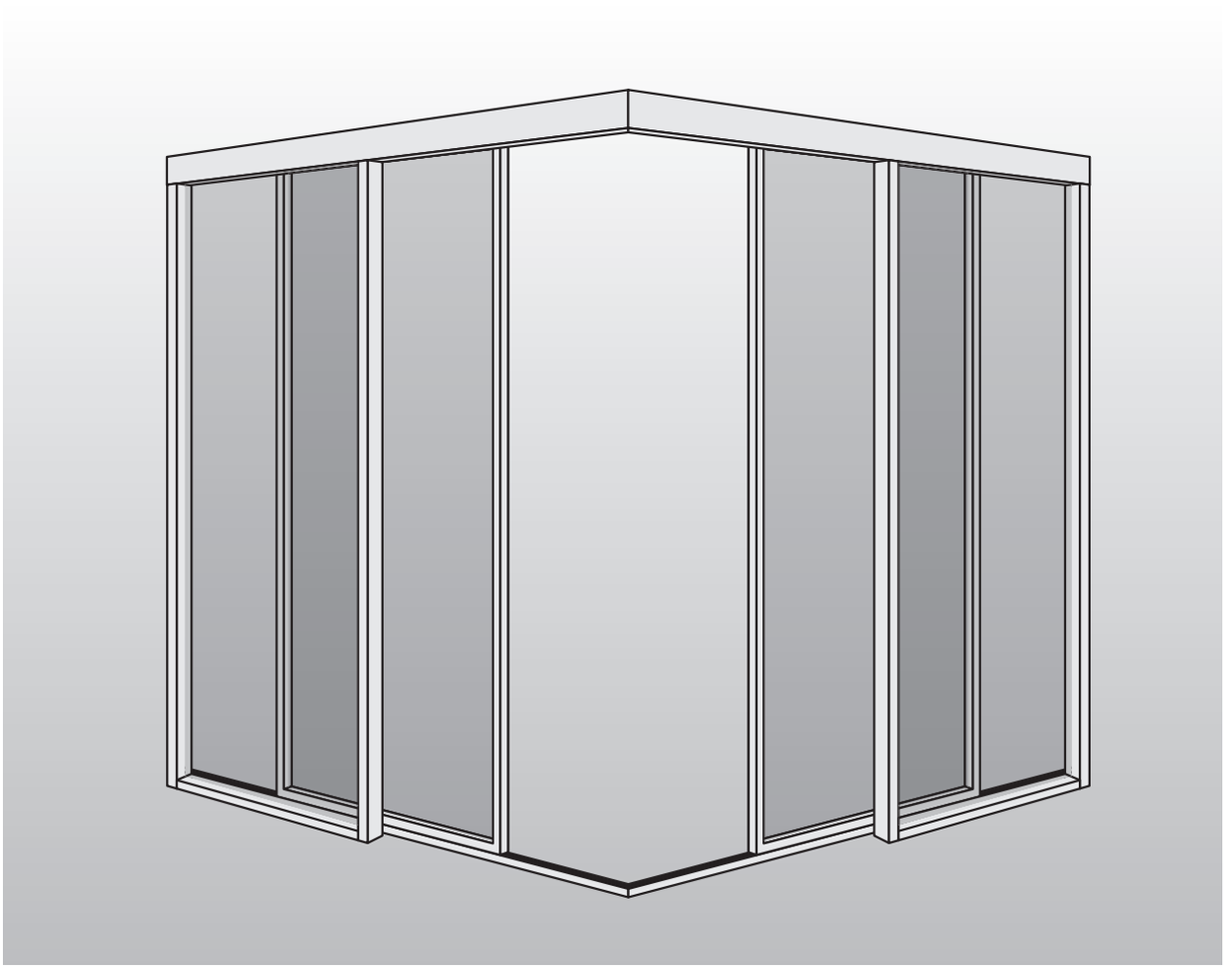
❑ Slimdrive SLV

❑ Slimdrive SLV-FR 2M



Assembly and service instructions

GB Mat. No. 110257

D Mat.- Nr. 109638

Valid as of software version DCU1 V1.0

1 Inhalt

Explanation of symbols

means “activity to be performed“

means "important note"

means "additional information"

Indicates parts of the text that must be read and observed.
Failure to observe this information may result in injuries and damage!

Danger of electric shock!

1 Safety remarks

Intended use

The **Slimdrive SLV and Slimdrive SLV-FR 2M** are solely suitable for use
- in dry rooms
- in automatic door systems for horizontally moved door leaves
- in entrances and interior areas of pedestrian traffic in commercial plants and public areas

The **Slimdrive SLV and Slimdrive SLV-FR 2M** may not be used as a fire or smoke protection door.

The **Slimdrive SLV-FR 2 M** is approved for use in escape and rescue routes.
The **Slimdrive SLV** may not be used as an escape and rescue door.

Safety remarks

- The prescribed installation, maintenance and repair work must be performed by properly trained personnel authorised by GEZE.
- For technical checks pertaining to security, the country-specific rules and regulations must be observed.
- GEZE shall not be liable for injuries or damage resulting from unauthorised modification of the equipment, and the approval for use in escape and rescue routes is voided when unauthorised changes are made (for **Slimdrive SLV-FR 2M**).
- When combining with outside products, GEZE will not assume any guarantee. Only use GEZE original parts for repair and maintenance works as well.
- The connection to the power supply must be made by a qualified electrician. Implement mains supply and earthed wire check according to VDE 0100 part 610.
- Use a customer-accessible 10-A overload cut-out as the line-side disconnecting device.
- Protect the display program switch from unauthorized access.
- The detection field of the motion detector in direction of emergency exit must satisfy AutSchR.
- In accordance with Machine Directive 98/37/EC, a danger analysis must be performed and the door system identified in accordance with CE Identification Directive 93/68/EEC before commissioning the door system.
- Observe the latest status of guidelines, standards and countryspecific rules, especially:
  - ZH 1/494 "Guidelines for power operated windows, doors and gates"
  - VDE 0100, Part 610, "Setting up heavy-current installations with nominal voltages up to 1000 V"
  - DIN EN 60335-2-103 "Safety electronic devices for home use and similar purposes; special requirements for drives, for gates, doors, and windows"
  - AutSchR "Directive for automatic windows, doors and gates" (for **Slimdrive SLV-FR 2M**).
  - Accident prevention rules, especially BGV A1 “General Rules”and BGV A2 “Electrical systems and resources”

Safety-conscious work

- Secure workplace against unauthorised entry.
- Watch swinging area of long system parts.
- Never carry out work with a high safety risk (e.g. installing the drive, hood or door leaf) while alone.
- Secure hood/drive shrouding against falling.
- Use only the cables indicated in the cable position plan. Put up screens according to the connection diagram.
- Secure loose internal drive cables with binders.
- Before working on the electrical system:
  - Disconnect the drive from the 230 V mains network and check to ensure that it is not supplied with power.
  - Disconnect the control from the 24 V accumulator.
  - When using an uninterrupted power supply (UPS), the system is live even if the line is isolated.
- Always use insulated wire-end ferrules for wire cores.
- Place safety stickers on the glass leaf doors (mat. no. 081476).
- Danger of injury by opened drive. Hair, clothing, cables etc. can be pulled in by rotating parts!
- Danger of injury by unsecured pinching, impact, drawing-in or shearing spots!
- Danger of injury by broken glass!
- Danger of injury by sharp edges in the drive!
- Danger of injury during installation by freely moving parts!

