



TSA 325 NT Revolving doors

Original operating instructions

EN User manual

130509-05



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Supplied system

3-leaf variant	<input type="checkbox"/>	3
4-leaf variant	<input type="checkbox"/>	4
Manual revolving door	<input type="checkbox"/>	M
With automatic positioning device	<input type="checkbox"/>	P
Automatic revolving door	<input type="checkbox"/>	A
Servo revolving door	<input type="checkbox"/>	S
All-glass	<input type="checkbox"/>	GG

Break-out function	<input type="checkbox"/>	BO
Burglar-resistant	<input type="checkbox"/>	RC2
Underfloor drive	<input type="checkbox"/>	UFA
Manual night-time closer	<input type="checkbox"/>	NV
Automatic night-time closer	<input type="checkbox"/>	ANV
Internal manual night-time closer	<input type="checkbox"/>	INV
Internal automatic night-time closer	<input type="checkbox"/>	IANV


Example: TSA 325 NT A3 NV BO = revolving door TSA 325 NT automatic drive with 3 leaves, with manual night-time closer and break-out function

1 About these instructions

Warning notices




Warning notices are used in these instructions to warn you of personal injury and property damage.

- ▶ 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 to medium injuries.


Further symbols and illustrations

Important information and technical notes are highlighted to explain correct operation.

Symbol	Meaning
	means "important note"; information about avoiding property damage
	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.

1.1 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.

 To ensure personal safety, it is important to follow these safety instructions. These instructions must be kept.

2 Safety instructions

2.1 Instructions for safe operation

- Failure to observe the instructions in this handbook may result in damage to the equipment or personal injury.
- The door may only be used for the movement of persons.
- 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 are supervised, or if they have been given instruction concerning use of the appliance in a safe way and understand the hazards involved.
However, this does not generally exclude such persons from using the door on which the drive is installed.
- Children shall not play with the appliance.
- Cleaning and maintenance shall not be carried out by children without supervision.
- The door system must be unplugged from the mains connection during maintenance and cleaning work.
- No persons may pass through the door system during repair or maintenance work.

2.2 General safety notices

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

- ▶ Make sure that the relevant accident prevention regulations and standard EN 16005 are observed.
- ▶ Observe any relevant additional national and European directives.
- ▶ Operating, maintenance and repair conditions specified by GEZE must be observed.
- Maintenance and repair work may only be performed by properly trained personnel authorised by GEZE. The protective conductor must be connected.
- Only trained, GEZE-authorized personnel may open the cover.
- GEZE shall assume no liability for damage caused by unauthorised changes to the system.
- The door system is solely suitable for use in entrances and interior areas of pedestrian traffic in commercial plants and public areas.
- The owner is responsible for safe operation of the system. If safety equipment is misaligned, causing it to no longer fulfil its intended purpose, further operation is no longer permissible. Inform the service technician immediately.
- In accordance with Machine Directive 2006/42/EC and EN 16005, a safety analysis must be performed and the door system identified in accordance with CE Identification Directive 93/68/EEC before the door system is commissioned.
- If there are any glass breakages (ceiling, leaf or drum wall), put the door out of use immediately and use suitable measures to prevent anyone entering the area (e.g. barrier tape). Notify a service technician.
- The door may stop unexpectedly if a safety function is triggered. It is possible that persons may walk into a stopped door leaf and hit it.
- If possible, the glass on the drum wall and side-hung leaf must be labelled at eye level through appropriate measures, to prevent persons from running into it.
- When switching over to night mode, the operator must ensure that no persons have been trapped in the door system.

2.3 Further technical safety instructions

- The flooring used under the area of the side-hung leaf on a revolving door may have a maximum unevenness of 4 mm. Gaps or floor guide slits in the flooring may not be wider than 4 mm.
- To ensure user safety, sufficient ambient lighting must be available.
- The setting for the revolving speed of the door system must be adjusted to the expected users of the system. It may be necessary to reduce the speed.
- Persons may stand in front of and inside the door system only to pass from one area to another area.
- In general, no one may stand on the roof of the door system.

3 Description

3.1 Intended use

The door system is solely suitable for use in entrances and interior areas of pedestrian traffic in commercial plants and public areas. Make sure the door system is used for this purpose during operation.

