

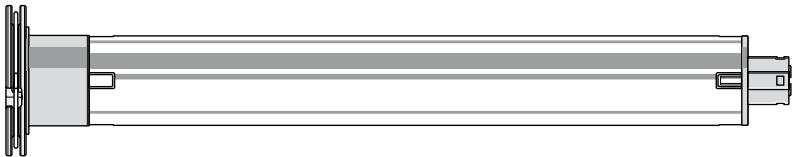
Tubular motor:

GEIGER-SOLIDline

Motor control:

GEIGER-SoftLock (GU45..E07)

For sun protection systems with locking mechanism



Index

1. Characteristics of the GEIGER-SoftLock.....	3
2. General information	4
3. Guarantee.....	4
4. Safety information	4
5. Intended use	5
6. Operation.....	5
7. Installation instructions	6
8. Setting of the end stops.....	7
9. Correction of the end stops.....	8
10. GEIGER Powertronic.....	8
11. Obstacle detection	9
12. Technical data.....	10
13. Declaration of conformity.....	10
14. Notes on waste disposal	10
15. Information for the specialist electrician	11
16. What to do if... ..	11

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1. Characteristics of the GEIGER-SoftLock

Application range:

For sun protection systems with locking mechanism

Safety

- A safe locking of the cassette through torque shutoff

Fabric Protection

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

...for a nice long lasting fabric.

Hanging Length Adjustment

- Modifications in fabric lengths are recognised and compensated for

Obstacle Recognition

- Reversing the rotation direction and obstacle clearance

GEIGER-Operating Radius Identification

- Modern electronic control identifies the equipment's torque curve and makes available to the motor the exact amount of power needed for extension, operation and closing.

Automatic locking in the extended end position

- For a perfect tensioning of the cloth

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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 locking mechanism**
- ▶ **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..E07)** with the **SoftLock** system are designed exclusively for the operation of sun protection systems with locking mechanism.

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 there for 1 second and then runs to the cloth tensioning position.

As a result, the front rail is locked and the tensioning of the cloth is optimal.

When activating the retraction key, the awning runs to the unlock position, stops there for 0,5 second and runs to the retracted position.

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.



Pos 1: Reverse position below the cloth tensioning position.

Pos 2: Cloth tensioning position, the front rail snaps into place and the cloth is perfectly tense.

Pos 3: Unlock position to retract without snap-in.

Pos 4: Retracted end position (learned position or end stop by closing the cassette).

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

Behaviour of the control after meeting an obstacle or after a manual shut down in the range between the unlock position and somewhat above the cloth tensioning position:

Retraction: the awning runs first to the unlock position and then retracts.

Extension: the awning runs first to the unlock position, then somewhat above the cloth tensioning position to the reverse position and then to the cloth tensioning position. This makes sure that the front rail is on the right side of the hook and guarantees a perfect tensioning of the cloth.

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 taken from the tube end to the center of the drive and marked on the tube.

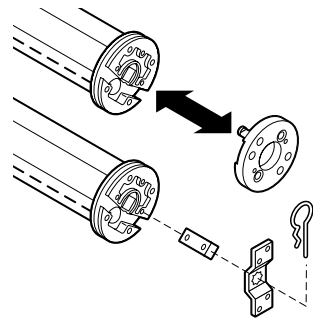
When drilling the winding shaft **never** drill into the area of the tubular motor!

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 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.

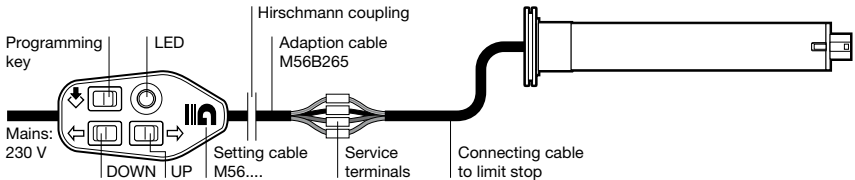


Depending on the selected motor head, different fixation systems can be used:

- 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 cloth tensioning position
Pos. 2: Cloth tensioning position: the front rail snaps into place and the cloth is perfectly tense.
Pos. 3: Unlock position to retract without snap-in
Pos. 4: Retracted end position (learned position or end stop by closing 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. The motor switches off when the desired torque has been reached. It saves the position and clicks 3 x to confirm.

8.5. Learning the unlock position (pos.3)

Go to the unlock position with keys UP or DOWN. Activate simultaneously both keys in order to save the position. The motor clicks 4 x to confirm.

8.6. Learning the retracted end stop (pos. 4)

a) Torque learning (cassette awning)

Retract the awning with the UP or DOWN keys until the motor switches off. The retracted position is saved. The motor clicks 5 x to confirm. The setting of the end stops is completed. The motor returns to normal operating position.

b) Position learning (open style folding arm awning)

Go to the desired position with the UP or DOWN keys. Activate simultaneously both keys, the motor saves the position and clicks 5 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. 4) is learned with torque recognition.

10. GEIGER Powertronic

The GEIGER-Powertronic enables the user to change the motor's closing characteristics as well as the tensioning of the cloth in the extended end position.

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 2



Caution: By manually raising the closing power (e.g. from level 2 to level 4) the fabric endures more strain.

In which situations is the GEIGER Powertronic applied?

