GU-SECURY Automatic with A-opener / A-opener servo

Assembly and Operating Instructions

Technical Data Sheet



GU-SECURY Automatic with A-opener / A-opener servo

Technical Data Sheet

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Symbols used

Symbol	Signal word	Meaning	Symbol	Signal word	Meaning
	**Danger!**	Risk of personal injury		**Info**	Special functions or user advice
	**Danger!**	Electrical hazard symbol sign		**Attention!**	Risk of property damage
	**Caution!**	Risk of crushing and entrapment		**Info**	Provide emergency power buffer for fire protection doors

General advice

The present installation and function description is exclusively addressed to specialists trained by GU who in turn will instruct the end user.

The body responsible for all instruction manuals is the Technical Office of GU in Ditzingen.

This product is to be considered as uncompleted apparatus. The instructions accompanying it do not contain a risk assessment. In fact, it is the installer of the complete technical equipment who is in charge of carrying out a risk analysis.

1 Information

These Assembly and Operating Instructions contain important advisory notes which must be followed by all means to ensure appropriate assembly and trouble-free operation.

The details and specifications given in these instructions are to be observed by door fabricators, installers, and operators.

In the following, the term "A-opener" also refers to the "A-opener servo".

1.1 Technical description

- Self-locking multipoint door lock
- Motor-driven release
- GU-SECURY Automatic with A-opener / A-opener servo
- Latchbolts throwing 20 mm / secured against being forced back
- GU-SECURY Automatic and Automatic3 with VdS certificate grade A
- GU-SECURY Automatic4 and Automatic6 with VdS certificate grade B
- GU-SECURY Automatic-DR with VdS certificate grade C

1.2 Application range and intended use

- GU-SECURY Automatic with A-opener / A-opener servo is designed for vertically installed doors.
- Their main area of application is building entrance doors in both private and public buildings.
- "Intended use" comprises the observance of the manufacturer's installation and operating instructions. This is the only way to avoid damage.
- GU excludes any liability for damage arising from changes made on the lock without their consent.

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2 Technical and operational safety



Danger!
Installation works involving the use of electrical equipment are dangerous.

Insufficient wire cross sections may cause a fire.

Therefore it is important to always observe the specified cable cross-sections.

Connections to a 230 V mains are dangerous to life!

Never connect the GU-SECURY A-opener / A-opener servo to a 230 V supply!

3 Operating parameters

3.1 Technical specification

• Supply voltage	12 V AC 12-24 V DC (stabilised)
• Nominal current	1 A
• Protection type	IP40
• Endurance test	200,000 opening cycles in accordance with DIN 18251 part 3
• Cable cross section	see table "Cable cross-section" on page 17
• Preload unlocking	at 12 V AC or DC up to 280 N at 24 V DC up to 400 N

3.2 Wiring and electrical connection

During the wiring and the electrical connection of the A-opener with the plug connection, ensure that the cables cannot be crimped or damaged in the area of the lock or faceplate during installation (e.g due to warping of door, gasket pressure, wind load, etc.)

Junction boxes must be accessible for maintenance work. Cable types, lengths and cross-sections must conform to the specifications.



Attention:
Observe standards and regulations for extra-low voltage (SELV) during installation and wiring.

Flexible cables must not be plastered over; free-hanging cables must be installed with strain relief.

For the routing of cable from the door leaf into the door frame, we recommend the use of SECURE***connect*** from the GU-BKS product range as a cable link

4 Scope of delivery and installation position

GU-SECURY Automatic with A-opener / A-opener servo

Bag of connecting cable (from A-opener to distribution box)

Installation position as shown in drawing below

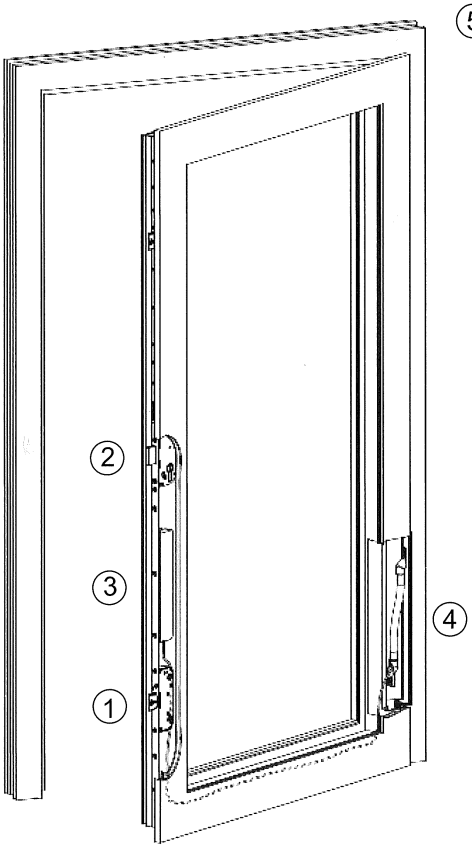
(1) Automatic latchbolts

(2) Deadbolt of main lock

(3) A-opener with connecting cable (approx. 6 m incl. connector for A-opener and wire end ferrules on side of junction box)

