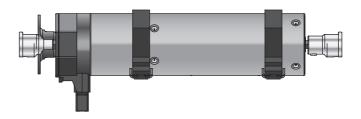


Motor for Venetian blinds:

**GEIGER GJ56.. AIR (GJ56.. F03)** 

for Venetian blinds



**EN** Original assembly and operating instructions

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#### 1. General information

Dear customer.

By purchasing a GEIGER 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 instructions. It serves for the prevention of danger and for the avoidance of personal injury and damage to property.

The installation and operating instructions contain important information for the installer, the specialist electrician and the user. Please pass on these instructions if you transfer the product. These instructions should be kept by the user.

#### 2. Guarantee

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

# 3. Intended use

The motors of the model range **GJ56.. F03** with electronic end stop are designed exclusively for the operation of Venetian blinds.

The motors may not be used for the operation of roller grilles, garage doors, furniture and lifting tools.

GJ 56 xx x

Design options
Torque in Nm
For head rails at least 56 mm
GEIGER Venetian blinds motor

## 4. Safety instructions



ATTENTION: Important safety instructions. For personal safety, it is important to follow these instructions. Please keep these instructions for future reference.

- Do not allow children to play with stationary controls. Keep remote controls away from children.
- The installation is to be checked regularly for defective balance, signs of wear or damaged cables and springs, if relevant.
- Do observe the moving sun protection system and keep persons away until it has closed completely.
- ▶ When operating the manual release with the sun protection system open, please be cautious as it can fall down quickly if springs or tapes wear off 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 automatic controlled device from the mains power supply if operations such as, for example, window cleaning are being carried out in the vicinity.
- ▶ During operation observe the danger zone.
- ▶ Do not use the installation if people or objects are in the danger zone.
- Urgently shut down damaged installations until repair.
- ▶ Unconditionally shut down the unit during maintenance and cleaning operations.
- ▶ Pinching and shearing points are to be avoided and must be secured.
- ▶ This appliance can be used by children aged 8 and above and persons whose physical, sensorial or mental capacities are impaired, or who have no experience or know-how if they have been supervised or been given instructions on the use of the appliance and if they understand the possible resulting dangers. Children are not permitted to play with the device. Cleaning and maintenance should not be carried out by children.
- ► The rated sound pressure level is less than 70 dB(A).
- Disconnect the device from the mains power supply for maintenance and replacement of parts.

If the motor is disconnected via a plug connection the operator must be able to control - from any place to which it has access – that the plug is removed. If this is not possible - due to design or installation - the disconnection from the power supply must be ensured via locking in the disconnected position (e.g. isolator).

► The motor tube can get very hot during prolonged use.

When working on the unit, do not touch the tube before it has cooled down.

# 5. Safety instructions for assembly



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

▶ When mounting the motor without any mechanical protection of the driven parts and of the tube which may become hot, the 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.

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- ▶ Before the motor is installed, all cables which are not needed are to be removed and all equipment which is not needed for power-operated actuation is to be put out of operation.
- ► The actuating element of a manual release must be mounted at a height of less than 1.8 m.
- ▶ If the motor is controlled by a switch or pushbutton, the switch or pushbutton must be mounted within eyeshot of the 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.
- Permanently installed control devices must be attached visibly.
- ► In case of devices extending horizontally, a horizontal distance of at least 0.4 m must be respected between the fully extended part and any other fixed element.
- ► The rated speed and the rated torque of the motor must be compatible with the device.
- ► The mounting accessories that are used must be designed in accordance with the selected rated torque.
- Good technical knowledge and good mechanical skills are necessary for the motor installation. Incorrect installation can lead to serious injury. Electrical work must be carried out by a qualified electrician in accordance with the regulations in force locally.
- ▶ Only use connecting cables that are suitable with the environmental conditions and which meet the construction requirements. (see accessories catalogue)
- If the device is not equipped with a connecting cable and a plug, or other means for disconnecting from the mains with a contact opening on each pole according to the conditions of the overvoltage category III for full disconnection, a disconnecting device of this type must be incorporated into the permanently installed electrical installation according to the wiring rules.
- ▶ Do not mount the connecting cables near hot surfaces.
- ► A plug for the disconnection of the motor from the power supply must be accessible after installation.
- Damaged connecting cables must be replaced by GEIGER connecting cables of the same type.
- ► The device must be mounted as described in the installation instructions. Fixations shall not be made with adhesives since they are regarded as unreliable.

