

Slimdrive EMD

Valid for variants: Slimdrive EMD (1-leaf/2-leaf) Slimdrive EMD-F (1-leaf/2-leaf) Slimdrive EMD Invers (1-leaf/2-leaf) Slimdrive EMD-F-IS Slimdrive EMD-F/R Slimdrive EMD-F/R-IS Original operating instructions

EN User manual



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1 Introduction

1.1 Symbols and illustrations

Warning notices

In these instructions, warning notices are used to warn against material damage and injuries.

- Always read and observe these warning notices.
- Observe all measures marked with the warning symbol and warning word.

Warning symbol	Warning word	Meaning	
	CAUTION	Danger to persons. Non-compliance can result in minor injuries.	
	nbols and illustra t information and	ations technical notes are highlighted to explain correct operation.	
Symbol	ol Meaning		
0	means "important note"; Information on avoiding material damage, improved understanding or optimising the workflows		
i	means "additional Information"; The user's attention should be drawn to important addition information. There is no danger to persons or property, but it is particularly useful to read the additional information carefully		
►	Symbol for an action: This means you have to do something. ▶ If there are several actions to be taken, keep to the given order.		

1.2 Product liability

In compliance with the liability of the manufacturer for his products as defined in the German "Product Liability Act", compliance with the information contained in this brochure (product information and intended use, misuse, product performance, product maintenance, obligations to provide information and instructions) must be ensured. Failure to comply releases the manufacturer from his statutory liability.

1.3 Special cases

In certain cases, such as with

- Special wiring
- special function settings (parameters)
- Special software

differences from the information given in this user manual may occur.

▶ If this is the case, please ask the service technician responsible.

1.4 More detailed information

Information about commissioning and service can be found on the following diagrams:

- Wiring diagram Slimdrive EMD
- Installation instructions Slimdrive EMD

1.5 Terms

Term	Explanation
Hinge side	The side of the door where the hinges from which the door leaf is suspended are located Usually that side of the door located in the opening direction.
Opposite hinge side	The side of the door facing the hinge side. Usually that side of the door located in the direction of closing movement.
Active leaf	The active leaf of a double leaf door. When the door is used, the active leaf must open as the first door leaf and close as the last door leaf.
Passive leaf	The secondary leaf of a double leaf door. When the door is used, the passive leaf may not open until the active leaf has left the closing position and must close again as the first door leaf.
Activation device inside (KI)	Push button, switch or movement detector for activating the drive unit. The activation device is located within the room enclosed by the door. Activation function in the AUTOMATIC and EXIT ONLY modes of operation. The activation device does not have any function in the NIGHT/OFF mode of operation.
Activation device outside (KA)	Push button, switch or movement detector for activating the drive unit. The activation device is located outside the room enclosed by the door. Activation function in the AUTOMATIC mode of operation. The activation device does not have any function in the EXIT ONLY and NIGHT/OFF modes of operation.
Activation device authorised (KB)	Access control function (for example key switch or card reader) used by authorised persons to activate the drive unit. The activation function is active in the AUTOMATIC, EXIT ONLY and NIGHT/OFF modes of operation.
Activation device with current impulse function	Push button for opening and closing the door. Activation function only in the AUTO- MATIC and EXIT ONLY modes of operation. The door is opened automatically when the button is first pressed and closed again automatically when the button is pressed the second time. The function can be activated during commissioning by parameter setting using the display programme switch, ST 220 or GEZEconnects. If the activation device is connected to the passive leaf control unit by means of the "current impulse" function, both door leaves open when activated, even when the passive leaf control system is deactivated.
Push&Go	When the door is pressed manually out of the closing position with an activated Push & Go function in the AUTOMATIC mode of operation, the door opens automatically as soon as a specific adjustable opening angle is exceeded.
Opening safety sensor (SIO)	Presence detector (e.g. active infrared light sensor) for protecting the swivelling range of the door in the opening direction. As a rule the sensor is located on the hinge side of the door on the door leaf.
Closing safety sensor (SIS)	Presence detector (for example active infrared light sensor) for protecting the swiv- elling range of the door in the closing direction. As a rule the sensor is located on the opposite hinge side of the door leaf.
Emergency stop button	Self-locking switch with which immediate stopping of the drive unit can be triggered in case of danger. The drive unit remains in its current position until the user unlocks the emergency stop switch again, thus terminating the emergency stop situation.
Low-energy function	The Slimdrive EMD can be used as a low-energy drive. In low-energy function the force needed for opening and closing the door is reduced to 67 N and the opening and closing time is reduced. This lowers the danger of a per- son bumping into the moving leaf. If people who are particularly vulnerable pass through the door, special measures must be taken to eliminate the contact hazard (e.g. use of open/closing safety sensors).

