AT12 Elevator Door Drive Operating Instructions

Rev.03, edition 08/2009

www.siemens.de/edm

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2 Introduction

The AT12 comfort elevator door drive is an „intelligent“ door drive. It can be used to activate the cabin and shaft doors at adjustable speeds and accelerations. This maintenance-free drive unit consists of a speed-controlled DC motor with non-self-locking gearing. The power is transmitted by a toothed belt. The toothed belt passes over a deflector pulley, and can drive two door clutch holders. This enables it to drive both single-sided and centrally-opening doors.

The AT12 is currently supplied with the following motor:
– 24 V/1.8 A motor, suitable for a maximum total door panel weight of 120 kg

The door drive can be ordered with the drive pinion either on the left or right-hand side, please see the drawing in the appendix.
Operation of the door drive does not require limit switches.
The door width and the *“OPEN”* and *“CLOSED”* positions are determined automatically.
A light-emitting diode on the controller indicates the current operating states.
The appendix includes all the important dimension drawings, an assembly suggestion, and the identification numbers for ordering the individual drive components.

NOTE
For reasons of clarity, these operating instructions do not contain complete, detailed information about all product types. Similarly, they cannot cover every conceivable type of installation, operation or maintenance.
Should you require further information or if specific problems occur, which are not covered in sufficient detail in these operating instructions, you can obtain the necessary information by calling the AT Service Hotline, phone: +49 (511) 877-14 71.

We would also like to point out that the contents of these operating instructions do not form part of or amend any earlier or existing agreement, undertaking or legal relationship. All obligations on the part of Siemens arise from the relevant contract of sale, which also contains the complete and solely valid warranty conditions. These contractual warranty conditions are neither extended nor limited by the statements in these operating instructions.

3 Safety instructions

Before commissioning:
Please read through these instructions carefully. They contain essential information for the installation, use and safety of the equipment.

Special symbols
These operating instructions use three special symbols to draw attention to important information:

WARNING
Within the context of these operating instructions, this symbol indicates that there is a danger to life and limb, as well as of substantial material damage if the appropriate precautionary measures are not taken.

CAUTION
Within the context of these operating instructions, this symbol indicates that there is a danger of slight injuries or material damage if the appropriate precautionary measures are not taken.

NOTE
Within the context of these operating instructions, this symbol indicates important information about the product or draws attention to a specific section of the instructions.

3.1 General safety instructions

WARNING
Only appropriately *qualified personnel* should work on or in the vicinity of this equipment. These people must be thoroughly familiar with all the warnings, notices, and functions of the AT12 door controller described in these operating instructions.

Qualified personnel, within the context of these operating instructions and warning notices, are persons familiar with the installation, assembly, commissioning and operation of the product, and who possess the appropriate qualifications for their jobs, such as:

- Training, instruction or authorization to commission electric circuits and devices/systems in compliance with safety engineering standards.
- Training or instruction in the maintenance and use of appropriate safety equipment in compliance with safety engineering standards.
- Training in first-aid

Faultless, safe operation of this equipment requires appropriate transport and storage, professional installation and assembly, as well as careful operation and maintenance. Before commissioning, all electrical connections must be inspected to ensure that all contacts are secure. Before starting work on the door drive, it must be disconnected from the power supply by unplugging the power plug.

4 Terminology

Initial speed = reduced speed in the opening and closing directions after power on until normal operation is detected.

Creep speed = reduced speed in the vicinity of the OPEN position of the elevator door (creep distance).

Cutter speed = reduced speed in the vicinity of the CLOSED position of the elevator door (cutter distance).

Creep distance = range of door travel in the vicinity of the OPEN position.

Cutter distance = range of door travel in the vicinity of the CLOSED position.

5 Overview of operator controls

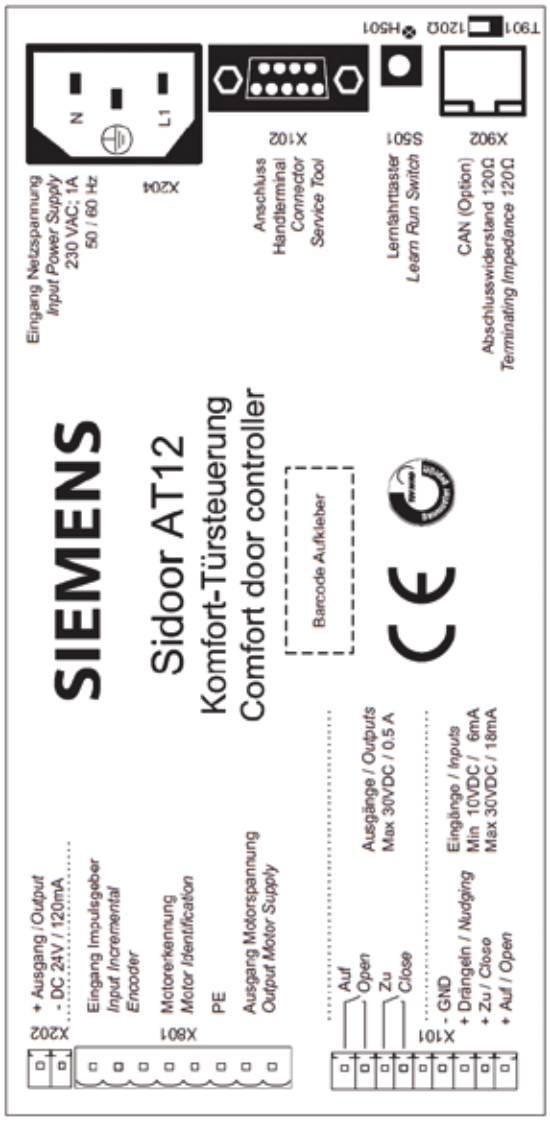


Figure 1

Sidoor AT12:

X204: 230 V (1A 50/60 Hz) power supply socket

X102: Connector for Service Tool and
USB adapter (Software Kit)

S501: Door parameter button (learn run switch)

X902: CAN connector (CAN OPEN RJ45)

T901: Switchable CAN terminating impedance
120 ohms

X202: 24 V DC / 120 mA voltage output

X801: Motor socket

X101: Connector for output signals
- Open
- Close

Connector for input signals:
- Nudge
- Close
- Open

6 Functions and device responses

6.1 Learn and test run

Pressing the door parameter button *(S501)* for longer than 5 seconds initiates automatic determination of the parameters:

1. Detection of the direction of door movement and the *„CLOSED"* position.
2. Determination of the friction values of the door system and the weight of the door.
3. Determination of the door width and the *„OPEN"* position. Closure of the door until it has traveled through the entire determined door width and reached the *„CLOSED"* position. These parameters are then saved, which takes three seconds.