Heed the following points when using the door system:

- ▶ Make sure that the electrically powered turnstile is not accelerated manually.
- ▶ Adapt the walking speed of the door system.
- ▶ Make sure that the opening is large enough for entering and leaving the door system.
- ▶ Do not stand still in the door system or change directions.
- ▶ Ensure sufficient distance to the drum wall and the side-hung casement.
- ▶ Do not stand still in the direct vicinity of the door entrance or exit.
- ▶ Do not enter the door carrying bulky objects or pushing a trolley (e.g. shopping trolley).
- ▶ Make sure children are always accompanied when they enter the door system.
- ▶ Keep children at play away from the door system.
- ▶ Keep animals on a short lead or carry them.

The door system must be used for the intended purpose so that the revolving door safety sensors do not unexpectedly slow or stop the door system in operation.



In certain conditions, changing weather conditions (wind, snow, rain, bright sunshine) can cause brief interruptions or standstill of the door system. This is not a fault, rather it is to guarantee user safety.

Deactivation of the escape and rescue route function

- If the operator switches to "NIGHT" mode and locks the turnstile or closes a night-time closer, the revolving door will no longer be available as an escape route.
- The "NIGHT" mode of operation is not a defined operating mode according to the guidelines on automatic sliding doors in escape and rescue routes (AutSchR).
- Only authorised persons may change the mode of operation with the key push button at the programme switch.
- The operator may only switch to "NIGHT" if the emergency exit route is no longer used, i.e. people are no longer in the building or an escape and rescue chart indicates other emergency exit routes for this time period.

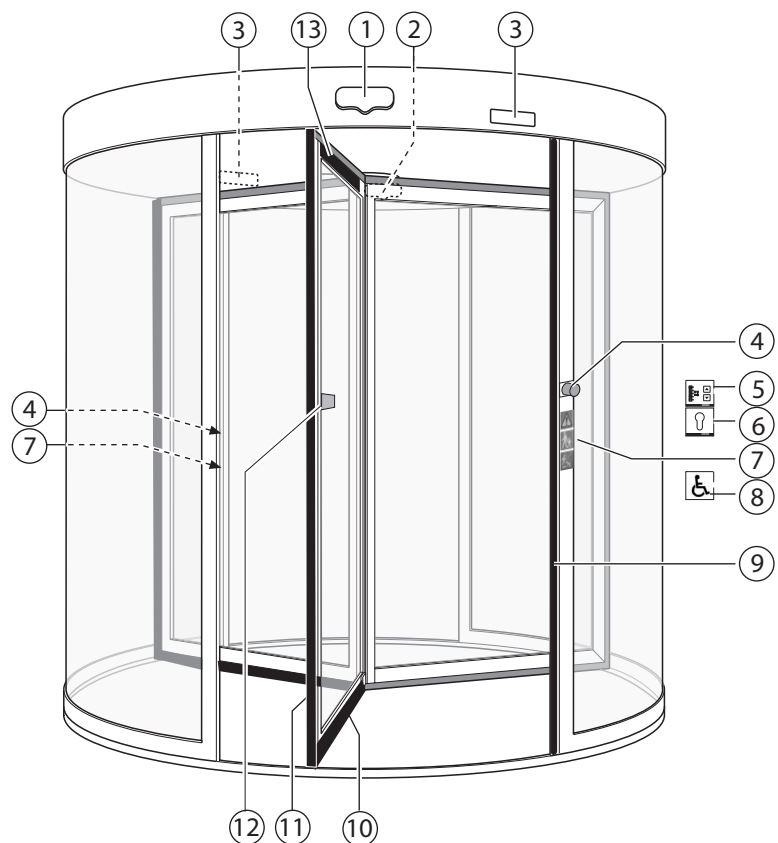
3.2 Structure



The operating elements are arranged differently depending on the situation. For technical reasons, we cannot show all of the possibilities here. The door system shown is only a schematic diagram.

