

Automatic radio controller
230V

for pre-coded systems

GF0024

Installation and operating instructions

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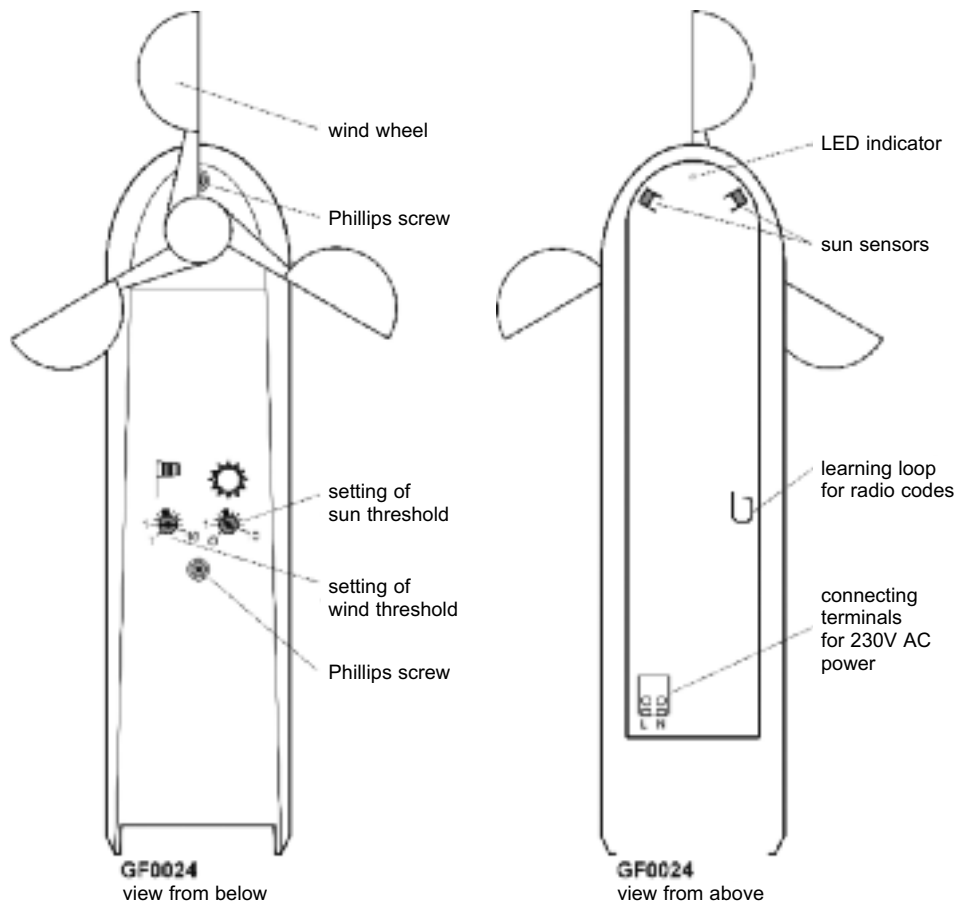
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1 Introduction

The purchase of an automatic radio controller **GJ0024** 230 V was a good decision. You have acquired a high-quality product from the house of GEIGER.

The **GJ0024** controllers make it possible to operate your sun screen systems automatically and provide you with comfortable, individual shade that meets your wishes.

It also protects your awning or jalousies from being damaged by strong wind.

Sun and wind signals are transmitted by radio signals, thereby obviating the need for extensive laying of cables and control wiring.

The following **radio receivers with integrated motor controls** can be used with the automatic radio controller GJ0024 as a base unit:

- awning controllers GFJ006
- awning controllers GFJ007

The automatic radio controller **GJ0024** can be correlated to receivers individually, in groups or as a central controller.

2 Safety Instructions

- The controller is only to be used for its intended purpose as described under Section 3 of the operating instructions. Changes or modifications to the controller void any rights to claims under the guarantee.
- After unpacking the controller, check it right away for any damage. If it is damaged, the unit may absolutely not be put into operation. Shipping damage is to be reported to the supplier immediately.
- When it can be presumed that the controller does not operate faultlessly, it is to be immediately taken out of service and secured against inadvertent use. This presumption exists when the case is damaged or the unit no longer functions.
- According to VDE 0022, the owner himself is responsible for compliance with EVU or VDE regulations as well as for proper installation.
- The transparent cover must be opened to make connections to supply power. Be particularly careful that no moisture (e.g. rainwater) is able to enter the unit while it is being connected.