Term	Explanation
Closing sequence control	 Electrical closing sequence control In normal operation of double leaf drive units, the closing sequence of the door leaves is controlled by the control units of the drive units, with the passive leaf being closed first. The active leaf remains in the open position until the passive leaf has reached the closed position, then the active leaf begins to close. Integrated closing sequence control (-IS) In the event of a power failure, the closing sequence is controlled mechanically on double leaf door systems with Slimdrive EMD-F-IS. The door leaves are closed by means of the power storage device of the drives, with the active leaf being kept open by the integrated mechanical closing sequence control. When the passive leaf has reached the closing position, it releases the active leaf by means of the mechanical elements of the integrated closing sequence control so that it can also close completely.
Electric strike	 Fail-secure electric strike Available as AC or DC electric strike version. When the drive unit is activated, the electric strike is switched on by the control unit of the drive unit provided the door is in the closing position. The electric strike remains activated until the door has left the closing position. Fail-safe electric strike DC electric strike version. The electric strike is switched off when the drive unit is activated until is activated provided the door is in the closing position. The electric strike is switched off when the drive unit is activated provided the door is in the closing position. The electric strike remains switched off until the door has left the closing position.
Bolt feedback	The bolt feedback function is a contact integrated in the lock latch that is activated when the door is locked mechanically by the tie bolt of the door lock. It signals to the control unit that the door is locked mechanically and can therefore not be opened by the drive unit. In this case the control unit ignores the control commands of all the activation devices.
Reset	Push button for restarting the drive after the operating voltage has been switched on or after a fire alarm has been terminated. When the push button is pressed, the latching integrated in the drive is activated, causing the drive to be switched on.
Latching function	When the door is closed in a de-energised state, the door leaf is impeded by the lock latch of the electric strike. To make sure the door can pass the lock latch safely during closing, an integrated limit switch is activated in the drive once a specific opening an- gle has been reached, reducing the braking strength. The door accelerates and closes into the lock at increased speed. In an energised state, this function is regulated by the drive control unit.
Door closer mode	In automatic mode (normal operation) the automatic swing door drive can behave like a door closer. This means that closing is torque-controlled. This closing torque can be adjusted and adapted to the respective passage situation.
Servo operation	If servo operation is used, the swing door drive supports manual opening through moment of force. The support torque and the support period can be set for this support.

2 Fundamental safety precautions

For the user

Carefully read and abide by this user manual before commissioning the door. Always observe the following safety instructions:

- ^a Operating, maintenance and repair conditions specified by GEZE must be observed.
- The commissioning, mandatory installation, maintenance and repair work must be performed by experts authorised by GEZE.
- ^a The connection to the mains voltage must be made by a professional electrician.
- No changes may be made to the system without prior agreement from GEZE.
- ^a GEZE shall assume no liability for damage caused by unauthorised changes to the system.
- The owner is responsible for safe operation of the system.
- ^a Have a service technician check the safe operation of the system at regular intervals.
- Should safety devices be misaligned, thus preventing them from fulfilling their intended purpose, further operation is not permissible. The service technician must be informed without delay.
- Make sure that the safety stickers are attached visibly to any glass leaves and are in a legible state.
- Protect the programme switch against unauthorised access.
- Danger of injury by sharp edges on the drive when removing the weather hood
- Danger of injury by parts hanging down
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory
 or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction
 concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance.
- ^o Cleaning and user maintenance shall not be made by children without supervision.

For the service technician

- ^o GEZE does not accept any warranty for combinations with third-party products.
- Only combine third-party products with original parts following agreement by GEZE. Furthermore, only original GEZE parts may be used for repair and maintenance work.
- The power connection and protective earth conductor test must be carried out in accordance DIN VDE 0100-610.
- Use an on-site automatic cut-out as the line-side disconnecting device, the dimensioning of which is matched to the type, cross-section, type of routing and ambient conditions of the on-site power supply circuit. The automatic cut-out must have at least 4 A and max. 16 A.