System parts and options

- 1 Movement detector inside
- 2 Movement detector outside
- 3 Front post safety sensor
- 4 Emergency-stop switch inside and outside
- 5 Keypad programme switch
- 6 Key switch (optional)
- 7 Warning notice inside and outside
- 8 Push pad (optional)
- 9 Post safety
- 10 Heel protection strip
- 11 Vertical safety contact strip
- 12 Breakout emergency exit sign (optional)
- 13 Mobile sensor strip (optional)



Pos.	Explanation
1 + 2	Pulse generator to activate the door rotation for the set number of rotations.
3	Safety sensor on the cornice profile of the door system to monitor the area directly in front of the right post of the door system. When a door leaf approaches the post, stoppage of the door system is triggered upon activation (for instance if a person is standing at the post).
4	The switch is always on the right post of the door system, and triggers an emergency stop upon activation. The drive is released and the door leaves can turn freely. The switch must be snapped back into place to begin the rotational movement once again.
5	Keypad programme switch to switch modes of operation and to display error codes on the door system.
6	Optional; key switch to protect the programme switch against unauthorised operation.
7	Sticker on the right post of the door system as a notice to watch children carefully in the door area.
8	Optional; when the push button is pressed and the door system is activated with a pulse generator (1+2), the door turns a set number of sectors at a low speed. Then the door system accelerates back to normal speed. Note: Only possible in automatic mode.

Pos.	Explanation
9	Rubber strip on the right post of the door system. When the rubber strip is pressed, this triggers a stop of the door system. After the rubber strip is released, the drive restarts independently after a set pause time.
10	Rubber strip on the bottom leaf profile. When the rubber strip is pressed, this triggers a stop of the door system. After the rubber strip is released, the drive restarts independently after a set pause time.
11	Rubber strip on the exterior vertical door leaf profile. When the rubber strip is pressed, this triggers a stop of the door system. After the rubber strip is released, the drive restarts independently after a set pause time.
12	Optional; sticker on the door leaf when using doors with break out door fittings in emergency exit systems.
13	Optional; use with revolving doors with a diameter over 3,000 mm. The safety sensor reduces the revolving speed when the door leaf approaches a person or triggers a stop of the door leaf.

3.3 GEZE door variants

Door variant	Special feature
Manual doors	Doors without safety function, exclusively for manual use
Manual doors with speed limiter	The max. speed of the revolving door is limited by a safety mechanism in the door.
Manual doors with automatic positioning device	Once it has been passed, the manual door is moved motor-driven to its initial/end position at very low speed. The programme switch must be set to the manual mode of operation.
Servo doors	Increased comfort compared with a manual door thanks to automatic starting of the turnstile with radar movement detector. In order to reach walking speed, the turnstile can be overridden by hand. After the door has been passed, it revolves slowly to the final position. The speeds are limited. The programme switch must be set to the manual mode of operation.
Fully automatic revolving doors	Activation via movement detector. Electromechanical drive with two pre-adjustable speeds. The revolving movement starts automatically.

3.4 GEZE building designs

Building design	Special feature
GG variant (all-glass)	The drum walls do not have a frame at the top or bottom and the door has a glass roof.
GD variant (glass roof)	The drum walls have a frame and the door has a glass roof.
BO variant (break out)	The side-hung casements can be broken out in any position by pressing the outer edge of the leaf. When a leaf is broken out, the drive is switched off immediately. The door leaves can be engaged again by hand. Then the door continues revolving until it reaches its end position.
RC2 variant	Burglar-resistant fitting system tested in accordance with DIN EN 1627 - 1630. Special version of the night-time closer, drum walls and roof.

4 Operation

4.1 Door in normal operation

i GEZE revolving doors can be operated with special control elements, which deviate from the behaviour described here. Please ask the service technician responsible for information on the special control elements which are installed.

During normal door operation the door revolves as long as persons are within the range of influence of the sensors.

What happens?	What does the door do?
An activation device (push button, switch or movement detector) is triggered.	The door begins to revolve.
The safety sensor (mobile safeguarding device) triggers because an object has been detected between the leaves.	The door slows down to a standstill if necessary.
Safety sensor (front post safety sensor) is triggered when the door revolves.	As soon as the passing leaf comes nearer than the preset danger distance, the door slows down to a standstill.
Safety sensor on the side element (post safety sensor) is triggered.	The door slows down to a standstill.
Safety sensors on the leaf (draw-in protection) touch an obstruction and are triggered.	The door slows down to a standstill.



4.2 Additional door functions

In addition to the keypad programme switch, various additional functions control the door manually via switches or push buttons.

Which switch/push button?	What does the switch/push button do?
Emergency stop switch	The door brakes to a standstill and can be revolved freely.
Key push button of the keypad programme switch	If a key push button is connected to the keypad programme switch, the operation of the keypad programme switch can be locked or released with it.
Contact sensor "Authorised" (e.g. outside key push button)	The door unlocks and revolves in accordance with the number of sectors set and lets the person pass.
Activation button	The door revolves at full speed
Push pad	The door slows and revolves at reduced speed
Key switch for night-time closer	When the key switch is activated, the night-time closer sliding door will open or close. ► Ensure that the night-time closer is either completely open or completely closed.