# 6. Assembly note

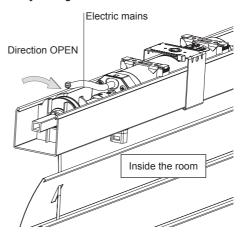
When viewed from inside the room, the power supply connection of the **GJ56.. F03** is located on the left side. The straps are wound on the winding rollers from the outside.

The **GJ56.. F03** must be installed in alignment with the turning bars.

It is important that the **GJ56.. F03** is installed centrally. Please make sure that the load is evenly distributed.

#### Inclined installation:

The inclined installation is permitted till 45° maximum to level.



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# 7. Installation instructions

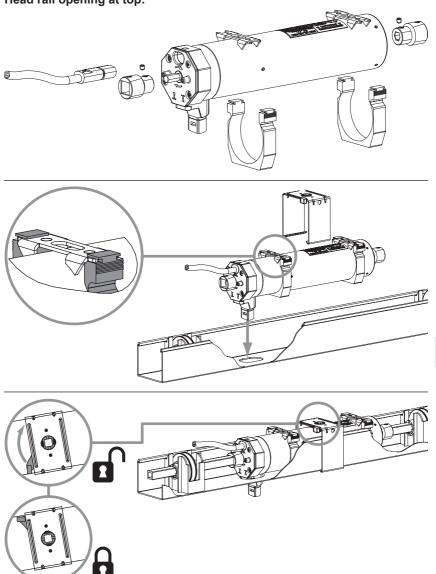
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Prior to installation please check to ensure there is no visible damage to the motor like cracks or open cables.

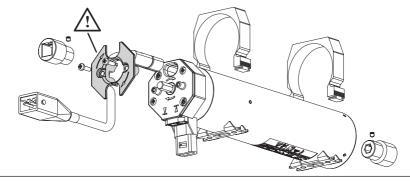
 $\triangle$ 

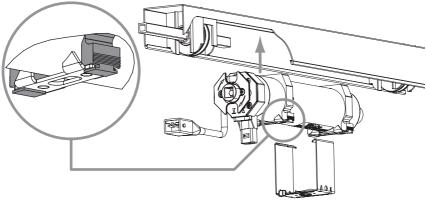
Before fixing please check the strength of the masonry and of the surface.

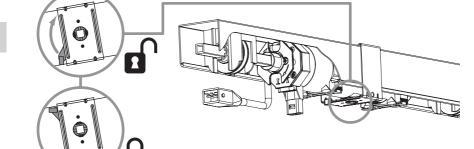
Head rail opening at top:



# Head rail opening at bottom:







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# 8. Information for the specialist electrician



The GJ56.. AIR can be connected to the mains supply with either a 4-wire connection cable (Flat4 plug) or with a 5-wire connection cable (Flat5 plug).



Caution: Important installation instructions.

Please follow all instructions since incorrect installation can lead to the destruction of the motor and the switching unit.

#### General

- The operations with the service clamps may be accomplished only by an electrical specialist.
- Motors with electronic limit stops can be connected in parallel.
- In this case the maximum load of the switching unit must not be exceeded.

