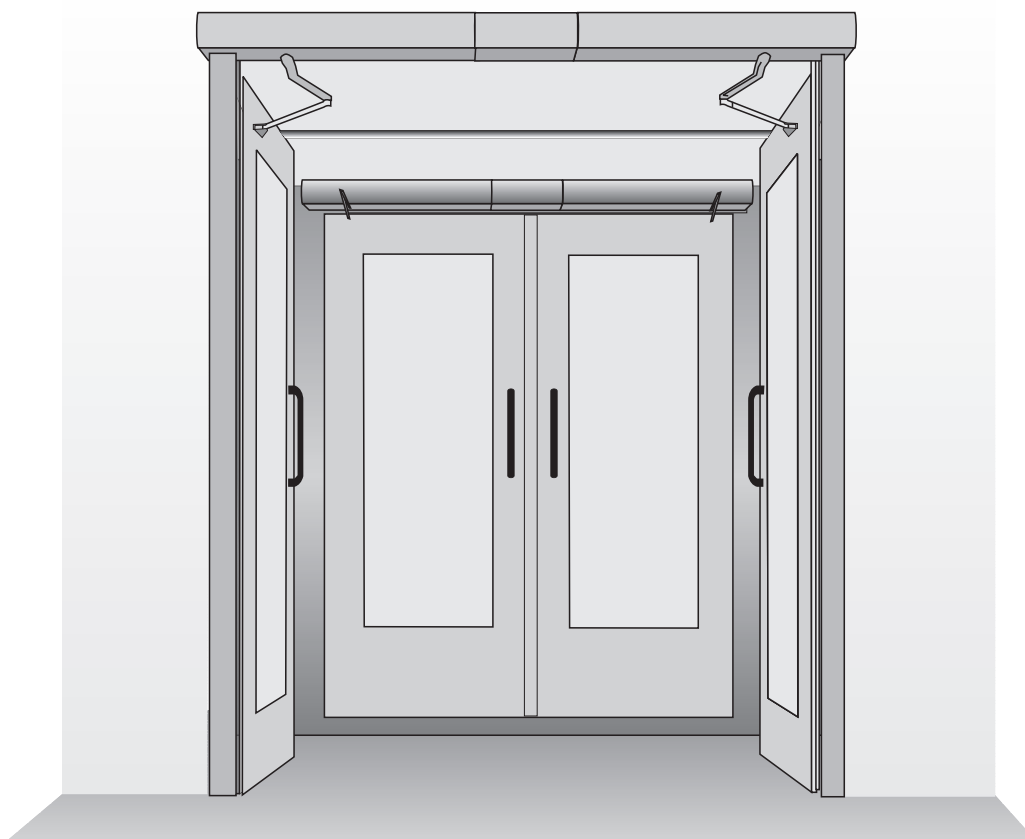


- TSA160NT
- TSA160NT F
- TSA160NT Z
- TSA160NT Invers
- TSA160NT Z-Invers
- TSA160NT-IS
- TSA160NT F-IS
- TSA160NT Z-IS
- TSA160NT-IS / TS
- TSA160NT F-IS / TS
- TSA160NT Z-IS / -TS



## User manual



Id. No. 127641



Mat.-Nr. 122654



Artikelnr. 127643



N° de suite 127642



Mat. Nr. 127644

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## Supplied system

TSA160NT <input type="checkbox"/>	TSA160NT F-IS <input type="checkbox"/>
TSA160NT F <input type="checkbox"/>	TSA160NT Z-IS <input type="checkbox"/>
TSA160NT Z <input type="checkbox"/>	TSA160NT-IS / TS <input type="checkbox"/>
TSA160NT Inverse <input type="checkbox"/>	TSA160NT F-IS / TS <input type="checkbox"/>
TSA160NT Z-Inverse <input type="checkbox"/>	TSA160NT Z-IS / -TS <input type="checkbox"/>
TSA160NT-IS <input type="checkbox"/>	

## Key to symbols



means "operation to be carried out"



means "additional information"



means "important note"

## Special cases



In certain cases, such as at

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

deviations from the information given in this user manual may occur. If this is the case, please ask the responsible service technician.

