GEIGER
Antriebstechnik

GEIGER-Funk

Sunshade controls

Solar-cell powered automatic radio controller

GF0025

Installation and Operating Instructions

03/2012

for pre-coded systems

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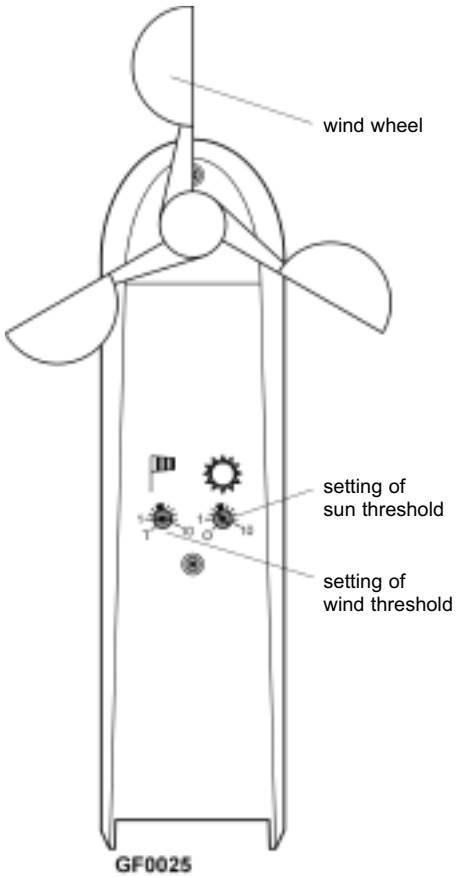
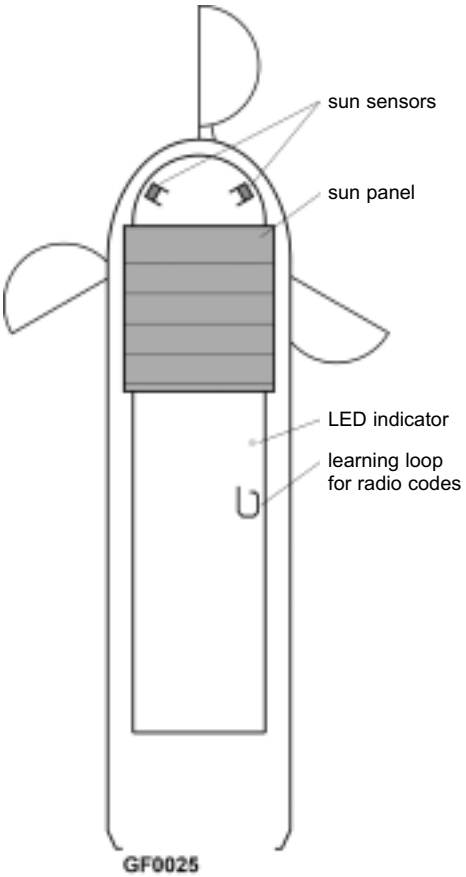




1 Introduction

The purchase of a solar-cell powered automatic radio controller **GF0025** was a good decision. You have acquired a high-quality product from the house of GEIGER.

The **GF0025** controller make it possible to operate your sun screen systems automatically and provides you with comfortable, individual shade that meets your wishes.
It also protects your awnings 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 wires. Integrated solar cells allow the **GF0025** to operate completely autonomously and it can be installed at any suitable location without difficulty.

All GEIGER radio motors and receivers can be used with the GF0025 as a base unit.

The automatic radio controller **GF0025** 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.

3 Intended Usage

- The automatic radio controller **GF0025** may only be used to control the operation of sun screen systems (awnings, jalousies, roll-shutters, etc.).
- Only use the **GF0025** 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.

Choose a location for installing the **GF0025** according to 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
- affix the **GF0025** at an elevated position in the open so that the solar panel receives sufficient sunlight
- the installation site should not be shaded by buildings, trees or bushes during the course of the day
- the distance between the **GF0025** and the nearest receiver (e.g. EKX2R) should be at least 2 metres
- Use the jointed bracket to mount the **GF0025** 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.

5 Set-up

The solar-cell powered automatic controller GF0025 operates without connecting wires. Its integrated solar cells makes it a completely autonomous unit. This pre-coded controller requires only about 10 minutes of daylight (>5 klx) to become initially operational – then it is ready for use.

