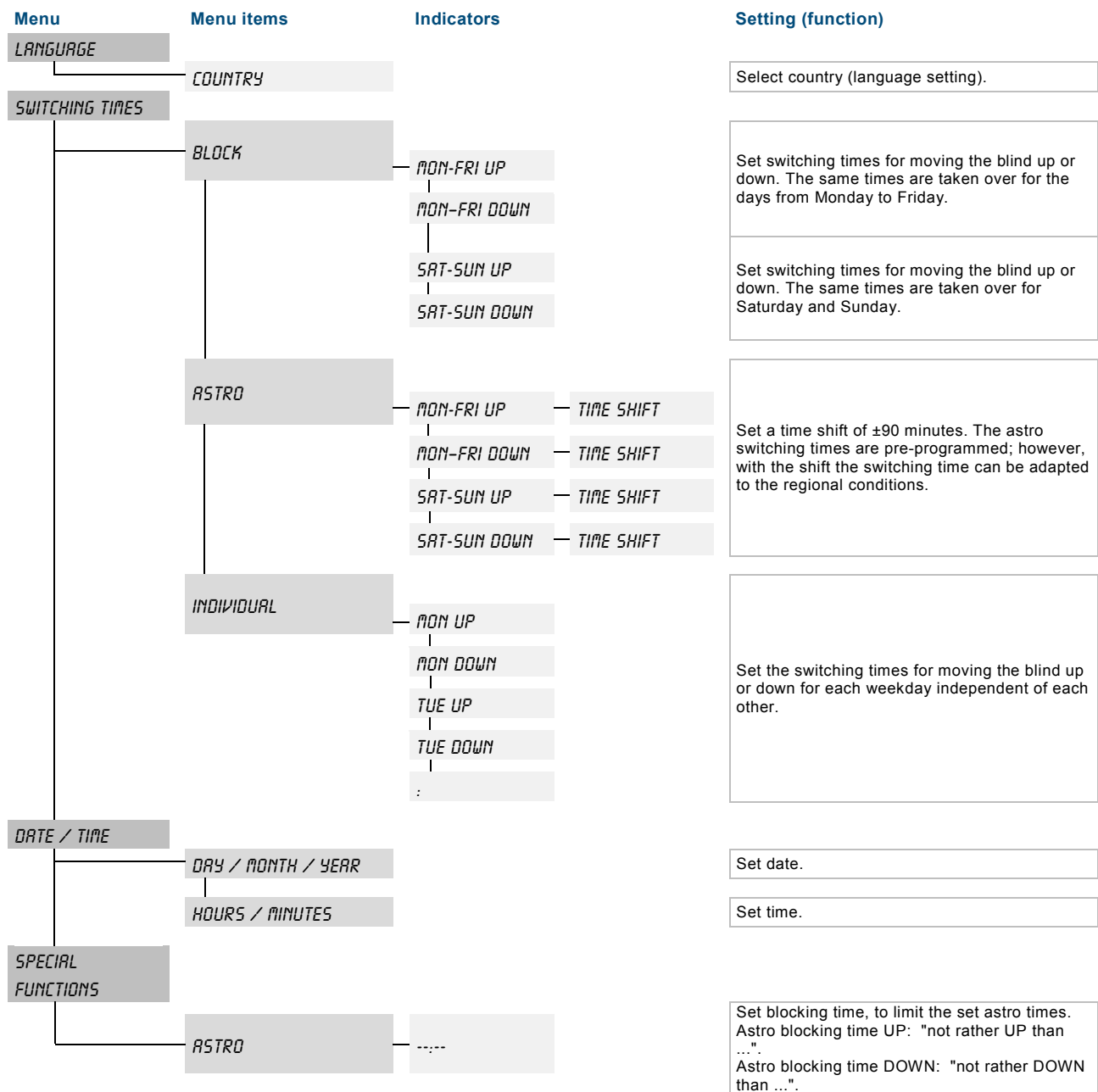
No.	Function
1	“Automatic” operating mode
2	“Manual” operating mode
3	Operating mode “holiday”
4	Mains power failure
5	Info line / date
6	Venetian blind control UP/DOWN
7	Current weekday
8	Time



Note

If the text is too long for the info line, it will run through the info line.