6.2 DOOR OPEN command

The *DOOR OPEN* command opens the door at the set speed of travel curve as long as the command is present.
The transitions along the speed of travel curve (e.g. from acceleration to constant velocity) are smoothed to prevent noises possibly arising from the play between the cabin and shaft doors. The door reaches the *„OPEN"* position at creep speed. Then, if the DOOR OPEN command is present, the door is held open with a reduced torque.
- The *DOOR OPEN* command must remain present throughout the entire opening movement.
- The *DOOR OPEN* command must remain present continuously in order to maintain continuous torque in the *OPEN* position.

The *DOOR OPEN* command has priority over all other control commands.

6.3 DOOR CLOSE command

The *DOOR CLOSE* command must remain present continuously in order to close the door. After the door has closed, it is held in this position with reduced torque as long as the *DOOR CLOSE* command remains present.

6.4 Door parameter button

The door parameter button *(S501)* combines the automatic learn and test run functions with the option of opening and closing the door from the controller.
The learn and test run is initiated by pressing the door parameter button for longer than 5 seconds.
The door can be moved by pressing the door parameter button briefly for between 0.1 and 2 seconds.
The „Open" and „Close" inputs must not be activated:

- First press of the button in normal or initial operation for 0.1 to 2 seconds --> Door opens until it reaches its end position „OPEN", and remains there with the average value of the pulse width modulation (PWM) signal.
- If the button is pressed again for 0.1 to 2 seconds before the door has opened completely, it stops and remains stationary with the average value of the PWM signal.
- The button is pressed again in normal or initial operation for 0.1 to 2 seconds --> Door closes until it reaches its end position „CLOSED", and remains there with the average value of the PWM signal.
- If the button is pressed again for 0.1 to 2 seconds before the door has closed completely, it stops and remains stationary with the average value of the PWM signal.
- The next press of the button opens the door again.
- If 10 seconds elapse between the individual presses with no further button input request, the next press of the button for 0.1 to 2 seconds always opens the door.

6.5 Setting parameters

The Service Tool and Software Kit offer additional setting and diagnostic options. The Service Tool is available as an extra, separate option. It is connected to the *X102* connector on the controller.
The Software Kit offers the easiest diagnostic option.
A PC can be connected to *X102* on the controller via a USB adapter (Software Kit accessory).

NOTE
The current parameters are overwritten by the factory parameters at the end of the learn run if the door parameter button (S501) is pressed at the same time as the supply voltage is switched on. If the *door parameter button* is pressed during operation in order to start a learn and test run, then only the door width and weight are determined. The speed of travel curve parameters, force limits and continuous torques are retained unchanged. The maximum closing speed and the nudge speed are limited as a function of the determined weight.

6.6 Blockage detection „CLOSE"

If the door is blocked in the *„CLOSE"* direction with a *DOOR CLOSE* command present, the door stops and reverses direction.
After reaching the open position, the door closes again at normal speed to within about 2 cm of the obstruction. It then travels at reduced speed (initial speed) against the obstruction before reversing again.
This action is repeated continuously as long as the obstruction remains. Once the obstruction has been cleared, the door travels at reduced speed to approximately 2 cm past the stored position of the obstruction, and then continues the rest of the way at normal closing speed.

6.7 Blockage detection „OPEN“

The door stops if it is blocked in the *„OPEN“* direction with a *DOOR OPEN* command present.
After approximately 2 seconds, the door automatically tries to reach its open position again.
This action is repeated a maximum of three times.
The door then remains stationary in this position.
If the *DOOR OPEN* command is canceled, the close command given, and then the *DOOR OPEN* command repeated, the door travels at normal speed to within about 2 cm of the stored position of the obstruction and then up to the obstruction at reduced speed.
The door drive stops at this point, and the opening action is repeated another 3 times.
If the obstruction has been removed beforehand, the door travels at reduced speed to approximately 2 cm past the stored position of the obstruction, and then continues to its open position at normal speed.

6.8 Nudging

The door does not automatically reverse in the operating state *NUDGE*. The *DOOR CLOSE* and *NUDGE* commands must be present simultaneously. When an obstruction is detected, the torque is reduced after 1 second to the motor's holding shut torque limit.

6.9 Restart after power failure

After a supply voltage failure, the door controller has to redetermine the end positions of the door travel. To do this, the door is commanded to travel at reduced speed (initial speed) until the controller has detected the *„OPEN“* and *„CLOSED“* end positions. The door then resumes traveling at normal speed.

6.10 Closing force

The closing force can be adjusted within a range from 70 N to 120 N.

NOTE
The resulting closing force must be measured by a suitable method of measurement, and must not exceed 150 N.

WARNING
When the closing force is set, it is imperative that any effective closing weight is taken into account.
The desired closing force must be reduced by 10 N for each 1 kg of counterweight.
This concerns the:
- Closing force *„CLOSE“*
- Closing force *„Cutter distance CLOSE“*
- Nudge force *„CLOSE“*

Example: Closing force = 4 kg
Desired static force limit „CLOSE“ = 150 N

The counterweight of 4 kg corresponds to a force of 40 N. The force limit then has to be adjusted to 150 N - 40 N = 110 N.

The factory setting assumes a counterweight of 4 kg. This means that the resulting static closing force is limited to 110 N.

6.11 Emergency release

WARNING
An emergency release can only be actuated if:
- Neither a *DOOR OPEN* nor *DOOR CLOSE* command is present;
- The door *param. button* has not been pressed;
- The Service Tool or Software Kit is not open at the menu command *Quick adjustment* or *Overall adjustment,* or at one of their submenus;
- The door has come to a standstill.

The door drive is only torque-free if these conditions are fulfilled. According to the requirements of TRA (German Technical Rules for Elevators) and EN81, the force required to open the door must be less than 300 N.

6.12 Overload protection

If the drive motor is subjected to severe strain by *DOOR OPEN* and *DOOR CLOSE* commands repeated in quick succession, the hold-open time is automatically increased. The next closing movement is delayed, even if a *DOOR CLOSE* command is present, the LED flashes red four times. This function prevents the motor from overheating.

7 Mechanical installation and configuration

CAUTION
Safe operation of the elevator door drive requires proper assembly and commissioning by *qualified personnel,* with due attention given to the warning notices in these operating instructions. The controller must be disconnected from the power supply before starting any work on the door drive. Only then is immobility of the door guaranteed.
The mechanical assembly and configuration of the elevator door drive have the following steps:

1. Mount the motor on the rubber-metal anti-vibration motor mounting.
   Then, if necessary, mount the motor on the mounting bracket.
2. Mount the deflector pulley, if necessary, with a mounting bracket.
   Align the drive pinion and the deflector pulley as precisely as possible with each other (flush).
3. Bolt the toothed belt to the door clutch holder and put it in position.

NOTE
Only install the door clutch holders (toothed-belt joint) specified in the appendix. Unsuitable fastenings can concentrate the stress on the toothed belt, which can lead to its destruction.
The door clutch holder (toothed-belt joint) must not run over or touch the drive pinion or deflector pulley.