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

- Adjust the drive's 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. 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 solar-cell powered automatic radio controller **GF0025** will now operate properly and reliably.

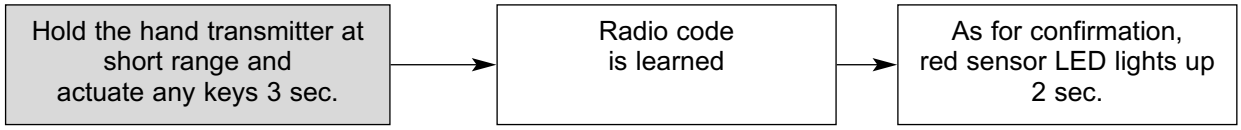
☞ Note: Shading for your rooms will only operate automatically when the receiver function "Sun automat" is enabled!

6 Setting of sun and wind sensors GF0025

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:

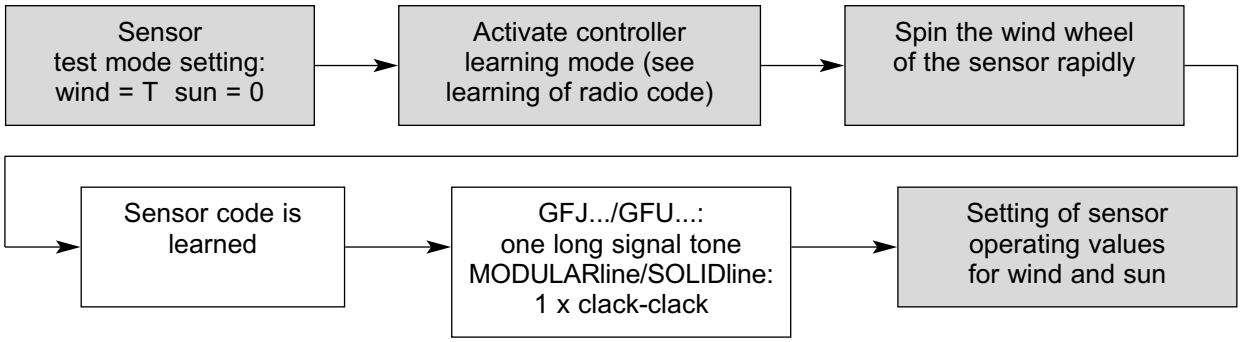
6.1 Learning of radio code in sensor

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).



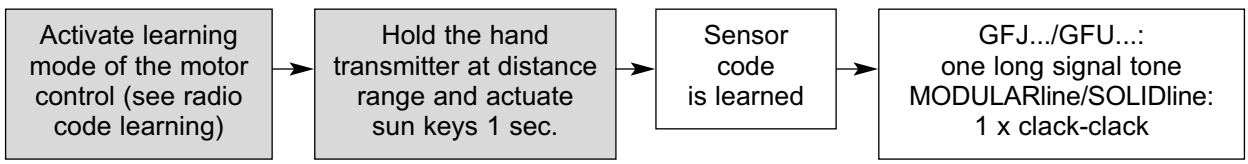
6.1.2 Learning of sensor code of the sensor into the motor control

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 **GF0025** 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 '0'). 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.

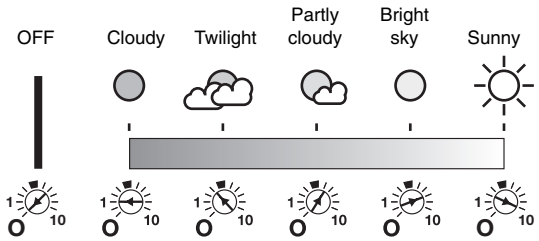
Continuously changing light conditions within the aforementioned time limits will not cause a travel command to be issued.

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 Windsensor

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 within 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.

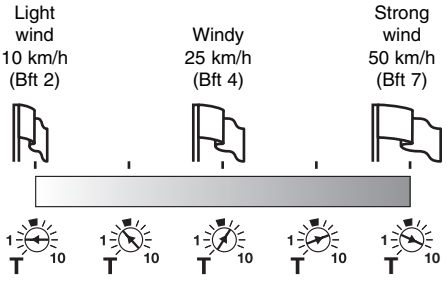
Be sure to observe the sun screen system manufacturer's regulations or recommendations. Changes to the wind threshold value can reduce the system's margin of safety.