5.5 Overview of the menu structure



5.6 Adjusting the device

All settings of the device are carried out supported by text-controlled operator prompting. The language, time and date have to be set first during initial commissioning..



Note

Values which need to be changed flash and are displayed in grey in the following illustrated examples.

5.6.1 Selecting languages

The language is set via the country selection and the astro time is automatically assigned. The current location (country) of the timer must be selected because of the different time zones.



Note

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

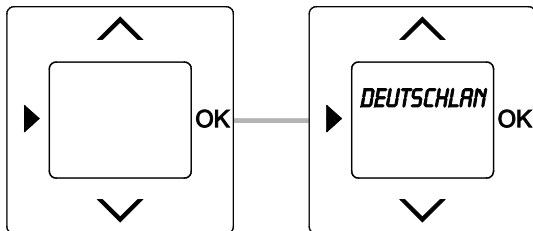



Fig. 4: Country / language selection

Button	Indication	Entry / Comments
	<i>GERMANY</i>	Selecting languages - Select the country via the arrow buttons.
OK		- Confirm your selection with the OK button. You simultaneously switch to the next menu item. This is followed by setting the year, month, day, hour and minute. See section 5.6.2.



Note

To change the language at a later point in time the device settings must be reset via the reset function. See section 5.6.3.

5.6.2 Setting date and time

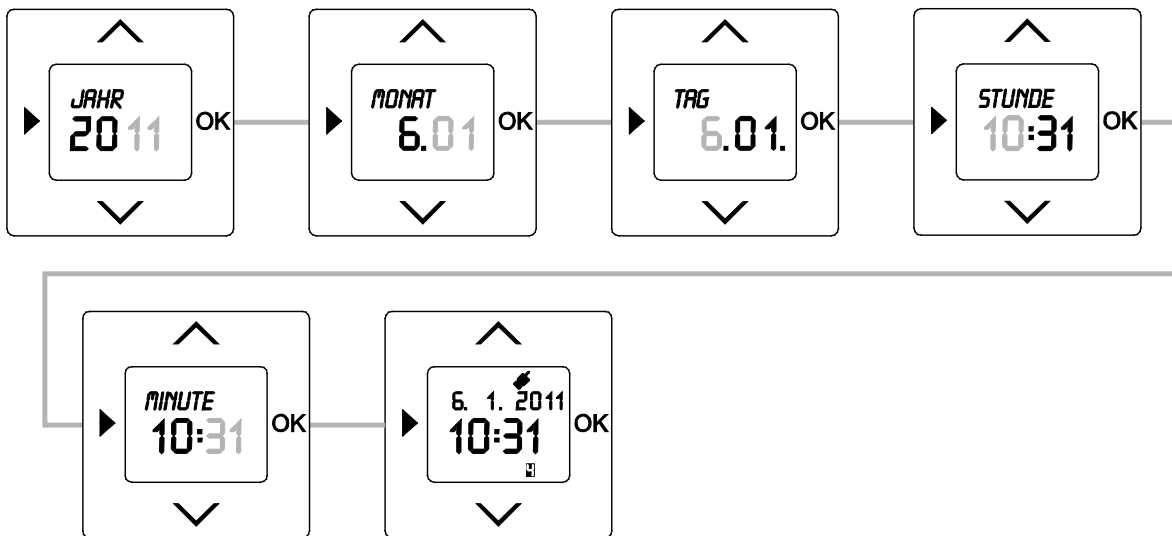


Fig. 5: Setting the date and time

Sequence of operating steps

The first two steps need only be carried out if the date and time are to be changed later. During initial commissioning you will be asked to enter the year directly after selecting the language.

