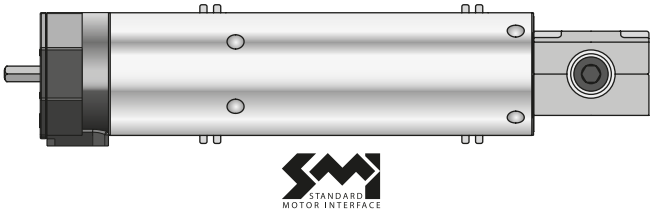
GEIGER
ANTRIEBSTECHNIK

GEIGER System INline GJ56.. r2-E17 SMI 3.0

with electronic end stop for the facade technology



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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 GJ56.. r2-E17 SMI 3.0 series with electronic end stop are designed for operation with Venetian blinds that are within a façade whereas the motor is outside the cavity.

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

GJ 56 xx x

- **x** – **Design options**
- **xx** – **Torque in Nm**
- **56** – **Motor diameter**
- **GJ** – **GEIGER INline System**

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.

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5. Safety instructions for assembly

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

- **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.**
- **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.**

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6. Assembly instructions

A prerequisite for a safe functioning of our system components is a proper assembly taking into account the relevant standards and guidelines in the production of element facades.

The system components supplied by GEIGER may not be reprocessed or altered, otherwise the warranty expires.

Before installation, the motor and the other system parts should be checked for visible damage.

Connecting element:

The connecting element must be screwed at right angles to the mounting surface. It is important to ensure that the mounting surface is cleaned and the seal of the connecting element fits cleanly and evenly on the mounting surface.

Please make sure that the connecting element and the facade element are firmly and durably connected. Tightening torques depend on the facade element and must be determined by the facade manufacturer.

The tightness of the connection between the connecting element and the facade element must be checked on site during installation.

A centering bore optionally used for double-walled profiles may not be larger than + 0.3 mm compared to the centering collar.

Cavity gear:

The cavity gear must be fixed within the cavity in such a way that the hexagonal rod of the connecting element can be inserted without tension into the hexagonal holding of the gear.

The screws must be secured with a screw-lock.

The hexagonal rod of the connecting element must fit exactly into the hexagonal housing of the flanged gear and must not be subject to tension during operation.

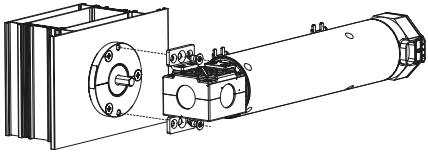
Motor with flanged gear – Parallel mounting:

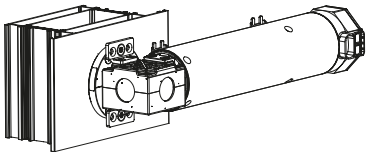
Screw mounting

For parallel mounting (radial), the drive is placed on the 7 mm hexagonal rod of the connecting element. The drive is attached to the fixing bracket on the angle gear using 2 galvanized countersunk head screws DIN-EN-ISO 14581 8.8 M5 x 10 and a tightening torque M = 2Nm.

The screws must be secured with a high-strength screw-lock.

The hexagonal rod of the connecting element must fit exactly into the hexagonal housing of the flanged gear and must not be subject to tension during operation.





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7. Identification number

Four removable ID stickers are applied on the connecting cable of the motor **GJ56.. r2-E17 SMI 3.0**. The printed number SMI-KEY-ID clearly identifies the motor in the bus system.

The stickers and / or the connecting cable must not be interchanged.

The stickers are useful if you want to note the installation location for a later bus integration of each motor (see “for your notes”).

8. Information for the specialist electrician

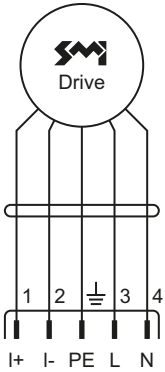
Caution: Important installation instructions.
Please follow all installation instructions since incorrect installation can lead to the destruction of the motor and the switching unit.

Attention! The bus voltage is not a safe low voltage. The bus is not galvanically isolated from the supply voltage.

The motor can only be operated with SMI certified actuators.

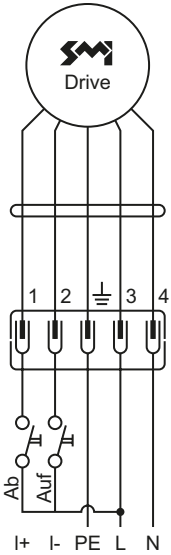
- For the operation with a setting switch, a locking switch is necessary (no simultaneous UP and DOWN commands).
- The operations with the service clamps may be accomplished only by an electrical specialist.
- The number of motors which can be connected to an actuator depends on the actuator. Please observe the instructions of the actuator manufacturer.
- In case of parallel connection, the maximum load of the electrical installation must not be exceeded.
- By push-button operation the switchover must be effected through an off position.
- By push-button operation the switchover time must be at least 0.2 s.
- Connecting cables with plug connectors of the Hirschmann Company are tested and approved with couplings of the Hirschmann Company.
- A 5-pole connecting cable with continuous power supply must be used for SMI motors. (GEIGER Flat5 with dark blue ring)
- 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.