# 1 General safety precautions

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Thoroughly read and abide by this user manual before commissioning the door.

In addition, always observe the following safety precautions:

- Operating, maintenance and repair conditions specified by GEZE must be observed.
- The commissioning, prescribed installation, maintenance and repair work must be performed by properly trained personnel authorised by GEZE.
- GEZE shall assume no liability for damage caused by unauthorised changes to the system.
- 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 not permissible. Inform the service technician immediately in this case.
- GEZE is not liable if products from other manufacturers are used with GEZE equipment. Furthermore, only original GEZE parts may be used for repair and maintenance work.
- The connection to the power supply must be made by a qualified electrician. Perform the power connection and safety earth conductor test in accordance with DIN VDE 0100-610.
- Use a customer-accessible 10-A overload cut-out that disconnects the system from the power supply as the line-side disconnecting device.
- Protect the optional mechanical programme switch (MPS) (for example MPS-ST) against unauthorised access.
- In accordance with Machine Directive 98/37/EC and DIN 18650, a danger analysis must be performed and the door system identified in accordance with CE Identification Directive 98/68/EEC before the door system is commissioned.
- Observe the latest versions of directives, standards and country-specific regulations, in particular:
  - BGR 232 "Guidelines for power-operated windows, doors and gates"
  - DIN 18650 "Building hardware - Powered pedestrian doors"
  - DIN VDE 0100-610 "Erection of low-voltage installations"
  - DIN EN 60335-2-103 "Safety of electrical devices for home use and similar purposes; Special requirements for drives for gates, doors and windows"
  - Accident-prevention regulations, especially BGV A1 "General regulations" and BGV A3 "Electrical systems and equipment"

## 2 Terms

Term	Statement
Hinge end	That side of the door at which the hinges from which the door leaf is suspended are located. Usually that side of the door located in the opening direction.
End opposite of hinge	That side of the door that lies opposite the hinge end. Usually that side of the door located in the closing direction.
Moveable leaf	The main leaf of a 2-leaf door. The moveable leaf must open as the first door leaf and close as the last door leaf when the door is used.
Fixed leaf	The secondary leaf of a 2-leaf door. When the door is used, the fixed leaf may not open until the moveable leaf has left the closing position and must close again as the first door leaf.
Inside contactor (KI)	Button, switch or motion detector for controlling the door drive. The contactor is located within the room enclosed by the door. Control function in the AUTOMATIC and CLOSING TIME operating modes <sup>1)</sup> . The contactor does not have any function in the NIGHT/OFF operating mode.
Outside contactor (KA)	Button, switch or motion detector for controlling the door drive. The contactor is located outside the room enclosed by the door. Control function in the AUTOMATIC operating mode. In the operating modes CLOSING TIME <sup>1)</sup> and NIGHT/OFF the contactor does not have any function.
Contactor authorised (KB)	Access control function (for example key switch or card reader) used by authorised persons to control the door drive. The control function is active in the "AUTOMATIC", "CLOSING TIME <sup>1)</sup> " and "NIGHT/OFF" operating modes.
Contactor with current impulse function	Button for opening and closing the door. Control function only in the AUTOMATIC and CLOSING TIME operating modes <sup>1)</sup> . 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 configuration. If the contactor is connected to the fixed leaf control system by means of the "current impulse" function, both door leaves open when activated, even when the fixed leaf control system is deactivated.
Push&Go	When the door is pressed manually out of the closing position during an activated closing position inhibition, the door opens automatically as soon as a specific adjustable opening angle is exceeded.
Safety sensor open (SIO)	Presence detector (for example active infrared light sensor) for protecting the swinging range of the door in the opening direction. As a rule the sensor is located on the hinge end of the door on the door leaf.
Safety sensor close (SIS)	Presence detector (for example active infrared light sensor) for protecting the swinging range of the door in the closing direction. As a rule the sensor is located on the end opposite the hinge on the door leaf.
Stop	Self-locking switch with which immediate stopping of the door drive can be triggered in case of danger. The drive remains in its current position until the user releases the stop switch again, thus terminating the stop situation.