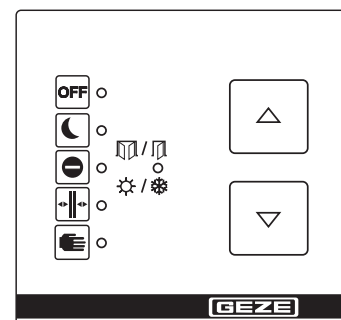
4.3 Selecting the operating mode

! ► Change the mode of operation once daily for doors with a positioning device / servo or for fully automatic doors. When the mode of operation is changed, internal tests are completed to ensure fault-free operation.

The system operating mode is selected and the corresponding programme is displayed at the keypad programme switch. The operating mode is changed by pushing the  or  buttons.








The current operating mode is indicated by permanent illumination of the corresponding LED. The TPS-KDT indicates the actual operating mode, even if the operating mode is changed via another operating mode input (e.g. additionally fitted switches or GLT system).


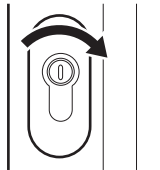
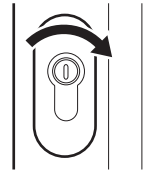
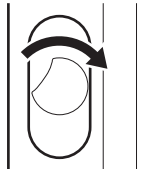
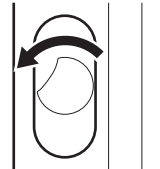
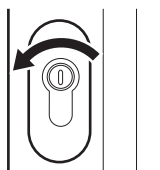
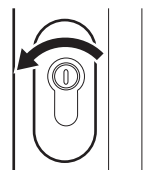
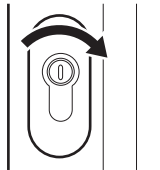
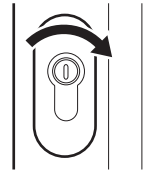
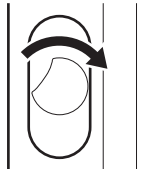
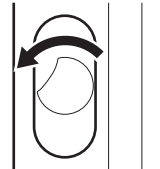
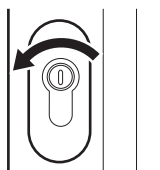
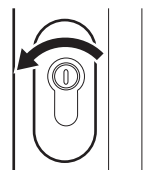
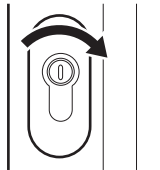
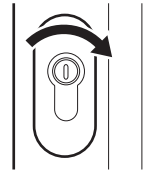
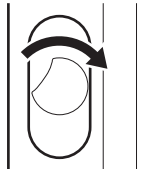
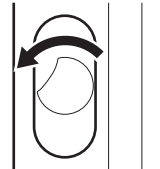
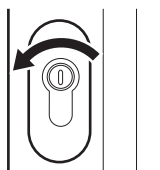
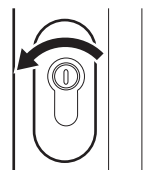
Keypad programme switch TPS-KDT



The keypad programme switch is accessible for everyone. Therefore we recommend the use of an additional key push button in order to block the keypad programme switch. The keypad programme switch is only enabled while the key push button is operated.

Changing the operating mode of the TPS can also be protected by setting parameters for a password to prevent the operating mode being changed by unauthorised persons. The password can only be set and changed by a service technician. The password for operating the keypad programme switch (TPS-KDT) has 2 digits (01 ... 99). The arrow keys are used for entry. The factory setting is 00 (released).