(4) Cable link, to be provided by customer (SECURE***connect***)

(5) Junction box, to be provided by customer (from here: use 3-wire cable provided by customer. See chapter "3 Operating parameters" on page 16)



Cable cross-section (cable to be provided by customer, from junction box)	
Length up to	**Cross section**
10 m	0.5 mm²
40 m	0.75 mm²
50 m	1 mm²
75 m	1.5 mm²
125 m	2.5 mm²

5 Installation instructions

5.1 General installation advice

The electronic components should be installed with utmost care since chafed or defective cables, damaged contacts etc. may seriously affect the safety of the system and cause its failure. Ensure that all components are in faultless condition before installing them.

It is imperative to observe the cutting specifications given in the drawing below!

In case of any problems or questions please contact the distributor or manufacturer.

The appropriate installation of the drive requires general electrical and mechanical knowledge, as is to be expected from a skilled and safety-conscious expert.

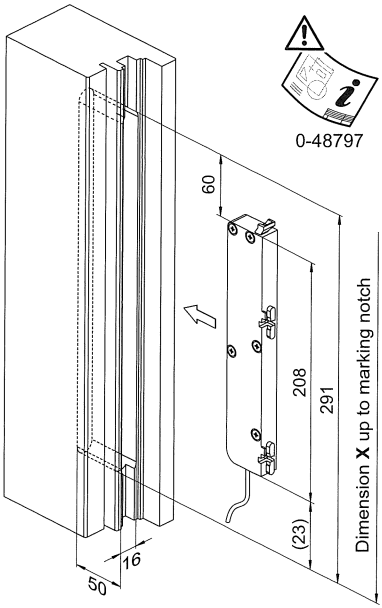
ATTENTION:
It is imperative that a space of 60 mm as shown above the upper end of the A-opener in the drawing be provided as it is needed for the travel.

If the milled recess is too small in length and depth, the lock's functions will be impaired!

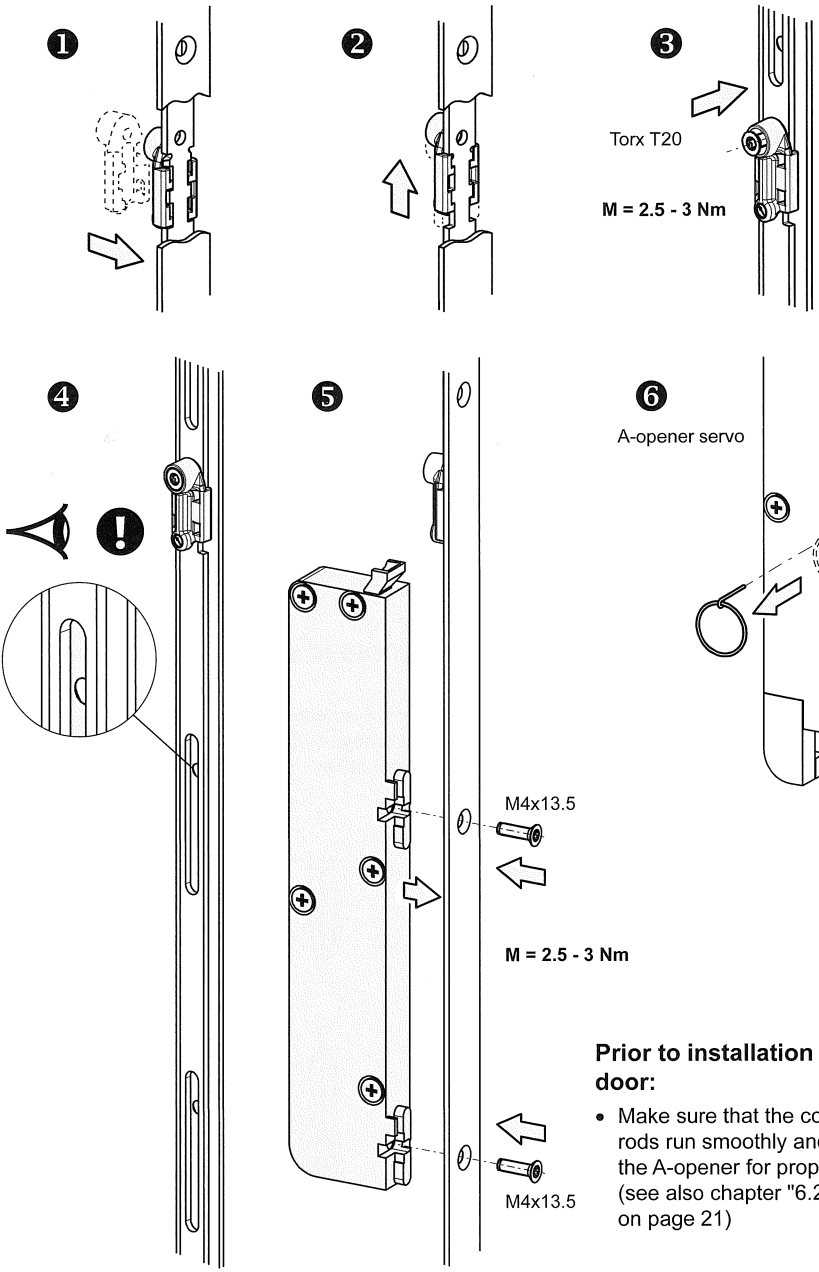
ATTENTION:
With GU-SECURY Automatic4 - as well as GU-SECURY Automatic-DR - multi-point locks, it is necessary to remove the connecting-rod guide in the upper fastening hole of the A-opener (e.g. using a screwdriver) before installing the A-opener.

