

**EN ReWiSo 2696**

Instruction manual for the electrical connection and for commissioning

Item no.: 3100 00 14



...Congratulations on purchasing the **ReWiSo**, you have opted for a quality product manufactured by RADEMACHER. Thank you for the trust you have placed in us.



**i** This manual...

...describes how to install, connect and operate the **ReWiSo**.

Before you begin, please read this manual through completely and follow all the safety instructions.



This manual is part of the product. Please store it in an easily accessible place. When passing the ReWiSo on to a third party, this manual must be passed on as well.

Damage resulting from non-compliance with this manual and the safety instructions will void the warranty. We assume no liability for any consequential damage.

**Key to symbols**

**i** Danger of fatal electric shock



This sign warns of danger when working on electrical connections, components, etc. It requires that safety precautions be taken to protect the life and health of the person concerned.



**This concerns your safety.**

Please pay attention and follow all instructions marked with this symbol.



**This symbol warns of malpractices that can result in personal injury or property damage.**

**NOTE/IMPORTANT/CAUTION**

This is to draw your attention to information that is important for trouble-free operation.

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ReWiSo has been developed for automatic control and convenient manual operation of an awning or Venetian blind. The controller has a very high degree of flexibility for connection and adjustment and can therefore be adapted individually to different installation conditions. Please use this operating manual to adapt the automatic functions to suit your requirements.

### **Included in delivery**

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ReWiSo consists of a weather station and operating unit. Batteries (2x) to power the operating unit are included.

### **Instructions for commissioning**

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**Installation, testing, commissioning and troubleshooting on the controller may only be carried out by a qualified electrician (according to VDE 0100).**

#### **Proceed as follows to commission the controller:**

1. Carry out the mechanical installation and electrical connection (see the section "Installation and commissioning")
2. Carry out the basic setting (see the section "Basic setting")
3. Adjust the automatic functions (see the section "Adjusting the automatic functions")

### **Connection and control possibilities**

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An awning or Venetian blind drive can be connected to the controller. If several awnings or Venetian blinds are to be controlled together, connection via a group control relay is possible.

#### **The following environmental parameters are measured and displayed:**

- ◆ Indoor and outdoor temperature - energy-saving function
- ◆ Brightness
- ◆ Wind velocity
- ◆ Precipitation

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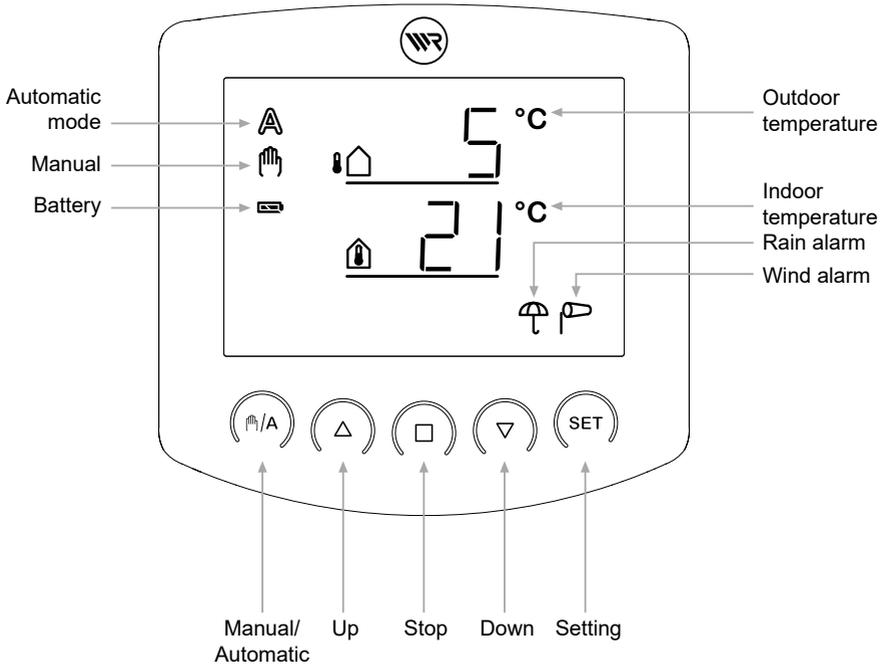
**Available automatic functions in overview**

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- ◆ Shading according to sun intensity with extension and retraction delay
- ◆ Extension to a programmed position in the case of adjustable Venetian blinds also with setting of the slat angle
- ◆ Blocking of sun shading until a preselected indoor temperature is reached (heat containment, only in automatic mode - energy-saving function)
- ◆ Retraction of sun shading below a preselected outdoor temperature (frost protection, only in automatic mode)
- ◆ Retraction of sun shading above a preselected wind velocity (wind alarm, function can be deactivated)
- ◆ Retraction of sun shading in the event of rain (rain alarm, function can be deactivated)

The awning or Venetian blind is retracted in automatic mode below the preselected brightness value or in the event of a rain or wind alarm. Wind and rain protection functions are active also in manual mode if they have been set in automatic mode.

**Button assignment and display symbols on the weather data display**



In the normal function, the operating unit of the controller displays the current outdoor temperature (top line) and indoor temperature (bottom line), as well as the operating mode (automatic or manual), the battery charge state and current alarm message for rain or wind. The weather data is refreshed once a minute (and when a button is pressed).

-  Outdoor temperature
-  Indoor temperature
-  - Full (battery symbol displays the charge state of the battery)
-  - Half-full
-  - Empty



Automatic mode active



Manual mode active. The connected drive was operated manually (with the arrow buttons) or the /A button was pressed. The automatic functions are thus deactivated and the awning or Venetian blind is not controlled according to brightness or temperature. The safety functions 'Rain alarm' and 'Wind alarm' remain active. The controller remains in manual mode until it is switched to automatic mode with the /A button.



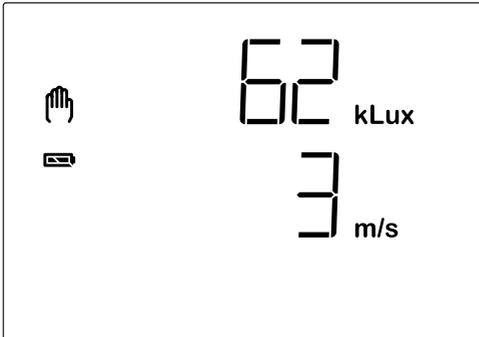
Rain alarm. Outdoor awnings are retracted, manual operation is blocked. The rain alarm function can be activated and deactivated in the automatic settings (e.g. for indoor awnings or Venetian blinds).



Wind alarm. Outdoor awnings or Venetian blinds are retracted, manual operation is blocked. The wind alarm function can be activated and deactivated in the automatic settings (e.g. for indoor awnings).

### Display of brightness and wind velocity

Press the **SET** button once briefly while the temperature is displayed to display the current brightness (in kilolux, kLux) and wind velocity (in metres per second, m/s). The values are refreshed every 4 seconds.



Note: The wind velocity is not correctly displayed during the first approx. 90 seconds after the power is restored to the weather station (e.g. after a power failure or during commissioning). Manual operation is therefore blocked during this period if the wind alarm is active.

Pressing **SET** again briefly recalls the temperature display (or the central command display, see next section). The temperature is also displayed again automatically after approx. 60 seconds.

## Manual operation

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Manual control, pre-setting of the automatic functions and the basic setting of the connected sun shading are performed with the buttons on the operating unit.



**Up**



**Stop**



**Down**

The connected awning or Venetian blind can be operated by hand using the buttons  $\triangle$ ,  $\square$  and  $\nabla$ . The arrow buttons have an automatic timer function. Pressing the buttons briefly (less than 1 second) allows the awning or Venetian blind to be exactly positioned. If the button is held depressed for longer than 1 second, the drive automatically runs up to the end position. Pressing  $\square$  stops the drive.

If the rain or wind alarm is active, manual operation is blocked.