Operating status	TPS-KDT	Explanatory notes
Automatic		<p>All the connected pulse generators are active in the "Automatic" operating mode. Revolving speed and time delay can be set. When activated by a movement detector the door accelerates to the set automatic speed, continues to revolve at this speed and stops in the target position after a preset number of sectors.</p> <p>The following special functions are possible in the "Automatic" operating mode:</p> <p>Summer operation The turnstile stands still without activation. When activated for the first time, the revolving door accelerates to automatic speed. After that the revolving door revolves at the automatic speed for a number of sectors that can be set and then slows to the run-on speed. The revolving door revolves at the slow speed for a set time delay and then stops in the next target position. This operating mode is particularly suitable for creating an welcoming atmosphere. If the time delay is set to endless, the revolving door revolves permanently.</p> <p>Winter operation The turnstile stands still without activation. When activated, the revolving door accelerates to the automatic speed. After that the revolving door revolves at the automatic speed for a number of sectors that can be set and then stops in the target position.</p> <p>In "Automatic" operating mode, alteration between summer and winter operation can be affected by simultaneously pressing the buttons  and .</p> <p>If winter operation is selected, the LED "Winter" is illuminated in the TPS-KDT.</p> <div style="text-align: center;">  </div> <p>Activation of push pad (optional) A switch with a wheelchair symbol is located on the door. When this switch is activated, the door brakes and revolves at the set disabled access speed. This speed is specified for the set number of sectors.</p>
Exit only		<p>In the "exit only" operating mode the door is only activated via the internal movement detector, then revolves for a set number of sectors at automatic speed and then stops again in the target position.</p>
Manual		<p>The turnstile can be rotated freely in manual operation. If no further functions are set, the "Manual" operating mode is identical with the "Off" operating mode. The following options can be set:</p> <ul style="list-style-type: none"> ▫ An automatic positioning device returns the door to the target position at slow speed after passing has been completed. ▫ Safety devices can be activated. ▫ The speed limiter can be activated. ▫ Prescribed mode of operation for revolving doors with automatic positioning device and servo revolving doors.
Night mode		<p>The following options for locking can be built into the system in order to lock it in the "Night" operating mode:</p> <p>No locking If the revolving door does not have a locking function, it can be revolved manually in the "Night" operating mode.</p>

Operating status	TPS-KDT	Explanatory notes															
Night mode		<p>Manual locking A rod locking can be used as a manual locking element. A contact used to monitor the locking operating mode is installed.</p> <table border="0"> <tr> <td style="text-align: center;">Unlock</td> <td></td> <td style="text-align: center;">Lock</td> </tr> <tr> <td></td> <td>▶ Disengage lock.</td> <td></td> <td>▶ Disengage lock.</td> </tr> <tr> <td></td> <td>▶ Unlock leaf.</td> <td></td> <td>▶ Lock leaf.</td> </tr> <tr> <td></td> <td>▶ Engage lock.</td> <td></td> <td>▶ Engage lock.</td> </tr> </table>	Unlock		Lock		▶ Disengage lock.		▶ Disengage lock.		▶ Unlock leaf.		▶ Lock leaf.		▶ Engage lock.		▶ Engage lock.
Unlock		Lock															
	▶ Disengage lock.		▶ Disengage lock.														
	▶ Unlock leaf.		▶ Lock leaf.														
	▶ Engage lock.		▶ Engage lock.														

 The leaf locking mechanism may also function as mirror-inverted for the all-glass version (AG).

To lock the door manually:

- ▶ Select the "Night" operating mode at the keypad programme switch. The Night LED flashes on the TPS-KDT.
- The door revolves automatically to the locking position.
- ▶ Lock the locking device manually.
- The Night LED switches to continuous light.

Unlocking the door manually:

- ▶ Unlock the locking device manually.
- The Night LED of the TPS-KDT switches to flashing.
- ▶ Set the desired operating mode on the TPS-KDT.
- The LED indicates the operating mode.

Locking device with disc brake





A disc brake can be used to lock the revolving door. When the power supply is interrupted, the brake is opened. The revolving door can then be revolved manually. It is not suitable for a revolving door with break-out function.

Locking the door:

- ▶ Select the "Night" operating mode on the TPS-KDT.
- The Night LED flashes on the TPS-KDT.
- The door revolves automatically to the locking position.
- The disc brake is activated.
- The Night LED switches to continuous light.


Unlocking the door:

- ▶ Select the desired operating mode on the TPS-KDT.
- The disc brake is released.
- The new operating mode is active and is displayed on the TPS-KDT.