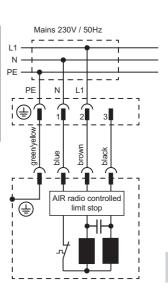
## Connection with a 4-wired connecting cable



# **CAUTION / IMPORTANT NOTE**

- The black wire of the connecting cable can be under power.
- The black wire must be fully insulated for touchsafe operations.
- The open end of the black wire must be insulated with an insulated clamp or other insulated material.
- When changing the running direction the switchover must be effected through an off-position.
- When changing the running direction the switchover time must be at least 0.5 s.
- With a three-phase network, please use the same external conductor in order to control the UP and DOWN directions.
- 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 70°C.
- Connecting cables with plug connectors of the Hirschmann Company are tested and approved with couplings of the Hirschmann Company.

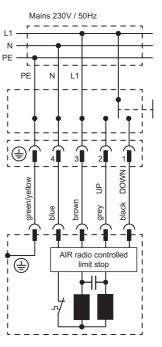
Hirschmann plug connectors	Function	Wire colour			
PE contact	PE	green/yellow			
Pole 1	N	blue			
Pole 2	L	brown			
Pole 3	without function	black			
Cable designation: 05RR-F 4G 0,75mm <sup>2</sup>					



# Connection with a 5-wired connecting cable

- When changing the running direction the switchover must be effected through an off-position.
- When changing the running direction the switchover time must be at least 0.5 s.
- With a three-phase network, please use the same external conductor in order to control the UP and DOWN directions
- 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 70°C.
- Connecting cables with plug connectors of the Hirschmann Company are tested and approved with couplings of the Hirschmann Company.

Hirschmann plug connectors	Function	Wire colour		
PE contact	PE	green/yellow		
Pole 1	DOWN	black		
Pole 2	UP	grey		
Pole 3	L	brown		
Pole 4	N	blue		
Cable designation: 05RR-F 5G 0 75mm <sup>2</sup>				



# 9. Operating modes of the GEIGER GJ56.. AIR

The motor can be operated in three ways.

Individual control: the motor is operated with a handheld or wall transmitter. Alternatively, the motor may be additionally operated with a locked control button. For this purpose, connect the motor with a 5-core connection cable according to the diagram. The adjustment of the end positions is only possible via a handheld or wall transmitter.

Smart Home control: the motor is connected, configured and operated with a Loxone Miniserver or a Loxone Miniserver Go.

A subsequent change between individual control and Smart Home control is possible by repeated teaching in of the motor (see point 11 or point 23). Reprogramming of the end positions is not necessary.

Please find below the commissioning/ operating instructions concerning the individual control with hand-held or wall transmitter.

The commissioning/ operating instructions with a Loxone Miniserver or Loxone Miniserver Go are under point 23.

# 10. Programming/deleting the handheld or wall transmitter

In Smart Home mode, the handheld or wall transmitters can be directly programmed on the Loxone Miniserver. For more information please refer to the assembly and operation instructions of the transmitters or click: www.loxone.com/help/lcair

#### Activate the learning mode

Connect the motor with the electrical power supply. Switch on mains. The motor makes two short movements (2 x click).

# The learning mode is now available for the next 30 minutes.

Press the RIGHT and LEFT keys of the LC AIR transmitter simultaneously for about 10 seconds until the channel LED flashes. The transmitter is now in the learning mode.

Press the STOP key for about 1,5 seconds. The motor which is nearest to the transmitter or which has the best reception confirms the learning mode (2 x click).



Should the improper motor be selected, move closer to the motor you need.

#### Learning the handheld or wall transmitter



The learning mode must be activated and the motor must be selected first in order to learn/delete the transmitter.

Select on the transmitter the channel on which the motor should be operated.

Press STOP and UP keys for approximately 1,5 seconds. The motor confirms (1 x click). The selected channel is programmed in the motor.

In order to learn further channels: Select channel on the transmitter and press STOP and UP keys for about 1.5 seconds.

#### Deactivate the learning mode

To deactivate the learning mode, press simultaneously the LEFT and RIGHT keys of the LC AIR transmitter for about 4 seconds until the channel LED stops blinking. The learning mode is deactivated.