Other lengths / lock versions			
Length [mm]	**Dim. B [mm]**	**Lock version**	**Dim. X [mm]**
1750 1935	760	Automatic 2, Automatic 3, Automatic 4, Automatic 6	650
1600	760		
Variable*	660	Automatic 2	470
Variable*	760, 790	Automatic 2	621
Variable*	760, 790, 733, 612, 734	Automatic 4	470
1750 Variable*	760	Automatic-DR	470

* All lengths not specified here, e.g., 2285 mm, 1709 mm, 1810 mm



5.2 Installation sequence



Prior to installation in the door:

- Make sure that the connecting rods run smoothly and check the A-opener for proper function (see also chapter "6.2 Trial run" on page 21)

6 Function of A-opener and A-opener servo

- The locked door can be released by a pulse given to the door release input (potential-free contact).
- The motor retracts the Automatic latchbolts, which is acknowledged by two audible signals, and after approx. 2 seconds releases them again.
  Thus, the lock is prepared again for automatic locking after the door has been pulled or pushed shut.
- With permanent contact at the door release input, the Automatic latchbolts of the multi-point lock remain retracted until the contact is opened again.
- When using a UPS, the connection data of the UPS must be observed. These may differ from the connection data of the A-opener.

After disconnecting the permanent contact, the door has to be opened and closed one time to ensure that it is reliably locked.

With the central deadbolt projected, the lever handle is blocked! In this state, permanent triggering of the A-opener will block the multi-point lock and unlocking via profile cylinder will not be possible.

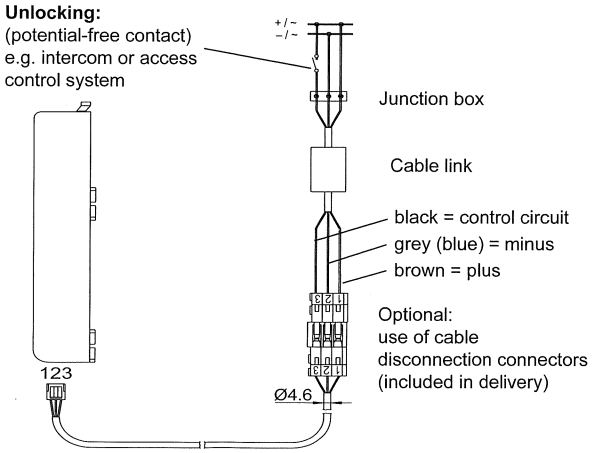
Additional function, A-opener servo

- The A-opener servo is activated by turning the key slightly towards the opening direction, or by lightly touching the lever handle. The automatic latchbolts of the multi-point lock are retracted by an electric motor. After actuating the A-opener servo once, a time period of at least 3 seconds must lapse before actuating the A-opener servo again!

Attention:

The operating mode "PERMANENT OPEN" is not permitted on fire or smoke protection doors!

If a motor-driven lock is used on a fire or smoke door, it is necessary to ensure (e.g. by means of UPS = uninterruptible power supply) that there is always sufficient energy to extend the latchbolts into locking position even in the event of a power failure. With the use of SECURE***connect***, this requirement is fulfilled.



6.1 Settings

Audible A-opener / A-opener servo acoustic sound transmitter

On delivery, the GU-SECURY Automatic with A-opener / A-opener servo is already programmed so that the opening operation is acknowledged by two audible signals. This indicates to the user that the latchbolts are now completely retracted and the door is accessible.

It is possible to deactivate these audible signals.