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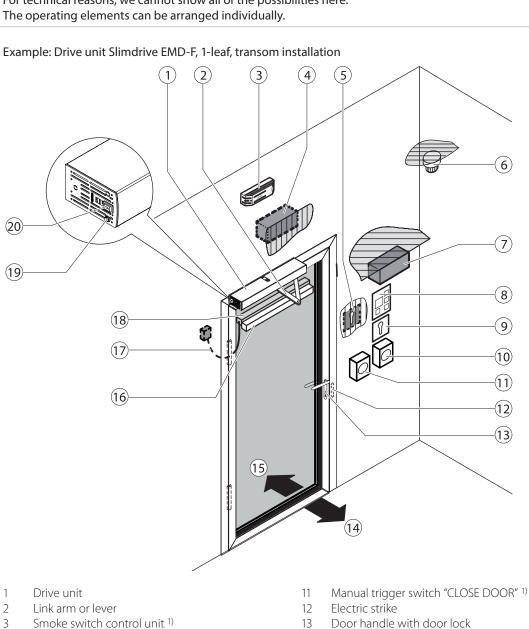
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Description 3

Types of installation and versions 3.1

- The drive unit can be mounted in transom installation on the lintel or in door leaf in door leaf installation.
- The drive unit is available as 1-leaf or 2-leaf version.
- 3.2 Structure

. The door system shown is only a schematic diagram. 1 For technical reasons, we cannot show all of the possibilities here. The operating elements can be arranged individually.



(optional)

	11	Manual Ingger switch CLOSE DOOR 17	
	12	Electric strike	(optional)
	13	Door handle with door lock	(on site)
(optional)	14	inside	
(optional)	15	outside	
	16	Closing safety sensor (SIS)	(optional)
(optional)	17	Door transmission cable	(optional)
(optional)	18	Opening safety sensor (SIO)	(optional)
	19	Reset button	
(optional)	20	Internal programme switch	

¹⁾ optional, in conjunction with Slimdrive EMD-F

Outside contact sensor (KA)

Mechanical contact (KB)

Contact sensor inside (KI)

Display programme switch

Key switch for enabling the display programme switch

Emergency stop switch

Smoke switch ¹⁾

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3.3 Overview of the modes of operation

The following modes of operation can be set on the Slimdrive EMD:

- Automatic
- Exit only
- Hold open
- Night mode
- OFF

Mode of operation	MPS/MPS-ST/ TPS*	DPS**	÷	Explanatory notes
		Кеу	Display	
Automatic			Ru	Door opens and closes again. The inside and outside activation devices are active. Refer also to Chapter 3.5.
 Opening of 2 leaves 	 ↓		‡	When the keys are pressed simultaneously, the mode of operation changes between 1-leaf opening and 2-leaf opening.
 Opening of 1 leaf 			*	On the DPS the LED $lpha$ is lit in 1-leaf operation.
Exit only			LS	Door only opens and closes if someone exits. Only the inside activation devices are active.
Hold open			60	Door remains open.
Night mode			~ <i>R</i>	Door opens and closes only when activated using the key switch The inside and outside activation devices are inactive.
OFF	OFF	OFF	oF	Door is enabled and can be moved by hand. The inside and outside activation devices are inactive.

* Mechanical programme switch MPS/mechanical programme switch with integrated key switch MPS-ST/keypad programme switch TPS

** Display programme switch

3.4 Operating elements

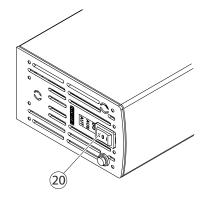
The modes of operation can be set using the following operating elements:

- Internal programme switch (20) on the drive unit (see chapter 3.4.1)
- Mechanical programme switch MPS with/without integrated key switch (optional) (see chapter 3.4.2)
- Display programme switch (optional) (see chapter 3.4.3)
- Keypad programme switch (optional) (see chapter 3.4.4)

3.4.1 Internal programme switch

The mode of operation on the drive unit can be selected using the internal programme switch (20). The switch position indicates the current mode of operation:

0.	operation		
	Setting II	Ru	Automatic
	Setting 0	~R	Night/Off
	Setting I	60	Hold open

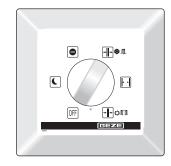


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3.4.2 Mechanical programme switch MPS (optional)

• Can be connected additionally to the internal programme switch (20).