Button	Indication	Entry / Comments
▶	SWITCHING TIMES	- Press the menu button to switch to the setting mode.
∧∨	DATE-TIME	- Select menu "Date - Time" via the arrow buttons.
OK	YEAR /	- Confirm your selection with the OK button. The preset year flashes.
∧∨	2011	- Set the year via the arrow buttons.
OK	MONTH /	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Month". The preset month flashes.
∧∨	6.01	- Set the month via the arrow buttons.
OK	DAY /	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Day". The preset day flashes.
∧∨	6.01	- Set the day via the arrow buttons.
OK	HOURL /	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Hour". The preset hour flashes.
∧∨	10:31	- Set the hour via the arrow buttons.
OK	MINUTE /	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Minute". The preset minute flashes.
∧∨	10:31	- Set the minutes via the arrow buttons.
OK		- Confirm your entry with the "OK" button. The timer changes into the operating mode.



Note

Pressing the menu button switches from setting mode to operating mode. All entries that were confirmed previously with the OK button are taken over.

5.6.3 RESET (resetting the device)

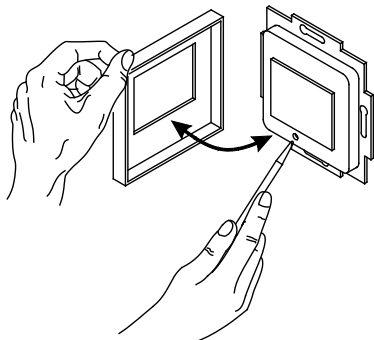


Fig. 6: Reset

1. Remove the cover and press the reset button.
2. Replace the cover.
3. Then, again set the language, the date and the time, see section 5.6.



Note

After a reset the settings of the language, date and time are deleted. The set switching times remain saved.

5.7 Operating modes

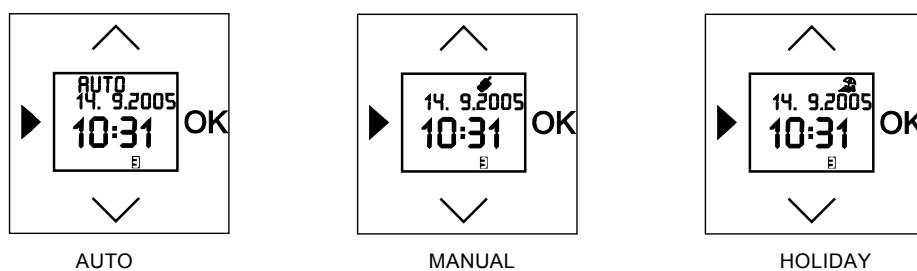




Fig. 7: Display views of operating modes

Icon	Operation mode
	<p>MANUAL MODE Control is executed only manually. For operation compare operating manual for 6418 U. The user can always switch to manual mode and back. Automatic switching times, as well as brightness and twilight functions are not carried out.</p> <p>General actuation You can control the blind as follows: UP / ▲ : - Touching the top surface The blind travels to the top end position or - Hold the top surface The blind travels up as long as the button is pressed. DOWN / ▼ : - Touch the bottom surface - The blind travels to the bottom end position or - Hold the bottom surface The blind travels down as long as the button is pressed. A brief actuation while the blind travels will stop it immediately.</p>
AUTO	<p>AUTOMATIC MODE The programmed switching times will be executed automatically.</p>
	<p>HOLIDAY MODE Control is executed as in automatic mode. A random generator shifts the switching times by up to 30 minutes.</p>

- Press the OK button to change the operating mode.
Manual operation is always possible.

5.7.1 Deleting switching times

To be able to delete the switching times during an incorrect entry, the procedure is described here first. For setting the switching times, please continue reading on the next page.

Deleting all switching times

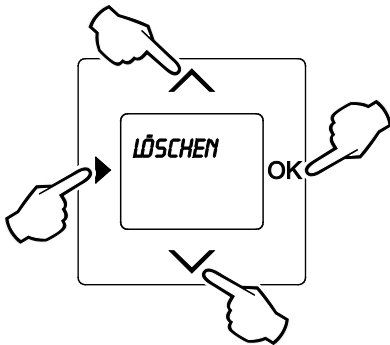


Fig. 8: Delete function

1. Press all 4 buttons simultaneously, or the entire operating surface for more than 5 seconds.
2. Confirm the enquiry with the OK button.
All set switching times will now be deleted. The date, time and language settings remain saved.