Operating status	TPS-KDT	Explanatory notes
Night mode		<p>Electromagnetic lock</p> <p>One or two electromagnetic locks can be used to lock the revolving door. A locked door remains locked when the power fails. An unlocked door remains unlocked when the power fails. In the case of a power failure the lock can be unlocked by means of a built-in battery.</p> <ul style="list-style-type: none"> ▶ Select the "Night" operating mode at the keypad programme switch. <p>The door moves to the end position and locks automatically.</p> <p>Option: Revolving door suitable for use in escape and rescue routes.</p> <p>Only with the break out variant (BO) with a separate key push button for locking.</p> <ul style="list-style-type: none"> ▶ During the slow movement into the end position, press the key operated button and keep it pressed. <p>The door locks automatically in the end position.</p> <ul style="list-style-type: none"> ▶ Release the key operated button again. ▶ In order to unlock the door, activate the key operated button and switch on the desired operating mode at the button programme switch. <p>Access via the contact sensor authorised (only at revolving doors suitable for use in escape and rescue routes):</p> <ul style="list-style-type: none"> ▶ Operate the authorised contact sensor (I think). <p>The door revolves once.</p> <ul style="list-style-type: none"> ▶ In order to lock the door hold the authorised contact sensor authorised until the door has locked automatically. <p>Locking in the event of a power failure</p> <hr/> <p> In order to avoid the danger of persons being locked in, the revolving door may not be entered when the locking bolts are lowered and may only be turned further from the outside. A special locking switch is required for locking and unlocking.</p> <hr/> <p>Locking with night-time closer</p> <p>The revolving door can be locked with a single leaf or double leaf night-time closer manual or automatic).</p> <p>Manual night-time closer: The procedure is identical to manual locking.</p> <p>Automatic night-time closer:</p> <ul style="list-style-type: none"> ▶ Select the "Night" operating mode on the TPS-KDT. <p>The door revolves automatically to the locking position.</p> <ul style="list-style-type: none"> ▶ In order to lock the night-time closer, activate the key push button and hold it until the night-time closer is closed and locked. ▶ In order to open the night-time closer, activate the switch and hold it until the night locking system is open. ▶ Select the desired operating mode on the TPS-KDT. <hr/> <p> When locking the door, the operator must ensure that no persons have become caught in the door system.</p>
Off		<ul style="list-style-type: none"> ▶ In the "Off" operating mode the motor is switched off and the door can be freely revolved manually. This operating mode is especially suitable for maintenance and cleaning of the door. All activation devices are switched off.

4.4 Locking/unlocking (optional)

For a description of locking/unlocking the door, see Section 4.3 "Selecting the operating mode", Night operating mode.

-  If a revolving door suitable for escape and rescue routes is used, the operator must ensure that the door really is unlocked after it has been unlocked.

4.5 Behaviour in an emergency



CAUTION!

Danger of injury caused by crushing!

The door leaf may only be snapped into place by trained personnel.

- ▶ When re-engaging the breakout leaf, ensure that your fingers do not become stuck on the inner leaf edge.



If a revolving door suitable for escape and rescue routes is used, the operator must ensure that the door really is unlocked after it has been unlocked.

The door can be stopped via the emergency stop switch and moved manually.

Revolving doors with break out system (BO) can be opened in any position by pressing the outer edge of the leaf (< 220 N), clearing a suitable escape route. The drive is switched off immediately after the leaf has been broken out and the turnstile can be revolved manually.

5 No mains voltage



- ▶ If the mains voltage fails (e.g. power failure), check the on-site safety fuse first.

State	Reaction
No mains voltage	In "Night" operating mode, the door remains locked as long as a disc brake was not used. In other operating modes, the door coasts to standstill and stops.
Mains voltage available again	The door starts again in the previously set operating mode.
Door leaves revolve if there is no active power supply	The door can be revolved manually providing it was not locked.

6 Fault messages on the programme switch TPS-KDT

If a fault occurs in the system, a fault code is displayed every 5 seconds (several LEDs), alternating with the operating mode (one LED). Up to 20 different fault messages can be displayed.

- ▶ Read the fault message, record it and notify the service technician.

TPS display	Designation
○ ○ ○ ○ ○	No operating voltage
○ ○ ○ ● ●	Drive too hot
○ ○ ● ○ ●	Position
○ ○ ● ● ○	Post safety
○ ○ ● ● ●	Motor, rotary encoder, initialisation sensor
○ ● ○ ● ○	Emergency stop
○ ● ○ ● ●	Draw-in protection (post safety sensor/vertical safety contact strip)
○ ● ● ○ ○	Rechargeable battery
○ ● ● ● ○	Frequency converter
○ ● ● ● ○	Mobile safeguarding device (accompanying safety)
● ○ ○ ○ ●	Alarm
● ○ ○ ● ○	Front post safety sensor
● ○ ○ ● ●	Disc brake
● ○ ● ○ ○	Break out
● ○ ● ○ ●	24 V internal (fuse F1)
● ○ ● ● ○	24 V external
● ● ○ ○ ●	Mains power failure
● ● ○ ● ○	Control unit, motor relay
● ● ○ ● ●	Keypad programme switch
● ● ○ ○ ○	Service terminal
● ● ● ○ ○	Locking