### Manual/Automatic

The  $\text{☀}/A$  button switches back and forth between automatic mode (display **A**) and manual mode (display  $\text{☀}$ ). If the controller is operated manually using the  $\triangle$ ,  $\square$  or  $\nabla$  buttons, it is then in manual mode. The automatic functions are then deactivated and the awning or Venetian blind is not controlled according to brightness or temperature. The  $\text{☀}/A$  button can be used to switch the controller back to automatic mode (display **A**).



Pressing the **SET** button briefly calls up the brightness and wind velocity display.

Holding the button depressed calls up the setting mode for the automatic functions and the basic setting. For further details, see the section "Setting the automatic functions" or "Basic setting".

In order that the awning or Venetian blind provides optimum sun shading, the values for automatic mode have to be adapted to the conditions on site. The following settings can be made in turn:

- A. Brightness for the sun shading
- B. Extension delay
- C. Retraction delay
- D. Indoor temperature lock
- E. Outdoor temperature lock
- F. Wind alarm
- G. Rain alarm
- H. Memory

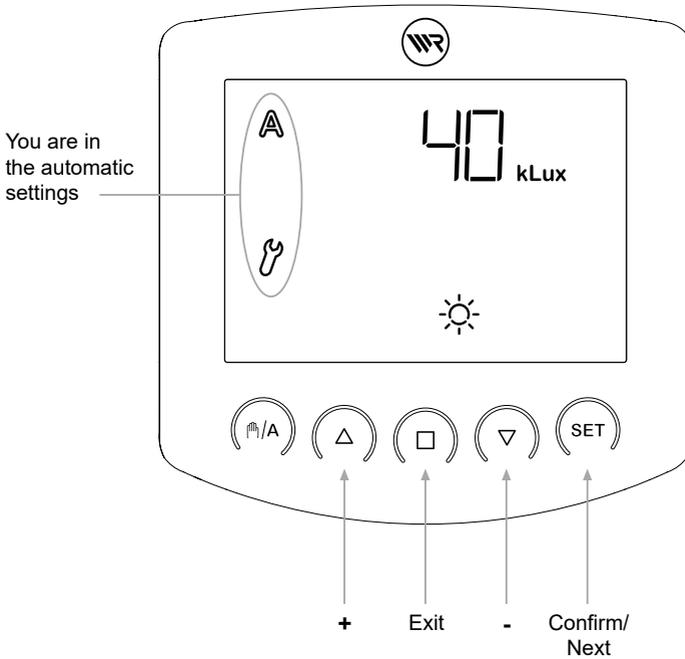
### **Calling up the automatic settings:**

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**Press the SET button in the weather data display for at least 3 seconds to call up the automatic settings.**

You are in the automatic settings as soon as the two **A** and **⚙** symbols appear on the left of the display. The first parameter to be set (brightness) is displayed.



You can exit the automatic settings at any time by pressing the  button. The changes made to the values are then not saved.

If no button is pressed in the automatic settings for 5 minutes, the display automatically switches back to the temperature display. Changes to settings are again not saved.

In the automatic settings, first enter the brightness above which the sun shading should be extended.



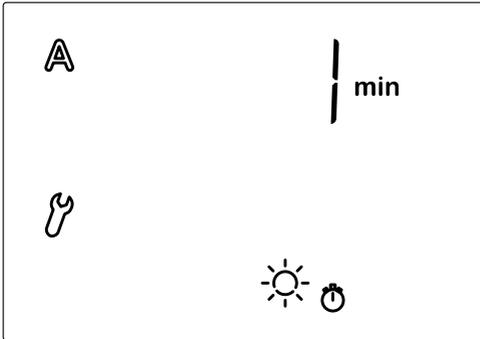
The sun intensity is displayed in kilolux (kLux). The value 1 kLux is achieved even with an overcast sky, 20 kLux is achieved when the sun is just coming out and 100 kLux is achieved with a cloudless sky at midday.

**The default setting for the brightness is 40 kLux.**

Adjust the value with  $\triangle$  (higher) and  $\nabla$  (lower) or select  $\square F F$  (off) to deactivate the function. If  $\square F F$  is selected, no control by brightness takes place. The following automatic parameters (sections B to E) are then skipped. In this case the sun shading can be operated manually and is protected against wind and rain (if the alarm function has been activated, see the sections “F. Wind alarm” and “G. Rain alarm”).

Press **SET** to proceed to the setting of the next parameter.

After setting the brightness, now enter the delay time for the extension of the sun shading.



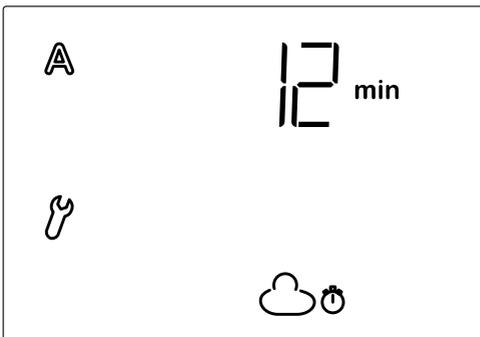
This delay ensures that the sun shading does not constantly extend and retract in the event of rapidly changing light conditions.

The default setting for the extension is 1 minute. The brightness must therefore lie above the entered set value (point A of the automatic settings) continuously for 1 minute before the sun shading is extended. The sun shading therefore reacts quickly to sun.

Adjust the value with  $\Delta$  (higher) and  $\nabla$  (lower). Then press **SET** to proceed to the setting of the next parameter.

**i C. Retraction delay**

After setting the extension delay, now enter the delay time for the retraction of the sun shading.

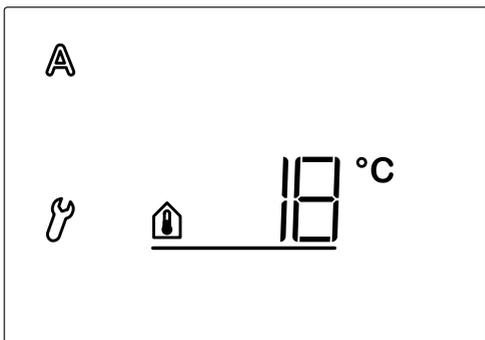


The default setting for the retraction is 12 minutes. The brightness must therefore lie below the entered set value (point A of the automatic settings) continuously for 12 minutes before the sun shading is retracted. Passing clouds are “masked” in this way.

Adjust the value with  $\Delta$  (higher) and  $\nabla$  (lower). Then press **SET** to proceed to the setting of the next parameter.

**i D. Indoor temperature lock**

After setting the retraction delay, now enter the indoor temperature below which the extension of the sun shading is to be blocked.

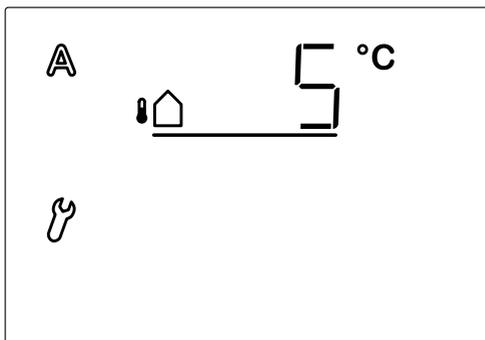


Using the indoor temperature lock, you can use the heat of the sun to achieve the desired room temperature (e.g. in the winter - energy-saving function). The sun shading only extends in the sunshine when the value is exceeded. The indoor temperature lock is active only when the controller is in automatic mode. Manual operation of the sun shading is still possible.

**The default setting for the indoor temperature lock is 18° C.**

Adjust the value with  $\Delta$  (higher) and  $\nabla$  (lower) or select **OFF** (off) to deactivate the indoor temperature lock. Then press **SET** to proceed to the setting of the next parameter.

After setting the indoor temperature lock, now enter the outdoor temperature below which the sun shading should not be moved.



The outdoor temperature lock is important when sun shading is installed on the outside of the building. In the event of frost, the awning or Venetian blind can freeze in the guide rails. If the sun shading is then moved, it can be damaged. Note that the guide rails or other mechanical parts may still be frozen even when the outdoor temperature has already risen to quite high values. Ask your conservatory builder for the temperature limit for your sun shading.

