

Tubular motor:

# **GEIGER-SOLIDline**

Motor control:

# **GEIGER-VariousWireless (GU45..F01)**

for rolling shutters, screens and open style folding arm awnings



- **EN** Operating Instructions
- FR Manuel d'utilisation



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# 1. General information

### Dear customer,

By purchasing a GEIGER tubular motor you have decided on a quality product from GEIGER.

Thank you very much for your decision and the confidence placed in us.

Before you put this drive into operation please observe the following safety information. It serves for the prevention of danger and for the avoidance of personal injury and damage to property.

### Please retain this information for future reference.

- Suitable for all roller shutter systems, screens and
- open style folding arm awnings
- Installation without stops possible
- Automatic detection of the end positions when using stop systems
- Changes in hangings are automatically compensated by electronics
- Drives are switchable in parallel
- Suitable for all GEIGER radio products
- Automatic detection of right/left installation
- Automatic hanging strain relief and thus prolongation of the service life

# 2. Guarantee

In the case of incorrect installation contrary to the operating instructions and/ or constructional modification, the legal and contractual guarantee for property damage and product liability lapses.

# 3. Safety information



ATTENTION: Important safety information. For personal safety, it is important to follow these instructions. The instructions should be kept.

- This appliance is not to be used by persons (including children) whose physical, sensorial or mental capacities are impaired, or who have no experience or know-how, unless they have been supervised or been given instructions on the use of the appliance by someone who is responsible for their safety.
- Children must be supervised to make sure they do not play with the appliance.
- The installation is to be checked regularly for defective balance, wear and damage.
- Damaged connecting leads must be replaced by the GEIGER connecting lead of the same wire type.
- During operation observe the danger zone.
- ▶ If people or objects are in the danger zone, do not use the installation.
- Urgently shut down damaged installations until repair.
- Unconditionally shut down the unit during maintenance and cleaning operations.
- Pinching and shearing sites are to be avoided and to be safeguarded against.
- When operating the manual actuator with the open sun protection system, exercise caution as it can fall down quickly if springs expand or are broken.

- Do not operate the device if operations such as, for example, window cleaning are to be carried out in the vicinity.
- Disconnect the device from the mains power supply if operations such as, for example, window cleaning are being carried out in the vicinity.

ATTENTION: Important safety information. Follow all installation instructions, as incorrect installation can lead to serious injuries.

- Connection must be carried out by a skilled electrician according to the regulations in force locally.
- ▶ The mains plug of the tubular motor must be accessible after installation.
- On the installation of the tubular motor without mechanical protection of the driven parts, the tubular motor must be installed at a height of at least 2.5 m above the ground or of another level which provides access to the drive.
- Before the tubular motor is installed, all leads which are not needed are to be removed and all equipment which is not needed for actuation is to be put out of operation.
- If the tubular motor is controlled by a switch or pushbutton, the switch or pushbutton must be mounted within eyeshot of the tubular motor. The switch or pushbutton must not be located in the vicinity of moving parts. The height of installation must be at least 1.5 m above the floor. If the apparatus is equipped without a pin and a socket connector (STAS3K) in the connecting lead, or other means for disconnecting from the mains with at least a 3 mm contact opening on each pole, a disconnecting device of this type must be incorporated into the permanently installed electrical installation according to the wiring rules.
- Permanently installed control devices must be attached visibly.
- The correct dimensioning of the drive is to be observed.

#### We recommend the following procedure:

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# 4. Intended use

The tubular motors of the model range **SOLIDIine (GU45..F01)** with the **Various-Wireless** system are designed exclusively for the operation of rolling shutters, screens and open style folding arm awnings.

If the tubular motors are used for other applications and/or modifications are performed to the tubular motors, which have not been discussed with GEIGER Antriebstechnik, then the manufacturer is **not** liable for personal injury and/or damage to property and for consequential damage.

# 5. Installation instructions

Before fixing, the strength of the masonry or of the subsurface is to be checked.



# Caution: If the tube is screwed/riveted to the drive, the measure must be taken from the tube end to the center of the drive and marked on the tube.

When drilling the winding shaft never drill into the area of the tubular motor!

When inserting into the shaft, the tubular motor must not be struck and must not be allowed to fall into the shaft.

## Installation into the rolling shutter:

Fix motor support to available stud bolts or in the side frame.

Insert motor into the shaft with a suitable adapter and drive up to the stop of the shaft adapter.

Insert roller capsule on the opposite side.