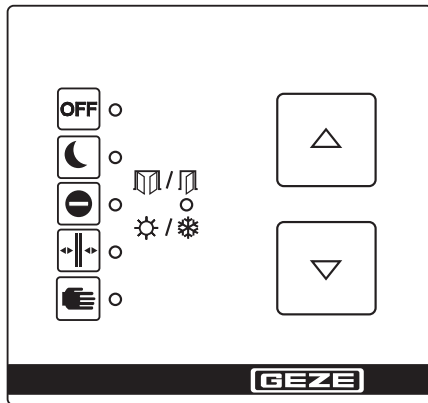
In addition, the following states are displayed:





- Non-taught Winter LED flashes continuously (1 s on, 3 s off)
- Maintenance Winter LED flashes continuously (0.5 s on, 0.5 s off)
- Fault Operating mode displayed for 5 sec., fault code for 2 sec.
- Block active Current operating mode LED flashes once if a key is pressed on the TPS and if the operating mode cannot be switched (key push button not operated or there is a permanent signal at the input DO, AU, LS or NA).

7 What to do if...?

Problem	Cause	Remedy
Door revolves very slowly	Floor area soiled	<ul style="list-style-type: none"> ▶ Interrupt power supply. ▶ Clean the affected floor area.
	Obstruction in travel path	▶ Remove obstruction and check door manually for smooth movement.
	Mobile safeguarding device is interrupted or misaligned	<ul style="list-style-type: none"> ▶ Clean safety sensor. ▶ Check the setting of the optical safety sensors.
	Scraping on floor, other mechanical impediment	▶ Revolve the door manually, remove visible obstacles. If no obstacles are visible, notify a service technician.
Door does not revolve	Movement detector misaligned or defective	<ul style="list-style-type: none"> ▶ Check movement detector. ▶ Notify a service technician.
	"Night", "Off" operating mode	▶ Select another operating mode.
	"Exit only" operating mode	▶ Select "Automatic" operating mode.
	Door is locked manually	▶ Unlock the door.
	No mains voltage	▶ See chapter 5, "No mains voltage".
	Emergency-stop switch pressed	▶ Unlock emergency stop switch.
	Door leaf has been broken out (BO variant)	▶ Engage the door leaf again by hand and wait for the door system to start up.
Door only revolves manually	"Off" operating mode	▶ Select another operating mode.
	No mains voltage	▶ See chapter 5, "No mains voltage".
Door always revolves only a bit further	Obstruction in travel path	<ul style="list-style-type: none"> ▶ Remove the obstacle. ▶ Notify a service technician. ▶ Change to the "Manual" operating mode and check the movement force manually. If the revolving force is too high, notify a service technician.
Door does not unlock or lock (in case of automatic locking)	Locking defective	<ul style="list-style-type: none"> ▶ Check locking in the "Night" operating mode. ▶ Unlock the door manually and notify a service technician.
	Key push button not activated	▶ Activate the key push button, repeat the unlocking process.
Programme switch cannot be operated	Programme switch is blocked	▶ Activate key switch.
	Programme switch is defective	▶ Request servicing.
Fault messages displayed at programme switch	Fault in the door system	▶ See chapter 6, "Fault messages on the programme switch TPS-KDT".
Glass break (door leaf/drum wall)	Impact on pane	<ul style="list-style-type: none"> ▶ Put the door out of operation immediately and take suitable measures to prevent anyone entering the door (e.g. barrier tape). ▶ Notify a service technician.

Carry out a reset/delete the fault memory



- ▶ Use key  or  to change to the mode of operation OFF (see Section 4.3 “Selecting the operating mode”).
- ▶ Press keys  and  simultaneously for 1 s.
The fault memory with the current faults is deleted.
- ▶ Select the desired new mode of operation.

8 Cleaning and maintenance

8.1 Maintenance



The owner must ensure that the system is working perfectly.

In accordance with EN 16005, a regular check must be completed of revolving door drives at least once annually in accordance with manufacturer specifications. The results must be documented in a test log and stored for at least 1 year. The check must be completed by a person who has been trained and certified by GEZE.