9. Conductor assignment for SMI drives for mains voltage

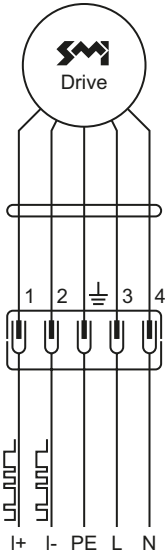


I+: Control wire +
I-: Control wire -
PE: Protective earth conductor
L: Live
N: Neutral wire

Names



Push button operation



Telegram operation

Changing the operating mode from telegram operation to pushbutton operation is done by switching the power supply off and on. This must then be confirmed via the switch. The drive is then in push-button mode.

Connector on drive cables	The STAS4 connector from Hirschmann is recommended.		
Cable connections and connector assignment for the STAS4/STAK4 connection system with **cables having black, grey, brown, blue and yellow-green wires**	STAS 4 / STAK 4	Wire colour	Name
	1 2 3 4 5 (PE)	black grey brown blue green-yellow	I+ I- L N PE
Cable connections and connector assignment for the STAS4/STAK4 connector system with **cables having 2 black wires**	STAS 4 / STAK 4	Wire colour	Name
	1 2 3 4 5 (PE)	black 1 black 2 brown blue green-yellow	I+ I- L N PE
	Definition of the black wires: black 1: between blue and green-yellow black 2: between brown and green-yellow		
Note on laying SMI wires in custom cables	The I+ and I- SMI wires can be laid in the motor connection line of the SMI drive (as above) or in their own cable. It is not permitted to lay SMI wires together with wires carrying other signals in one cable. If SMI drives wired in parallel are supplied with electrical power from different phases, the SMI I+ and I- wires must be laid in a separate cable.		

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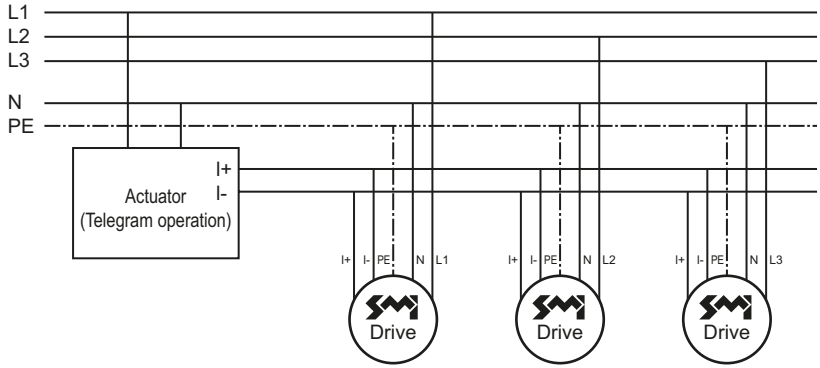
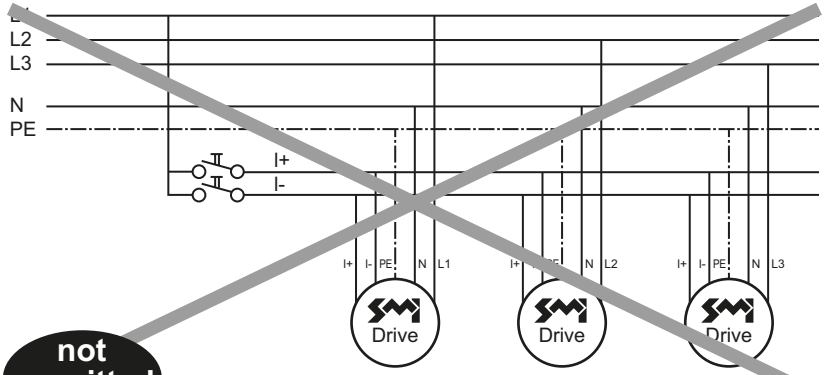
10. SMI drives on different AC phases

Parallel connection to the control lines I+ and I- while supplying power to the drives from different phases, is only permissible in telegram operating mode.



permitted Telegram operation with power supply from different phases



not permitted Push button operation with power supply from different phases

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11. For your notes …

SMI-KEY-ID (sticker)	**Place of installation** e.g.: 1st floor, left side, third room, 1st window etc.

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12. Setting of the end stops

General information

In order to set the end positions of the **GJ56.. r2-E07 SMI 3.0** motors, any setting switch – with continuous power supply – can be used that has a programming key or that allows a simultaneous UP/DOWN command. In this case, the UP/DOWN keys must be activated simultaneously instead of the programming key.

Article number / GEIGER setting switch	
M56F152	with service terminal (D), 5 wires, SMI compatible
M56F153	with service terminal (CH), 5 wires, SMI compatible

Important: please observe the connecting diagram on the back of the setting switch.