Deleting the current switching time in the setting mode

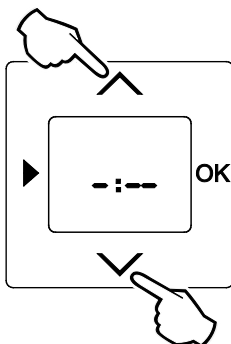


Fig. 9: Delete function of current value

Individual values can be deleted if "Setting mode / switching times" has been selected and the time display flashes.

1. Briefly press both arrow buttons.
2. Confirm the enquiry with the OK button.
Only the current value is deleted. The display shows -: - - .

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 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 (Mon - Fri) and once more for block (Sat - Sun).



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".

Preset block switching times:	Mon–Fri OPEN: 07:00	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
	Mon–Fri CLOSE: 20:00	
	Sat–Sun OPEN: 08:00	
	Sat–Sun CLOSE: 21:00	

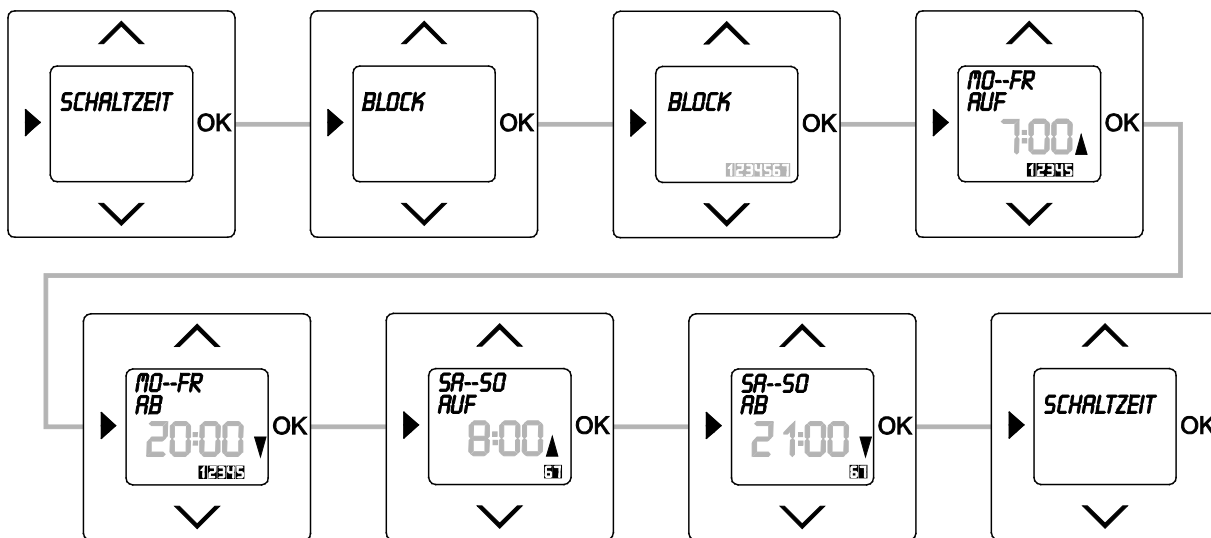


Fig. 10: Menu item – Block

Sequence of operating steps

Button	Display	Entry / Comments
▶	SWITCHING TIMES	- Press the menu button to switch to the setting mode.
OK	BLOCK	- Press the OK button to select menu item "Block".
OK	1234567	The weekdays flash. - Press the OK button again.
OK	MON-FRI UP / 7:00	The preset up-time flashes.
^ / v	7:30	- Set the desired up-time via the arrow buttons. In this example the up-time has been set at 7:30.
OK	MON-FRI DOWN / 20:00	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Mon - Fri DOWN". The preset down-time flashes.
^ / v	20:30	- Set the desired down-time via the arrow buttons. In this example the down-time has been set at 20:30.
OK	SAT-SUN UP / 08:00	- Press the OK button again. The preset up-time flashes.
^ / v	08:30	- Set the desired up-time via the arrow buttons. In this example the up-time has been set at 8:30.
OK	SAT-SUN DOWN / 21:00	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Sat - Sun DOWN". The preset down-time flashes.
^ / v	21:30	- Set the desired down-time time via the arrow buttons. In this example the down-time has been set at 21:30.
OK	SWITCHING TIMES	- Confirm your entry with the "OK" button. The switching times have been set.
▶		- Press the menu button to switch to the operating mode.