Put shaft with motor on motor support or on pivoting engine bearer. On the opposite side pull out roller capsule until bolt fits into ball bearing.

Screw together roller capsule with shaft.

Screw together shaft with tubular carrier.

Fix rolling shutter casing to shaft.

# Installation into awnings and screens:

Insert motor with a suitable adapter and drive into the shaft up to the stop of the shaft adapter.

Fix the motor support on the awning. Fix the motor together with the shaft on the motor support. The bearer locks into place.

# Depending on the selected motor head, different fixation systems can be used:

- Place the motor with square insert in the starshaped bearer and lock with pin
- Place the motor into the existing engine bearer and lock
- Place the motor in a compatible engine bearer with clip system and lock with spring or rotating lever



# 6. Bringing into service

# Definition of "near range":

Distance of the hand-held transmitter to the motor control: max. 15 cm,

#### or

hold at the hand-held transmitter directly on to the motor-connecting cable.

The motor-connecting cable thus serves up to a length of 3 metres as an "antenna".

## Definition of "far range":

Distance of the hand-held transmitter to the motor control: min.1.5 metres,

#### or

Distance of the hand held transmitter to the motor connecting cable min.0.5 metres

Connect the motor to the power grid.

Switch on the mains.

The motor makes a short back and forth movement (1 x "click-click").

After each interruption of the voltage supply, the learning mode **can** be activated for 30 min.

The learning mode is necessary in order to transmit radio codes, or in order to be able to adjust the end positions again.

# Activate learning mode:

In the near range press UP or DOWN key and keep it pressed for about 3 seconds until the motor actuates (1 x "click–click").



If no action takes place within 60 seconds, the learning mode is deactivated! The motor returns to normal operation (3 x "click-click").









# 7. Learning/deleting the radio code

In the close range press UP or DOWN key for about 1 second. The motor actuates. (1 x " click-click ").

The remote code is taught to the motor!

If no action takes place within 60 seconds, the learning mode is deactivated! The motor returns to normal operation (3 x "click-click").

# Deleting the radio code



# The learning mode must be activated first in order to delete the radio codes.

At close range, press the UP or DOWN key and hold approx. 5 seconds. The motor reacts immediately (1 x 'Click-Click'). Keep the key pressed about 5 sec. until the motor confirms the deleting of the radio codes with 1 x'Click-Click'.



# Please note:

You can only delete all remote codes and sensor remote codes together. It is not possible to delete individual remote codes.

# 8. Adjustment of the end positions/ Intermediate position for rolling shutters

The following installation types are possible:		The following installa- tion types are possible:	Awning is equipped with:	
Α	Upper and lower end position with stop	End bar with stopper/ with anti-lift device	-	
В	Upper end position of freely adjustable/lower end position with stop	End bar with stopper/ without anti-lift device	-	
С	Upper end position with stop/lower end position freely adjustable	End bar with stopper/ no anti-lift device	awning arms used as stops	
D	Upper and lower end positions freely adjustable	End bar without stopper/no anti-lift device	no stops are used	



The learning mode must be activated first in order to adjust the end positions (see page 6)

## Activate end position mode:

In the far range press the UP or DOWN key for about 1 second and keep it pressed until the motor actuates (1 x "click-click").

Please note! The key assignment for UP or DOWN takes place automatically, depending on the installation type, during or after the finish of the end position programming.



# Change/delete the end positions

In order to change or delete the end positions, a new programming must be started (see «learning the end positions»).



The learning mode must be activated first in order to adjust/delete the end positions (see page 6)

# 9. Learning the end positions

# Variant A: Upper and lower end position with stop

## Upper end position:

In the far range, press the UP or DOWN key and keep it pressed until the hangings have reached the upper stop and the motor switches off automatically.

## The upper end position is now stored.

The UP and DOWN keys are now assigned to the corresponding turning direction of the motor.



## Lower end position:

In the far range pressed the DOWN key and keep it pressed until the hangings have reached the lower stop and the motor switches off automatically.

The motor confirms with 1 x "click-click".

The lower end position is now stored





# Variant B: Upper end position freely adjustable/ lower end position with stop

## Upper end position:

In the far range press the UP or DOWN key and keep it pressed until the hangings have reached the desired upper end position. Corrections with UP or DOWN key are possible.

## Store upper end position:

In the near range press the UP or DOWN key for about 1 second. The motor actuates (1 x "click-click").





## Store lower end position:

In the far range press the UP or DOWN key and keep it pressed until the hangings have reached the lower stop and the motor switches off automatically. The motor confirms with 1 x "click-click".