If your sun shading can still operate even at low temperature or if it is installed on the inside, deactivate the outdoor temperature lock (display OFF).

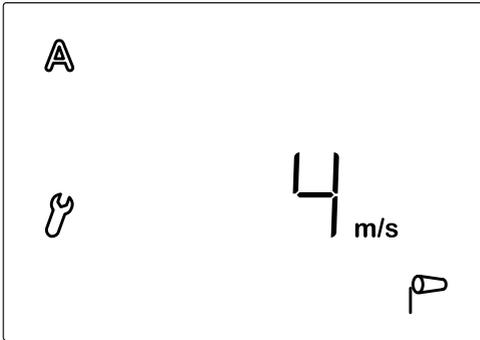


**The outdoor and indoor temperature locks are only active in automatic mode. Operation by hand is still possible. Therefore pay attention to possible freezing when opening and closing the sun shading manually.**

**The default setting for the outdoor temperature lock is 5° C.**

Adjust the value with  $\Delta$  (higher) and  $\nabla$  (lower) or select OFF (off) to deactivate the outdoor temperature lock. Then press **SET** to proceed to the setting of the next parameter.

After setting the outdoor temperature lock, now enter the value for the wind alarm function.



The wind alarm protects outdoor sun shading against damage. If the entered wind value is exceeded, the awning or Venetian blind is retracted and manual operation is blocked. The wind velocity is entered in m/s (metres per second). The wind alarm is maintained for 5 minutes. If the set wind value is exceeded again within these 5 minutes, the holding time starts again.

The following table (see next section) contains reference values for setting the wind alarm. Depending on the location of the conservatory and the installation position of the weather station, different wind values may be optimal for protecting the sun shading. Observe the behaviour of the awning or Venetian blind in windy weather and correct the wind value accordingly.

**The default setting for the retraction in windy weather is 4 m/s.**

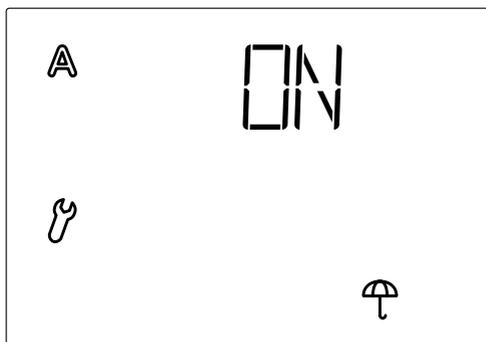
Adjust the value with  $\Delta$  (higher) and  $\nabla$  (lower) or select OFF (off) to deactivate the function. Then press **SET** to proceed to the setting of the next parameter.

**Table: Wind velocity**

Description	m/s	km/h	Beaufort	Knots
Calm	< 0.3	< 1.1	0	< 1
Almost calm	0.3 - 1.5	1.1 - 5.4	1	1 - 3
Very light wind	1.6 - 3.3	5.5 - 11.9	2	4 - 6
Light wind	3.4 - 5.4	12.0 - 19.4	3	7 - 10
Moderate wind	5.5 - 7.9	19.5 - 28.4	4	11 - 16
Fresh wind	8.0 - 10.7	28.5 - 38.5	5	17 - 21
Very fresh wind	10.8 - 13.8	38.6 - 49.7	6	22 - 27
Strong wind	13.9 - 17.1	49.8 - 61.5	7	28 - 33
Very strong wind	17.2 - 20.7	61.6 - 74.5	8	34 - 40
Storm	20.8 - 24.4	74.6 - 87.8	9	41 - 47
Heavy storm	24.5 - 28.4	87.9 - 102.2	10	48 - 55
Hurricane-like storm	28.5 - 32.6	102.3 - 117.3	11	56 - 63
Hurricane	> 32.6	> 117.3	12	> 63

**i G. Rain alarm**

After setting the wind alarm, now select whether or not the rain alarm is to be activated.

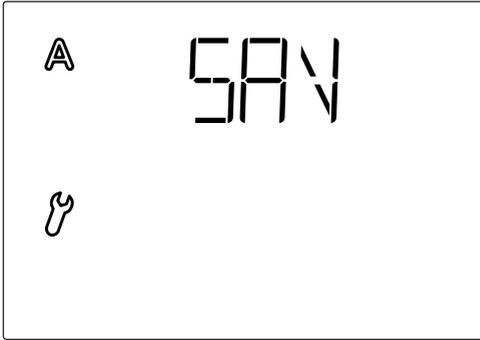


The rain alarm protects outdoor sun shading, particularly cloth awnings, against damage. If the rain alarm is triggered, the sun shading is retracted automatically and manual operation is blocked.

The rain alarm is maintained for 5 minutes. If rain is detected again within these 5 minutes, the holding time starts again.

In the default setting, the rain alarm is activated (display ). Use the arrow buttons to select between activated (display ) and deactivated (display ). Then press SET to save the settings.

At the end of the input of the automatic settings, **SAV** (Save) is displayed to prompt saving of the entered settings.



Press the **SET** button to save your inputs and return to the weather data display.  
Press  to exit the automatic settings without saving.

During commissioning of the controller, the basic device settings are entered here. The following settings can be made in turn:

1. Radio connection to the weather station
2. Rotation direction of the motor
3. Running direction
4. Travel command in the event of a wind or rain alarm
5. Transmission of the weather and automatic data
6. Sun shading position
7. Save

### Calling up the basic settings:

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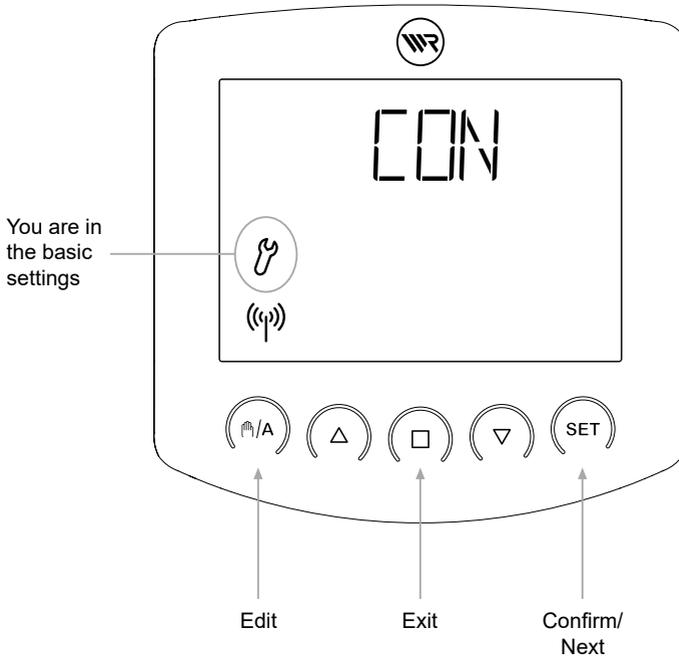
**Press the SET button in the weather data display for at least 3 seconds to call up the automatic settings.**

You are in the automatic settings as soon as the two **A** and **⌘** symbols appear on the left of the display.



**Then press SET button again for at least 3 seconds to call up the basic settings.**

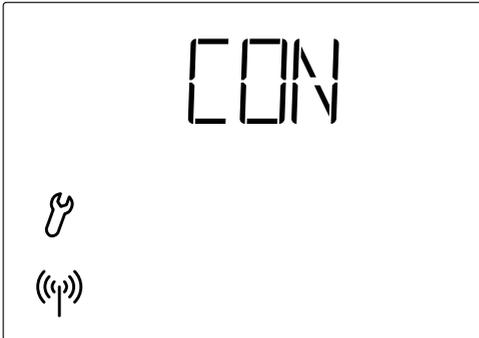
You are in the basic settings as soon as the **⌘** symbol appears on the left of the display and the first setting step (radio connection) is displayed.



You can exit the basic settings at any time by pressing the  button. The changes made to the settings are then not saved.

If no button is pressed in the basic settings for 5 minutes, the display automatically switches back to the temperature display. Changes to settings are again not saved.

The first step is the teach-in (or later also clearing) of the radio connection.