3 Intended Usage

- The automatic radio controller **GF0024** may only be used to control the operation of sun screen systems (awnings, jalousies, roll-shutters, etc.).
- **GF0024** controller together with radio receivers approved for operation by the manufacturer.

4 Installation

The unit is suitable for surface mounting on building and roof facings.

Find a location which meets the following criteria:

- similar wind conditions as those of the objects to be protected
- similar light conditions as those prevailing at the controlled sun screen devices
- the installation site should not be shaded by buildings, trees or bushes during the course of the day
- the distance between the **GF0024** and the nearest receiver (e.g. GFJ007) should be at least 2 metres
- it must be possible to route a power cable to the unit at the location chosen (two conductors, each with a minimum cross-sectional area of 0.75mm²)

Perform the installation as follows:

- Use the jointed bracket to mount the **GF0024** level, so that the axle of the wind wheel hangs down vertically and the wind wheel's vanes can rotate freely. A 4 mm Allen wrench is necessary to fix the bracket in place
- Fasten the unit securely with the screws provided
- Loosen the two Phillips screws and open the transparent cover. Now connect the unit's "L" and "N" terminals to the 230V /50Hz mains (with mains power shut off!)
- If the wiring must be routed upward then a loop should be formed beneath the unit so that rainwater will drip off below the unit
- Be sure that the rubber seals are firmly seated in the cable breakouts located in the bottom section of the housing and that the top cover is also well seated in its round rubber seal
- Now press the cover gently forward in the direction of the wind wheel while watching that the housing's groove and tongue joint are completely interlocked
- Screw on the housing parts with the two Phillips screws

5 Set-up

The following work must be complete before starting with the set-up procedure:

- Adjust drive limit switches according to manufacturer's instructions.
- Electrically connect approved GEIGER sun screen controllers according to their operating instructions.




Check the sun screen system's directions of rotation / travel directions!

Proceed as follows:

- Hold the wind wheel vanes still (should not turn), set the wind potentiometer to "T" and the sun potentiometer to "1".

- Normal daylight (> 5 klx) will cause subordinate sun screen system/s to move into their shading positions after about 6 seconds.
- Now spin the wind wheel rapidly for at least 3 seconds. When the wind threshold limit has been exceeded, the red LED on the unit will light up. The systems must be retracted immediately. A wind lockout time of about 10 minutes will be set at radio receivers.
- Conclude the procedure by setting the potentiometer to the desired limit value or the wind limit value recommended by the textile manufacturer. For more information about this, refer to sections 7.1 "Sun sensors" and 7.2 "Wind sensor".

The automatic radio controller **GF0024**, 230 V, will now operate properly and reliably.

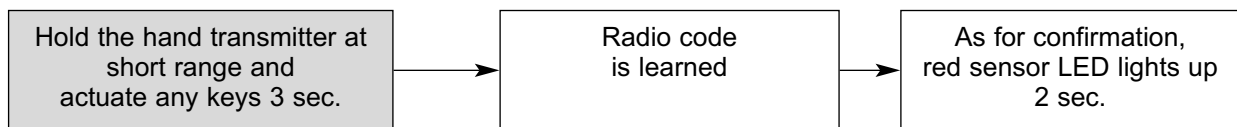
 **Note:** Shading for your rooms will only operate automatically when the receiver function "Sun automat" is enabled!