## The lower end position is now stored.

The UP and DOWN keys are now assigned to the corresponding turning direction of the motor.



Programming is finished and the motor has changed to normal operation.



# Variant C: Upper end position with stop/ lower end position freely adjustable

## Upper end position:

In the far range press the UP or DOWN key and keep it pressed until the hangings have reached the upper stop and the motor switches off automatically.

## The upper end position is now stored!

The UP and DOWN keys are now assigned to the corresponding turning direction of the motor.

## Lower end position:

In the far range press the DOWN key and keep it pressed until the hangings have reached the desired lower end position. Corrections with UP or DOWN key are possible.





### Store lower end position:

In the near range press UP or DOWN key for about 1 second. The motor actuates (1 x "click-click").





# Variant D: Upper and lower end positions freely adjustable

### Upper end position:

In the far range press UP or DOWN key and keep it pressed until the hangings have reached the desired upper end position. Corrections without UP or DOWN key are possible.

### Store upper end position:

In the near range press UP or DOWN key for about 1 second. The motor actuates (1 x "click-click").



In the far range press UP or DOWN key and keep pressed until the hangings have reached the desired lower end position. Corrections with UP or DOWN key are possible.

Store lower end position:

In the near range press UP or DOWN key for about 1 second. The motor actuates (1 x "click-click"). The UP and DOWN keys are now assigned to the corresponding turning direction of the motor.



Programming is finished and the motor has changed to normal operation.



min. 1.5 m

1 x

max. 15 cm

> min. 1,5 m

clack-

clack

# Teach intermediate position

Travel from any desired position to the desired end position, stop with the opposite key and hold key pressed for ca. 3 sec. until the motor responds (1 x  $_{\rm x}$  click-click").

Then release the key!

The intermediate position is now stored.

# Change intermediate position

See "teach intermediate position", but in a new desired position.

# **Cancel intermediate position**

Stop hangings from UP or DOWN -movement and keep key pressed for about 5 sec. until the motor responds (3x "click-click").



# 10. Grouped control

(see also 6. Bringing into service and chapter 7. Teach/delete radio code)

## 1. Target: Operate together rolling shutter A and rolling shutter B with a handheld transmitter one channel

## Rolling shutters: A + B

- 1. Actuate key 3 sec. at close range to activate the learning mode of rolling shutter A
- 2. Actuate key 1 sec. at close range to program the radio code of rolling shutter A
- 3. Actuate key 3 sec. at close range to activate the learning mode of rolling shutter B
- 4. Actuate key 1 sec. at close range to program the radio code of rolling shutter B



Same operation for three or more rolling shutters

2. Targe: Individual or grouped control of rolling shutter A + rolling shutter B with a hand-held transmitter 3 channels

## **Rolling shutters: A**

1. Actuate key 3 sec. at close range to activate the learning mode of rolling shutter  ${\sf A}$ 

2. Actuate key 1 sec. at close range to program the radio code of rolling shutter A



actuate **upper** keys





# **Rolling shutters: B**

- 1. Actuate key 3 sec. at close range to activate the learning mode of rolling shutter B
- 2. Actuate key 1 sec. at close range to program the radio code of rolling shutter B



actuate middle keys



## Rolling shutters: A + B

- 1. Actuate key 3 sec. at close range to activate the learning mode of rolling shutter A
- 2. Actuate key 1 sec. at close range to program the radio code of rolling shutter A
- 3. Actuate key 3 sec. at close range to activate the learning mode of rolling shutter B
- 4. Actuate key 1 sec. at close range to program the radio code of rolling shutter B



# 11. Setting of end stops with open style folding arm awnings

# Variant C: Upper end position with stop/lower end position freely adjustable

# Upper end position:

In the far range press the UP or DOWN key and keep it pressed until the hangings have reached the upper stop and the motor switches off automatically.

## The upper end position is now stored!

The UP and DOWN keys are now assigned to the corresponding turning direction of the motor.

## Lower end position:

In the far range press the DOWN key and keep it pressed until the hangings have reached the desired lower end position. Corrections with UP or DOWN key are possible.





# Store lower end position:

In the near range press UP or DOWN key for about 1 second. The motor actuates (1 x "click-click").



# Variant D: Upper and lower end positions freely adjustable

### Upper end position:

In the far range press UP or DOWN key and keep it pressed until the hangings have reached the desired upper end position. Corrections without UP or OFF key are possible.