Inspection of installed system

Check measures for security and prevention of pinching, impact, drawing-in or shearing spots.
- Check the functioning of safety sensors and motion detectors.
- The detection field of the motion detector in the exiting direction must cover the opening width x 1.5 m in front of the door.
  The motion detector in direction of emergency exit (see AutSchR) must detect persons with a speed greater than 0.1 m/s.
- Check earth connection to all metal parts which can be touched.

Environmentally-conscious working

When disposing of the door system, separate the different materials and have them recycled.
Do not dispose of batteries and storage cells with household garbage.
Comply with the statutory regulations when disposing of the door system and the batteries and storage cells.

2 Overview

2.1 Diagrams

Number	Type	Name
70484-9-9847	Connection diagram	DCU 1
70484-9-9850	Connection diagram	DCU 1 - 2M
70484-9-9861	Cable schematics	DCU 1+ DCU 1 - 2M
	Drive drawing	Slimdrive SLV / SLV-FR
	Leaf assembly drawing	Slimdrive SLV / SLV-FR
	Assembly instructions floor guidance	
70484-9-9832	Asssembly instructions GEZE HZC	Presence sensor
	Fault elimination	Error search and error measures Control DCU1, DCU1-2M

Object-related drawings are enclosed.

The diagrams are subject to change. Please use only the most current status.

2.2 Tool

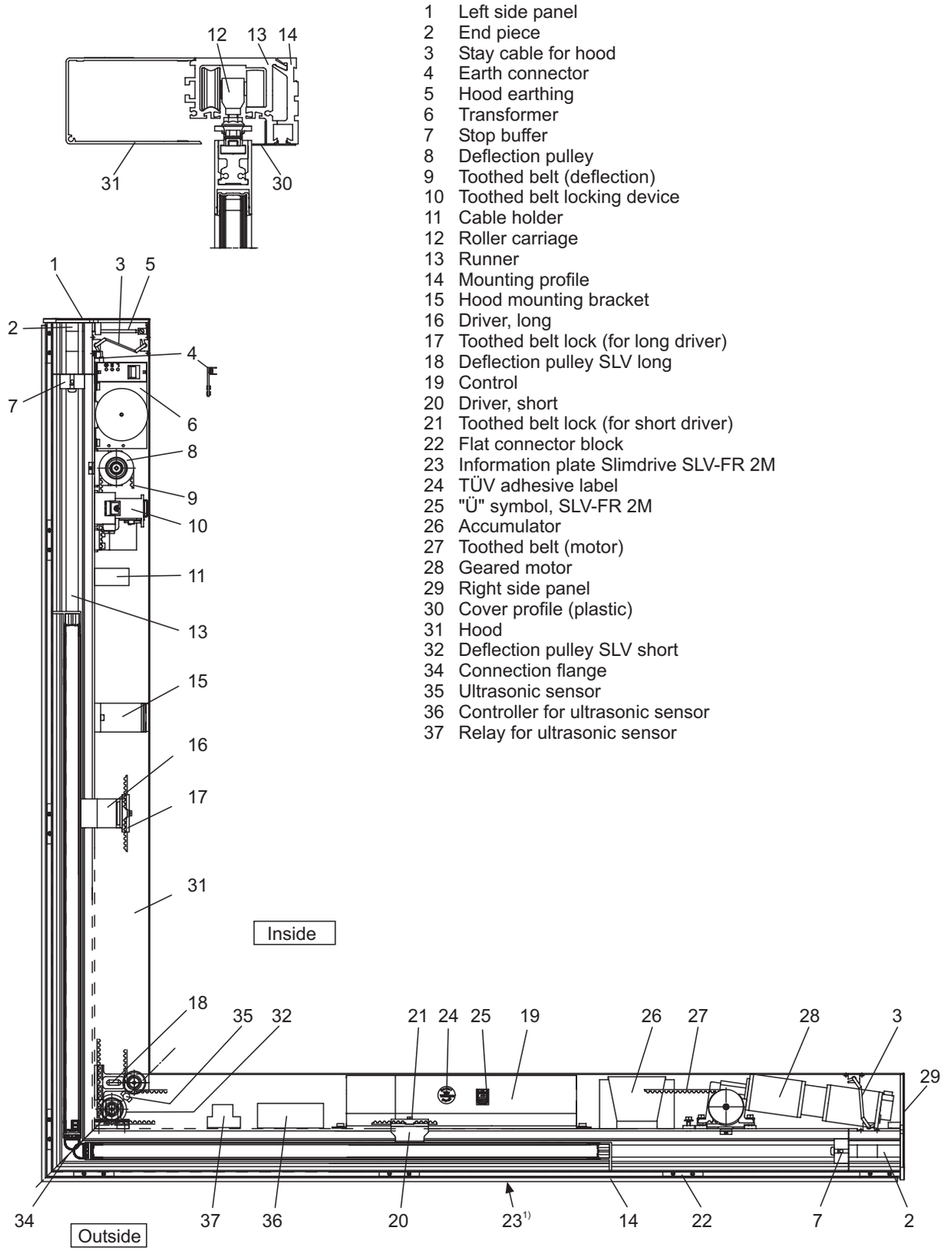
Tool	Size
Measuring tape	
Marking pen	
Torque spanner	
Allen key	2 mm, 2.5 mm, 3 mm, 5 mm, 6 mm
Open ended spanners	8 mm, 10 mm, 13 mm
Screwdriver set	up to 6 mm
Pin punch	3 mm with point length = 60 mm
Side cutting pliers	
Crimping tool for electrical cable	
Wire stripper	
Multimeter	

