

Tubular motor:

## **GEIGER-SOLIDline**

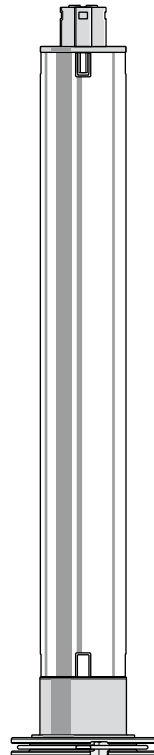
Motor control:

## **GEIGER-SoftReverse (GU45..E06)**

for sun protection systems with reverse position

**EN** Operating Instructions

**EN**



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# 1. Characteristics of the GEIGER-SoftReverse

## Application range:

For sun protection systems with reverse position

### Safety

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- A safe locking of the cassette through torque shutoff

### Fabric Protection

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- GEIGER Locking power minimisation (automatic function)
- GEIGER Powertronic (manual function: power level)

... for a nice long lasting fabric.

### Hanging Length Adjustment

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- Modifications in fabric lengths are recognised and compensated for

### Obstacle Recognition

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- Protection of the awning system by retracting the equipment

### GEIGER-Operating Radius Identification

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- Modern electronic control identifies the equipment's torque curve, and makes available to the motor the exact amount of power in the inflexion point range needed during operation, and while closing.

### Reverse in the lower end position

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- Perfect tensioning of the fabric

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## 2. 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.**

- ▶ **For sun protection systems with reverse position**
- ▶ **Drives are switchable in parallel**
- ▶ **Automatic identification of right hand/left hand installation**

## 3. 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.

## 4. 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.

## 5. Intended use

The tubular motors of the model range **SOLIDline (GU45..E06)** with the **Soft-Reverse** system are designed exclusively for the operation of sun protection systems with reverse position.

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.

## 6. Operation



**Precondition for safe operation is proper installation (see section 7) and correct commissioning (see section 8).**

When extending, the awning runs to the reverse position, stops for 1 second and then runs to the cloth tensioning function which ensures a perfect tensioning of the cloth.

If the cloth tensioning position is programmed on the reverse position, the motor will not reverse.

Press the retraction key in order to retract the cloth.

Systems with torque recognition switch off when the specified cut-off torque is reached.

A correction of the hanging length is performed with each complete run from the cloth tensioning function to the retracted end position.

In case of a free positioning of the end stop, the awning runs to the selected point and stops.



- Pos. 1: reverse position below the inflexion point
- Pos. 2: cloth tensioning function (in the inflexion point range) to optimize the tension of the cloth
- Pos. 3: retracted end position (learned position or end stop by closing of the cassette)

## 7. 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 measured 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.

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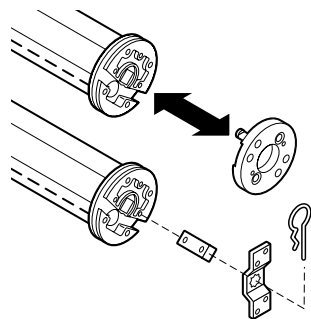
### Installation into the awning:

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 star-shaped 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

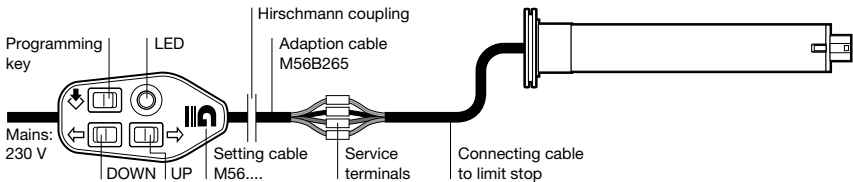
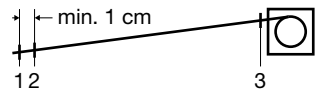


## 8. Setting of the end stops

Pos.1: reverse position below the inflexion point

Pos. 2: cloth tensioning function( in the inflexion point range) to optimize the tension of the cloth

Pos. 3: retracted end position (learned position or end stop by closing of the cassette)



### 8.1. Connection of the setting cable

Connect the setting cable to the connecting cable of the motor. When doing so, take care to ensure that the colours of the different leads do tally with each other. The assignment of the direction keys UP and DOWN is dependent on the installation situation of the motor. Then connect the setting cable to the 230V mains.