## Store upper end position:

In the near range press UP or DOWN key for about 1 second. The motor actuates (1 x "click-click").

### Lower end position:

In the far range press UP or DOWN key and keep pressed until the hangings have reached the desired lower end position. Corrections with UP or OFF key are possible.



# EN

#### Store lower end position:

In the near range press UP or DOWN key for about 1 second. The motor actuates (1 x "click-click").



# 12. Function description of radio motor

In the delivery state, each GEIGER radio receiver and radio transmitter is equipped with the "GEIGER-Code" + + + - + - so that the motor can be operated immediately, in order, for example, to facilitate the installation of hangings on the winding shaft.



For security reasons, the "GEIGER-Code" must be overwritten by an individual code! This takes place automatically in the teaching for the first time of an individual code (see page 6 learn/delete radio codes).





"GEIGER code"

individual code (example)

# The DIP switches No. 8 and No. 9 have no function!

Please take the description and adjustments from the operating instructions of the appropriate hand-held/wall transmitter.

# 13. Radio codes

A maximum of three different functional codes can be taught. The motor can thus be a member in three groups that are independent of one another. Additionally, a further two radio sensor codes can be taught.

If three radio codes have already been taught and it is attempted to teach a fourth code, the radio code learnt as the third code is cancelled and replaced by the new code. If two radio sensor codes have already been taught and it is attempted to teach a third code, the radio sensor code learnt as the second code is cancelled and replaced by the new code.

## Example:

Wireless receiver in the motor				
Group 1 Code	Group 2 Code	Group 3 Code	Sensor 1 Code	Sensor 2 Code
+ 0 0 + - 0 -	+++00++	+ - + + - + +	+ - + + - + +	+ + + + +
	• • • • • • • • • • • • • • • • • • •	• • • • • • • • • • • • • • • • • • •	8 8 0	· · · · · · · · · · · · · · · · · · ·

For your documentation record any hand-held remote/sensor codes taught into the motor here:

Group 1	Group 2	Group 3	Sensor 1	Sensor 2

### Programming in the far range/near range

In the radio receiver of the motor is integrated an approach detector that recognizes whether a radio transmitter is operated from some distance = far range, (at least 1.5 metres distance to the motor control or 0.5 metres to the motor cable), or it is operated close to the antenna = near range, (at most 15 cm removed or directly on the motor connecting cable).



Caution: If radio receivers or motor connecting cables lie near to one another, unintentional codes can be transmitted to other radio receivers.

#### **Recommendation:**

When starting the motor for the first time, disconnect motors that are intended to be operated by another pair of keys, or by another code, from the mains.

# 14. Starting from end positions

#### No intermediate position is programmed:

For starting from end positions, a short key pressure in the appropriate travel direction is sufficient. For stopping the travel movement a short key pressure in the opposite direction is sufficient.

If a sun/wind sensor is integrated in the system, in the automatic mode (sun in) the end positions are travelled to.

#### An intermediate position is programmed:

For starting from the **end positions** the appropriate travel direction key must be pressed for at least **1.5 seconds**.

With a short key press **of under 1.5 seconds**, the **intermediate position** is travelled to. For stopping the travel movement a **short** key press in the opposite direction is sufficient.

If a sun/wind sensor is integrated in the sensor system, in the automatic mode (sun in) the intermediate position is **always** travelled to.

# 15. Obstacle recognition

When, after the teaching of the first complete, uninterrupted travel from one end position to the other end position is carried out, the torque needed is learnt.

In any following complete, uninterrupted travel from end position to end position, the torque needed is automatically reset. Slow changes in the installation due to ageing, soiling, cold or heat are thus automatically taken into consideration.

If a travel movement in UP direction is blocked by an obstacle, the motor switches off and a small return motion takes place.

The running direction in which the obstacle was recognized is blocked.

The block is removed if the motor has been operated in the opposite direction for a certain time. An obstacle must thus first be released before the motor can be operated again in the direction of the obstacle.

# 16. End position correction

If an end position with an end stop (Variant **A**, **B** or **C**) is taught, the motor in future stops **before** reaching the stop in order to avoid a mechanical loading of the hangings. Checking of the end position, and if appropriate an end position correction, takes place after 5, 20, and then every 50 cycles.

Should a **hangings elongation** have resulted, due to temperature changes, this is corrected at the next end position correction.

If, due to temperature changes, **modified winding behaviour** should arise and the hangings should run against the stop, an immediate end position correction takes place. In addition, the counter for the end position correction is started afresh.