2.3 Torques

see drive drawing

2.4 Components and Modules

Slimdrive SLV / SLV-FR 2M modules, two-leaf, 90° version

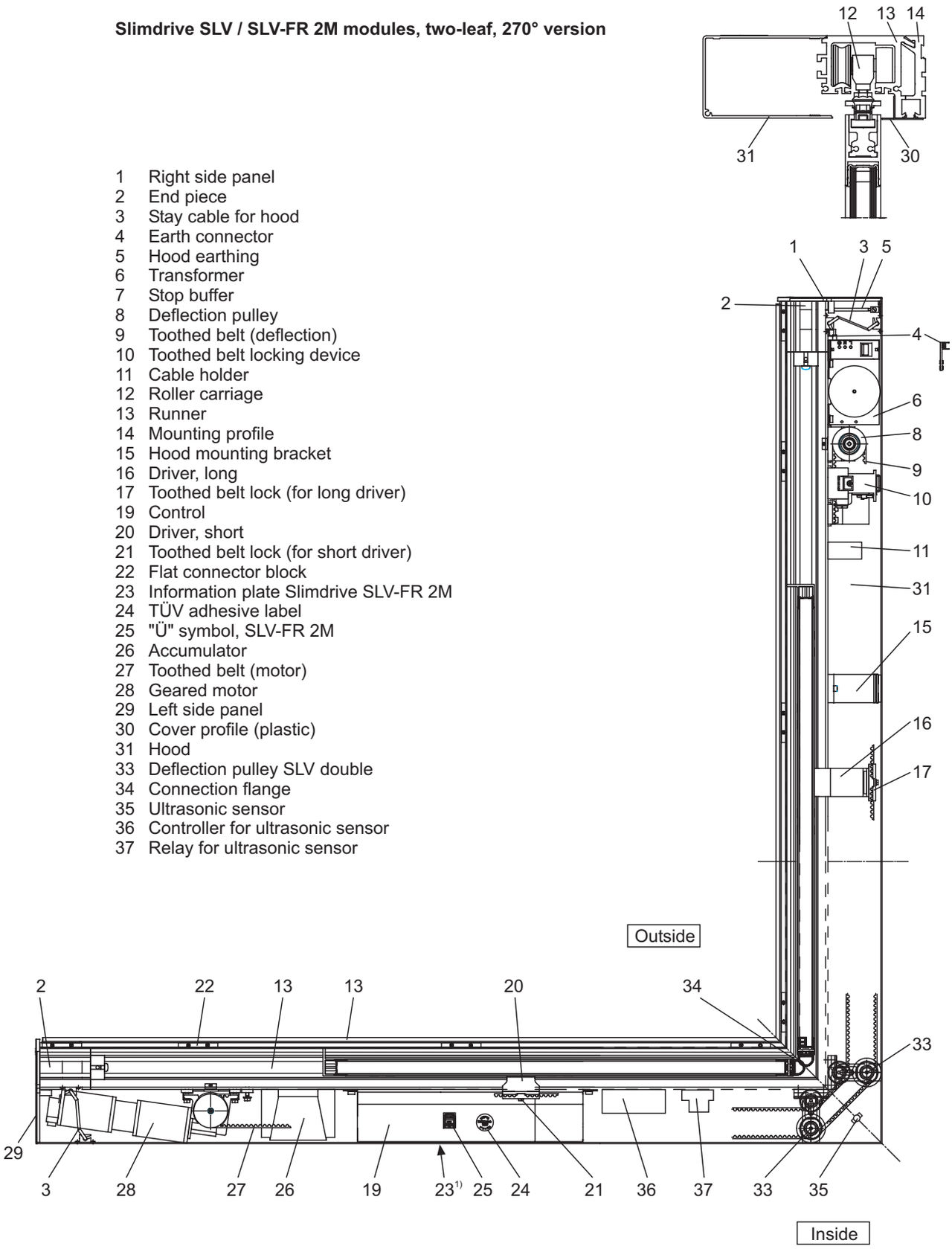


1 Left side panel
2 End piece
3 Stay cable for hood
4 Earth connector
5 Hood earthing
6 Transformer
7 Stop buffer
8 Deflection pulley
9 Toothed belt (deflection)
10 Toothed belt locking device
11 Cable holder
12 Roller carriage
13 Runner
14 Mounting profile
15 Hood mounting bracket
16 Driver, long
17 Toothed belt lock (for long driver)
18 Deflection pulley SLV long
19 Control
20 Driver, short
21 Toothed belt lock (for short driver)
22 Flat connector block
23 Information plate Slimdrive SLV-FR 2M
24 TÜV adhesive label
25 "Ü" symbol, SLV-FR 2M
26 Accumulator
27 Toothed belt (motor)
28 Geared motor
29 Right side panel
30 Cover profile (plastic)
31 Hood
32 Deflection pulley SLV short
34 Connection flange
35 Ultrasonic sensor
36 Controller for ultrasonic sensor
37 Relay for ultrasonic sensor

[1)] stick onto the runner below the control or the accumulator

Schematic shows the
Slimdrive SLV-FR 2M
90° version
View from below

Slimdrive SLV / SLV-FR 2M modules, two-leaf, 270° version



1 Right side panel
2 End piece
3 Stay cable for hood
4 Earth connector
5 Hood earthing
6 Transformer
7 Stop buffer
8 Deflection pulley
9 Toothed belt (deflection)
10 Toothed belt locking device
11 Cable holder
12 Roller carriage
13 Runner
14 Mounting profile
15 Hood mounting bracket
16 Driver, long
17 Toothed belt lock (for long driver)
19 Control
20 Driver, short
21 Toothed belt lock (for short driver)
22 Flat connector block
23 Information plate Slimdrive SLV-FR 2M
24 TÜV adhesive label
25 "Ü" symbol, SLV-FR 2M
26 Accumulator
27 Toothed belt (motor)
28 Geared motor
29 Left side panel
30 Cover profile (plastic)
31 Hood
33 Deflection pulley SLV double
34 Connection flange
35 Ultrasonic sensor
36 Controller for ultrasonic sensor
37 Relay for ultrasonic sensor

Schematic shows the
Slimdrive SLV-FR 2M
270° version
View from below

[1] stick onto the runner below the control or the accumulator

Periphery

- Floor guide area
- Safety sensor close (SIS) (e.g. light barriers, light curtains)
- Contactor authorised (KB) for authorised opening (e.g. key switch)
- Inside motion detector, outside contactor (KA)
- Display program switch
- Key switch for display program switch
- Emergency-stop switch (optional)
- Main switch (optional)

2.5 Functional test

Disconnect the accumulator after the function test and leave disconnected until start-up.

The components are not tested individually.

During the operating test the following, completely mounted components of the drive are tested:
• Control
• Motor and rotary transducer
• Accumulator
• Locking device 24 V
• Transformer

Prerequisites

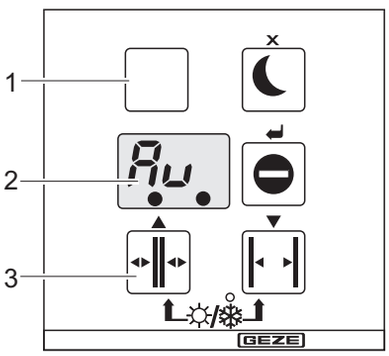
Danger of electric shock!