6 Setting of sun and wind sensors

The device is delivered pre-coded with GEIGER coding for testing purposes. For trouble-free operating of the system (in case of similar systems in the neighbourhood) the code has to be changed and all following settings are required:

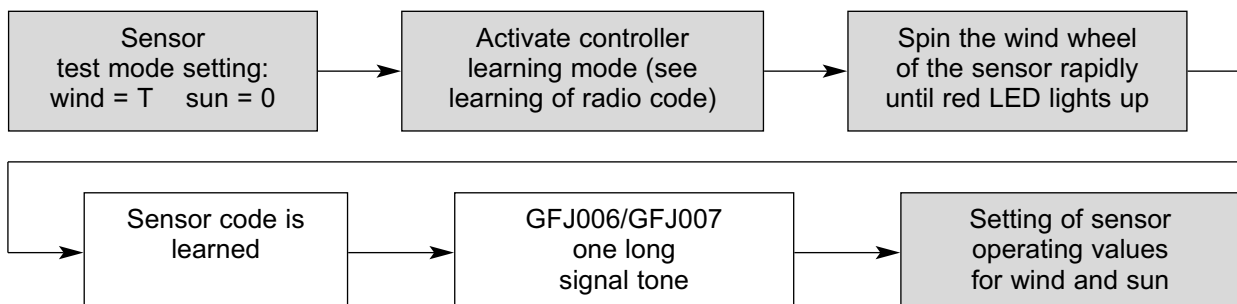
6.1 Learning of radio code in sensor

On delivery the GEIGER code is learned in the sensor. Concerns only GF0025: a radio code can not be trained while in test mode (potentiometer set to T).



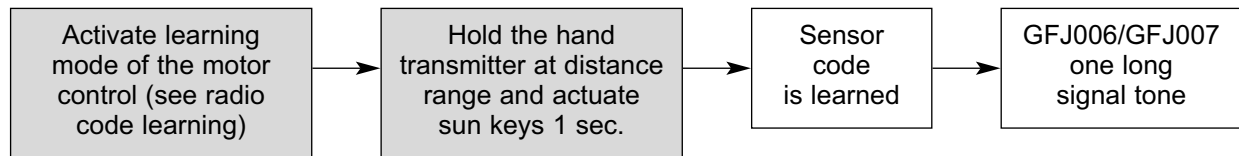
6.1.2 Learning of sensor code of the sensor into the motor control

The motor control possesses 2 memory locations for sensor code. The first code memory concerns the sensor, the second code memory allows on and off operation of the sun automatic. The device is delivered pre-coded with GEIGER coding. For the first learning, the GEIGER code will be replaced by a transmitter code. If two sensor codes have already been learned and if an attempt is made to learn a third one in addition, the last code actually stored is deleted and the new code stored instead.



6.2 Learning of the code of the sun automatic key in the motor control

The "on" and "off" sun automatic can be operated with hand transmitter with sun key. The sun automatic keys have their own radio code. In order to activate the functions the sun automatic radio code has to be learned in the motor control. (see setting of radio code). The sun automatic code is a sensor code and therefore is learned in the sensor code memory.



7 Alterable Automatic Control Functions

7.1 Sun Sensors

The **GF0024** unit possesses two sun sensors (see sketch on Page 2). The sun monitoring function measures light strength in a range of about 10 to 60 klx. The brightness threshold can be adjusted with the "Sun" potentiometer (factory setting 4 - 5).

In position '0' the sun monitoring function is turned off.

If the preset threshold is continuously exceeded for about 5 minutes, the unit will issue the "extend" command.

When the threshold is underrun for about 20 minutes, the "retract" command will be issued.

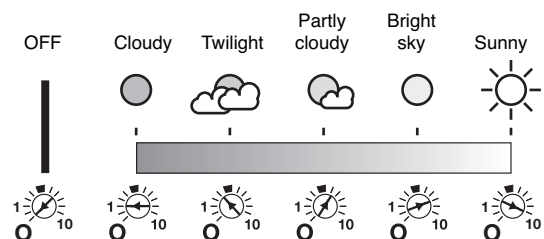
Continuously changing light conditions within the aforementioned time limits will not cause a travel command to be issued.

The optical sunlight detection field encompasses about 180°.

Programming «sun»

Should the sun protection system move outwards/downwards:

- by increased light intensity
 - ➔ Higher brightness threshold: clockwise
- by reduced light intensity
 - ➔ Lower brightness threshold: counter clockwise



7.2 Wind Sensor

The wind monitoring function has the highest priority (above manual operation functions or sun monitoring functions) and cannot be turned off.