#### Delete the learned handheld or wall transmitter



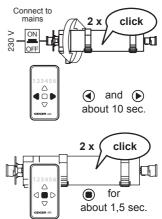
The learning mode must be activated and the motor must be selected first in order to learn/delete the transmitter.

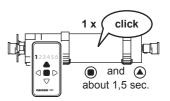
Select on the transmitter the channel to be deleted. Press STOP and DOWN keys for approximately 1,5 seconds. The motor confirms (4 x click). The selected channel is deleted in the motor.

When there are no more programmed transmitters, the motor confirms with 6 x click.

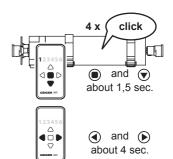
#### Deactivate the learning mode

To deactivate the learning mode, press simultaneously the LEFT and RIGHT keys of the LC AIR transmitter for about 4 seconds until the channel LED stops blinking. The learning mode is deactivated.









# 11. Learning mode for end positions

#### Activate the learning mode for end positions

Connect the motor with the electrical power supply. Switch on mains. The motor makes two short movements (2 x click).

# The learning mode is now available for the next 30 minutes.

Press simultaneously the UP and DOWN keys of the LC AIR transmitter for about 10 seconds until all channel LEDs flash alternately. The transmitter is now in the learning mode.

Press the STOP key for about 1,5 seconds. The motor which is nearest to the transmitter or which has the best reception confirms the learning mode for end positions (2 x click).

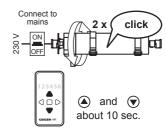


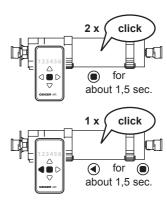
# Should the improper motor be selected, move closer to the motor you need.

Press LEFT and STOP keys for about 1,5 seconds to activate the learning mode for end positions. The motor confirms with a short movement (1 x click).



The motor jerks (start, stop, start) at each run command to confirm the learning mode for end position activation.





# 12. Setting the end positions



The learning mode for end positions must be activated first in order to set the end positions (see point 11).



Please note: the lower end position must be learned first.

#### Lower end position:

Press the UP or DOWN key and keep it pressed until the sun protection has reached the desired lower end position. Corrections with UP or DOWN key are possible.

## Store lower end position:

Press at the same time the STOP and RIGHT key for about 1.5 seconds. The motor confirms with 2 x click.

#### Upper end position with limit stop switch:

Press the UP key until the motor turns off automatically. The position is now stored and the motor confirms with 4 x click.

#### Upper end position on position:

Press the UP or DOWN key and keep it pressed until the sun protection has reached the upper end position. Corrections can be done with the UP and DOWN keys.

#### Store upper end position:

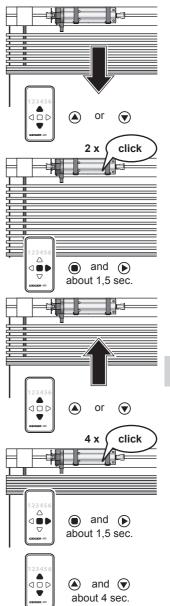
Press at the same time the STOP and RIGHT key for about 1,5 seconds. The motor confirms (4 x click).



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

#### Deactivate the learning mode for end positions

To deactivate the learning mode for end positions, press simultaneously the UP and DOWN keys of the transmitter for about 4 seconds until the channel LEDs stop blinking. The learning mode for end positions is now deactivated.



Disconnect the motor from the electrical power supply for about 5 seconds. Switch on mains again.

The motor makes two short movements (2 x click).

The learning mode is now available for the next 30 minutes.



# The end position will be modified that is closer to an already learned end position.

Press the UP and DOWN keys of the transmitter simultaneously for about 10 seconds until all channel LED flash alternately. The transmitter is now in the learning mode.

Press the STOP key for about 1,5 seconds. The motor which is nearest to the transmitter or which has the best reception confirms the learning mode (2 x click).