4. Tension the toothed belt with the aid of the tensioning device. The correct tension has been reached when the midpoint of the toothed belt can be pushed in by approximately 3 cm for every meter of distance between the drive pinion and the deflector pulley.
5. Mount the controller close to the drive motor (take the length of the cable into account). Take note of the permissible ambient temperature limits, and take action to keep within these limits whenever necessary.

8 Electrical configuration and commissioning

WARNING
When electrical devices are used, certain parts of them have to carry dangerous voltages. Failure to observe the operating instructions can therefore lead to serious injuries or material damage.
It is essential to observe the warning notices.
The door movements cannot always be externally controlled while the controller is being commissioned (in particular during the automatic determination of parameters). Therefore an authorized person must be posted near the door to ensure that no one else can come near the elevator door during commissioning. After commissioning, the forces and energies in the entire elevator system must be checked by the service personnel to ensure that they are within their permissible limits.

NOTE
The AT12 controller runs plugged directly into the 230 V AC power supply. The controller must be protected by a 6A-10A ($I^2t>30A^2/sec$) fuse on the building side. It is essential to connect the PE to the X204 socket.

NOTE
The motor temperature must not be below 0°C during the parameter learn run, as otherwise the weight of the door will be incorrectly determined, and the closing and nudge speeds may lie in impermissible ranges.

NOTE
The *X101* control inputs plug is not plugged in during commissioning in order to prevent uncontrolled movements.

1. Push the door into its „CLOSED" position.
2. Plug in the X801 motor plug.
3. Plug in the X204 power plug (the power supply is switched off).
4. Press and hold down the door parameter button (S501).
5. Switch on the power supply.
6. Keep the door parameter button (S501) pressed until the door moves (the learn run has started). During the learn run, the door is opened about 10 cm, and closed once or twice at creep speed. The friction of the door system is then determined by opening and closing the door through a range of 25 cm at creep speed. The door then opens and closes through its complete range of movement at reduced speed. After the door has opened about 10 cm, it passes through a short acceleration ramp to determine the weight of the door.
   In the „CLOSED" position, the door parameters and the determined door width are saved.
   LED H501 flashes green during the learn run and while the parameters are being saved.
   The LED shines green continuously when the saving process has finished.
7. The door can now be opened completely by pressing the door parameter button.
   Pressing it again when the door is in its „OPEN" end position completely closes the door.
8. Switch off the power supply.
9. Connect the control signals to the X101 connector as shown in the terminal circuit diagram (see appendix).

CAUTION
The controller will be operative after the next switch-on. If a control signal is present, the door moves in the set direction.

10. Switch on the controller (plug in the power plug or X101 plug).
    LED H501 lights red for about 2 seconds, and continuously green after the application software has started (no faults in controller). If the LED continues to light red, the learn run should be repeated as described above. The LED indicates the following errors/faults by red flash codes:

    Flash code:
    1 CPU error
    2 Brake chopper error
    3 Error in the second switch off path
    4 Motor temperature monitoring
    5 Unknown motor (X801)
    6 Blockage detected in direction of closure
    7 Incremental encoder error (X801)
    8 Parameter learn run ended incorrectly
    9 Motor overcurrent
    10 Blockage detected in direction of opening
    11 Overvoltage (motor)
    12 Undervoltage (motor)
    13 Ammeter error
    14 Weight of door determined as being too heavy
    15 Output stage faulty
    16 Overvoltage in 15 V circuit
    17 Undervoltage in 15 V circuit

11. If the control signal *„CLOSE"* is present, the door moves into the *„CLOSED"* position at initial speed. If the control signal *„OPEN"* is present, the door moves into the *„OPEN"* position at initial speed.
12. If the controller has detected the door „OPEN" and „CLOSED" end positions, the subsequent opening and closing movements proceed at normal speed once again.

NOTE
Door movement in the „OPEN" or „CLOSE" direction can also be actuated with the door parameter button S501.

13. The door travel values can be matched to the individual door for specific applications.
    This requires the Service Tool to be connected.
    The operating program (Software Kit) can also be started on a PC connected via the USB adapter. This is available as a special accessory. Its operation is described in the appendix to these instructions.

The following settings can be made:

Function	Function	Factory setting
Creep distance Open	0... 100 mm	25 mm
Cutter distance Open	0... 100 mm	30 mm
Creep distance Close	0... 100 mm	20 mm
Cutter distance Close	0... 100 mm	40 mm
Maximum speed Open	100... 500 mm/s	500mm/s
Creep speed Open	30... 90 mm/s	40 mm/s
Cutter speed Open	30... 90 mm/s	60 mm/s
Initial speed Open	30... 90 mm/s	90 mm/s
Maximum speed Close	100... 500 mm/s	250 mm/s
Creep speed Close	30... 90 mm/s	60 mm/s
Cutter speed Close	30... 90 mm/s	40 mm/s
Initial speed Close	30... 90 mm/s	90 mm/s
Nudge speed Close	50... 250 mm/s	150 mm/s
Acceleration ramp OPEN	300... 850 mm/s^2	850 mm/s^2
Braking ramp OPEN	300... 850 mm/s^2	600 mm/s^2
Reversing ramp OPEN/CLOSE	300... 850 mm/s^2	850 mm/s^2
Acceleration ramp CLOSE	300... 850 mm/s^2	500 mm/s^2
Braking ramp CLOSE	300... 850 mm/s^2	500 mm/s^2
Reversing ramp CLOSE/OPEN	300... 850 mm/s^2	850 mm/s^2
Continuous torque (power) OPEN	0... 1,5 A	1 A
Continuous torque (power) CLOSE	0... 1,5 A	1 A
Cutter push torque	0... 5,0 A	2,5 A
Opening force static	70... 120 N	120 N
Closing force static	70... 120 N	110 N
Cutter force static Close	70... 120 N	110 N
Nudge force static Close	70... 120 N	110 N

Parameters should always be adjusted during normal operation with the door in the *„CLOSED“* position, because the controller then accepts the values immediately.

CAUTION
Taking the counterweights into account, the maximum static closing force must not exceed 150 N.

WARNING
After the elevator door has been commissioned, the energies and forces on the heaviest door in the entire elevator system must be checked by the service personnel, and adjusted if they exceed their limiting values.

NOTE
After the optimal settings of the parameters have been determined, they can be noted in the configuration record (see the Configuration record appendix). This record should also be kept at hand when asking questions on the Hotline.

9 The relay contacts

The relay contacts can be used to report the following door states to the higher-level elevator controller:

- *XI01 (PIN3 and PIN4)*
Door has reached the position „CLOSED“
The relay switches on when the controller has detected the *„CLOSED“* position and the pulse generator ceases to output pulses, that is the door is stationary. *Pin 3* remains connected to *Pin 4* only until the *DOOR OPEN command* is issued. The relay then drops again immediately.