Deactivation is done as follows:

- After the lock's electric release (triggered by a potential-free contact), the lock must be disconnected from the voltage supply, however, not earlier than 10 seconds after disconnection.
- The lock must be disconnected from the supply voltage for at least 10 seconds.
- Afterwards switch the supply voltage on again.
- Now a first pulse must be given to the door release input within 3-9 seconds,
- and a second one immediately afterwards which has to last for at least 10 seconds. **Note**: the motor is not operating meanwhile.
- After this the signal tones are deactivated.

In order to activate the signal tones, follow the same programming steps.

6.2 Trial run

After installation, check all functions in a trial run.



Attention!
Risk of injury when reaching between door leaf and frame!

When the installation is completed, the building operator/end user must be instructed in all important operating steps.

In order to test the lock in a trial run, a pulse is given to the door release input (e.g. via intercom). The motor retracts the latchbolts, and after approx. 1.5 seconds acknowledges open status with signal tones. This is when the door can be opened by hand.

The latchbolts are retained for approx. 2 seconds. Afterwards the motor releases them again and they extend to their initial position. Now the door can be closed again by hand.

Note for the A-opener servo



The servo function is activated only 10 s after switching on the power supply.

For the trial run, the A-opener servo is activated by turning the key slightly towards the opening direction, or by lightly touching the lever handle. The motor now retracts all of the latchbolts.

Note: With the GU-SECURY variants "AutomaticDay" and "AutomaticTE" with "daytime release function", the latch of the central lock is not retracted by the A-opener!

The lock can always be operated mechanically by key from both sides. With the central deadbolt retracted, door opening from inside via lever handle is possible at any time.

7 Inspection and maintenance works, replacement parts

GU-SECURY Automatic with A-opener / A-opener servo must only be operated with power supply units meeting the minimum requirements of the lock (see "Technical data")

Any warranty claims for damage caused by non-observance are rejected.

The serviceability of the locking system must be verified at regular intervals. For doing so, check all fixing points and retighten screws, if required.

In order to avoid that the mechanical properties of the lock – especially with regard to key, handle, and latchbolt movement – are affected by dirt, it is necessary that the lock is inspected and lubricated with non-resinous oil at least once a year.

The A-opener itself is maintenance-free.

8 Error description, possible causes / remedies

☒ Motor not running

➲ Cable(s) connected wrongly or not at all, verify connections:

- Voltage supply V direct voltage/alternating voltage
  brown: +/~
  grey (blue): -/~
  black: +/~ (control voltage for release).
- Check transformer and exchange microfuse, if necessary.
- Check terminals.

☒ Latchbolts are retracted after activation, however not extended again.

➲ Cable connected wrongly, verify connections:

- Voltage supply V direct voltage/alternating voltage
  brown: +/~
  grey (blue): -/~
  black: +/~ (control voltage for release).
- Milled recess for A-opener too small: driving rod gets jammed or stuck.
  The recess must be cut larger.

☒ Motor hums over a longer period of time or
☒ A-opener cannot retract the latchbolts

➲ A-opener not getting enough current, transformer too weak:

- Check transformer:
  Voltage supply V direct voltage/alternating voltage min. 1 Ampere (1000mA!)
  Cables used are too long or too thin: verify cable cross sections:
  - up to 10 m – 0.5 mm²
  - up to 40 m – 0.75 mm²
  - up to 50 m – 1.0 mm²
  - up to 75 m – 1.5 mm²
  - up to 125 m – 2.5 mm²

➲ Loads connected in parallel:

- Transformer not powerful enough to provide the energy required for the GU-SECURY Automatic with A-opener / A-opener servo plus the additional loads connected to it!

☒ Only the additional latchbolts are retracted

➲ **GU-SECURY "AutomaticDay" and GU-SECURY "AutomaticTE" with A-opener:**

- No error, function is intended.

➲ **Defective central lock case:**

- Please contact GU.

☒ No "Servo" function

- Check connecting rods can move freely.
- Check the key can turn easily.
- If a SECURE***connect*** has been used, the following must be noted:
  If the doors have been open for an extended period of time, they have to be closed for at least 15 seconds (tappets are in contact with the contact plates) in order to re-establish the A-opener servo's full range of functions.

☒ Motor running again only after a few seconds

- The A-opener / A-opener servo is blocked for max. 15 seconds after a fast succession of several opening and closing cycles so that the capacitors can be adequately recharged.

9 GU Customer services

- Installation of motor drive and start-up
- Annual inspection in compliance with the prevailing standards and regulations
- Maintenance and repair works
- Retrofitting or changing existing door assemblies.

For clarifying any technical questions please contact our aftersales service.

10 Disposal

The device contains electrical parts and must be disposed of in compliance with the legal regulations.

11 Declaration of Performance

The following Declaration of Performance applies to this product:

- 0004-CPR-GU-BKS-Ferco

Declarations of Performance can be found at the GU website "www.g-u.com".

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