- Only allow an electrician to connect and disconnect the electrical system (230 V).
- Add an FI protective switch.
- Set up an earthed wire connection to all accessible metal parts and check the connection.

- The electrical and mechanical installation has now been completed.
- The motor, controller, transformer, accumulator and locking device are mounted and connected.
- The controller has not yet been initialised with the "Learn" function.
- A display program switch is connected.
- The toothed belt locking device (optional) must be locked (interlocking cog completely engages in the toothed belt).

Procedure

Only use display program switch DCU1 (Mat. No. 103940)!



1 Service key
2 Display
3 Automatic key

- If a fault occurs during the operating test, the test is aborted and the fault displayed.
- The operating test can be conducted as often as desired.
- The display on the program switch display does not appear in ascending order.

1. Simultaneously press the Service button (1), Automatic button (3) and the key switch for the program switch.

The operating test starts.

Shown on display of the display program switch	Tested component	Drive reaction
P1	Locking device	Locking device unlocked
P3	Motor	The motor turns approx. 20 cm in the Open direction, and then 20 cm in the Close direction again
P2	Locking device	Locking device locked
P6	Accumulator	Checks whether an accumulator is connected
A0		Accumulator was not detected
A1		Accumulator was detected* (If an accumulator is connected, it must be detected)

* It is checked whether a battery is present, and not the charging level of the accumulator.

If a fault occurs during the operating test, the test is aborted and the fault displayed (see fault table).

2. Press ↵ key

3 Assembly

3.1 Preparations to be made by the customer

Check the preparations made by the customer to ensure proper installation:

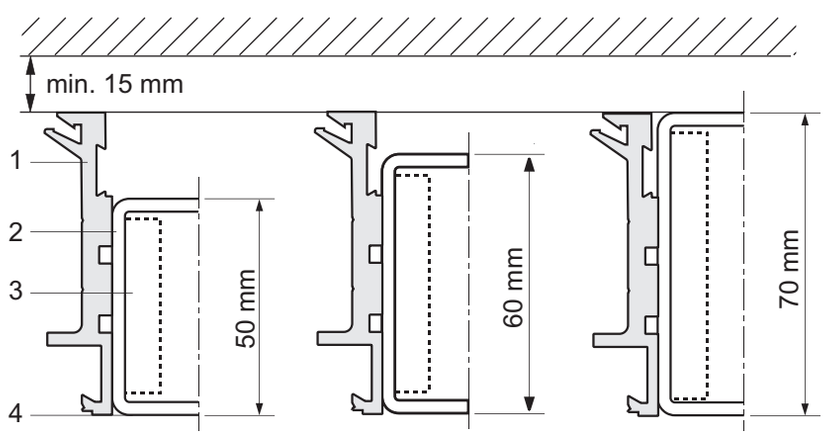
- **Type and loading capacity of the facade construction or**
- **Sub-construction - Levelness of the installation surface**
- **Requirements of interconnection diagram**

3.2 Installation

- **Secure workplace against unauthorised entry.**
- **Always perform work with a second technician.**
- **Use stepladder or stepstool.**
- **Keep inside area of runner clean.**

Installing profiles

1. Align mounting profile on installation surface and use as drilling jig.
2. Drill holes in accordance with the on-site conditions (see installation diagram).
3. Prepare cable routing in accordance with local conditions, for example:
   - Hold free (right) end piece on left side of mounting profile and copy to cable gland.
   - Remove mounting profile at marked position.



1 Mounting profile

2 Bolt

3 Shim (supplied by customer)

4 Lower edge of bolt lock

4. Only for post/bolt lock design:
   Align mounting profile with lower edge of bolt lock.
5. Screw on the mounting profile. Watch the shim (3) for post/bolt lock design here (see installation diagram).
6. Install light barrier profiles/sealing strips in accordance with on-site conditions (see drive drawing).

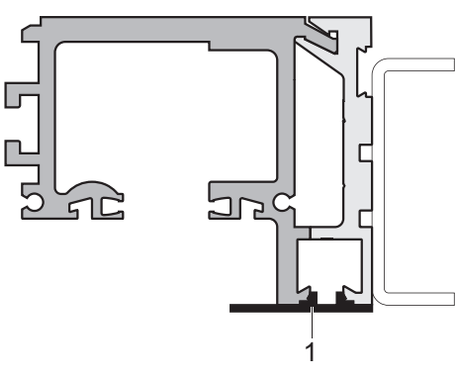
7. Press sealing rubber into sealing strips.
8. Lay outside drive sensor cable:
   Pre-drill mounting profile in suitable position and pull in cables (see block diagram).
9 Connect runners with the pre-assembled modules with the connection flange
10. Insert runners with pre-assembled modules into the mounting profiles.
    If necessary, loosen the headless set screws of the connection flange again

Danger of injury!

Unsecured components may fall down when under load.

➪ Brace the entire runner.

11. Brace runner over terminal strips with mounting profile so that the runner is torsion-free:
    – Insert terminal strips between mounting profile and runner, position approx. 400 mm apart and tighten headless set screws.
12. Tighten the headless set screws of the connection flange.
13. Insert cover (1) for runner and mounting profile.



14. Install floor guide (see assembly instructions floor guide)

Installing door leaves

Danger of injury by broken glass!

➪ Always install door leaves together with another person.

Danger of crushing!
The door leaves are still unsecured and slide easily.

➪ Ensure that the door leaves are not moved accidentally or by unauthorised persons!

- In order to install the door leaves to drive, the door suspensions must be installed at the door leaves.
- The door suspensions must be installed when the windows are mounted in the door leaves.In case of later installation of door suspension, the frames of the door leaf must be removed (see assembly instructions door leaf).

1. Remove roller carriage from transport lock.
2. Hook door leaf into roller carriage:
   Install the door suspensions from the front into the suspension bolts of two roller carriages.
3. Secure door leaves via lock nuts.

Adjusting the door leaves

Observe the applicable standards and guidelines about pinching, impact, drawing-in or shearing areas.

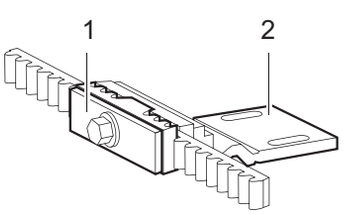
1. Set parallel position and height of door leaves at hexagon of suspension bolts:
   – Ensure smooth movement of door leaves individually
   – Align door leaves flush. Ensure same height and parallel closing edges when doing so.
   – Lock door leaves with hexagon nut.
2. Adjust stop buffers for the door leafs.