### 8.2. Activate the learning mode

Simultaneously activate both keys UP and DOWN until the motor responds (1 x clack-clack sound). Then release.

### 8.3. Learning of the reverse position (pos. 1)

Go to the reverse position with keys UP or DOWN. Activate simultaneously both keys when the desired position is reached. The motor clicks 2 x to confirm the storage of the position.

### 8.4. Learning of the cloth tensioning position (pos. 2)

Go to the cloth tensioning position with keys UP or DOWN. Activate simultaneously both keys when the desired position is reached. The motor clicks 3 x to confirm the storage of the position.

If the cloth tensioning position is programmed on the reverse position, the motor will not reverse.

### 8.5. Learning of the retracted end stop (pos.3)

#### a) Torque learning (cassette awning)

Retract the cloth with the UP or DOWN keys until the motor switches off. The motor clicks 4 x to confirm the storage of the position. The setting of the end stops is completed. The motor returns to normal operating mode.

#### b) Position learning (open style folding arm awnings)

Go to the desired position with the UP or DOWN keys. Activate simultaneously both keys, the motor saves the position and clicks 4 x to confirm. The setting of the end stops is completed. The motor returns to normal operating mode.



**There is no need to first delete the end stops (memorised) if you wish to modify them.**

## 9. Correction of the end stops

If a **lengthening/shortening of the hanging** has resulted due to e.g. temperature changes, this will be automatically corrected by closing the awning.

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.

After the first reference run, the motor automatically identifies the torque necessary to close the awning and closes it with the lowest possible power, so that the fabric is optimally protected.



**The automatic end stop correction is only active when the retracted end stop (pos. 3) is learned with torque recognition.**

## 10. GEIGER Powertronic

The GEIGER Powertronic enables the user to change the motor's closing characteristics. The user can raise or reduce the closing power applied through the motor. This way, he or she influences the closing characteristics of the casing. A rise in the closing power causes a tighter closing of the casing with increased stress on the fabric; a reduction in the closing power causes a looser closing and less strain to the fabric.

**Closing power levels:** from level 0 to level 7

**GEIGER-delivery setting:** level 4



**Caution: By manually raising the closing power (e.g. from level 4 to level 7) the fabric endures more strain.**

**In which situations is the GEIGER Powertronic applied?**

- If the casing does not completely close.
- If the closing operation should be optimised for better fabric protection.

**When can the GEIGER Powertronic be applied?**

- Anytime; this function can be activated during initial operation, as well as at a later date.

**Which resources are necessary?**

- GEIGER setting cable M56K144 (D), M56F150 (CH) or M56F151 (D with service terminal)

**Please note:**

- The stop positions are not affected when the GEIGER Powertronic is activated.
- The selected power level is not affected when the end stop positions are changed
- Only activate the GEIGER Powertronic after the stop positions have been taught-in and a complete reference run has been conducted.



## **GEIGER Powertronic – changing the power levels**

Connect the setting cable to the connecting cable of the motor. When doing so, take care to ensure that the colours of the different leads do tally with each other. Then connect the setting cable to the 230V mains.

### **Activating the GEIGER-Powertronic**

Activate simultaneously keys UP and DOWN. After approx. 3 seconds the motor confirms with 1 x clack-clack and after 5 seconds with 5 x clack-clack. Release the keys.