5.8.2 ASTRO function

By activating the astro function the switching times are automatically adjusted each day to the yearly process of sunrise and sunset.

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

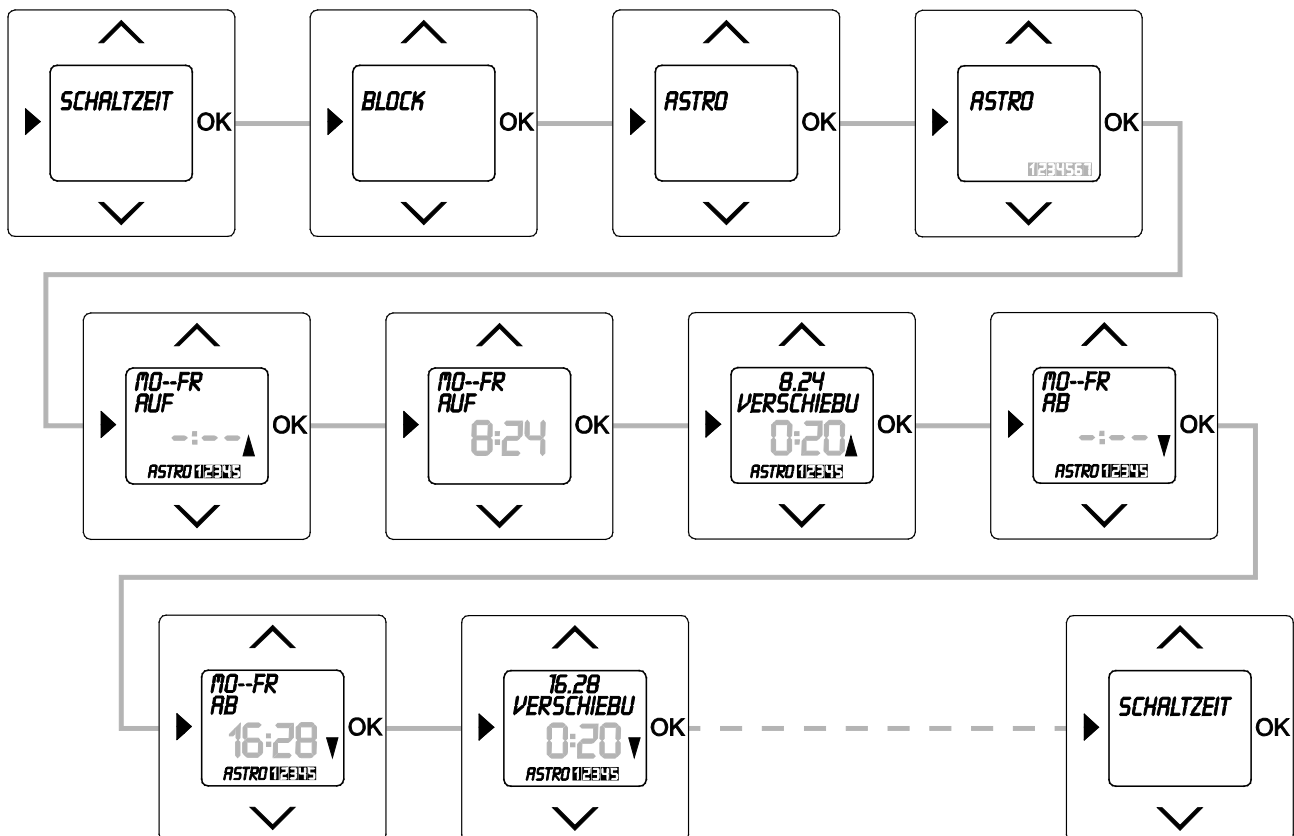






Fig. 11: Menu item – Astro

Sequence of operating steps

Button	Display	Entry / Comments
▶	SWITCHING TIMES	- Press the menu button to switch to the setting mode.
OK	BLOCK	- Press the OK button. Menu item "Block" is displayed.
▲▼	ASTRO	- Select menu item "Astro" via the arrow buttons.
OK	MON--FRI UP / ...	- Press the OK button. You simultaneously switch to the next menu item "Mon - Fri UP". The display flashes.
▲▼	MON--FRI UP / 8:24	- Press one of the arrow buttons. The up-time flashes. The astro time for sunrise is fixed and cannot be changed.
OK	TIME SHIFT	- Confirm the time with the "OK" button. You simultaneously switch to the next menu item "Time shift".

Continuation: Sequence of operating steps

Button	Display	Entry / Comments
	0:20	- Set the time shift for the specified astro time via the arrow buttons, so that the switching time is adapted to the regional conditions. In this example the up-time has been pushed back 20 minutes. No shift will be set if a flashing display -:- is confirmed.
OK	MON--FRI DOWN / -:-	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Mon - Fri DOWN". The display flashes.
	MO--FR RB / 16:28	- Press one of the arrow buttons. The down-time flashes. The astro time for sundown is fixed and cannot be changed.
OK	TIME SHIFT	- Confirm the time with the "OK" button. You simultaneously switch to the next menu item "Time shift".