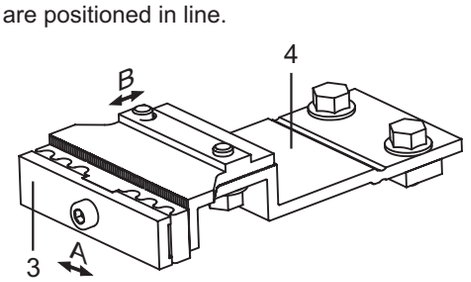
Install height adjustment

1. Slide brush into height-adjustment strip (see overview diagram).
2. Push height-adjustment strip into door leaf (see drive drawing).
3. Install floor guide (see drive drawing).
4. Ensure that the door leaves are moving smoothly.

Connecting door leaves to system

1. Close door leaves and move into closing position, if necessary, realign stop buffers.
2. Move toothed belt until toothed-belt lock and driver are positioned in line.





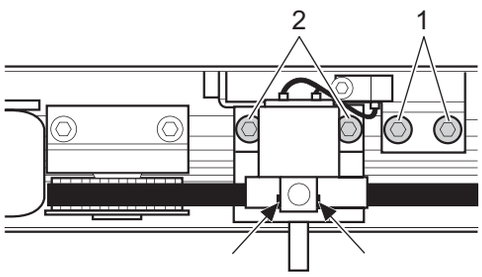
3. Connect driver to toothed-belt lock:
   – Begin with **short** driver.
   – Screw on the rear left toothed-belt lock (1) to short driver (2).
   – Bolt front toothed-belt lock to long driver.

– Continue with **long** driver
– Screw on the front right toothed-belt lock (3) to long driver (4).
– Adapt the position of the toothed-belt lock to the toothed belt using the lock teeth B.
– Screw on front toothed-belt lock to long driver and make fine adjustments to toothed-belt (lock teeth A).

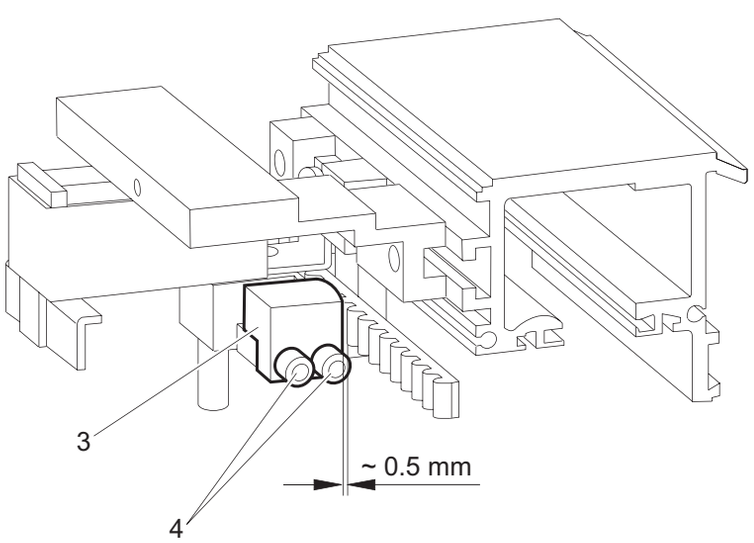
The door leaves are joined with the system and the position of the main closing edge is set.

Positioning toothed belt locking device

1. Close the door leaves.



2. Loosen the screws (1) and (2) on the locking device.
3. Align the locking device to the toothed belt.
   After installation the locking pin must be positioned above the hole in the hood so that it can be locked and released.
   If necessary, enlargen holes.
4. Tighten bolts (1).
5. Align locking device guide so that it has sufficient clearance on both sides.
6. Tighten bolts (2).
7. Lightly lubricate sliding surfaces (see arrows in figure shown above).



8. Loosen locking bolts (4).
9. Set belt guide (3) on the lock side so that a gap of approx. 0.5 mm exists between the belt guide and the toothed belt.
10. Tighten locking bolts (4) again.

The driver may not contact the lock during operation!

Installing safety equipment

⇨ Mounting motion detector

For electrical installation, see terminal connection diagram

Installing switch/button

For electrical installation, see terminal connection diagram

Mounting display program switch

Only use display program switches DCU (Mat. No. 103940)!

For electrical installation, see terminal connection diagram

Mounting key switch

The key switch for the Slimdrive SLV-FR 2M is mandatory!

The key switch for the Slimdrive SLV can be installed as an option.

The display program switch can be locked and unlocked by using the key switch

For electrical installation, see terminal connection diagram

3.3 Start-up

Danger of electric shock!

➪ Only allow an electrician to connect and disconnect the electrical system (230 V).

➪ Implement mains supply and earthed wire check according to VDE 0100 part 610.

Connecting cable

1. Disconnect the system from the 230 V mains network.
2. Carry out cable routing in an orderly manner in accordance with terminal connection diagram:
   Use cable take-up in the end pieces and cable holders. Cut out breaks in the side panel if necessary.
3. Make connections to the controls according to the connection diagram.

- **If flexible cables are used, attach insulated wire-end ferrules.**
- **The accumulator must be completed charged.**

4. Remove cables from sliding path of leaves and driver before startup and secure with cable ties.

Starting Learn function

1. Insert the display program switch in the controller.
2. Clear out detection field of all sensors.

Danger of crushing!
Door leaves move, all the locking devices on the door are deactivated.

➪ Move away from the door path.

Danger of injury by opened drive!
Hair, clothing, cables etc. can be pulled in by rotating parts!

➪ When working on open drive, be cautious of rotating parts.

3. Connect system to 230 V mains network.
   The controller jumps to the Learn function with initial start-up (see Chapter 4.2) and the display program switch shows LE. Next, St is displayed for a controller DCU1 (St = standard door) or Ft for a controller DCU1-2M (Ft = escape door), and a version number, e.g. 14 for version 1, revision 4.

   If the controller was already in operation, Learning mode is started by selecting LE in the Service menu, Chapter 4.2.

To perform the Learn function correctly, the door leaves must be closed.

4. Close the door leaves.
5. Press ↵ key:
   – Door leaves open and close again.
   – Run parameters are determined and saved.
   Learn program proceeds as described in Chapter 4.2.

6. If program selector indicates LB, manually push door leaves to reduced opening width with and press ↵ key twice.

For Slimdrive SLV-FR 2M the reduced opening width is only permissible if the reduced opening width is greater than the required escape route width (see Chapter 4.2).

– Door leaves open and close.

When the program selector shows LE or AU, the Learn program has been completed and the door is ready for operation.