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

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



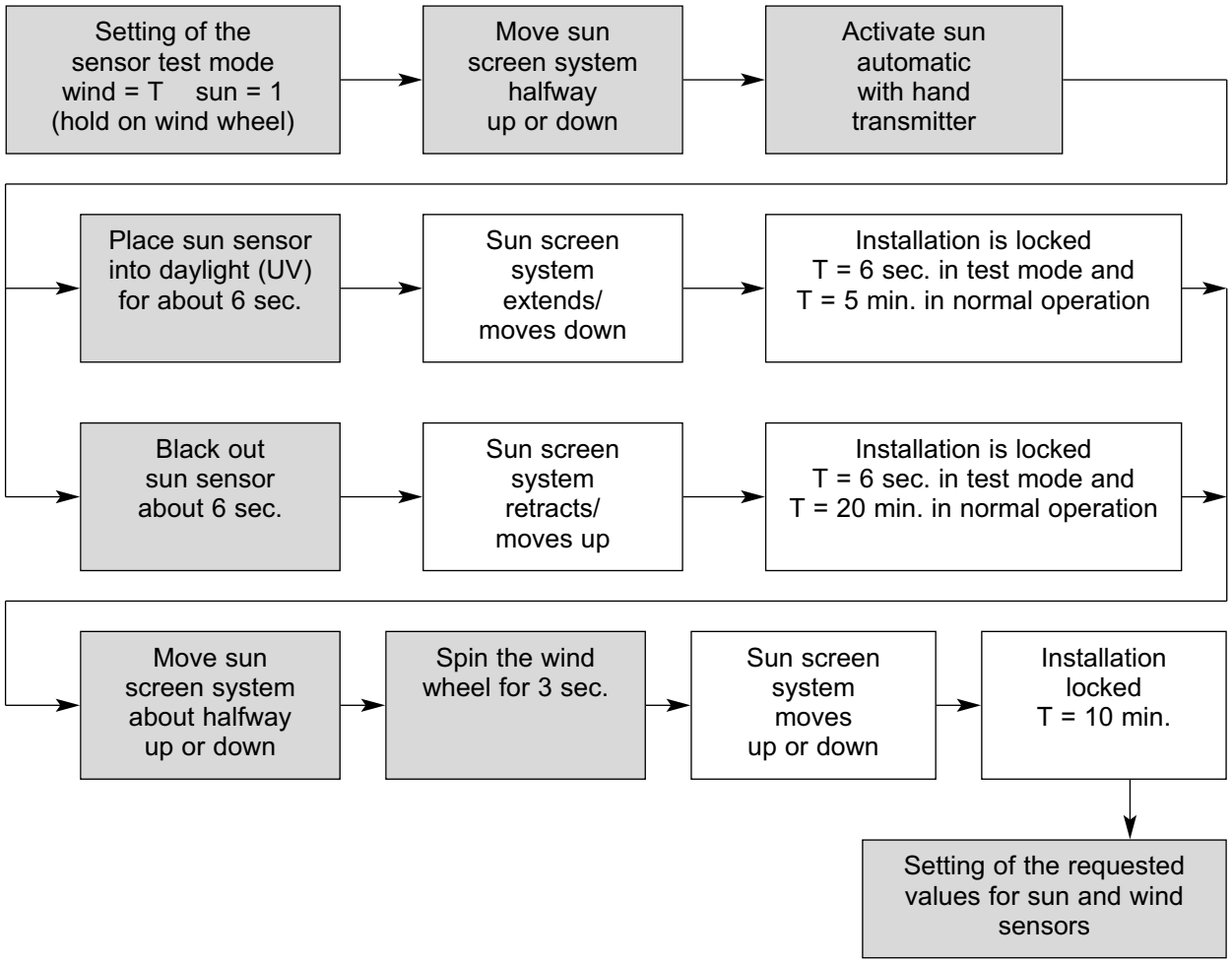
7.3 Test and Demo Operation of the Controller

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.
- 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 solar-cell powered automatic radio controller GF0025 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 for the solar panel and 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 **GF0025** 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

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

10 Technical Data

GF0025	**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	solar-cell powered	
Ingress protection class	IP 43 (for outdoor use)	
Operating temperature	-20 to +60°C	
Relative humidity	max. 95% (non-condensing)	
Housing dimensions (including bracket) without / with 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-antriebstechnik.de**