# Should the improper motor be selected, move closer to the motor you need.

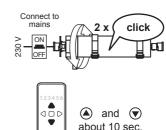
Press STOP and UP keys for approximately 1,5 seconds. The motor confirms (1 x click).

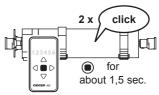
Press the UP or DOWN key and keep it pressed until the sun protection has reached the selected upper or the lower end position. Corrections can be done with the UP and DOWN keys.

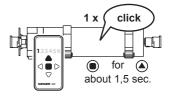
Press STOP and RIGHT keys for approximately 1,5 seconds. The motor confirms (4 x click for the upper end stop and 4 x click for the lower end stop). If the upper position is learned on the limit stop switch, the position will be learned automatically without confirmation.

#### Deactivate the learning mode for end positions

To deactivate the learning mode for end positions, press simultaneously the UP and DOWN keys of the transmitter for about 4 seconds until the channel LEDs stop blinking. The learning mode for end positions is now deactivated.









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# 14. Intermediate position

#### Learning the intermediate position

Travel from any position to the selected end position, stop with the opposite key and hold key pressed for approx. 2 sec. until the motor responds (2 x click). Then release the key.

When the intermediate position is reached, the slat angle can be adjusted in the next 10 seconds.

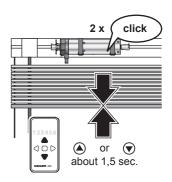
After a further 10 sec., the intermediate position with slat angle is confirmed (2 x click) and stored.

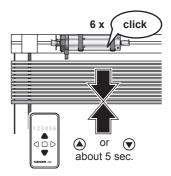
#### Changing the intermediate position

See "learning the intermediate position" and select a new intermediate position.

#### Deleting the intermediate position

Stop the sun protection when moving upwards or downwards with the opposite key and keep key pressed for about 5 sec. The motor responds after 2 sec. (2 x click) and confirms the deletion of the intermediate position (6 x click).





# 15. Moving to the end positions

#### No intermediate position has been programmed:

In order to reach the end positions, press the appropriate travel direction key at least 1,5 seconds.

#### An intermediate position is programmed:

In order to reach the end positions, press the appropriate travel direction key at least 3 seconds.

The intermediate position is travelled to with a short key pressure of **more than 1,5 sec**. and **less than 3 sec**. In order to stop the travel movement just press **shortly** the opposite travel direction key or stop key.

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# 16. Grouped control

(also see point 10 Programming/deleting the LC AIR handheld or wall transmitter)

Operation: individual or grouped control of sun protection A and sun protection B with 6-channel transmitter LC AIR

Connect the motor with the electrical power supply. Switch on mains. The motor makes two short movements ( $2 \times \text{click}$ ).

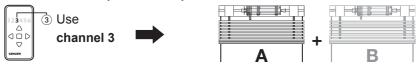
Press the RIGHT and LEFT keys of the transmitter LC AIR simultaneously for about 10 seconds until the channel LED flashes. The transmitter is now in the learning mode.

#### Sun protection: A

- 1. Press STOP key 1,5 seconds to select the motor
- 2. Select the channel (here channel 1) with LEFT or RIGHT key
- 3. Press STOP and UP keys simultaneously 1,5 seconds to learn the channel.



- 4. Select the group channel (here channel 3) with LEFT or RIGHT key
- 5. Press STOP and UP keys simultaneously 1,5 seconds to learn the channel.



#### Sun protection: B

- 1. Press STOP key 1,5 seconds to select the motor
- 2. Select the channel (here channel 2) with LEFT or RIGHT key
- 3. Press STOP and UP keys simultaneously 1,5 seconds to learn the channel.



- 4. Select the group channel (here channel 3) with LEFT or RIGHT key
- 5. Press STOP and UP keys simultaneously 1,5 seconds to learn the channel.



If an operating command is now given for the **channel 1**, the **sun protection A** opens or closes.

If the operation command is given for **channel 2**, the **sun protection B** opens or closes. In order to open or close both **sun protection systems A and B** simultaneously, you must select **channel 3** and give the desired operation command.