Check the function

1. Switch system off.
2. Switch system on again.
3. Set display program switch to automatic:
   The self-test will run automatically.
4. Check function of modules and periphery:
   – Safety sensor close (SIS):
   When light barrier/light curtain is interrupted, door may not close following actuation.
   Door closes slowly after 4 minutes, with fault message.
   – Safety sensor open (SIO):
   e.g. test fixed-field sensor operation and actuation area.
   – Inside contactor (KI)
   – Contact maker Justified (KB)
   – Outside contactor (KA)
   – Use the Diagnosis function (Chapter 4.1) in the Service mode to check whether the controller has learned all the connected modules/safety devices.
   – Check locking function and reset locking position if necessary (Chapter 3.2).
5. If the system does not function, check the power supply.
   See also fault table as well as “Errors and Measures” document.

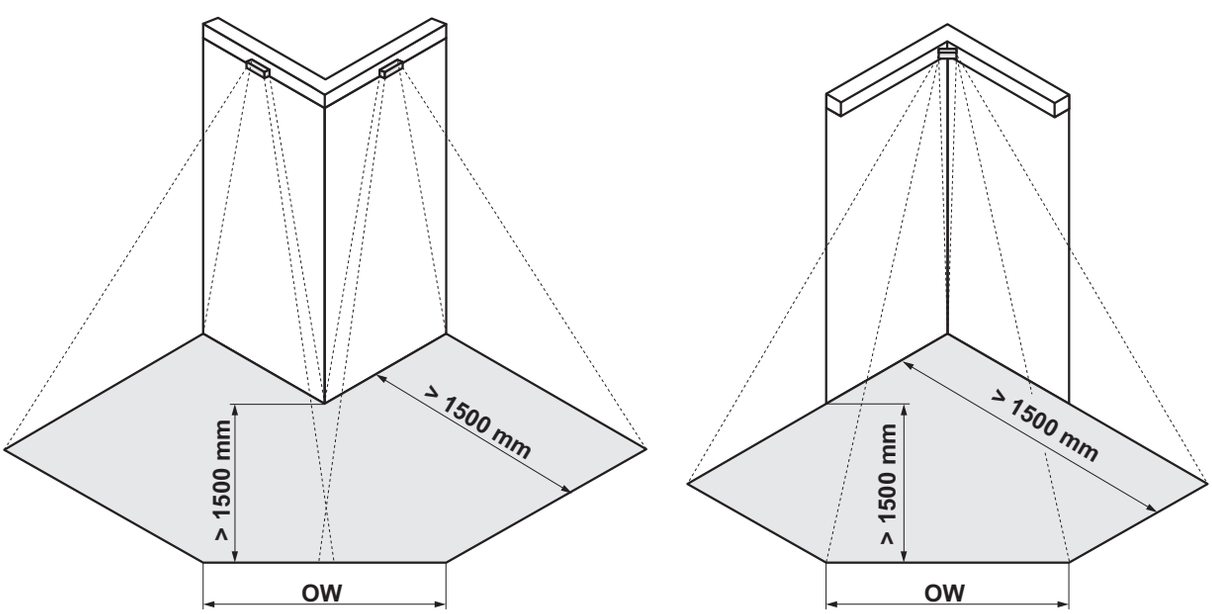
Adjusting inside motion detectors

Slimdrive SLV-FR 2M:

- **Inside motion detectors** have to detect movements in the direction of escape as of a speed of 0.1 m/s at a distance of at least 1500mm from the door (AutSchR)
- To cover the prescribed detection area, two self-monitoring inside motion detectors, depending on the type, may be required for large opening widths.
  For notes on how to connect the two motion detectors in the direction of escape, see connection diagram.
- When adjusting the motion detector ensure that the complete opening area is detected (see drawing). Adjust the sensitivity of the sensor and the detection field accordingly.

Slimdrive SLV

- The motion detector(s) should be set so that the detection field covers the entire door opening width and up to 1.5 m in front of the door. We recommend that you install two motion detectors for door opening widths greater than 80 in (2 m).
- **Inside motion detectors** have to detect movements from a speed of 0.1 m/s on.



After setting the motion detector(s), check the detection field on the ground.

Mounting of hood

Danger of injury from swivelling hood!

➪ Two people should always mount the hood.

1. Installing cables for hood stay cable at the mounting elements of the runner (see Chapter 3.17).
2. Insert cable for hood earth at the earth connector on the runner.
3. Clean hood at the contact points for hood mounting brackets. When doing so, ensure that the hood is not lubricated at the contact points.
4. Pull the protective film off the Velcro strip on the hood mounting bracket.
5. Slide hood onto side panels until it engages and press it firmly near the hood mounting brackets.
6. Screw in locking pin (for units with a lock).

The lock may not scrape the hood.

The cables may not be clamped.

Filling out user manual

➪ Record installed features in the user manual for the owner.

3.4 Dismantling

Danger of injury from falling hood!

Hood is held by an engaging mechanism and the Velcro strips of the hood mounting bracket.

➪ Two people are required to remove the hood and lower it carefully at the hood stay cable.

Danger of injury due to impact and crushing!

➪ Secure door leaves against accidental movement.

➪ Disconnect the accumulator.

Danger of electric shock!

➪ Disconnect the system from the 230 V mains network before working on the electrical system.

Risk of injury from height adjustment strip!

➪ Pull out the height adjustment strip before unhinging the door leaf.

➪ Do not rest the door leaves on the height adjustment strip.

Removal is carried out in the reverse order of installation.

4 Service mode

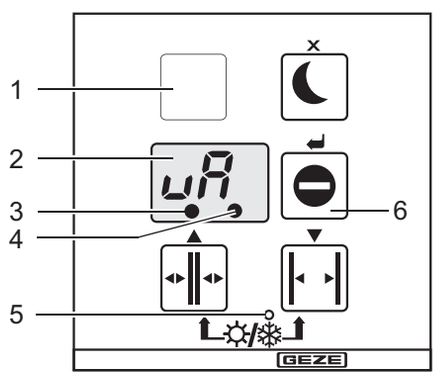
4.1 Operation

Access to Service mode:

- **Only with display program switch (Mat. No. 103940)**
- **Not in the Night operating mode**
- **Operation only possible with the key switch actuated (DCU1-2M)**
- **It is not possible to operate the display program switch during the self-test**

Switching Service mode on/off

Press the service key (1) and the "closing time" key ⊖ at the same time.



1 Service key
2 Display
3 Zero position unknown
(Door not yet initialized completely.
Not an error)
4 Maintenance indicator
5 LED for reduced opening width
6 "Closing time" key

If no key is pressed for a period of 5 minutes, then the controller returns to the normal operating mode.

Exceptions: in the Learning mode, in the Diagnostic mode and with motor isolated.

Operating Service mode

The Service mode starts with the first function in the first menu (function uA).

The Service mode consists of four menus which are divided into individual functions.
Different settings are possible within the functions.

The door leaves open and close after each change.

IIn the Service mode the door maintains the current operating state and opens and closes accordingly.
Exception: Settings LE and Fo.