	0:20	- Set the time shift for the specified astro time via the arrow buttons, so that the switching time is adapted to the regional conditions. In this example the down-time has been pushed back 20 minutes. No shift will be set if a flashing display -:- is confirmed.
OK	0:20	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Sat - Sun UP".
	SAT--SUN UP / 8:24	- Press one of the arrow buttons. The up-time flashes. The astro time for sunrise is fixed and cannot be changed.
OK	TIME SHIFT	- Confirm the time with the "OK" button. You simultaneously switch to the next menu item "Time shift".
	0:20	- Set the time shift for the specified astro time via the arrow buttons, so that the switching time is adapted to the regional conditions. In this example the up-time has been pushed back 20 minutes. No shift will be set if a flashing display -:- is confirmed.
OK	0:20	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Sat - Sun DOWN".
	SAT--SUN DOWN / -:-	The display flashes.
	SAT--SUN DOWN / 16:28	- Press one of the arrow buttons. The down-time flashes. The astro time for sundown is fixed and cannot be changed.
OK	TIME SHIFT	- Confirm the time with the "OK" button. You simultaneously switch to the next menu item "Time shift".
	0:20	- Set the time shift for the specified astro time via the arrow buttons, so that the switching time is adapted to the regional conditions. In this example the down-time has been pushed back 20 minutes. No shift will be set if a flashing display -:- is confirmed.
OK	SWITCHING TIMES	- Confirm your entry with the "OK" button. The switching times have been set.
		- Press the menu button to switch to the operating mode.

5.8.3 Individual switching times

The times for moving up and down for each day can be set independent of each other via menu item "Individual".