At the mechanical programme switch MPS, the mode of operation for the system is selected and the corresponding programme is displayed. The mechanical programme switch is accessible for everyone without a key switch.



Mechanical programme switch MPS



Mechanical programme switch MPS-ST with integrated key switch

With the mechanical programme switch MPS-ST, selection of the modes of operation is disabled if the key provided has been removed.

3.4.3 Display programme switch DPS (option)

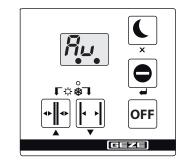
• Can be connected additionally to the internal programme switch (20).

If a dot appears on the bottom right-hand part of the display, maintenance is due.

If a dot appears in the middle of the display, the door has not yet been fully initialised after the mains voltage has been

switched on. Initialisation is carried out automatically when the drive opens and closes the door.

As an option, operation of the display programme switch can be restricted by a key switch SCT.



Display programme switch DPS

3.4.4 Keypad programme switch TPS (optional)

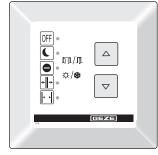
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• Can be connected additionally to the internal programme switch (20).

• Setting of the mode of operation using the keypad programme switch is only possible when the internal programme switch (20) is set to the **0** position.

The system operating status is selected and the corresponding programme is displayed at the keypad programme switch.

The keypad programme switch is accessible for everyone without a key switch. If desired, an additional key switch can be used for blocking.



Keypad programme switch TPS

3.5 Door in normal operation

In normal operation, the door is automatically opened and closed.

What happens?	What does the door do?
An activation device (push button, switch or movement detector) is triggered.	Door opens, waits the hold-open time and then closes.
Closing safety sensor (SIS) is triggered when the door is open (e.g. light switch).	Door remains open.
Closing safety sensor (SIS) is triggered while the door is closing.	The door immediately opens again or stops depending on the parameter setting.
Opening safety sensor (SIO) is triggered while door is opening.	The door stops and remains in position until the end of activation (door opens) or until the end of the hold-open time (door closes).
Opening safety sensor (SIO) is triggered when the door is closed.	Door remains closed.
A person moves toward the opened door and a move- ment detector is activated.	Door remains open.
A person moves toward the closing door and a movement detector is activated.	Door reopens immediately.
Door contacts an obstruction when opening. The opening safety sensor has not been activated.	Door stops, waits and attempts again to move to the open position at a reduced speed. Then the door closes again.
Door contacts an obstruction when closing. The closing safety sensor has not been activated.	Door reopens immediately, waits the hold-open time and then closes at a reduced speed. When door closer mode is used with the closing safety sensor deactivated, the drive presses against the obstacle with the force set.

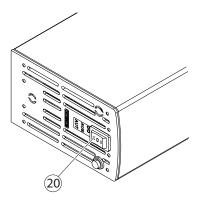
Additional door functions

Which switch/push button?	What does the switch/push button do?
Emergency stop switch	The door stops immediately (in every mode of operation) and holds the position until the emergency stop switch is unlocked.
Key switch of the display programme switch	If a key switch is connected to the display programme switch, the operation of the display programme switch can be locked or released with it.
Activation device authorised (KB) (e.g. outside key switch)	Door opens once and closes after the hold-open time. The set mode of operation is retained.
Switch function	 The automated door can be activated using the switch function. Normal switch function: Switch contact opens the door and the door remains in the open position. Switch contact closes the door. Switch function with hold-open time: Switch contact opens the door. Switch contact opens the door. Switch contact closes the door. Switch contact closes the door.
Double push button	In the case of 2-leaf drives, a button with a double func- tion can be connected via a push button for which param- eters can be set. This means that 1-leaf or 2-leaf opening is possible by pressing the push button. If the push button is pressed once, only the active leaf opens and closes after the hold-open time has expired. If the button is pressed twice within 1.5 s, both leaves open and close after the double leaf hold-open time has expired.
Emergency lock	When the emergency lock is used, a switch can close the 1- or 2-leaf system immediately. The doors close with the set force and without safety sensors and obstacle detec- tion. There is an increased risk of injury.
WC control	The door opens after the elbow switch on the outside of the toilet has been pressed, and closes automatically after the set hold-open time has passed. When the push button is activated inside the toilet cabin, the system is switched to the exit only mode of operation, which means the outer push button no longer opens the door. At the same time, the lights indicate that the toilet is occupied. The electric strike is supplied with current, preventing manual opening of the door from outside. Activating the "inner" push button again or through man- ual opening from inside, the WC function (exit only mode of operation) is cancelled and the drive switched back to the automatic mode of operation. The 'occupied' displays and lights go out.