The keys of the display program switch are assigned as follows in the Service mode:

Button	Description
▲	Go to previous function/setting or increase value
▼	Go to next function/setting or decrease value
↵	Confirm function and switch to the settings/Accept setting and return to the current menu
X	Cancel and return to first menu (uA function)

For the list of menu functions, see terminal connection diagram.

4.2 Learning

Close door leaves before learning.

The door calculates its running parameters by using the Learn function in the Service mode.

The display program switch displays the following steps:

Display	Description	Possible settings
L0	Start	—
L1	Checking the rotary transducer	—
L3	Opening width	—
L2	Toothed belt locking device	—
L8	Friction	—
L4	Door leaf mass	—
L6	Reduced opening width	⇨ Position the door in the desired position. ⇨ Press ↵ button: The setting is adopted. - or - Automatic acceptance after 30 seconds:
L7	End	Adopt setting
EL	Error in learning (see Chapter 6.2)	

Learning a reduced position for escape doors (DCU1-2M)

A reduced opening width can also be learned in the context of the Learn program.

To learn a reduced opening size, the operator must submit the escape route width specified for the escape route in writing.Only when this document has been submitted is it permitted to learn a reduced opening width. The set reduced opening width must be at least as large as the specified escape route width. A copy of the document must be included with the service or test log..

The reduced opening width may not be smaller than 30% of the opening width. The control will not learn a smaller reduced position.

1. Before starting the learn program, install a jumper on the control between terminals 2 and 6.
   Begin learning.
2. When L6 is displayed at the display program switch, move the door until the desired position for the reduced opening width is reached.
3. Press ↵ button
   Door position is accepted.
4. Press ↵ button
   The Learn program is ended.
5. Remove the jumper between terminal 2 and 6 again.

Check:

1. Switch over to the "Automatic" AU program.
2. Move door into “Winter” operational mode by simultaneously pressing the keys and .
3. Check position of reduced opening width with a tape measure by actuation or with “reduced continuous open".

Cancelling Learning mode

➪ Press the service key and the closing time key at the same time.

4.3 Air lock or vestibule using one program selector (only for DCU1)

The air lock or vestibule functions are only available for standard sliding doors (DCU1).

These functions are not permissible for sliding doors in escape routes (DCU1-2M).

Air lock: Two sliding doors use the same program selector.
One door will only open if the other is closed.

Vestibule: Two sliding doors use the same program switch.

For the air lock and vestibule, the program selector only displays the error reports of the main control.

- **Only connect the power supply of the program selector display to the internal door during operation of both systems.**
- **Supply the display program switch with the power of the outer door during outer door start-up.**

Starting up an air lock or vestibule system:

1. Start up the inner door (main control) as with a single system.
   During this the outside door (secondary control) is de-energised.
2. Switch off the inside door.
3. Start up the outside door as with a single system. During this the inside door is de-energised.
4. For the outside door, set value of
   01 for secondary control (air lock) or
   02 for secondary control (vestibule) in menu item SL .
5. Check whether the value 00 is switched on for inner door in the menu item SL .
6. Switch off the system and start both systems simultaneously.

5 Service and maintenance

5.1 Mechanical service

Danger of injury from falling hood!

Hood is held by an engaging mechanism and the Velcro strips of the hood mounting bracket.

- ➪ Always attach the hood with two persons, that is, always remove the hood with two persons.
- ➪ When removing, carefully lower hood at the hood stay cable.
- ➪ Make certain the hood engages when it is attached and press the velcro strips firmly into place.

Danger of electric shock!

- ➪ Disconnect the system from the 230 V mains network before working on the electrical system.

Danger of crushing!

- ➪ Secure door leaves against accidental movement.
- ➪ Disconnect the accumulator.

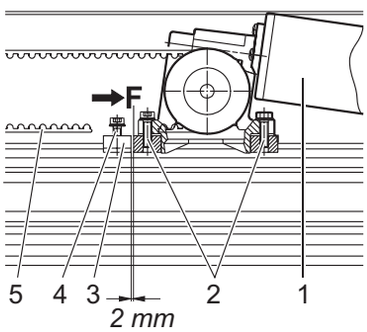
Danger of injury by opened drive!

Hair, clothing, cables etc. can be pulled in by rotating parts!

- ➪ When working on open drive, be cautious of rotating parts.

- **Keep inside area of runner clean.**
- **Three teeth of toothed belt must engage on each side of toothed belt lock.**

Tensioning toothed belt



Avoid unnecessarily high toothed belt tension.

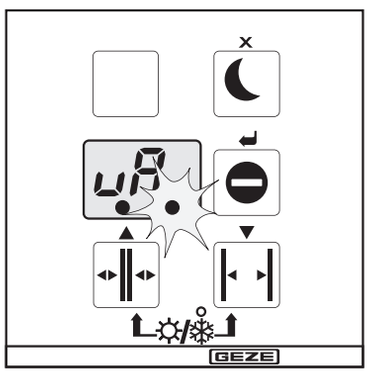
1. Loosen bolts (2).
2. Pull motor (1) with mounted toothed belt (5) to the right.
3. Tighten bolts (2).
4. Loosen bolt (4).
5. Push sliding block (3) toward motor (arrow). When doing so, leave a gap of approx. 2 mm between sliding block and motor.
6. Tighten bolt (4).
7. Insert a large flat-head screwdriver into the gap between the sliding block and motor and loosen bolts (2).
8. Lever motor to the right with the screwdriver to tension the toothed belt (5) (displacement force F at motor is approx. 300 N).
9. Tighten bolts (2) again.

Checking toothed belt tension

1. Start up door.
   Toothed belt may not lift up from the motor gear or skip when braking toward the open position.
2. If the toothed belt lifts up or skips, increase toothed belt tension:
   – Mark motor position at the runner.
   – Move motor to the right in 1-mm increments.

5.2 Maintenance

The prescribed maintenance work on Slimdrive SLV and Slimdrive SLV-FR 2M is to be carried out by properly trained personnel at least once a year or when the service display on the program selector display lights up (see figure below).



1. Keep the test documents up-to-date and make them available.
2. In the menu item SA of the second Service menu, bring up the number of openings (CO), the operating hours (HO) and the number of self-tests (Fo) and record these in the maintenance log.

After completing the maintenance work always carry out the Learn function for the door (see Chapter 4.2).