– *X101 (PIN1 and PIN2)*
The door has reached the „OPEN“ position.
The relay switches on when the current distance of the door from the *„OPEN“ position* is less than 2 cm. *Pin 7* and *Pin 2* are then connected. The relay drops again immediately the distance once more exceeds 2 cm.

In the “Overview of operator controls”, the contacts are always shown with the relay de-energized (inactive).

WARNING
The door controller is not a safety mechanism. Therefore the relay contacts must not be used for the elevator safety circuit.
Voltages exceeding 42 V must not be connected to the relay contacts.

10 CAN

The movement commands and door states can be transmitted by means of a CAN Bus protocol.
As at July 2009, this function had not been implemented.

A terminating impedance of 120 ohms can be switched optionally with the slide switch T901. The impedance is switched as default.

The pin assignment of the RJ45 X902 socket corresponds to the CANopen pin assignment. The cable shield is not placed on the printed circuit board of the AT12. This must be put on appropriately by the user or system manager in order to ensure reliable communication.

11 The speed of travel curve

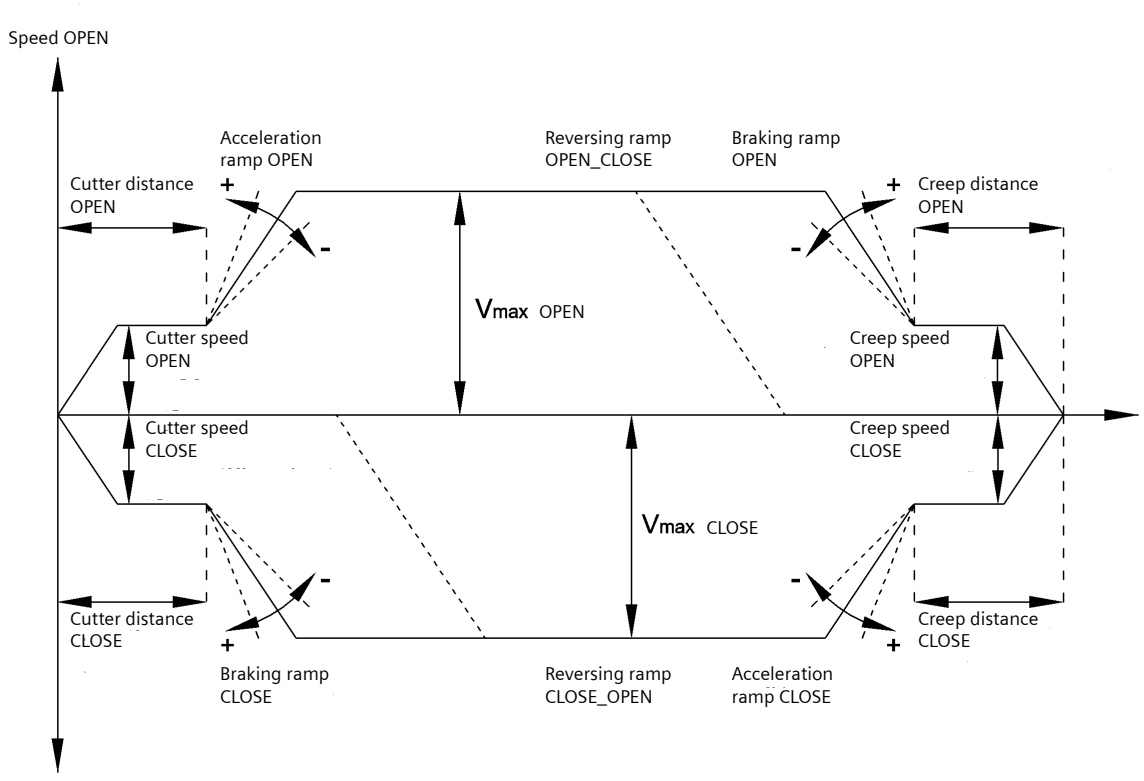


Figure 2

Reversing ramp OPEN_CLOSE = reversal of movement from the *OPEN* to the *CLOSE* direction.
Reversing ramp CLOSE_OPEN = reversal of movement from the *CLOSE* to the *OPEN* direction.

When reversing from the open to the close direction, the door is braked with the reversing ramp OPEN_CLOSE, and starts the closing movement with the acceleration ramp CLOSE.

12 Operating status display

The current operating states of the AT12 are displayed by a suitable error state display (Service Tool).

Display	Meaning
0	Reserve
1	RAM, EEPROM or CPU error (system error)
2	Brake chopper error
3	Error in the second switch off path
4	Increased hold-open time with longer motor switch-on time
5	Motor undefined
6	Motor blocked in direction of closure
7	Incremental encoder error
8	Reserve
9	Motor overcurrent
A	Reserve
b	15V overvoltage
c	Blockage while opening
C	Reserve
d	Door remains stationary during initialization run (no *OPEN* or *CLOSE* signal)
E	Motor overvoltage
F	Motor undervoltage
h	15V undervoltage
H	Parameter determination (learn run)
n	Output stage defective
L	Ammeter error
o	Function OK
P	Parameter error (error during learn run)
u	Door closed
U	Maximum door weight exceeded
-	Controller waiting for learn run - door system has no valid parameter values

12.1 Speed limit curve

The speed limit curve is the characteristic curve which defines the maximum permissible door speed V_{max} as a function of the total door panel weight.
According to EN 81, the maximum kinetic energy of the door in the closing direction must not exceed 10 joules. $W_{KIN} = 1/2\ m \cdot v^2 = 10\ J$.
Example from the following speed limit curve:
Total door panel weight m = 120 kg => V_{max} = 0,4 m/s.