The wind wheel measures wind speed in a range of about 10 to 50 km/h. The wind threshold can be adjusted with the "Wind" potentiometer (factory setting 4 - 5). Each scale division corresponds to a change of about 4.4 km/h.

Programming «wind»

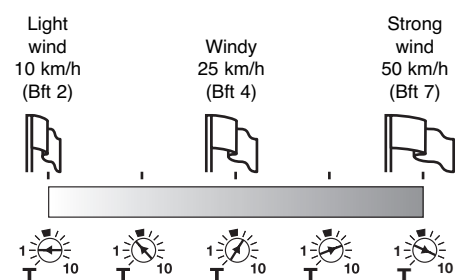
Should the sun protection system move outwards/downwards:

- by increased wind velocity
 - ➔ Higher wind threshold: clockwise
- by reduced wind velocity
 - ➔ Lower wind threshold: counter clockwise



Be sure to observe the sun screen system manufacturer's regulations or recommendations. Changes to the wind threshold value can reduce the system's margin of safety.


If the threshold is continuously exceeded for a period of 3 seconds, the unit will issue a "retract" command.



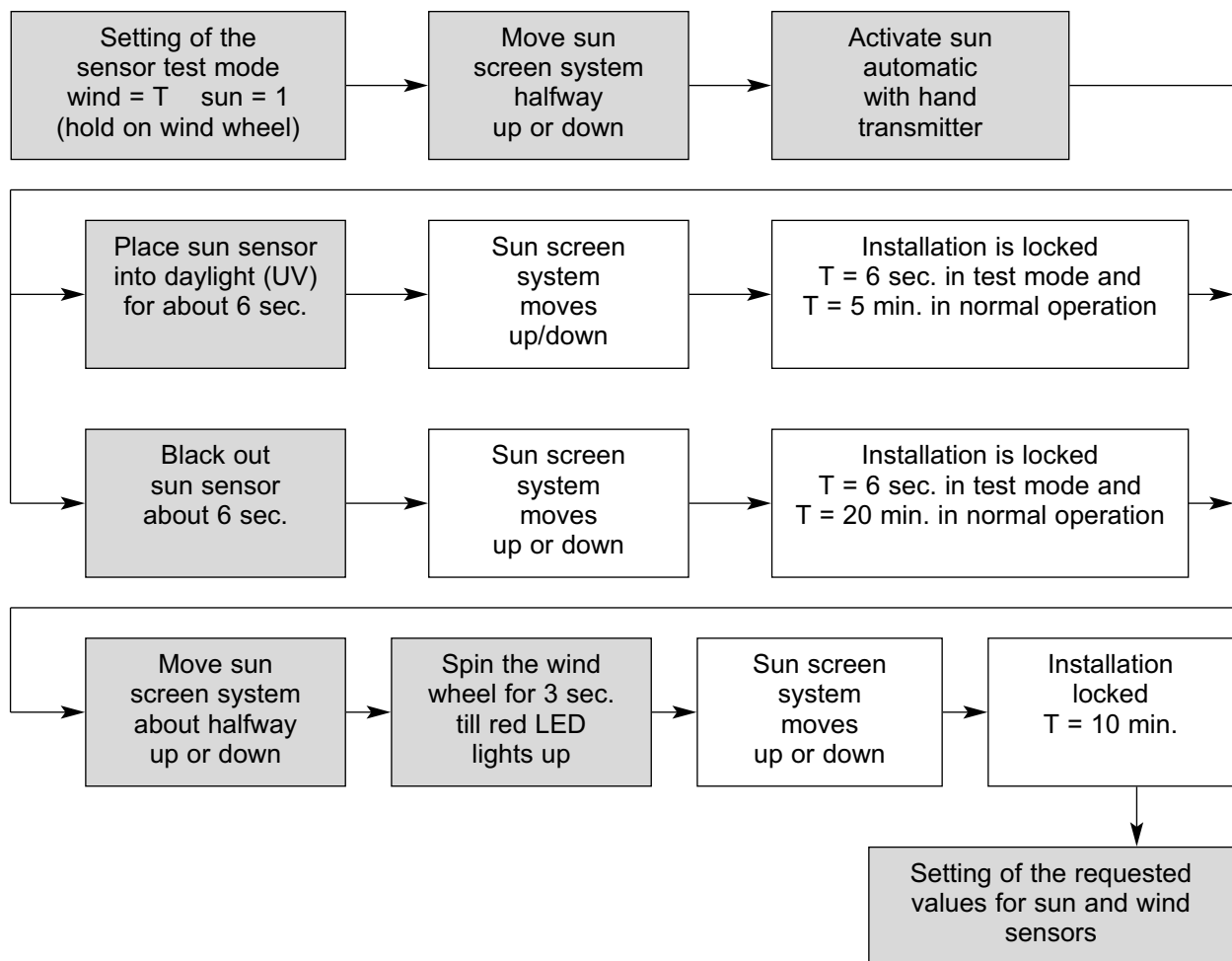
7.3 Test and Demo Operation of the Controller