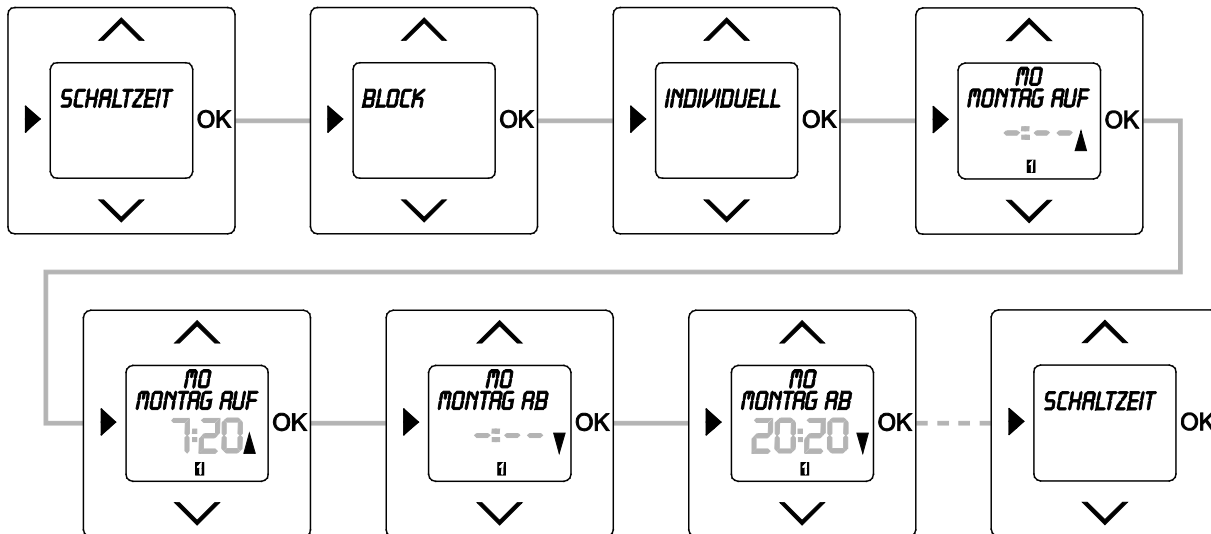


Fig. 12: Menu item – Individual

Sequence of operating steps

Button	Display	Entry / Comments
▶	SWITCHING TIMES	- Press the menu button to switch to the setting mode.
OK	BLOCK	- Press the OK button. Menu item "Block" is displayed.
▲▼	INDIVIDUAL	- Select menu item "Individual" via the arrow buttons.
OK	MONDAY UP / ---	- Press the OK button. You simultaneously switch to the next menu item "Monday UP". The display flashes.
▲▼	MONDAY UP / 7:00	- Press one of the arrow buttons. The suggested up-time flashes.
▲▼	7:20	- Change the time via the arrow buttons. In this example the up-time has been set at 7:20. No switching time will be set if the flashing display --- is confirmed.
OK	MONDAY DOWN / ---	- Confirm your entry with the "OK" button. You simultaneously switch to the next menu item "Monday DOWN". The display flashes.
▲▼	MONDAY DOWN / 20:00	- Press one of the arrow buttons. The suggested down-time flashes.
▲▼	20:20	- Change the time via the arrow buttons. In this example the down-time has been set at 20:20. No switching time will be set if the flashing display --- is confirmed.
OK	TUESDAY UP / 7:00	- 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	SWITCHING TIMES	- Confirm your entry with the "OK" button. The switching times have been set.
▶		- Press the menu button to switch to the operating mode.

5.9 Calling up 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 ASTRO blocking time

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

ASTRO blocking time	Meaning
UP	Not earlier UP than ... o'clock
DOWN	Not earlier DOWN than ... o'clock