<sup>1)</sup> The "CLOSING TIME" operating mode can only be selected with the optional mechanical programme switch.

## Terms

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Term	Statement
Close sequence control	<p>Electrical close sequence control unit.            In normal operation of 2-leaf door drives the closing sequence of the door leaves is controlled by the control units of the door drives, with the fixed leaf being closed first. The moveable leaf remains in the open position until the hold-open time of the fixed leaf has expired. Only then does the moveable leaf begin to close.</p> <p>Integrated close sequence control unit (-IS)            The closing sequence is controlled mechanically in the case of a power failure at 2-leaf door systems with TSA160NT-F-IS. The door leaves are closed by means of the power storage of the drives, with the moveable leaf being kept open by the integrated mechanical close sequence control unit at approximately 30° opening angle before the closing position is reached. When the fixed leaf has reached the closing position, it releases the moveable leaf by means of the mechanical elements of the control sequence control unit, so that it can also close completely.</p>
Electrical door opener	<p>The control unit has a floating contact for the connection of a door opener. This can be configured as an open-circuit NC or a closed-circuit NC.            When door drive is controlled, the door opener is activated briefly by the control unit. Power can be supplied to 24 VDC NC contacts from the drive.</p>
Lock feedback	<p>The lock feedback function is a contact integrated in the door catch 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 door drive. In this case the control unit ignores the control commands of all the contactors.</p>
Reset	<p>Button for restarting the drive after the operating voltage has been switched on or after a fire alarm has been terminated. When the button is pushed, the self-retention integrated in the drive is activated, causing the drive to be activated.</p>

### 3 Description

#### 3.1 Structure

##### System parts and options

- The door drive unit can be placed in head mounting (Fig. 1) on the lintel on the hinge side or opposite side.
- The door drive is available as 1-leaf or 2-leaf variations.
- The operating elements are arranged differently depending on the situation. For technical reasons, we cannot show all of the possibilities here.

1	Door drive unit		10	Safety sensor close (SIS)	(optional)
2	Linkage or lever		11	Door transition cable	(optional)
3	Internal programme switch		12	Contactor authorised (KB)	(optional)
4	Door handle with door lock	(provided by customer)	13	Stop switch	(optional)
5	Electrical door opener	(provided by customer)	14	Reset button (F-Reset)	(only TSA160NT F)
6	Inside contactor (KI)	(optional)	15	Smoke switching control unit <sup>2)</sup>	
7	Outside contactor (KA)	(optional)	16	Smoke switch <sup>2)</sup>	
8	Mechanical programme switch (MPS)	(optional)	17	Interrupter button "CLOSE DOOR" <sup>2)</sup>	
8a	Lockable mechanical programme switch (MPS-ST) for releasing the programme switch	(optional)			
9	Safety sensor open (SIO)	(optional)			