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4 Operation 1 The set parameters of the drive functions may only be modified by a service technician. 4.1 Selecting the mode of operation

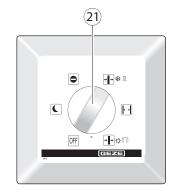
- 4.1.1 Selecting the mode of operation at the mechanical programme switch
 - The internal programme switch (20) can be deactivated by a service technician.
 - In the **0** programme switch setting the mode of operation can be changed using a connected display programme switch (optional).
 - In the programme settings I and II the display programme switch (optional) is used to display the mode of operation set and to output fault messages.
 - Set the internal programme switch (20) to the required position (II, 0 or I).



- 4.1.2 Selecting the mode of operation at the mechanical programme switch MPS
 - Setting of the mode of operation using the mechanical programme switch is only possible when the internal programme switch (20) is set to the **0** position.

With the programme switch MPS

Turn the rotary switch (21) to the required mode of operation. The mode of operation is set.



Mechanical programme switch MPS

Operation of the mechanical programme switch MPS-ST is only possible with the supplied key (22).

- ▶ Insert the key (22) into the mechanical programme switch MPS-ST.
- ▶ Turn the key rotary switch (23) to the required mode of operation.

The mode of operation is set.

Remove the key.

The mechanical programme switch MPS-ST locked.

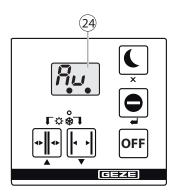


Mechanical programme switch MPS-ST with integrated key switch

4.1.3 Selecting the mode of operation using the display programme switch

- Setting of the mode of operation using the display programme switch is only possible when the internal programme switch (20) is set to the **0** position.
- Touch the required mode of operation on the display pro-gramme switch.

The mode of operation is set and indicated on the display (24).



Display programme switch DPS

Enabling operation of the display programme switch with key switch SCT (optional)

Press key switch SCT briefly.

Operation of the display programme switch is enabled.

Press key switch SCT briefly again.

Operation of the display programme switch is disabled.

Fault messages on the display

If a fault occurs in the door system, it is displayed on the display programme switch about every 5 seconds.

Read off the number of the fault message, note it down and notify the service technician.



4.1.4 Selecting the mode of operation using the keypad programme switch

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 Setting of the mode of operation using the keypad programme switch is only possible when the internal programme switch (20) is set to the **0** position.

The desired operating status is selected by pressing the and v keys.
 The LED of the current operating state lights up.

When using a key switch:

- Enable by operating the key switch once briefly.
- Disable the operation of the keypad programme switch:
- Activate the key switch briefly again.



Keypad programme switch TPS

Fault messages in the keypad programme switch

If a fault occurs in the system, this is indicated by at least 2 LEDs lighting up alternately with the current operating status.

▶ Read off the light combination, note this down and inform a service technician.