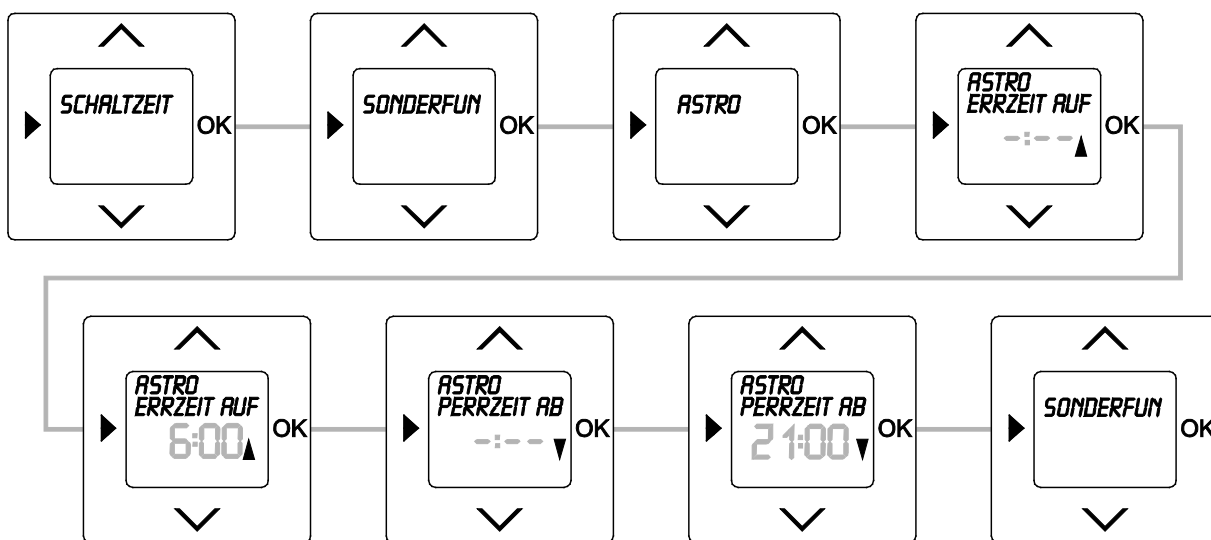


Fig. 13: Menu item – Astro blocking time

Sequence of operating steps

Button	Display	Entry / Comments
▶	SWITCHING TIMES	- Press the menu button to switch to the setting mode.
∧∨	SPECIAL FUNCTIONS	- Select menu "Special functions" via the arrow buttons.
OK	ADDITIONAL SWITCHING TIMES	- Press the OK button. Menu item "Additional switching times" is displayed.
∧∨	ASTRO	- Select menu "Astro" via the arrow buttons.
OK	ASTRO BLOCKING TIME UP ---	- Confirm your selection with the OK button. You simultaneously switch to the next menu item "Astro blocking time UP". The display flashes.
∧∨	6:00	- Set the earliest time via the arrow buttons from which the blind is to be moved up. In this example the preset time of 6:00 has been taken over.
OK	ASTRO BLOCKING TIME DOWN ---	- Confirm your selection with the OK button. You simultaneously switch to the next menu item "Astro blocking time DOWN". The display flashes.
∧∨	21:00	- Set the earliest time via the arrow buttons from which the blind is to be moved down. In this example the preset time of 21:00 has been taken over.
OK	SPECIAL FUNCTIONS	- Confirm your entry with the "OK" button. You simultaneously switch to menu "Special functions".
▶		- Press the menu button to switch to the operating mode.

6 Technical data

General	
Power reserve	4 h
Protection type	IP 20
Ambient temperature	0 ... 35°C

7 Mounting / Installation



Warning

Electric voltage!

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

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



Notes on electrical connection

Prerequisite for mounting or attaching the 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.

1. Pull the attachment off.
 - If the device is already mounted or assembled, pull off the attachment from the flush-mounted insert with the aid of the frame.

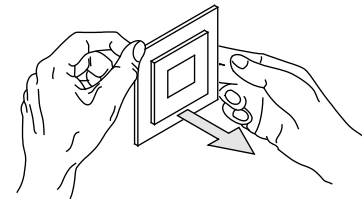
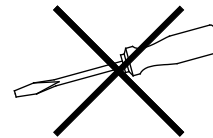


Fig. 14: Wall mounting: Pulling the attachment off

- If the state of the device is at the point of delivery, pull off the attachment from the flush-mounted insert with your hands.
- Pull the attachment off 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.

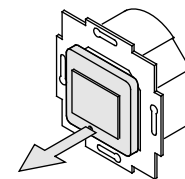
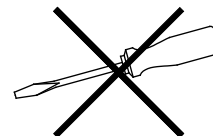


Fig. 15: State of the device at the point of delivery: pulling off the attachment

2. Plug the attachment together with the frame onto the flush-mounted insert.
 - Make sure 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.

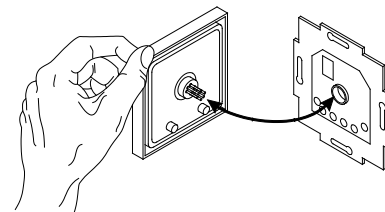


Fig. 16: Plug-on of attachment

The device is now mounted.

A member of the ABB Group

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