**The teach-in may only be carried out by a qualified electrician as the programming button is inside the weather station.**

**Select the desired step with the  $\text{P}/\text{A}$  button:**

**CON** (Continue) to skip this step,

**LEA** (Learn) to learn a radio connection to the weather station,

**CLR** (Clear) to delete an existing radio connection.

**Confirm your selection with the SET button.**

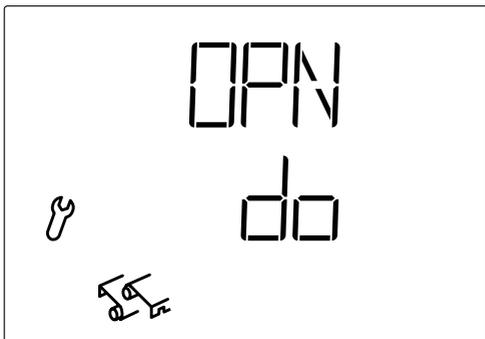
When you have confirmed **LEA** (Learn) with the **SET** button, the radio symbol stops flashing and the radio waves are animated (they “run”).

Now press the orange programming button inside the weather station to learn the radio connection. (An overview of the PCB can be found in the section “Preparing the weather station”).)

Learning was successful when the LED next to the programming button flashes twice briefly and the display switches to step 2 of the basic settings (rotation direction of the motor).

If you confirm **CLR** (Clear) with the **SET** button, the radio connection is cleared. The display jumps automatically to **LEA** (Learn) to enable a new connection to be taught-in.

After teaching-in the radio connection, now set the rotation direction of the motor.



If the 'Up' and 'Down' cables were connected incorrectly during installation of the drive, this can be corrected in this step. For the rotation direction test, first extend the sun shading slightly. Test the two arrow buttons and check on the display whether the sun shading retracts (i.e. opens) again with  $\nabla$  or with  $\Delta$ :

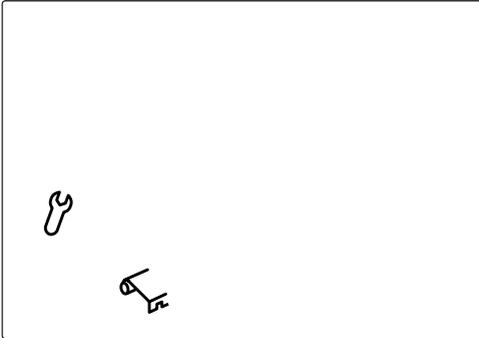
- ◆ Open ( $\square\square\square\nabla$ ) the sun shading with the  $\nabla$  button, then press the  $\square\square/A$  button to select the display  $\square\square$  (Down).
- ◆ Open ( $\square\square\square\Delta$ ) the sun shading with the  $\Delta$  button, then press the  $\square\square/A$  button to select the display  $\square\square$  (Up).

Press the **SET** button to proceed to the next setting step.



**Rain and wind alarm are deactivated for this test. Therefore take care that the sun shading is not damaged by moisture or wind.**

After setting the rotation direction of the motor, now select whether the sun shading extends from top to bottom or from bottom to top.



Sun shading can extend from the top or bottom depending on the model. In this step you can change the assignment of the arrow buttons so that these correspond to the running direction of the sun shading. You can test the setting directly using the arrow buttons.

Press the /A button to switch between the displayed symbols. Select:



If the awning or Venetian blind extends from top to bottom (the  button extends the sun shading) or



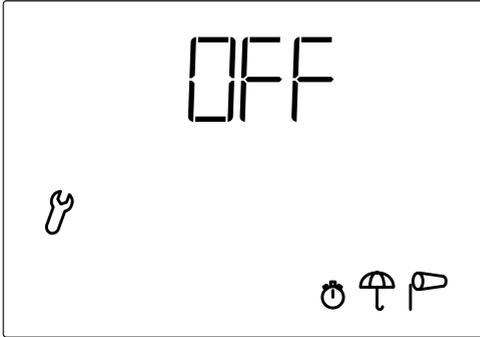
If the awning or Venetian blind extends from bottom to top (the  button extends the sun shading).

Press the **SET** button to proceed to the next setting step.



**Rain and wind alarm are deactivated for this test. Therefore take care that the sun shading is not damaged by moisture or wind.**

After setting the running direction, you can now select whether the travel command is to be limited in time or continuous in the event of a wind or rain alarm.



If a wind or rain alarm is triggered, the sun shading is retracted. The running command for the connected drive ends either after 4 minutes or it is maintained continuously as long as the alarm message is present.

Press the /A button to switch between the OFF and ON displays. Select:

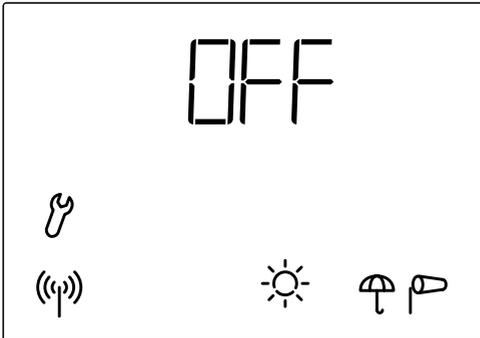
OFF

If the travel command is to end 4 minutes after the alarm (setting for normal awning or Venetian blind controllers) or

ON

If the travel command is to be maintained continuously after the alarm (travel command ends as soon as the alarm message is no longer present).

Press the **SET** button to proceed to the next setting step.

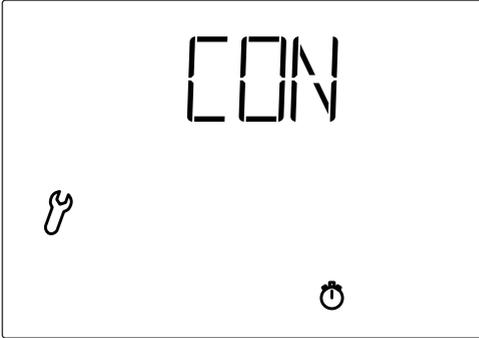


Press the /A button to switch between the OFF and ON displays. Select:

 In order not to send weather data and automatic commands (setting for normal awning and Venetian blind controllers).

Press the **SET** button to proceed to the next setting step.

After setting the running direction, you can now teach-in a sun shading position.



An individual position can be set for awnings or Venetian blinds up to which the sun shading is extended in automatic mode. With adjustable Venetian blinds, the opening angle of the slats can also be set (reversing).

**Select the desired step with the /A button:**

**CON** (Continue) to skip the setting of the sun shading position. The sun shading is then always fully extended (closed) in automatic mode. In this case, continue as described in section 6 “Saving the basic settings”.

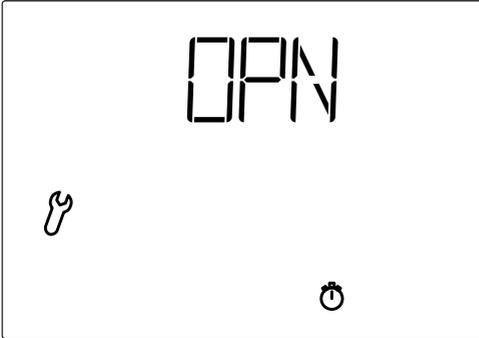
**LEA** (Learn) to learn the sun shading position.

**CLR** (Clear) to clear the sun shading position already learned. The sun shading is then again always fully extended (closed) in automatic mode. In this case, continue as described in section 6 “Saving the basic settings”.

Confirm your selection with the **SET** button.

## **i** 6.1. Retracted position

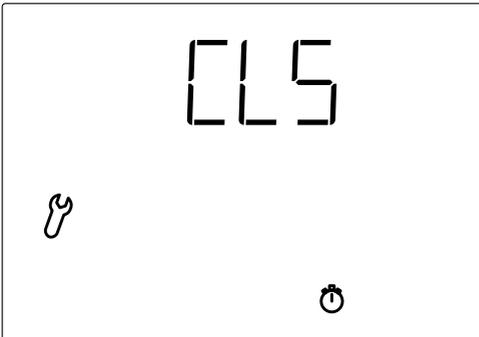
After confirming **LEA** (Learn), the prompt **OPN** (Open) appears.