# Deactivate the learning mode

To deactivate the learning mode, press simultaneously the LEFT and RIGHT keys of the LC AIR transmitter for about 4 seconds until the channel LEDs stop blinking. The learning mode is now deactivated.



and about 4 sec.

# 17. Referencing on the limit stop switch

The referencing on the limit stop switch can compensate a possible drifting of the upper end position due to the modified winding behaviour of the lifting tapes.

If the referencing has been activated (see below), the fifth run upwards is done till the limit stop switch.

The variation in distance between the upper limit position and the limit stop switch is stored.

After 5, 20 and then every 50 cycles on the upper end stop, the motor runs against the limit stop switch in order to test if the variations in distance have changed. If this is the case, the upper end position is readjusted.

The motor stops on the limit stop switch by each reference run.

# 18. Enable/disable reference cycles

## Switching on/off referencing:

If the upper and lower end positions are set on position (see point 12), the referencing is automatically disabled.

If the lower end stop is readjusted on position and the upper end stop on the limit stop switch (see point 12), the referencing is **disabled**.

If now the upper end position is adjusted again on position (see point 13) the referencing is automatically on. With a new setting of the upper end position (see point 13) on position, the referencing remains **on**.

# 19. Obstacle detection and anti-freeze protection

For an optimal operation of the obstacle detection function, move the sun protection from bottom to top without interruption, after the programming has been completed.

After an obstacle detection (e.g. obstacle or blind frozen to the window sill), the UP direction is blocked.

A short command in the DOWN direction releases the UP direction.

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# 20. What to do if...

Problem	Solution
Motor does not run.	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 downwards direction, motor runs upwards.	The control leads are interchanged. Exchange black/brown control leads.  End position order was not observed (set first the lower end position)
Motor only runs in one direction.	Motor in the end position.     Run motor in the opposite direction.     Readjust the end positions, if necessary.
After running several times, the motor breaks down and no longer responds.	The motor became too hot and has switched off.  Try it again after a cooling time of about 15 min.
The blind is in the upper position, actuates the limit stop switch and can no longer be moved downwards.	The motor was installed upside down or the lower end position has been overrun and the lift tapes were wound up incorrectly. Allow free mobility of the limit stop switch. Reset the end stops.
The slats are positioned at different angles depending if the intermediate position is approached from the top or from below.	Reset the reference angle of the slats.

#### **EU Declaration of Conformity**

Gerhard Geiger GmbH & Co. KG Antriebstechnik Schleifmühle 6 D-74321 Bietigheim-Bissingen

#### Product designation:

Venetian blinds motor, motor for rolling shutters, motor for awnings

#### Type designation:

GJ56.., GR45.., GU45.., GSI56.., GB45.., GB35..

#### Applied directives:

2006/42/EG 2014/53/FU

2011/65/EU + (EU)2015/863 + (EU)2017/2102

#### Applied standards:

EN 60335-1:2012

EN 60335-1:2012/AC:2014 EN 60335-1:2012/A11:2014 EN 60335-1:2012/A13:2017 EN 60335-1:2012/A1:2019 EN 60335-1:2012/A14:2019

EN 60335-1:2012/A2:2019

EN 60335-2-97:2006+A11:2008+A2:2010+A12:2015

FN 62233:2008 EN 62233 Ber.1:2008 EN IEC 5514-1:2021

EN IEC 5514-2:2021

EN IEC 61000-3-2:2019+ EN IEC 61000-3-2:2019/A1:2021

EN 61000-3-3:2013+EN 61000-3-3:2013/A1:2019+EN 61000-3-3:2013/A2:2022

ETSI EN 301 489-1 V2.2.3 (2019-11) ETSI EN 301 489-3 V2.1.1(2019-03) ETSI EN 300 220-2 V3.2.1 (2018-06)