Technical data of short motor SOLIDline (GU45)				
	GU4510	GU4520	GU4530	GU4540
Voltage	230V~/50Hz	230V~/50Hz	230 V~/50 Hz	230V~/50Hz
Current	0,47 A	0,63 A	0,8 A	1,0 A
Cos Phi (cosφ)	>0,95	>0,95	>0,95	>0,95
Inrush current (factor)	x 1,2	x 1,2	x 1,2	x 1,2
Power	105 W	140 W	180 W	220 W
Torque	10 Nm	20 Nm	30 Nm	40 Nm
Speed of rotation	16 1/min	16 1/min	16 1/min	16 1/min
Protection type	IP 44	IP 44	IP 44	IP 44
Total length <sup>1)</sup>	515,5 mm	545,5 mm	565,5 mm	585,5 mm
Operating type	S2 4 min	S2 5 min	S2 4 min	S2 4 min
Diameter	45 mm	45 mm	45 mm	45 mm
Weight	approx. 1,9 kg	approx. 2,2 kg	approx. 2,4 kg	approx. 2,7 kg

# 17. Technical data

<sup>1)</sup> SOLIDline-ZN/-KS: +1 mm / SOLIDline-COM/-SIC + 4,5 mm / SOLIDline-SOC: + 4 mm

Subject to technical modifications



# 18. Declaration of conformity

We herewith explicitly declare that this product complies with the essential requirements and relevant directives. It is authorised for use in all EC member states and in Switzerland without any need of prior registration. The Declaration of Conformity concerning this product is available on our website: www.geiger-antriebstechnik.de.

# 19. Notes on waste disposal Recycling of packaging materials

In the interest of environmental protection, please contact your local government's recycling or solid waste management department to learn more about the services it provides.

# Waste disposal of electric and electronic equipment

Electronic equipment or batteries cannot be discarded along with the normal household waste. Keep for more information on the recycling and disposal methods envisaged by the local regulations in your area.

# 20. Information for the specialist electrician



# Caution:

Wrong installation and wrong connection can lead to serious injuries.

The parallel operation of the several **SOLIDIne VariousWireless** is possible.

PVC cables are not suitable for equipment used outdoors or exposed to prolonged high levels of UV radiation.

These cables should not be used if they are likely to touch metal parts that can heat up to temperatures exceeding  $100^{\circ}$ C.

Connecting cables with plug connectors of the Hirschmann Company, type STAS 3K or the Phoenix Mecano Company, type GLS/3+PE may only be used in connection with the Hirschmann cable socket STAK 3K.



# 21. What to do if...

Problem	Solution
No short "click-click" on switching on the motor.	<ul> <li>Motor not plugged in.</li> <li>Please check the plug connection.</li> <li>Check connecting cable for possible damage.</li> <li>Check the mains voltage and allow the cause of the voltage breakdown to be tested by a specialist electrician.</li> </ul>
Instead of in the upwards direction, motor runs downwards.	• End positions are set wrongly. First set the upper, then the lower end position.

Problem	Solution
Hand-held transmitter does not work.	<ul> <li>Check the battery.</li> <li>The wind sensor has triggered. Try it again after the expiry of the wind cut-off time.</li> <li>Inadvertent deletion of the radio code.</li> <li>Start learning radio code again (see page 6).</li> </ul>
After running several times, the motor breaks down and no longer responds.	<ul> <li>The motor became too hot and has switched off.</li> <li>Try it again after a cooling time of about 15 min.</li> </ul>
The motor no longer runs automatically.	<ul> <li>The sun automatic control mechanism was switched off.</li> <li>The wind sensor has triggered. Try it again after the expiry of the wind cut-off time.</li> <li>Inadvertent deletion of the radio code. Start learning radio code again (see page 6).</li> </ul>
The motor does not react to the near range	<ul> <li>Move as close as possible to the motor head with the hand-held transmitter.</li> <li>Exchange the batteries in the hand-held transmitter.</li> </ul>
When turning on the power a 2 x Click-Click occurs and the motor does not react to the hand-held remote control.	<ul> <li>Press the UP or DOWN key with a suitable transmitter in the near range for at least 3 seconds. The motor confirms. (1 x "click-click").</li> <li>For resetting the motor to the learning mode, the voltage must be switched off and then on again (e.g. OFF – ON safety device).</li> <li>Continue with Chapter 6, "Bringing into service"!</li> </ul>

For technical questions, please call our service team at: +49 (0) 7142 938-300. They will be happy to assist you.



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