5 Troubleshooting

Problem	Cause	Remedy
Door only opens and closes slowly	Obstruction in travel path	 Remove obstruction and check door leaf for ease of movement Have the door close completely once; door moves after obstruction at a safe speed until the complete closing proce- dure has been completed
	Closing safety sensor (SIS) soiled	 Clean the closing safety sensor Have the door close completely once; door moves after obstruction at a safe speed until the complete closing proce- dure has been completed
	Closing safety sensor (SIS) misaligned or defective	 Notify a service technician
Door opens and closes	Obstruction in travel path	Clear the obstruction
constantly	Irradiation or reflections, e.g. reflective floor, falling rain	 Check detection area of movement detector
	Misaligned movement detector	 Check detection area of movement detector
Door only opens a crack	Obstruction in travel path	 Remove obstruction and check door leaf for ease of movement
Door does not open	Obstruction in travel path	 Remove obstruction and check door leaf for ease of movement
	Movement detector misaligned or defec- tive (outside)	 Check the movement detector, notify a service technician if necessary
	Emergency stop button activated	Unlock emergency stop button
	"Night" mode of operation	 Select a different mode of operation
	"Exit only" mode of operation	Select "Automatic" mode of operation
	Door locked mechanically	Unlock the door
	Electric strike does not release	Notify a service technician
	Fire alarm active (Slimdrive EMD-F only)	Activate reset button (19)
	Drive defective	Notify a service technician
Door does not close	Closing safety sensor (SIS) soiled	 Clean the closing safety sensor (SIS)
(After 4 minutes of continu- ous activation by the safety	Closing safety sensor (SIS) misaligned or defective	Notify a service technician
sensor, the Slimdrive EMD/ Slimdrive EMD-F automati- cally closes the door	Obstruction in travel path	 Remove obstruction and check door leaf for ease of movement
in low-energy mode)	Movement detector triggers constantly	 Check the movement detector, notify a service technician if necessary
	"Hold open" mode of operation	Select a different mode of operation
	Current impulse push button function controls	 Terminate activation by pressing the pus button again
Display programme switch	Display programme switch is disabled	 Activate key switch for release
cannot be operated	Display programme switch defective	Notify a service technician
Keypad programme switch	Keypad programme switch is disabled	Activate key switch for release
cannot be operated	Keypad programme switch is faulty	Notify a service technician
Display programme switch displays B	Connection between display programme switch and control unit faulty	Notify a service technician
	Display programme switch or control unit defective	Notify a service technician
Display programme switch	Power failure	Check mains fuse
without display	Connection between display programme switch and control unit faulty	Notify a service technician
	Display programme switch or control unit defective	Notify a service technician

Problem	Cause	Remedy
Keypad programme switch	Power failure	Check mains fuse
without display	Connection between keypad programme switch and control unit faulty	Notify a service technician
	Keypad programme switch or control unit defective	Notify a service technician
Display of fault messages on the display programme switch	Fault in the door system	 Note fault messages. Up to 10 different fault messages can occur in succession. The display changes about every 10 seconds. Notify a service technician
Display of fault messages on the keypad programme switch	Fault in the door system	Note the LED combination.Notify a service technician.

6 Cleaning and maintenance

6.1 Cleaning

▲ CAUTION!

Danger of injury due to impact and crushing!

- Set the mode of operation to OFF.
- Secure door leaves against accidental movement before carrying out cleaning work.

What is to be cleaned?	How is it to be cleaned?
Closing safety sensor (SIS) (e.g. light switch)	Wipe with damp cloth
Glass surfaces	Wipe with a cold vinegar/water mixture; then dry.
Stainless surfaces	Wipe with soft cloth
Coated surfaces	Wipe with water and soap
Anodised surfaces	▶ Wipe with non-alkaline potassium soap (pH value 5.5 7)
Display programme switch, keypad programme switch, mechanical programme switch	Wipe with soft cloth. Do not use a cleaning agent

6.2 Maintenance

The owner must ensure that the system is working perfectly. To guarantee perfect operation, the door system must be serviced regularly by a service technician.

Maintenance must be carried out at least once a year or according to the maintenance display on the display programme switch.

Installation, maintenance and repair work must be performed by experts authorised by GEZE.

If a dot appears on the bottom right-hand part of the display, maintenance is due.Notify a service technician.



The maintenance display lights up after the specified calendar period or number of opening cycles, depending on what occurs first:

1 year or 500,000 cycles

GEZE offers maintenance contracts with the following services:

- Check fastening elements for a firm fit
- Performance of miscellaneous adjustment work
- Performance of operational checks
- Check all the safety and control equipment of the door system
- Lubricate all moving parts

6.3 Inspection by an expert

In compliance with the "Guidelines for windows, doors and gates" (ASR A1.7 and GUV 16.10) Section 6, power-operated doors must be inspected for safety by an expert before initial commissioning and at least once a year. GEZE offers the following services:

Inspection and operational checks of all safety and control equipment in compliance with the requirements in the test log for power-operated windows, doors and gates; Sliding doors and sliding gates ZH 1/580.2 edition.

Slimdrive EMD/EMD-F

7 Technical data

Opening speed:	0°/s 33°/s
Closing speed:	0°/s 33°/s
Electrical connection values:	230 V; 50 Hz pursuant to DIN IEC 38
Connected load:	max. 300 W Capacity rating 230 W
Protection:	Mains connection 230 V: on site 4 A to 16 A
Current consumption for external devices:	24 V DC connection; max. 1000 mA
Temperature range:	–15°C to +50°C; for dry rooms only
IP rating:	IP 20



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