Factory setting

- The motor is set on the upper end position at the factory. The lower end stop is at the very other end. (at least lower end stop + 200 motor rotations).
- The motor command is in normal operation.

If the factory setting has been carried out and if the programming mode is activated, max. 100 revolutions can be done downwards. Reset to factory settings for a further run downwards.

13. Activate the programming mode

Prerequisite: The motor is positioned between the upper and the lower end position.

The GJ56.. r2-E17 SMI 3.0 can be set with any SMI setting switch that ensures a continuous power supply and has a programming key or that allows a simultaneous UP/DOWN command. If there is no programming key, the UP/DOWN keys must be simultaneously pressed.

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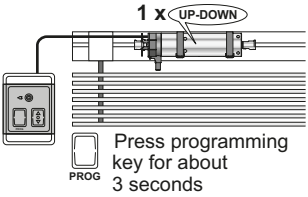
Activate the programming mode via limit stop switch

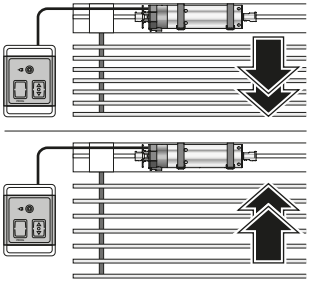
In order to activate the programming mode, the motor must be connected according to the diagram “push button operation” (see point 9).

Press the programming key of the limit stop switch or the UP/DOWN keys simultaneously until, after about 3 seconds, the motor confirms “end position programming activated” with 1 x UP-DOWN. Then release the key.



14. Programming/changing the end stops

The upper and lower end stops can be programmed and changed independently of each other.



- Activate the programming mode.
- Run the motor in the direction of the desired end position. The motor interrupts its run just to show that it is in the programming mode:
- The direction in which the motor moves after the break* determines the end stop to be programmed. (UP = upper end stop, DOWN = lower end stop)
- When the desired end position is reached, move the motor in the opposite direction until 2 short breaks* show the last saved position.
- The programming is completed.

** As long as the interruption of movement has not yet occurred, corrections can be done.*

Start the setting process again to adjust another end position.

Cancel the programming mode:

To exit learning mode, hold down the learning buttons (PROG button / UP and DOWN buttons / Up switch and DOWN button) until the drive confirms that learning mode has been exited by performing 3 UP&DOWN cycles after approximately 3 seconds.

15. Resetting to factory settings

Programming buttons (PROG button/UP and DOWN buttons/upward limit switch and DOWN button) The drive responds between 3 and 6 seconds (1 x UP-DOWN) and after 20 to < 30 seconds with 4 x UP-DOWN. As soon as the drive starts with 4 x UP-DOWN, the teach buttons can be released. The drive is then reset to the factory settings.
Note: the position at which the drive has been reset to the factory setting is now defined as the upper end position and can be adjusted by activating the learning mode.

16. Blockage detection and anti-freeze protection

The motor has blockage detection in the UP direction. After blockage detection (e.g. due to the blind freezing to the window sill), the UP direction is blocked. The UP direction is released again by a short movement command in the DOWN direction.

17. 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/grey control leads.
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.

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18. Declaration of conformity

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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.., GB35.., GB45.., GB59..

Applied directives:

2006/42/EG
2014/53/EU
2011/65/EU+(EU)2015/863+(EU)2017/2102
(EU)2023/826

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 60335-1:2012/A15:2021
EN 60335-1:2012/A16:2023

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

EN 62233:2008+Ber.1:2008+Cor.:2008

EN IEC 55014-1:2021
EN IEC 55014-2:2021
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)

Authorized representative for technical data:

Gerhard Geiger GmbH & Co. KG

Address:

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Bietigheim-Bissingen, 19.05.2025

Roland Kraus (General Manager)

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

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

19. Maintenance

The drive is maintenance-free.

20. Technical data

Technical data GJ56.. r2-E17 SMI 3.0 with electronic end stop		
	GJ5606	**GJ5610**
Voltage	230 V~/50 Hz	
Current	0,40 A	0,60 A
Cos Phi (cosφ)	> 0,95	
Inrush current (factor)	x 1,2	
Power	90 W	135 W
Torque	6 Nm	10 Nm
Speed	26 rpm	
Protection class	IP 54	
Limit switch range	200 rotations	
Operating mode	S2 6 min.	S2 4 min.
Length[1)]	376 mm	381 mm
Diameter	55 mm	
Weight[1)]	ca. 1,60 kg	ca. 1,70 kg
Air humidity	trocken, nicht kondensierend	
Storage temperature	T = -15°C .. +70°C	
[1)] With angel gear GSI1…: total length + 52 mm / weight + 0,4 kg		
Subject to technical modifications. Please find information to the ambient temperature range of our GEIGER motors under www.geiger.de		

21. 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.

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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.

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