<sup>2)</sup> optional, in connection with TSA160NT F

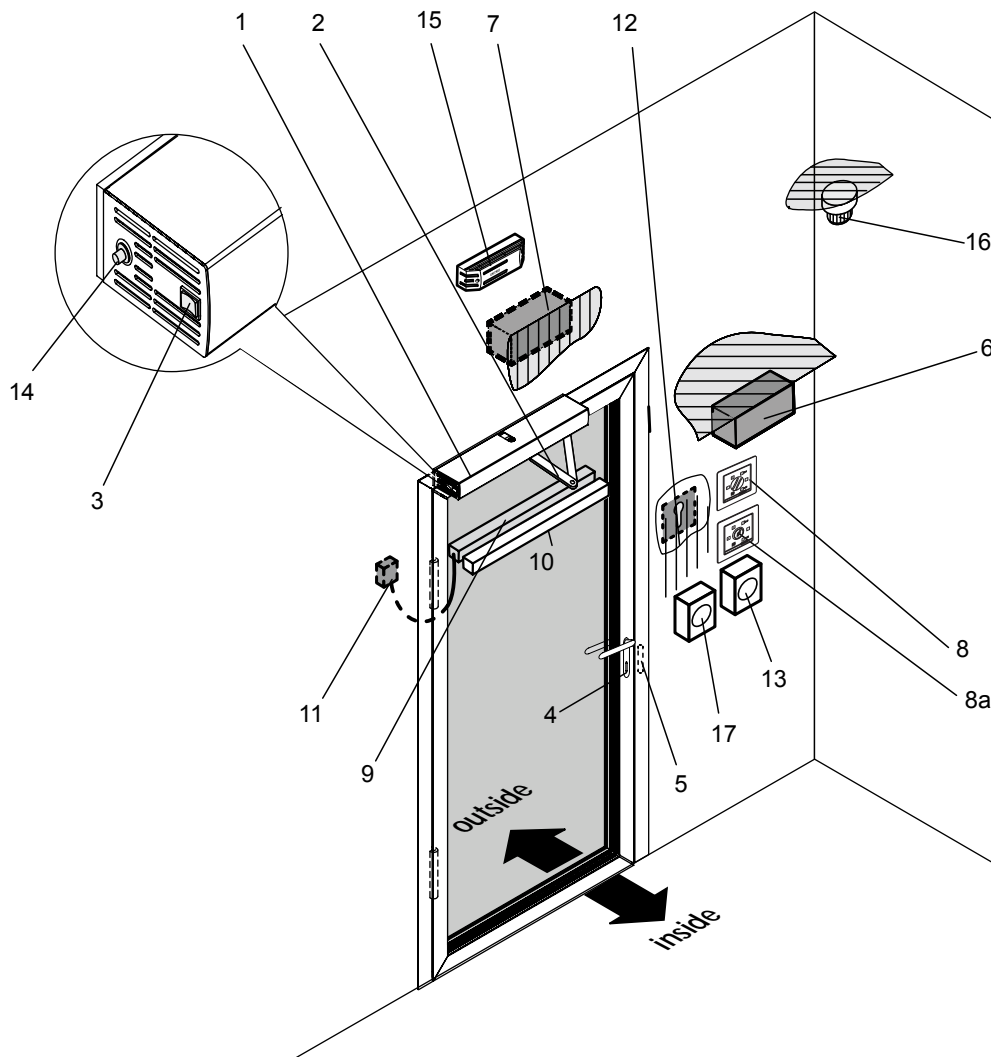


Fig. 1 Example: TSA160NT F door drive, 1-leaf, head mounting



# Operation

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## Additional door functions

Which switch/button?	What does the switch/button do?
Stop switch	The door stops immediately (in every operating mode) and holds the position until the stop switch is unlocked
Contactor authorised (KB) (e.g. outside key switch)	Door opens once and closes after the hold-open time. The set operating mode is retained

### 4.3 Internal programme switch

The following operating modes can be set by using the internal programme switch:



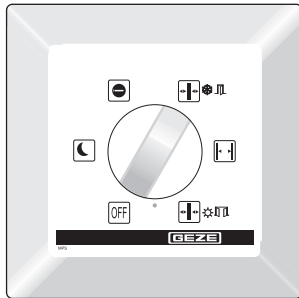
- Position II    Automatic
- Position 0    Night/O
- Position I    Permanently open

- Special cases (such as special circuiting) may occur during the operation of the GEZE door drives. These may differ from the behaviour described here. If this is the case, please ask the responsible service technician.

# Operation

## 4.4 Mechanical programme switch (MPS) (optional)

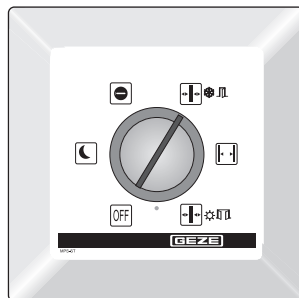
Can be connected additionally to the internal programme



Mechanical programme switch MPS

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







To have a disabling mechanism use the mechanical programme switch MPS-ST. The desired operating mode can be selected by actuating the selector switch.



Mechanical programme switch MPS-St with integrated key switch

At the mechanical programme switch MPS-ST, the system operating mode is selected and the corresponding programme is displayed. Operation of the mechanical programme switch MPS-ST is only possible with the supplied key.