Test object	Action	Remarks
Runner	Check for cleanliness	Clean the runner, if necessary
Roller carriage	Check the wear of the rollers	Remove the wear, if necessary
Floor guide area	Check for smooth function	Clean the floor routing section, if necessary
Floor routing section (brushes)	Check for soiling and hardness	Clean or replace, if necessary
Door leaf	Check for smooth movement	See Chapter 7.1
Toothed belt	Check for wear and damage Check tension Check at the locking device for damage	Replace toothed belt if necessary Tighten the toothed belt, if necessary (see Chapter 5.1) Replace toothed belt if necessary
Locking system	Check for function	Re-position the locking device, if necessary (see Chapter 3.2)
Accumulator	Check accumulator voltage	Replace accumulator, if necessary
Screws	Check for tight fit	Tighten the bolts, if necessary (for torques refer to drive drawing)
Modules and periphery	Check for correct operation	Replace the module, if necessary (see Chapter 6.1)
Cable	Check for damage and proper fastening	If necessary, fasten cable or replace it

6 Fault elimination

Danger of injury from falling hood!

Hood is held by an engaging mechanism and the Velcro strips of the hood mounting bracket.

- ➪ Always attach the hood with two persons, that is, always remove the hood with two persons.
- ➪ When removing, carefully lower hood at the hood stay cable.
- ➪ Make certain the hood engages when it is attached and press the velcro strips firmly into place.

Danger of electric shock!

- ➪ Disconnect the system from the 230 V mains network before working on the electrical system.

Danger of crushing!

- ➪ Secure door leaves against accidental movement.
- ➪ Disconnect the accumulator.

Danger of injury by opened drive!

Hair, clothing, cables etc. can be pulled in by rotating parts!

- ➪ When working on open drive, be cautious of rotating parts.

6.1 Mechanical faults

Cause	Remedy
Runner deformed	➪Replace runner ➪Check installation surface
Door leaf binds	➪Check the door leaf (see below)
Roller carriage jammed or defective, high wear at the rollers	➪ Check that the toothed belt at the driver is positioned at a right angle ➪Guide toothed belt parallel ➪Replace the roller carriage (see below)
Toothed belt is damaged	➪Replace toothed belt
Module is defective	➪Replace module (see below)

Checking door leaf

1. Detach driver from toothed belt lock.
2. Move door leaf and check for smooth movement.
3. If door leaves move smoothly:
   Check the geared motor and replace it if necessary.

Replace roller carriage

For 2-leaf doors:
To replace a roller carriage on the left (right) door leaf, remove the left (right) door leaf and the left (right) end piece.

1. Detach driver from toothed belt lock.
2. Loosen lock nut on suspension bolt of roller carriages.
3. Remove door leaf.
4. Loosen and remove terminal strip on end piece.
5. Take out end piece upward.
6. Remove buffer from runner.
7. Replace the roller carriage.
8. Install roller carriage in reverse order. For torques, see overview diagram.

Replacing module

1. Fastening with sliding block and slot entry:
   Loosen the screw on the sliding block and move the sliding block sideways.
2. Fastening with sliding block and hole:
   Loosen and remove the fastening bolts.
3. Remove and replace the module.
4. Fasten the module in reverse order.

6.2 Electrical faults

Current pending error reports are briefly displayed cyclically (10 s) in operation at the display program switch. Additionally, they are entered in the error memories Er and oE .

If the dot lights up in the left half of the program display selector screen, then the installation was unable to completely initialize.

Either there is an obstruction or something in the installation itself has become jammed.

The dot disappears as soon as the door has been opened completely and closed again once.

For troubleshooting and elimination, see the fault table.

If no errors are displayed during a malfunction, or if the display program switch has no function:

- ➪ Check for active power supply
- ➪ Check cable and cable connections
- ➪ Check the fuses in the control and in the transformer and replace as necessary (see below)

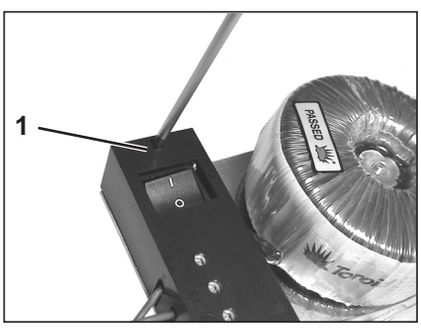
Error reports

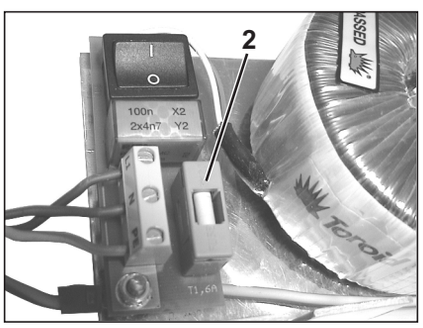
For the list of error messages, see terminal connection diagram

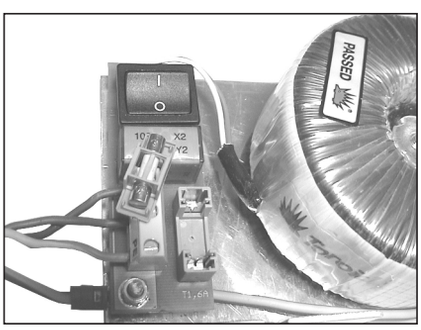
Replace fuse in transformer

Danger of electric shock!

➪ Disconnect the system from the 230 V mains network before removing the board cover.







1. Insert a suitable screwdriver in the opening of the board cover (1) above the switch.
2. Carefully push up the end wall of the board cover using the tip of the screwdriver (this releases the snap hinge).
3. Remove the cover.
4. Pull off the fuse holder (2) towards the front and replace the defective fuse.
5. Plug in the fuse holder.

Cables must not be pinched when mounting the hood.

6. Replace the board cover and snap into place.

7 Index

Statement from the manufacturerer

pursuant to Appendix II B of the Machine Directive 89/392 EEC, version 98/37 EC

Manufacturer: **GEZE GmbH**

Reinhold-Vöster-Str. 21 – 29
D-71229 Leonberg

Product designation: GEZE Slimdrive SLV-FR 2M

Statement:

The drive is developed, designed and produced in accordance with the Machine Directive 89/392/EEC, version 98/37 EC, and the Construction Products Directive 89/106/EEC, version 93/68 EC, solely by GEZE GmbH and is not intended for use on its own.

Additionally applicable EU directives:

- EMC Directive 89/336/EEC, version 93/31/EEC
- Low-Voltage Directive 73/23/EEC, version 93/68/EEC
- R & TTE Directive

Applied European standards:

- EN 292 Parts 1 and 2
- EN 50081-1
- EN 50082-2
- EN 60335-1
- EN 60950
- prEN 12650-1
- prEN 12650-2

Applied national standards and technical specifications :

- ZH 1/494
- AutSchR
- DIN V VDE 0801

Documentation and operating instructions:

The delivery documentation, the statement from the manufacturer and the operating instructions are included with the drive.
Note:

Commissioning the described drive is not permissible until it has been determined that the door system which will accept this drive complies with the standards of the Machine Directive and the Construction Products Directive.

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GEZE Representative:

The standart DIN ISO 9001 of our trade