First fully retract the awning or Venetian blind so that it provides no sun shading. Then press the **SET** button to proceed to the next step.

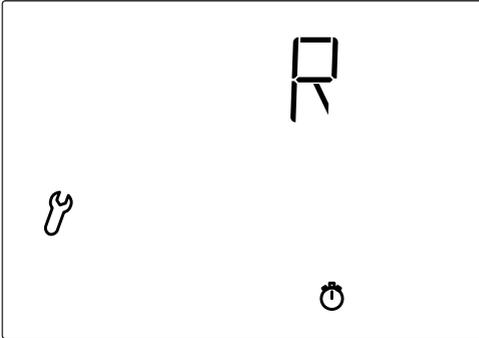
## **i** 6.2. Setting the desired position

The prompt **CLS** (Close) appears.



Now extend the sun shading as far as it is later to be extended in automatic mode when the sun is shining. Then press the **SET** button to proceed to the next step.

The prompt **R** (Reverse) appears.



With adjustable Venetian blinds, now open the slats to the desired angle. With awnings or if the Venetian blinds are not to be opened, do not move the sun shading. Then press the **SET** button to terminate the setting of the sun shading position.

**i** 7. Saving the basic settings

At the end of the input of the basic settings, **SAV** (Save) is displayed to prompt you to save the entered settings.



Press the **SET** button to save your inputs and return to the weather data display. Press  to exit the basic settings without saving.

After entering the basic settings, the values for the automatic functions can be set. During initial commissioning, first check the function of the sensors (see the section "Checking the sensors").



In the event of a power failure at the weather station, the controller can no longer control the connected drives! If the full scope of functions is to be maintained even without the mains power supply, an emergency power generator with corresponding changeover from mains to emergency operation has to be installed on site.

Settings saved in the program of the controller are retained even in the event of a power failure. When the mains power is restored, the controller is in automatic mode.

If the radio connection between the operating unit and weather station fails (e.g. due to radio interference or empty batteries in the operating unit), manual intervention is no longer possible. The controller remains in its present mode (manual or automatic). Automatic mode continues to function as set until the radio connection is established again, but cannot take account of the indoor temperature. The wind and rain alarm functions are maintained even if the controller is in manual mode.

If cleaning or maintenance work has to be carried out in the vicinity of the awning(s) or Venetian blind(s), the controller (weather station) must be isolated by switching off the fuse installed on site and securing it to prevent restarting. This ensures that the connected drives cannot start unintentionally.

If it starts to rain, it can take some time before the weather station detects rain, depending on the intensity of the rain and the outdoor temperature.

Please also note, for example, that if it starts to rain during a power failure, an outdoor awning is no longer retracted automatically if no emergency power generator is installed.

Please remember that the rails of sun shading systems installed on the outside of the building can freeze. If the awning of Venetian blind is then moved, the sun shading and drive may be damaged.



**Please ensure that no-one is allowed to remain in the travel range of system parts driven by the motor (risk of crushing!). The corresponding building regulations must be observed.**



**Caution: mains voltage! The VDE regulations must be observed.**

Installation, testing, commissioning and troubleshooting on the controller may only be carried out by a qualified electrician (according to VDE 0100). Isolate all lines to be installed and take appropriate safety precautions to prevent any unintentional switching on.



The controller is designed exclusively for its intended use. Any unauthorised modification or failure to observe the operating manual will void all warranty and guarantee claims.

After unpacking the controller, inspect it immediately for possible mechanical damage. If transport damage is discovered, please notify the supplier immediately.



**A damaged controller must not be put into operation.**

If it is suspected that safe operation of the controller or the connected drives is not possible, the system must be switched off and secured to prevent unintentional operation.

The controller together with the weather station may only be used as a stationary installation, i.e. only in its installed state and after completion of all installation and commissioning operations and only in the intended environment.

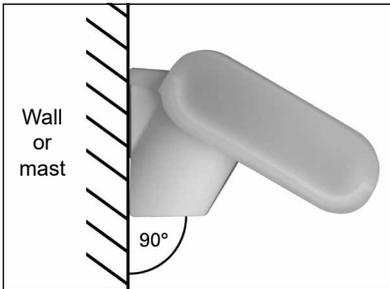
RADEMACHER can assume no liability for amendments to the standards or regulations after publication of this operating manual.



## Location

Select an installation position on the building where wind, rain and sun can be detected by the sensors without any impeding structures. No structural parts may be installed above the weather station from which water could drip onto the precipitation sensor after it has already stopped raining or snowing. The building or, for example, trees must not cast shadows onto the weather station. A distance of at least 60 cm must be allowed under the weather station to permit proper wind measurement and to prevent the weather station being covered by snow in winter.

**The weather station must be installed on a vertical wall (or mast) and aligned horizontally in the transverse direction.**



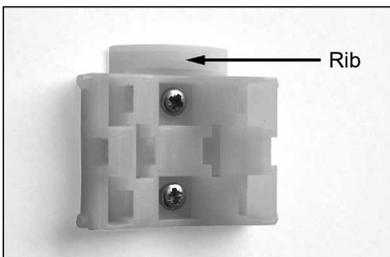
## Fitting the bracket

The weather station includes a combined wall/mast bracket. On delivery, the bracket is fastened to the rear side of the housing with adhesive tape.

Fasten the bracket perpendicularly to a wall or mast.

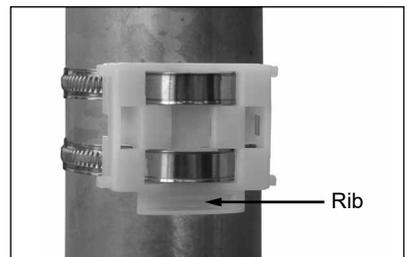
### Wall installation:

Flat side towards the wall, semi-circular rib facing upwards.



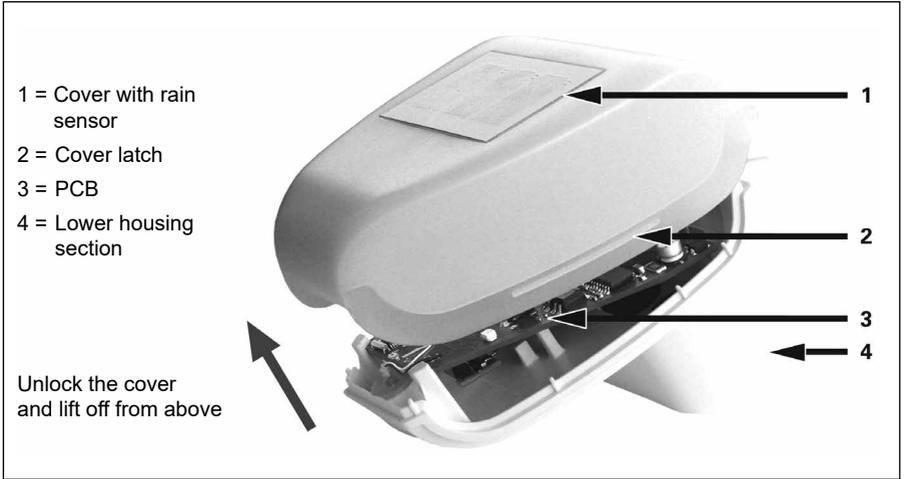
### Mast installation:

Curved side towards the mast, rib facing downwards.