The mechanical programme switch MPS-ST is disabled when the key is removed. The desired operating mode is selected by using the key selector switch.

Operating mode	MPS MPS-ST	Descriptions
<b>Automatic</b>  - Opening of 2 leaves  - Opening of 1 leaf	  	<b>Door opens - and closes again.</b> The inside and outside contactors are active. At 2-leaf systems: Switch to opening of 2 leaves in all the operating modes: Select the opening of 2 leaves at the corresponding position.  Switch to opening of 1 leaf in all the operating modes: Select the opening of 1 leaf at the corresponding position.
<b>Closing time</b>		Door only opens and closes if someone exits.
<b>Permanently open</b>		Door remains open.
<b>Night</b>		Door opens and closes only when actuated by means of key switch
<b>Fixed leaf On/Off</b>		Door is enabled and can be moved by hand.

## 5 What to do if...?

Problem	Cause	Remedy
Door opens and closes constantly	Obstruction in sliding path	Clear the obstruction
	Light beams or reflections, e.g. reflective floor, falling rain	Check detection field of motion detector
	Misaligned motion detector	Check detection field of motion detector
Door only opens a crack	Obstruction in sliding path	Remove obstruction and check door leaf for ease of movement
Door does not open	Obstruction in sliding path	Remove obstruction and check door leaf for ease of movement
	Motion detector misaligned or defective (outside)	Check the motion detector. If necessary, notify a service technician
	Stop activated	Unlock the stop function
	"Night" operating mode	Select a different operating mode
	"Closing time" operating mode	Select "Automatic" operating mode
	Door locked mechanically	Unlock the door
	Door opener does not release	Notify a service technician
	Fire alarm active (only TSA160NT F)	Press the Reset button
	Drive defective	Notify a service technician
Door does not close	Safety sensor close (SIS) soiled	Clean the Safety sensor close (SIS)
	Safety sensor close (SIS) misaligned or defective	Notify a service technician
	Obstruction in sliding path	Remove obstruction and check door leaf for ease of movement
	Motion detector operates uninterruptedly	Check the motion detector. If necessary, notify a service technician
	"Permanently open" operating mode	Select a different operating mode
	Current impulse button function controls	Terminate controlling by pressing the button once more

## 6 Cleaning and maintenance



**CAUTION!** Danger of injury due to impact and crushing!

- ➔ Disconnect the drive from the 230 V mains network before carrying out cleaning work.
- ➔ Secure door leaves against accidental movement before carrying out cleaning work.
- ➔ Installation, maintenance and repair work must be performed by properly trained personnel authorised by GEZE.

### Cleaning

What is to be cleaned?	How is it to be cleaned?
Safety sensor close (SIS) (e.g. light sensors)	Wipe with moist cloth
Glass surfaces	Wipe with a cold vinegar/water mixture; then dry.
Stainless surfaces	Wipe with non-scratching cloth
Painted surfaces	Wipe with water and soap
Anodised surfaces	Wipe with non-scratching cloth (pH-value 5.5 ... 7)
Mechanical programme switch	Wipe with soft cloth. Do not use a cleaning agent

### Maintenance

The owner must ensure that the system functions properly.

GEZE offers maintenance contracts with the following services:

- Inspection of fastening elements for firm seating
- Carrying out of miscellaneous adjustment work
- Carrying out of operational checks
- Checking all the safety and control equipment of the door system
- Lubrication of all the moveable parts

### Inspection by trained professionals

In accordance with the "Guidelines for power-operated windows, doors and gates" (BGR 232 and GU 16.10) Section 6, power-operated doors must be inspected for safety by a trained professional before initial commissioning and at least once a year.

## 7 Technical data

### General data

Opening speed	Can be set by means of hydraulic valve
Closing speed	Can be set by means of hydraulic valve
Electrical connection values	230 V; 50 Hz pursuant to DIN IEC 38
Connected load	300 W
Fuse protection	Power supply connection 230 V: customer-accessible 10 A
Current draw for external devices	24 V DC connection; max. 1200 mA
Temperature range	-15 °C to +50 °C; for dry rooms only
Protection type	IP 20

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