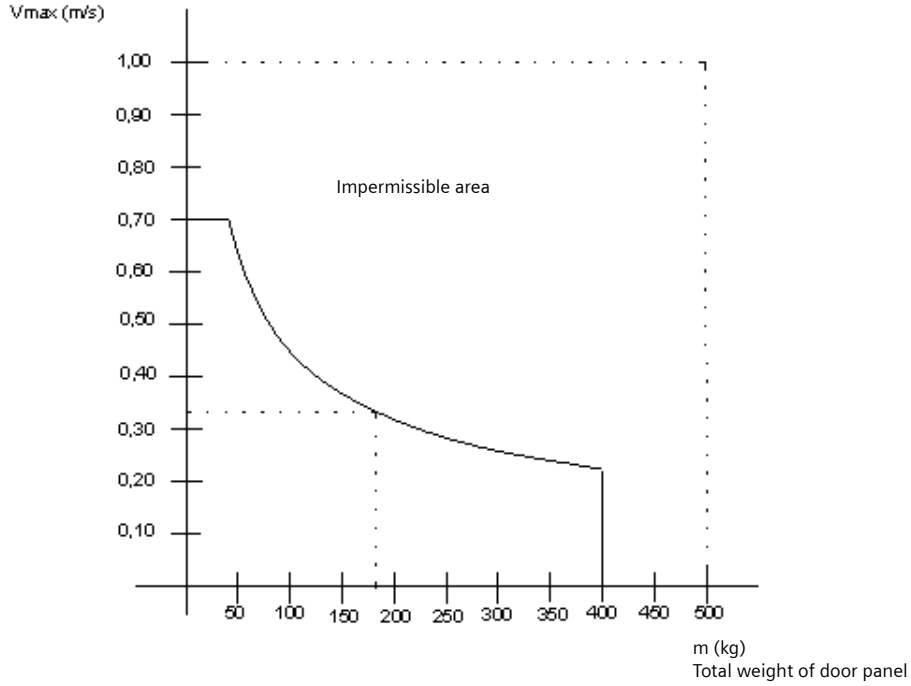


Figure 3

NOTE
The speed can be set in the range between 0% (corresponds to 0.10 m/s) and 100% (corresponds to 0.50 m/s).

13 Technical data

13.1 DC geared motor

Supply voltage	24 V DC
Maximum speed	0,5 m/s
Degree of protection	IP 21
Transmission ratio	15:1
Pulse generator	100 pulses/revolution
Rated current	1,8 A

13.2 Controller

Supply voltage	230V, 50-60 Hz
Tolerance	+- 15%
Fuse protection provided by customer	6A -10A ($I^2t>30A^2s$)
Maximum current consumption	1,6 A
Degree of protection	IP 20
Control inputs	+10 V to +28 V DC, 6mA to 18 mA per input (potential-free, switching to P potential)
Door width	0,3 m bis 2,40 m
Maximum counterweight	4kg
Output relay switching capacity	30 VDC 0,5 A (mind. 10 mA)
Min. and max. permissible storage temperatures	-20...+85 °C
Min. and max. permissible operating temperatures	-0...+50 °C
Moisture requirement	No condensation
24 V output	Maximum output current 120mA, short-circuit and overload resistant CAUTION: Do not supply with external voltage!

13.3 Regulations and standards

EMC tests	EN 12015 and EN 12016
TÜV (German Technical Inspectorate)	Type tested
CE	Certified
Electrical safety according to EN60950	Conforms
Elevator standard EN81	Conforms

14 Appendix

14.1 Appendix 1: Identification numbers of components

Identification number	Plain text	Short designation
Controller		
A2B00082335	AT 12 controller	AT12
Geared motor		
A2B00059634	24 V motor, pinion left, for doors weighing up to 120 kg	
A2B00059632	24 V motor, pinion right, for doors weighing up to 120 kg	
Accessories		
H070220794	Rubber-metal anti-vibration mount for motor	AT rubber-bonded metal
H070220816	Mounting bracket with tensioning device for deflector pulley	Mounting bracket for deflector pulley
H070040052	Door clutch holder	
H070040060	Deflector unit	
H070040028	Toothed belt, 4 m	
H070040087	Toothed belt, 45 m	
Servicing accessories		
A2B00043033	Service Tool	
A2B00052025	Software Kit with USB adapter	