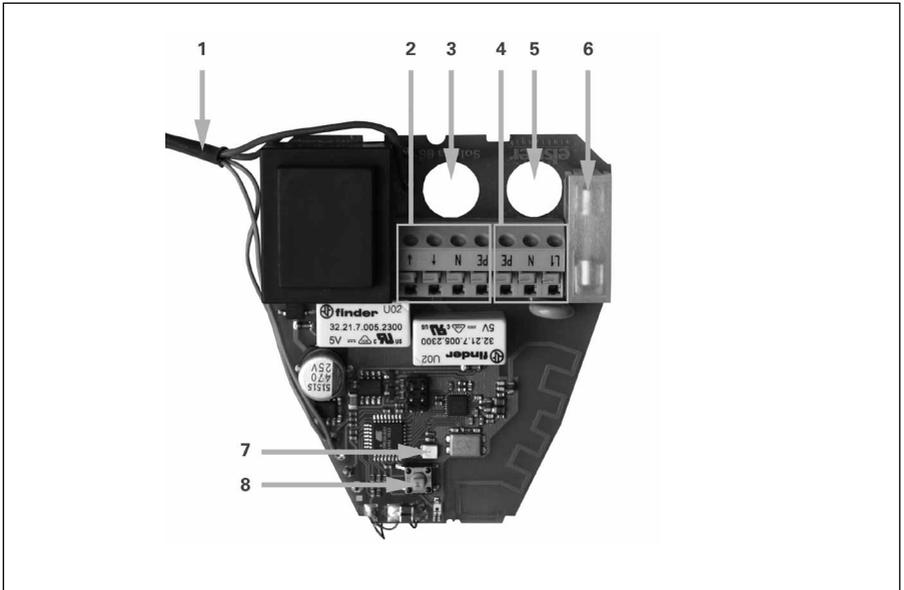




### Preparation of the weather station



The cover of the weather station with the rain sensor is latched at the lower edge on the left and right (see Fig.). Remove the cover from the weather station. Proceed carefully to avoid tearing off the cable connection between the PCB in the lower section and the rain sensor in the cover.





- 1 Cable connection to the precipitation sensor in the housing cover
- 2 Drive connections (spring-loaded terminal, PE/N/Up/Down), suitable for solid conductors up to 1.5 mm<sup>2</sup> or fine-wire conductors
- 3 Opening for drive cable
- 4 Power supply connections (230 V / 50 Hz, spring-loaded terminal, L1/N/PE), suitable for solid conductors up to 1.5 mm<sup>2</sup> or fine-wire conductors
- 5 Opening for power supply cable
- 6 Fine fuse 6.3 A
- 7 Programming LED. During normal operation, this LED indicates the reception of a valid data packet
- 8 Programming button for teaching-in the radio connection to the operating unit

### Connection of the power supply and drive

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The drive of the awning or Venetian blind is connected to the weather station. Several drives can be connected in parallel. When connecting motors in parallel, check whether a group control relay is prescribed by the motor manufacturer. Group control relay can be ordered from RADEMACHER.



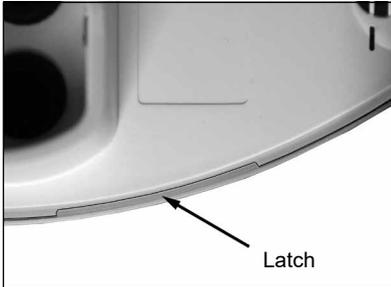
**If motors are connected in parallel that are not suitable for this, these and the controller will be damaged.**

Motors with a power consumption higher than 1000 watts must be operated via a relay or contactor with a separate mains lead.



Insert the cables for the power supply and the drive through the rubber seals on the underside of the weather station and connect the power supply (L1 / N / PE) and the drive (PE / N / Up / Down) to the corresponding terminals.

Close the housing by pressing the cover onto the lower section. The cover must engage on the left and right with an audible “click”.



Check that the cover and lower section are correctly engaged! The figure shows the closed weather station from below.

### Installation of the weather station



Push the housing into the installed bracket from above. The tabs on the bracket must engage in the rails of the housing.

The weather station can be removed from the bracket again by pulling up against the resistance of the latches.

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**Notes on installation of the weather station**

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Do not open the weather station if water (rain) could get inside: Even a few drops of water could damage the electronics. Ensure it is connected properly. An incorrect connection can lead to destruction of the weather station and the control electronics.

During installation, pay particular attention to ensure that the temperature sensor (small PCB on the underside of the housing) is not damaged. Also ensure that the connecting cable between the PCB and rain sensor is not torn off or kinked when connecting it.

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**i Installation of the operating unit**

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The operating unit is battery-operated and communicates via radio with the weather station.

Do not install the operating unit where it could be exposed to direct sunlight as this could falsify the measurement of the indoor temperature. The sensor for this is located in the lower half of the operating unit. For the same reason, the operating unit should not be installed above a radiator. Ensure that direct draughts from windows or doors do not falsify the readings.

Avoid a relative humidity of more than 80%. Avoid condensation.

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**i Notes on radio systems**

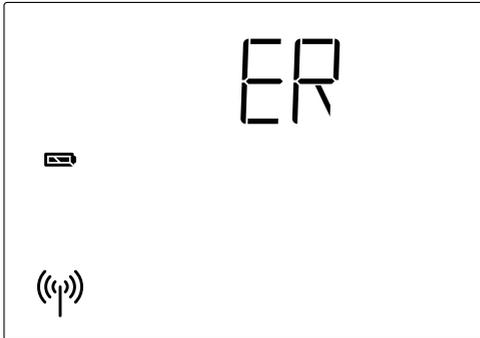
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During planning, ensure that there is adequate radio reception. The range of radio controls is limited by the statutory provisions for radio systems and by conditions at the installation site (if the radio signal has to pass through walls and ceilings).

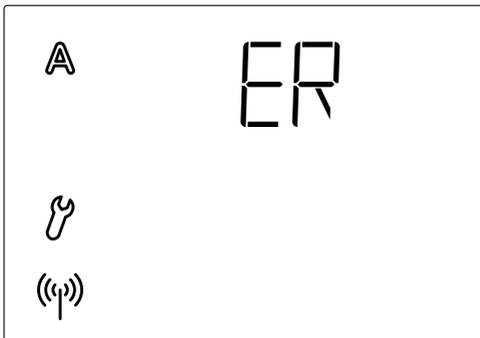
In order not to impair reception quality, a minimum distance of 30 cm should be maintained between radio transmitters. Both the operating unit and weather station should therefore be installed at a sufficient distance from other radio transmitters. Powerful local transmitters (e.g. radio headphones) transmitting on the same frequency (868.2 MHz) can interfere with the reception. Furthermore, the operating unit should not be installed in the immediate vicinity of metallic surfaces.

After wiring up the system and checking all connections, proceed as follows:

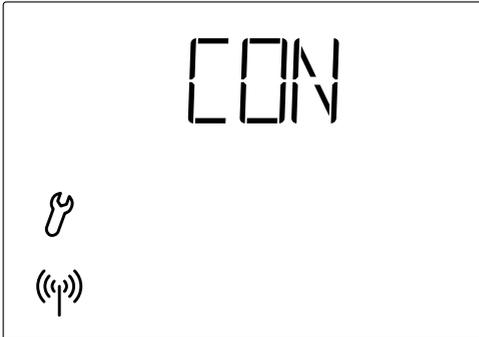
- ◆ Switch on the mains power supply to the weather station.
- ◆ Insert the batteries into the operating unit as described in the section “Inserting batteries”.
- ◆ The display of the operating unit shows that no radio connection between the weather station and operating unit has been taught-in:



- ◆ Hold the **SET** button depressed for 3 seconds until the following display appears:



- ◆ Now hold the **SET** button depressed again for 3 seconds until the display for teaching-in the radio connection is shown.



You are in the basic settings. Continue as described in section 1 “Radio connection to the weather station” for the basic settings.

- ◆ Then check the function of the sensors (see next section).

## **i Checking the sensors**

In the event of malfunctions of the sensors, error messages are displayed instead of the values. See also the section “Error messages”.

### **Checking the sun sensor**

The brightness can be displayed by briefly pressing the **SET** button on the operating unit (see the section “Display of brightness and wind velocity”). The upper value indicates the brightness in kilolux (kLux).

The sun sensor is located under the opaque glass cover of the weather station. If the brightness is not sufficient, illuminate the weather station from above using a powerful torch until a value is displayed.

### **Checking the wind sensor**

The wind velocity can be displayed by briefly pressing the **SET** button on the operating unit (see the section “Display of brightness and wind velocity”). The lower value indicates the velocity in metres per second (m/s). The sensor tube is located on the front on the underside of the weather station. If you blow into this tube, the displayed value will change.