DIN EN IEC 63000:2019-05

#### Authorized representative for technical data:

Gerhard Geiger GmbH & Co. KG

#### Address:

Schleifmühle 6, D-74321 Bietigheim-Bissingen

Bietigheim-Bissingen, 18.07.2023

Roland Kraus (General Manager)

Schleifmühle 6 | D-74321 Bietigheim-Bissinge

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Komplementär: Geiger Verwaltungs-GmbH | Sitz Bietigheim-Bissingen | Amtsgericht Stuttgart HRB 300481 Geschäftsführer: Roland Kraus | WEEE-Reg.-Nr. DE47902323

Current declarations of conformity are available under www.geiger.de

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#### **Conditions**

In order to integrate the GEIGER GJ56.. AIR in your Loxone system, a Miniserver Go or a Miniserver with Air Base Extension must be operational.

More information under: www.loxone.com/help/miniserver

#### **Commissioning in Loxone Config**

Open Loxone Config and connect with your Miniserver. Then select the Air Base Extension in the peripheral tree and activate the Air Monitor. Next, click "start search" in the learning monitor. All Air devices that are in the learning mode are now listed.



Now connect the Venetian blind motor to a power source. To signal a restart, the motor twitches twice and scans the available radio channels until it finds a searching Air Base.

Now mark the GJ56.. AIR , enter a name and assign a room to it. Then, click "create device".



The Venetian blind motor appears under the given designation in the tree. When it is clicked in the tree, it jerks twice.



Select the Venetian blind motor and drag & drop to a programming page.

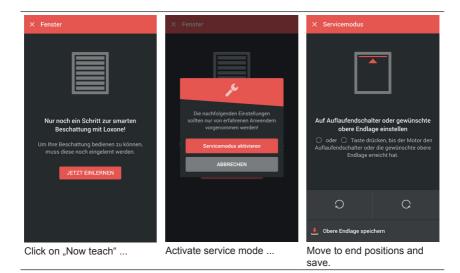


"Save in Miniserver" transfers the changes made in the Config to the Miniserver.



The motor is now programmed and features the standard configuration as well as a visualization where the upper end position can be easily taught. For more information and documentation please visit www.loxone.com/help/blindmotor-gj56-air

If the end positions have already been programmed with a handheld or wall transmitter they do not need to be taught again.



The motor confirms the learning of the lower end position with 2 x "click", the upper end position and thus the end of the end position storage is confirmed with 4 x "click".

Between learning the lower end position and learning the upper end position you have 2 minutes, otherwise the previously set values (or the factory state) are restored - in this case the tubular motor confirms with 6 x "click".

ATTENTION: Depending on the mounting position, the Venetian blind has different directions of rotation to roll up the blind. Therefore, only the running direction of the motor, but not the winding direction of the blind, can be unambiguously determined in advance.

Once the end positions are set, the blind can be operated normally.

## 23. Technical data

Technical data GJ56 F03					
	GJ5606k F03	GJ5610 F03	GJ5620 F03		
Voltage		230 V~/50 Hz			
Current	0,40 A	0,60 A	0,85 A		
Cos Phi (cosφ)		> 0,95			
Inrush current (factor)		x 1,2			
Power	93 W	135 W	190 W		
Torque	6 Nm	10 Nm	2 x 10 Nm		
Speed		26 rpm			
Protection class		IP 54			
Limit switch range		200 rpm			
Operating mode	S2 4 min.	S2 4 min.	S2 4 min.		
Length	319,5 mm	329,5 mm	356,7 mm		
Diameter	55 mm				
Weight	ca. 1,50 kg	ca. 1,70 kg	ca. 2,20 kg		
Air humidity	dry and non-condensing place				
Storage temperature	T = -15°C +70°C				

Subject to technical modifications. Please find information to the ambient temperature range of our GEIGER motors under www.geiger.de

## 24. Maintenance

The drive is maintenance-free.

# 25. 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

Electrical and electronic equipment must be collected and disposed of separately in accordance with EU regulations.

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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