14.2 Appendix 2: Dimension drawing of AT12 controller

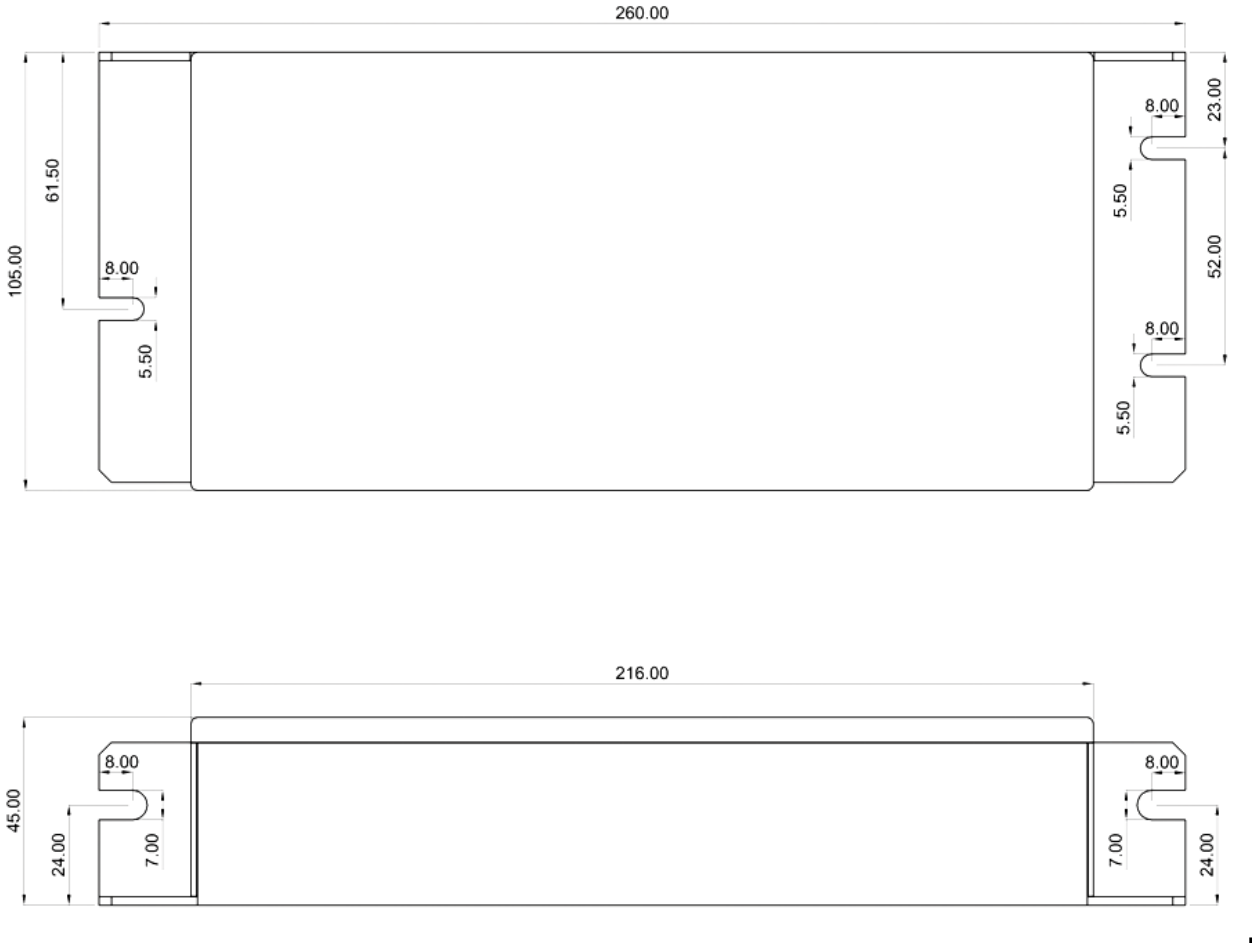


Figure 4

Dimensions in mm

14.3 Appendix 3: 24 V geared motor with rubber-metal anti-vibration mount and mounting bracket

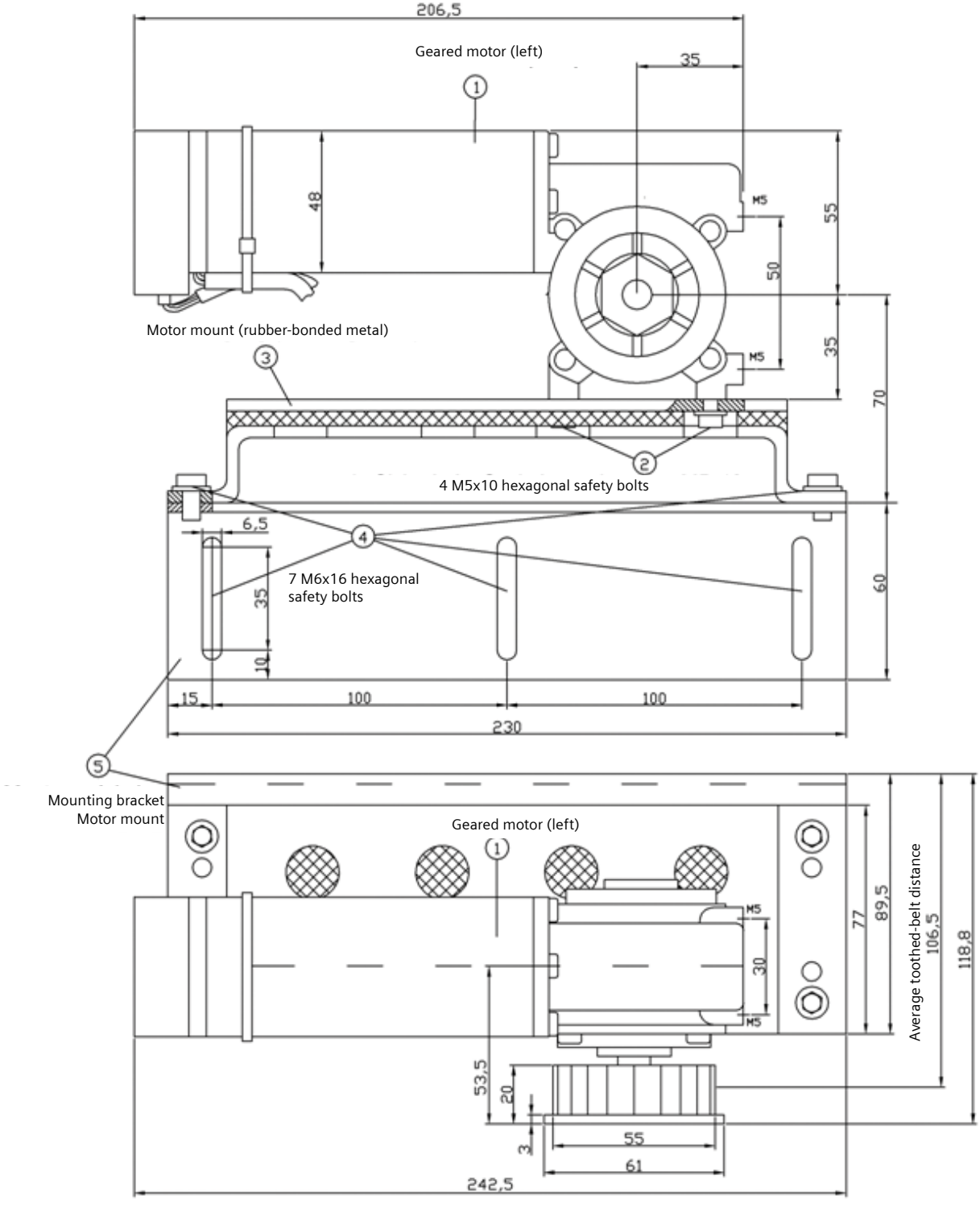


Figure 5

Diagram of motor with drive pinion on the left

14.4 Appendix 4: Deflector pulley with tensioning device and mounting bracket

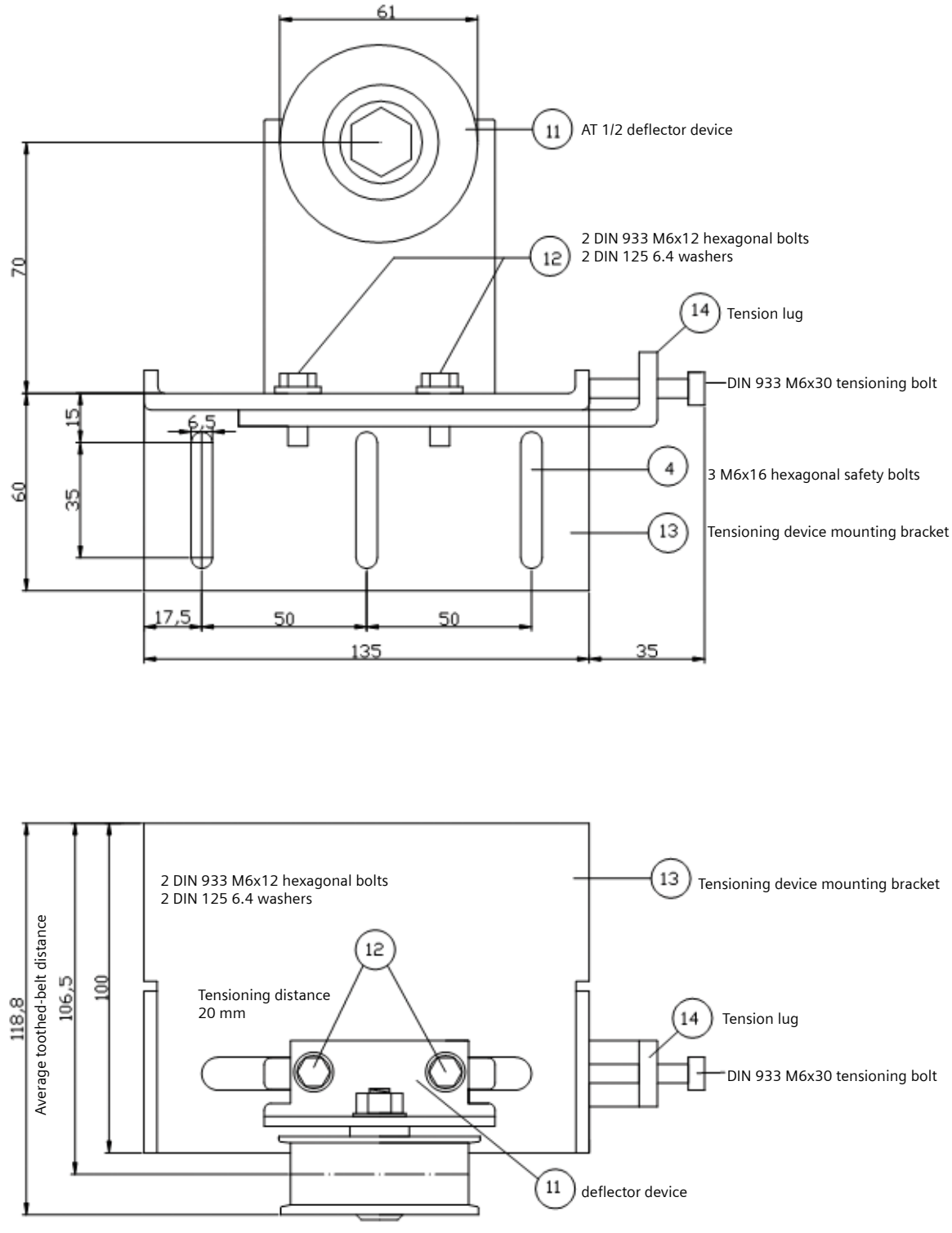


Figure 6

14.5 Appendix 5: Door clutch holder

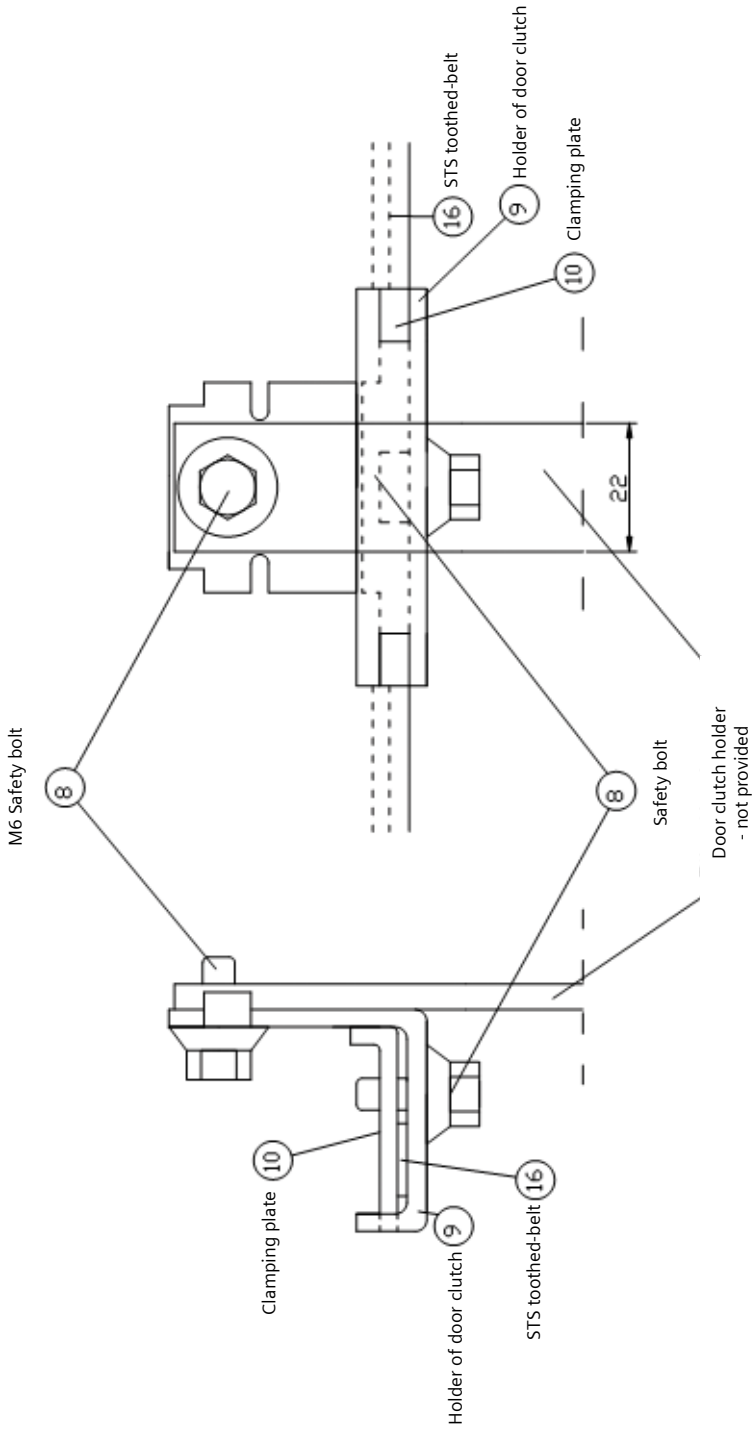


Figure 7

14.6 Appendix 6: Assembly suggestion

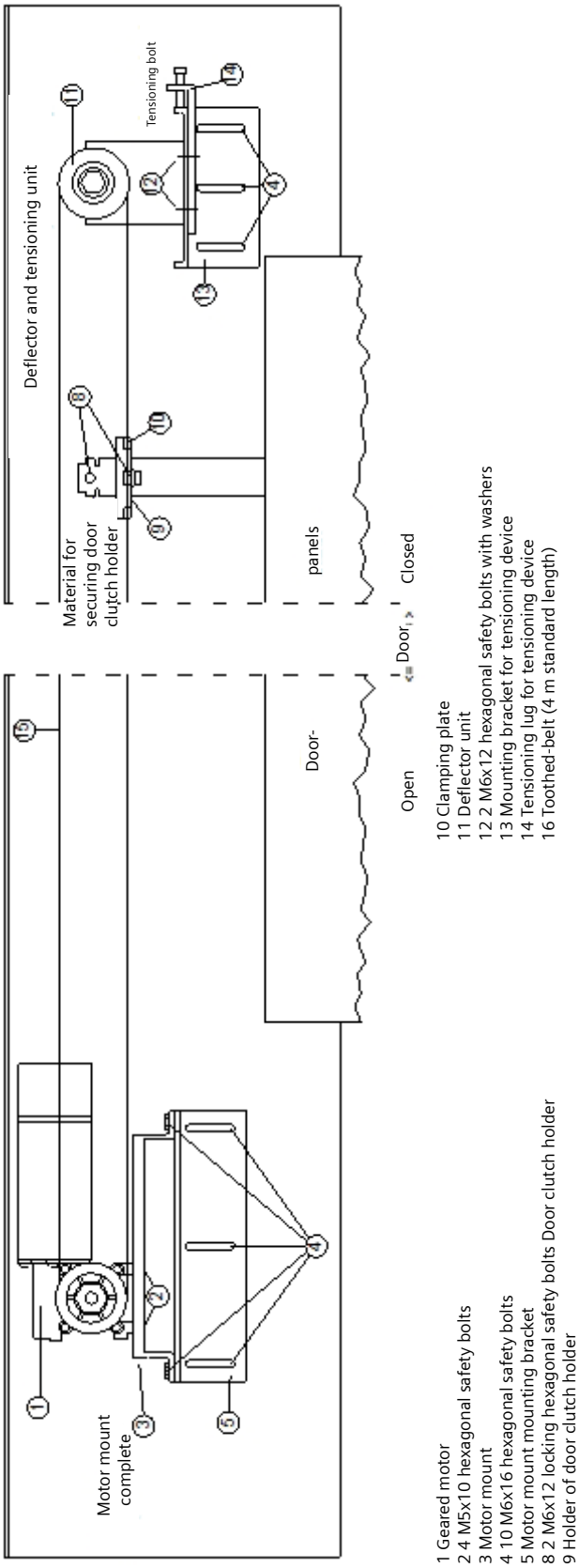


Figure 8

14.7 Appendix 7: Control inputs terminal circuit diagram

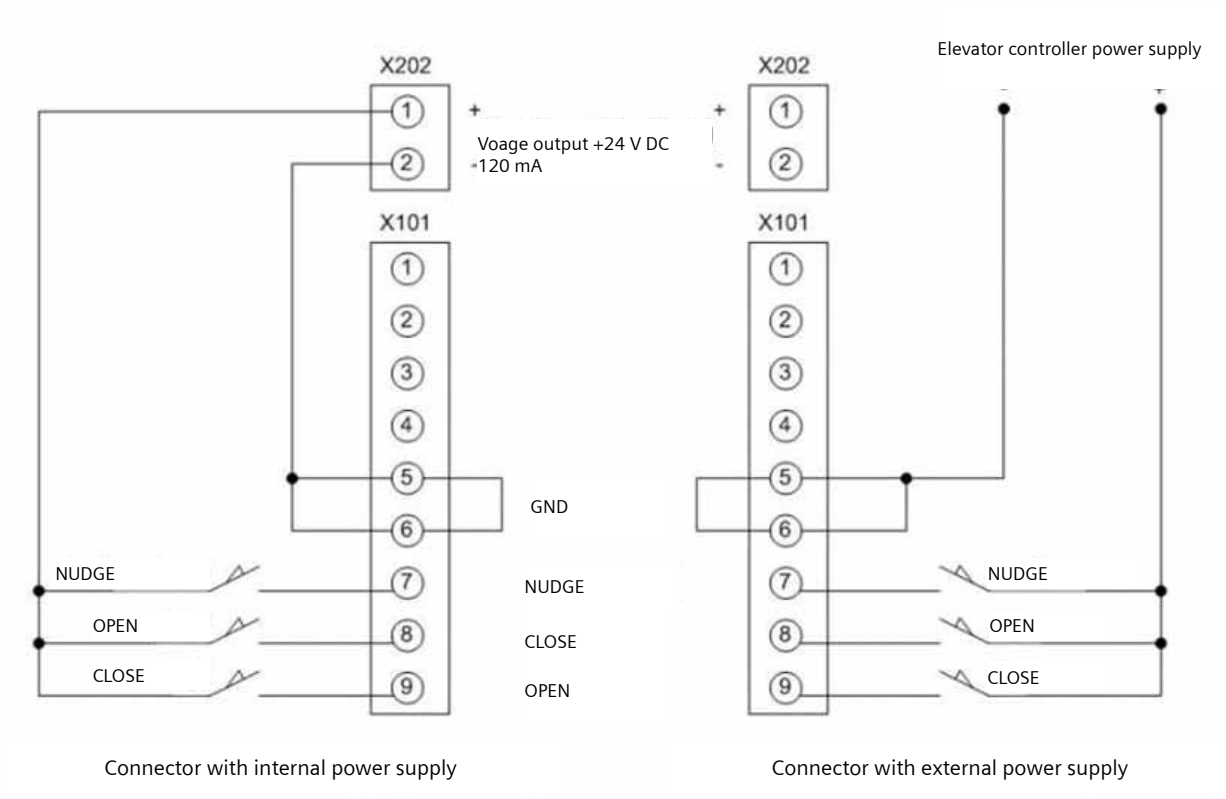


Figure 9

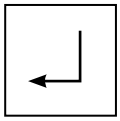
Nudge = simultaneous activation of the *CLOSE* and *Nudge commands* (effective only in the closing direction). The permissible voltages of an external power supply can be found in chapter 13.2 Controller (control inputs).