Daily:

- ▶ Check the safety devices (such as emergency switches) in the area of the door system, for instance by pressing the emergency stop switch or activating a safety edge. The system must stop immediately.
- ▶ Subject the door system to a visual inspection for loose parts, sharp edges and broken glass.
- ▶ Check that there is sufficient lighting in the passage area.
- ▶ Check the floor condition (obstructions, danger of slipping, unevenness, dirt deposits).
- ▶ Check the system for unusual noises (such as squeaking bearings). Decommission and block the door if there are unusual noises. Notify a service technician.

Weekly:

- ▶ Clean the door system, see Section 8.2, “Cleaning”.

Monthly:

- ▶ Check the lubrication of the floor bearing and re-grease bearings if necessary.

If the “Winter” LED on the TPS-KDT keypad programme switch flashes continuously, maintenance is required.

GEZE offers maintenance contracts with the following services:

- Inspect and adjust the chain.
- Check the leaf suspension.
- Check the attachment elements for firm seating.
- Performance of miscellaneous adjustment work.
- Performance of operational checks.

8.2 Cleaning



- ▶ Unplug the system from the power grid before beginning cleaning work. The mains power switch must be equipped with a mains circuit breaker.

What is to be cleaned	How is it to be cleaned
Floor guide, night-time closer	<ul style="list-style-type: none"> ▶ Remove the soiling and check that the door moves smoothly. ▶ Keep free of snow and ice in winter.
Safety sensor	▶ Wipe with moist cloth.
Glass surfaces	▶ Wipe with a cold vinegar-water mixture or glass cleaner; then dry.
Stainless surfaces	▶ Wipe with non-scratching cloth.
Coated surfaces	▶ Wipe with water and soap.
Anodised surfaces	▶ Wipe with non-alkaline potassium soap (pH value 5.5...7)
Keypad programme switch	▶ Wipe with damp cloth. Do not use a cleaning agent.
Brushes on the side-hung casements	▶ Clean weekly with the vacuum cleaner.
Entrance mat	<ul style="list-style-type: none"> ▶ Clean/vacuum clean at regular intervals. ▶ Lift up the entrance mat and vacuum clean under it.

8.3 Inspection by an expert

In compliance with standard EN 16005, the safe state of power operated doors must be checked before initial operation and at least once a year by an expert.

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.

9 Disposal

The door system is made up of materials that should be sent for recycling.

- ▶ Sort the individual components in accordance with the type of material.
- The parts can be disposed of by a recycling company.

Batteries and rechargeable batteries contain pollutants and heavy metals.

- ▶ Do not dispose of batteries and rechargeable batteries with household waste.
- ▶ Observe national legal regulations.



Information regarding the German Battery Directive:

(Applicable in Germany and in all other member states of the European Union as well as in other European countries, together with the countries' own provisions for a separate waste battery collection system.)



In accordance with the German Battery Directive, we are obliged to inform you of the following in connection with the sale of batteries or rechargeable batteries respectively in connection with the delivery of devices containing batteries or rechargeable batteries: Rechargeable batteries and batteries must not be disposed of with household waste. Disposal with household waste is expressly forbidden according to the German Battery Directive. As the final consumer, you are bound by law to return waste batteries and rechargeable batteries. Please return waste batteries and rechargeable batteries to a communal collection point or retailer.

Following use, you may return any batteries or rechargeable batteries received from us by post. The address is: GEZE GmbH, Incoming Goods, Reinhold-Vöster-Str. 21-29, 71229 Leonberg/Germany.

Batteries that contain hazardous substances are labelled with the symbol of a crossed-out garbage can.

The chemical designation of the harmful substance is specified underneath the rubbish-bin symbol: Cd for Cadmium, Pb for lead, Hg for mercury.

10 Technical data

Revolving speed	$\varnothing \leq 3.0$ m: 0.2 up to max. 1 m/sec $\varnothing > 3.0$ m: 0.2 to max. 0.75 m/sec
Electrical connection values	230 V, 50–60 Hz, 350 W
Current for external devices	24 V DC, max. 3,5 A
Equipotential bonding	10 mm ²
Temperature range	–15 °C to +50 °C
IP rating	Ceiling drive: IP 20 Underfloor operator: IP 54
Noise level	< 68 dB (A)
Door service life	over 500,000 cycles



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These original operating instructions are also available over the GEZE customer portal or at www.geze.com.

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