### **Changing the power levels**

Activate the key UP in order to increase the power level. After 3 seconds, the motor confirms with 1 x clack-clack. The key can now be released. If you keep pressing the key, another power level will be reached every 1,5 seconds and the motor confirms each new level with 1 x clack-clack. When the maximum force level is reached the motor confirms with 2 x clack-clack.

In order to reduce the power level activate the key DOWN and repeat the same operation.

The set value is saved with a simultaneous activation of UP and DOWN keys. The motor confirms with 1 x clack-clack and the control returns to normal mode.

## **11. Obstacle detection**

If, after teaching-in, the first complete, uninterrupted run from one stop position to the other is conducted, the necessary torque will be taught-in.

With each successive complete and uninterrupted run from one stop position to the other, the necessary torque is automatically readjusted. Slow changes to the equipment through aging, contamination, the cold or heat are accounted for in this regard. This process takes place for both running directions independently of one another.

Should UPWARD movement be blocked by an obstruction, the motor turns off and a short reverse movement occurs.

The direction of movement in which the obstruction was detected is locked.

The device will be unlocked if the motor is run for a short time period in the opposite direction. The obstruction must also be removed before the motor can be rerun in the direction of the obstruction.

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## 12. Technical data

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

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

Subject to technical modifications



## 13. 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](http://www.geiger-antriebstechnik.de).

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## 14. Information for the specialist electrician



**Caution: Wrong installation and wrong connection can lead to serious injuries.**

The adjusting cable M56K144, M56F150 or M56F151 must be used for the adjustment processes.

If required, use the adapter cable with service clamps M56B265.

The operations with the service clamps must only be carried out by a skilled electrician.

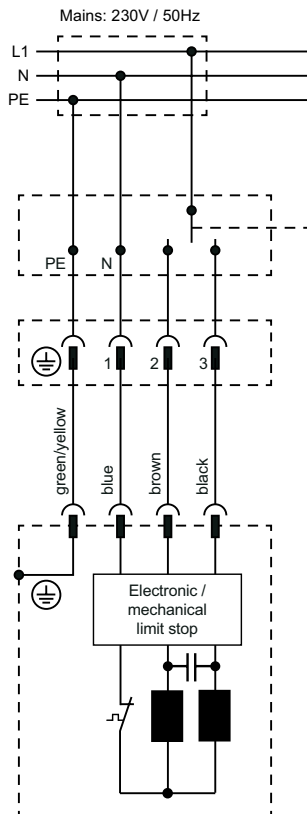
The parallel operation of several **SOLIDline Soft-Reverse** motors is possible. Please observe the rating of the control switch used.

Please do not use any installation switch which allows simultaneous up and down controls.

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°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.



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## 15. 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.

## 16. What to do if...

Problem	Solution
<b>Motor does not run.</b>	<ul style="list-style-type: none"> <li>• Motor not plugged in. 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>
<b>Instead of in the upwards direction, motor runs downwards.</b>	<ul style="list-style-type: none"> <li>• The control leads are interchanged. Exchange black/brown control leads.</li> </ul>
<b>Motor only runs in one direction.</b>	<ul style="list-style-type: none"> <li>• Motor in the end position. Run motor in the opposite direction.</li> </ul>
<b>After running several times, the motor breaks down and no longer responds.</b>	<ul style="list-style-type: none"> <li>• The motor became too hot and has switched off. Try it again after a cooling time of about 15 min.</li> </ul>
<b>The motor «hums» when the programming key is actuated. The LED lights weakly.</b>	<ul style="list-style-type: none"> <li>• Function is not provided</li> </ul>
<b>The reverse position has not been stored during programming.</b>	<ul style="list-style-type: none"> <li>• When programming, a minimum distance is required between reverse position and cloth tensioning position.</li> </ul>
<b>Motor should stop on reverse position for maintenance purposes but runs automatically on cloth tensioning position.</b>	<ul style="list-style-type: none"> <li>• Run motor to cloth tensioning position and switch off before automatic reverse.</li> </ul>

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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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Antriebstechnik

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