Note: The wind velocity is not correctly displayed during the first approx. 90 seconds after the power is restored to the weather station (e.g. after a power failure or during commissioning).

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### **Checking the rain sensor**

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Wet one or more of the golden sensor surfaces in the cover of the weather station. The symbol  (rain alarm) appears on the display. For this to happen, the rain alarm must have been activated in the automatic settings (this is the default setting on delivery, see also the section “G. Rain alarm”). Note that the umbrella symbol remains displayed for 5 minutes after drying the sensor.

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### **Checking the temperature sensors**

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If realistic values are displayed alongside the   (outdoor temperature) and  (indoor temperature) symbols, the sensors can be assumed to be functioning correctly.

## Weather station

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The weather station should be inspected for soiling twice a year and cleaned, as necessary. In the event of heavy soiling, the wind sensor may cease to function, display a constant rain alarm or no longer detect sunshine.

In the event of a power failure, the data input by you is stored for approx. 10 years. No battery is required for this.



**For the sake of safety, the weather station should always be disconnected from the mains power supply (e.g. switch off or remove the fuse) for cleaning and maintenance.**

## Operating unit

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Clean the display when necessary using a damp cloth.

## Inserting batteries (operating unit)

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The battery compartment is inside the housing.



Open the operating unit by releasing the catch on the underside of the housing. Press against the tab using a flat screwdriver.

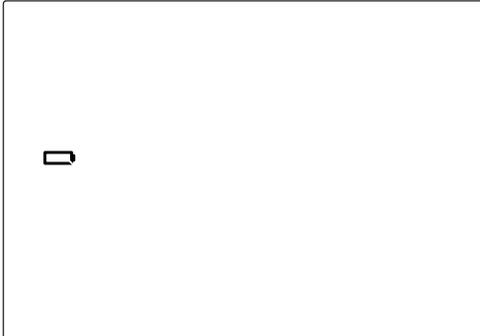


Pay attention to the correct polarity of the batteries. Two commercially available batteries (1.5 V) or rechargeable batteries (1.2 V) of type AA (Mignon/ LR6) are required.

Close the housing again by hooking the front panel with the PCB into the rear panel from above. The housing must close with an audible “click”.

## Error messages

Error messages may appear on the weather data display instead of the values for temperature, brightness or wind velocity.



**Error:**

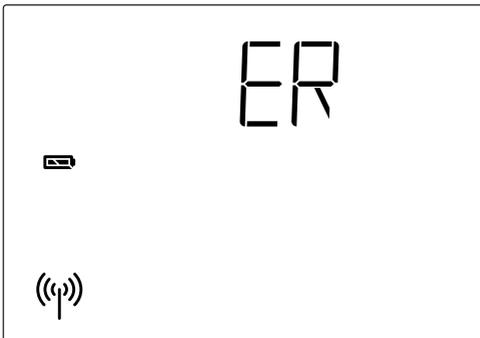
A battery is displayed, but no other symbols or values. Manual operation is possible.

**Cause:**

The batteries in the operating unit are empty and have to be replaced. Caution: Proper functioning of the operating unit can no longer be assured.

**Procedure:**

Replace the batteries as described in the section “Inserting batteries”.



**Error:**

ER and the radio symbol are shown on the display.

**Cause:**

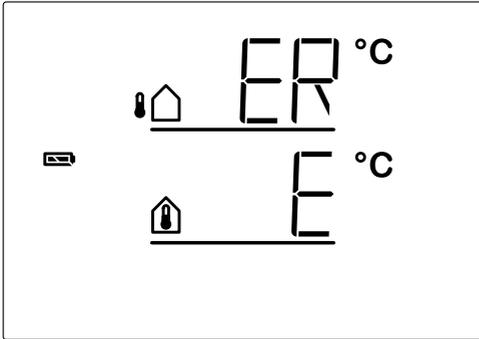
No radio connection between the operating unit and weather station. The weather station is not in operation (e.g. has no power supply) or the radio connection is interrupted or has not yet been taught-in.

**Procedure:**



**The error may only be remedied by a qualified electrician. Please contact your installer.**

The teach-in of the radio connection between the weather station and operating unit is described in section 1 “Radio connection to the weather station”.



**Error:**

ER instead of the outdoor temperature or E instead of the indoor temperature

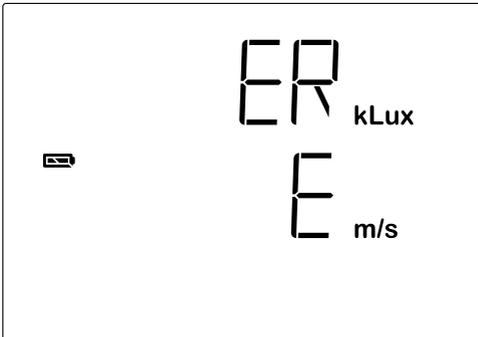
**Cause:**

The outdoor temperature sensor of the weather station or the indoor temperature sensor in the operating unit is defective.

**Procedure:**



The error may only be remedied by a qualified electrician. Please contact your installer.



**Error:**

ER instead of the brightness or E instead of the wind velocity

**Cause:**

The brightness sensor or the wind sensor of the weather station is defective.

**Procedure:**



The error may only be remedied by a qualified electrician. Please contact your installer.

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### Calling up service data

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The software version of the operating unit and weather station can be shown on the display. The service area can be called up from the basic settings by holding the **SET** button depressed (3 seconds). The software version of the operating unit (PPIV) is displayed first; press the **SET** button briefly to display the software version of the controller/weather station (SOL). Display 10 means version 1.0, 12 means 1.2, etc. Exit the service data display by pressing the **SET** button again.

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### i Factory settings

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The following default settings are stored for automatic mode on delivery of the ReWiSo controller:

- ◆ Sun shading from sun intensity > 40 kLux
- ◆ Delay time in the case of sun until the sun shading
  - extends: 1 min,
  - retracts: 12 min
- ◆ Blocking until the indoor temperature > 18°C
- ◆ Blocking until the outdoor temperature > 5°C
- ◆ Wind alarm from 4 m/s
- ◆ Rain alarm activated

kLux: Kिलोलुक्स (= 1000 Lux), unit of light intensity

m/s: Metres per second, unit of wind velocity

ER	Error	OFF	Deactivated, switched off
ON	Activated, switched on	SAVE	Save the entered settings

**i Technical specifications****Radio technology**

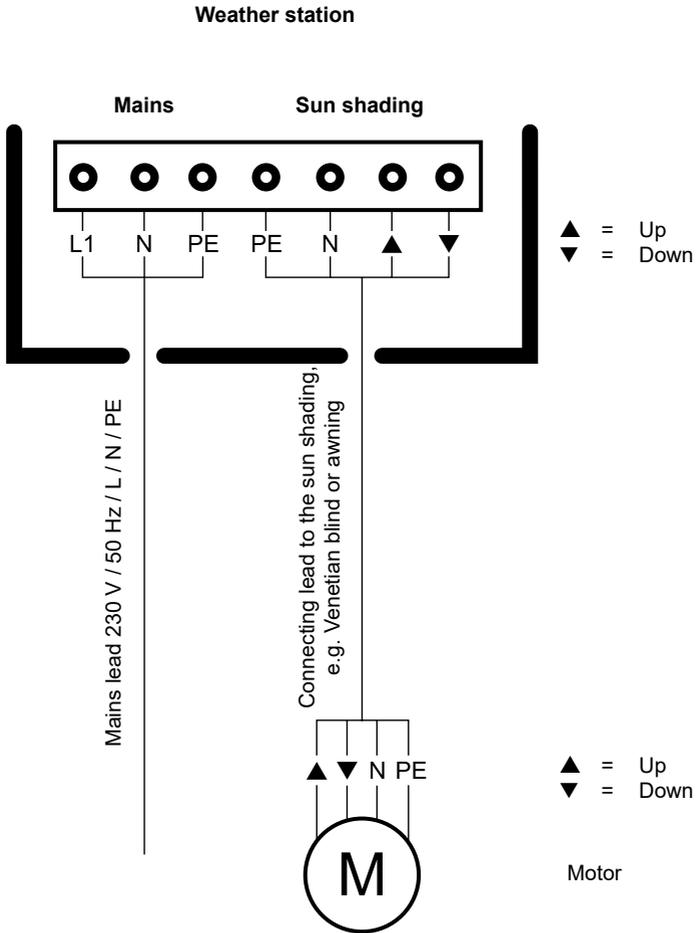
Transmission frequency:	868.2 MHz
Transmission power:	max. 10 mW