- To optimize the tension of the cloth in the extended end position.
- 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 tubular motor SOLIDline-KS (GU45..)						
	GU4506	GU4510	GU4520	GU4530	GU4540	GU4550
Voltage	230 V~/50 Hz					
Current	0,36 A	0,47 A	0,63 A	0,8 A	1,0 A	1,0 A
Cos Phi (cosφ)	>0,95					
Inrush current (factor)	x 1,2					
Power	83 W	105 W	140 W	180 W	220 W	220 W
Torque	6 Nm	10 Nm	20 Nm	30 Nm	40 Nm	50 Nm
Speed	16 rpm	16 rpm	16 rpm	16 rpm	16 rpm	12 rpm
Protection class	IP 44					
Total length¹⁾	506,5 mm	516,5 mm	546,5 mm	566,5 mm	586,5 mm	586,5 mm
Operating mode	S2 4 min	S2 4 min	S2 5 min	S2 4 min	S2 4 min	S2 4 min
Sound pressure level²⁾	39 dB(A)	39 dB(A)	41 dB(A)	41 dB(A)	43 dB(A)	-
Diameter	45 mm					
Weight	approx 1,85 kg	approx 1,90 kg	approx 2,20 kg	approx 2,40 kg	approx 2,70 kg	approx 2,70 kg
Ambient temperature / humidity	Operation: T = -10°C .. +60°C / H max. 90% Storage: T = -15°C .. +70°C / dry and non-condensing place					

¹⁾ **SOLIDline-ZN**: -1 mm / **SOLIDline-COM** + 3,5 mm / **SOLIDline-SOC**: + 3 mm

²⁾ The average sound pressure level data are intended for guidance only. The values were determined by GEIGER at a distance of 1 m, with a hanging motor at idle speed and averaged over 10 seconds. There is no reference to any specific test standard.

Subject to technical modifications



EN 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.de.

14. 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.

15. 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-Lock** motors is possible. Please observe the rating of the control switch used.

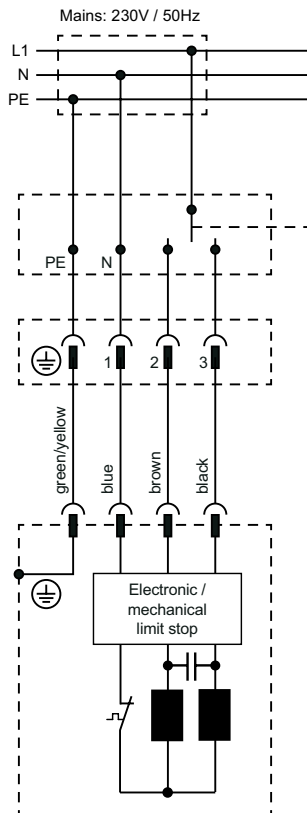
Please do not use any installation switch which allows simultaneous up and down controls.

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 are tested and approved with couplings of the Hirschmann Company.

In order to prevent a malfunction caused by coupling, the supply line (ref. NYM) from the actuator/switch to the motor must not exceed 100m in case of motors with electronic end stops.



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16. What to do if...

Problem	Solution
Motor does not run.	<ul style="list-style-type: none"> • Motor not plugged in. Please check the plug connection. • Check connecting cable for possible damage. • Check the mains voltage and allow the cause of the voltage breakdown to be tested by a specialist electrician.
Instead of in the upwards direction, motor runs downwards.	<ul style="list-style-type: none"> • The control leads are interchanged. Exchange black/brown control leads.
Motor only runs in one direction.	<ul style="list-style-type: none"> • Motor in the end position. Run motor in the opposite direction. • Readjust end position if necessary.

Problem	Solution
After running several times, the motor breaks down and no longer responds.	<ul style="list-style-type: none"> The motor became too hot and has switched off. Try it again after a cooling time of about 15 min.
The motor «hums» when the programming key is actuated. The LED lights weakly.	<ul style="list-style-type: none"> Function is not provided.
Motor should stop on reverse position or on unlock position for maintenance purposes but runs automatically on cloth tensioning position	<ul style="list-style-type: none"> Run the motor to the reverse position (pos. 1) or to the unlock position (pos. 3) and switch off.
After a manual stop, the motor does not retract the awning immediately but extends it.	<ul style="list-style-type: none"> The motor is between the unlock position (pos. 3) and somewhat above the cloth tensioning position (pos.2). To make sure that the motor does not snap in when retracting, the motor should run first to the unlock position and then to the retracted end position. (pos.4)
After a manual stop the motor does not stop on the reverse position when extending the awning but runs on.	<ul style="list-style-type: none"> The motor is between unlock position (pos. 3) and somewhat above the cloth tensioning position (pos.2). To make sure that the motor hits the hooks, go first to the unlock position. Afterwards, the direction rotation is changed automatically and the motor runs somewhat above the cloth tensioning position (pos. 2) . From there, it runs automatically to the reverse position and then to the cloth tensioning position (pos.2)

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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.



Gerhard Geiger GmbH & Co. KG
 Schleifmühle 6
 D-74321 Bietigheim-Bissingen
 Telephone: +49 (0) 7142 938-0
 Telefax: +49 (0) 7142 938-230
 E-Mail: info@geiger.de
 Internet: www.geiger.de