The controller possesses a "Test" mode setting intended for set-up and testing. This test mode uses shorter system times (see section 10 "Technical Data").

Test mode is active when the "Wind" potentiometer is in its "T" position. Normal mode operation is active when the "Wind" potentiometer is again set to a value of between 1 - 10.

 A new transmitter code cannot be trained while in test mode.

The test mode allows you to test the functions of the sensors with small release values.



Remarks:

- The sun automatic is activated when the installation stays about 90 sec. in the upper end stop position. This function is deactivated when the upper end stop is shortly operated.
- The red LED lights up only when wind comes up.
- For safety reasons the installation gets locked if wind comes up and will be unlocked after a period of 10 minutes without wind.
- The installation can be unlocked if you switch off and on the power supply.

8 Maintenance and Cleaning

The automatic radio controller **GF0024** is basically maintenance-free.

However, it is prudent to regularly check the free movement of the wind wheel, e.g. by simply observing that it rotates even in a gentle wind.



Never use oils or greases to improve the wind wheel's freedom of motion. Dust and insects are best removed with a clean, dry brush.

The transparent cover over the sun sensors must be kept free of contamination to ensure the unit's reliable operation with respect to sunlight.



Clean this transparent cover with a soft cloth. Moisten the cleaning cloth slightly with a mild solution of water and hand-dishwashing liquid to remove stubborn contamination (e.g. bird droppings).



Never use aggressive cleaning agents or chemical solutions for cleaning because these can react with the plastic housing and may even be detrimental to the unit's functionality.



Never spray the **GF0024** unit with water, e.g. from a garden hose, because it is only protected from rainwater falling from above – not against spray water from the sides or from below.

9 Disposal

9.1 General

Dispose of the unwanted unit according to the applicable legal regulations.

10 Technical Data

GF0024	Normal mode	Test mode (altered values)
Transmit frequency	434 MHz	
Trainable code	1	
Integrated wind wheel	1	
Wind threshold value	10 – 50 km/h setting	5 km/h, fixed value
Wind retract delay	3 seconds	
Wind lockout time	Receiver specific, about 10 minutes	
Integrated sun sensors	2	
Detection angle	about 180°	
"Sun" setting range	about 10 – 60 klx	5 klx, fixed value
"Sun bright" extend command	after about 5 minutes	after 6 seconds
"Sun dark" retract command	after about 20 minutes	after 6 seconds
Power supply	230V / 50Hz	
Ingress protection class	IP 43 (for outdoor use)	
Operating temperature	-20 to +60°C	
Relative humidity	max. 95% (non-condensing)	
Housing dimensions (including bracket) <u>without / with</u> wind wheel vanes	length	260 / 295 mm
	width	72 / 134 mm
	height	90 / 160 mm

11 Declaration of Conformity

We herewith declare that this unit complies with the fundamental requirements and relevant regulations set forth by Guideline 1999/5/EU and that it may be used without registration in all EU states and Switzerland.

The declaration of conformity for this unit can be found under: www.geiger.de

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For technical questions, please call our service team at: +49 (0) 7142 938 333.
They will be happy to assist you.

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