**Operating unit**

Operating voltage:	2 x 1.5 V (2 batteries, AA/Mignon/LR6) or 2 x 1.2 V (2 rechargeable batteries, AA/Mignon/LR6)
Ambient temperature:	- 10°C to + 50°C
Relative humidity:	max. 80%, avoid condensation

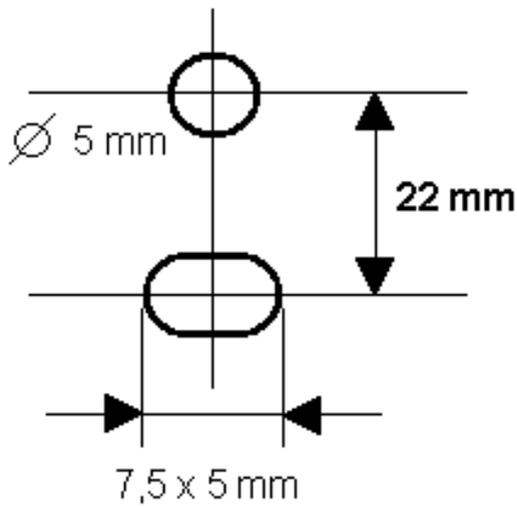
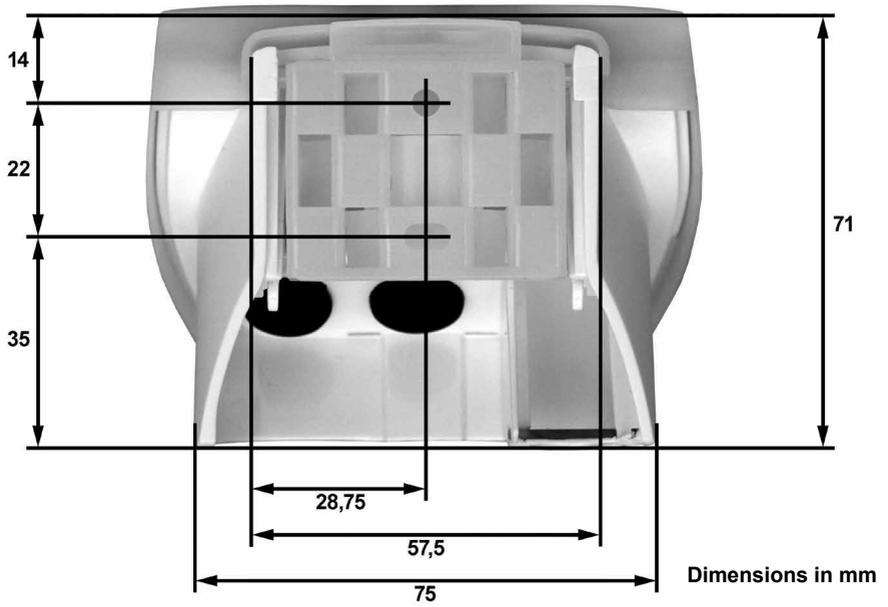
**Weather station**

Operating voltage	230 V, 50 Hz
Ambient temperature	- 30°C to + 60°C
Dimensions of weather station	approx. W = 96 mm, H = 77 mm, D = 118 mm
Output:	loadable with max. 1000 W, fused with T 6.3 A micro fuse
Heating rain detector	approx. 1.2 W - stand-by consumption
Temperature sensor measuring range	- 30°C to + 60°C
Temperature sensor resolution	0.6°C
Sun sensor measuring range	0 to 150 kLux
Sun sensor resolution	1 kLux
Wind sensor measuring range	0 m/s to 35 m/s
Wind sensor resolution	1 m/s

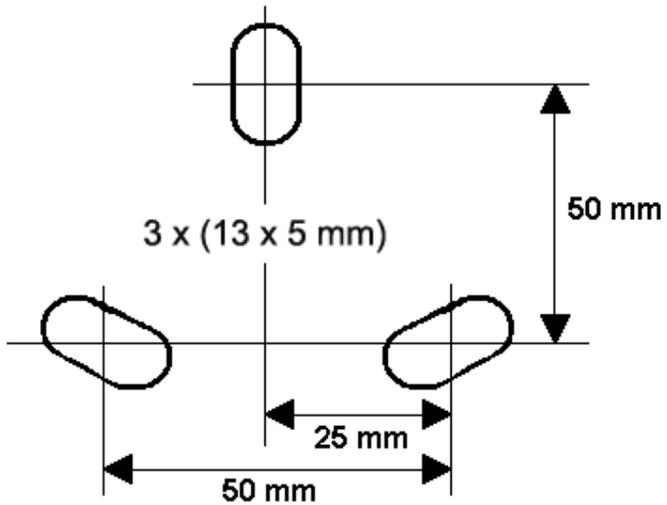
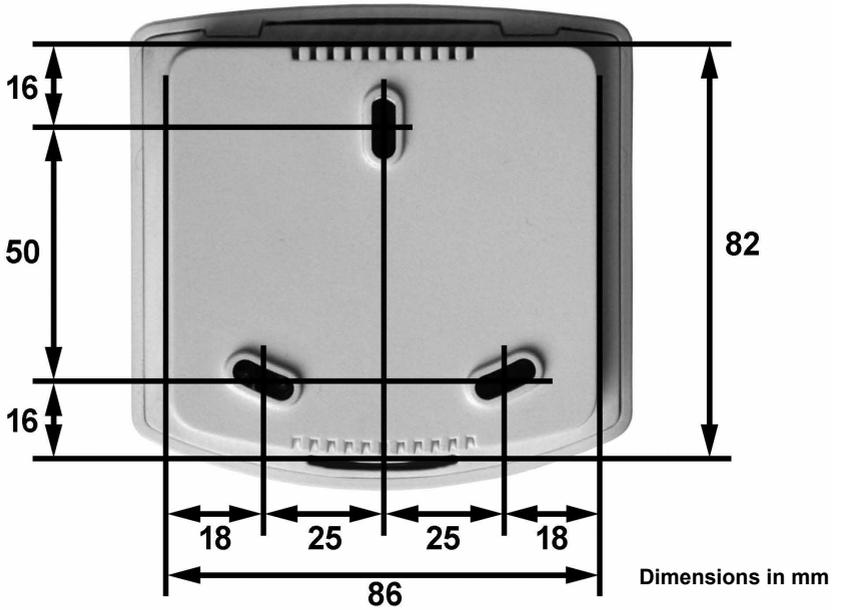


The operating unit is battery-operated. The communication between the operating unit and weather station is done by radio.

All dimensions in mm, technical deviations possible.



All dimensions in mm, technical deviations possible.



## **i** Control of several drives as a group

**EN**

### **NOTE**

Several drives can be controlled at the same time using the RADEMACHER Multiple Control Relay.

## **i** Personal setting data for automatic mode

Sun shading above brightness more than:		kLux
Delay time – extending:		min.
Delay time – retracting:		min.
Sun shading above an indoor temperature more than:		°C
Outdoor temperature lock below:		°C
Wind alarm above:		m/s
Rain alarm:		(Yes/No)

## **i** Simplified EU declaration of conformity

**CE** RADEMACHER Geräte-Elektronik GmbH hereby declares that the ReWiSo 2696 complies with the Directive **2014/53/EU (Radio Equipment Directive)**.

The full text of the declaration of conformity is available at the following website:  
[www.rademacher.de/ce](http://www.rademacher.de/ce)

You can find information about the warranty conditions of our products on our homepage.

**RADEMACHER**

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