NOTE
The X202 24 V voltage output must not be connected to an external voltage potential, for example a higher-level elevator controller.

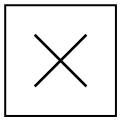
The X202 connector 2 (minus 24 V) can be connected to the PE.

14.8 Appendix 8: Diagnostics and parameterization

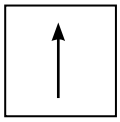
Both the Service Tool and the Software Kit are equally suitable for diagnosis and setting parameters.
These tools are available as an option (see Appendix).
The Service Tool and the USB adapter of the Software Kit can be connected to the X102 socket on the controller by the associated cable.
The tool keys and buttons have identical inscriptions and functions.



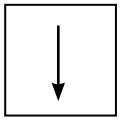
Accept key, jumps to the next menu below



Escape key, jumps back to the menu above



Menu selection key, increases a parameter value



Menu selection key, decreases a parameter value

Parameters can be changed in the *„MAIN MENU QUICK ALIGNMENT → Parameter Setting“* and the *„MAIN MENU TOTAL ALIGNMENT → Profile Parameter“* menus.
The desired parameter is selected with the ↑ or ↓ – key, and activated for setting with the Accept key ↵ (parameter value flashes).
The parameter value can then be increased or reduced by pressing the corresponding key (see above).
The value is accepted by pressing the Accept key again.

14.9 Configuration record

Please have the configuration record to hand when you call the Hotline.
Hotline: +49 (0)511 8 77-14 71
Fax: +49 (0)511 8 77-16 30

NOTE
Please take the adjustment range and the factory settings from chapter 8 Electrical configuration and commissioning.

Function	Set value
Creep distance Open	mm
Cutter distance Open	mm
Creep distance Close	mm
Cutter distance Close	mm
Maximum speed Open	mm/s
Creep speed Open	mm/s
Cutter speed Open	mm/s
Initial speed Open	mm/s
Maximum speed Close	mm/s
Creep speed Close	mm/s
Cutter speed Close	mm/s
Initial speed Close	mm/s
Nudge speed Close	mm/s
Acceleration ramp OPEN	mm/s^2
Braking ramp OPEN	mm/s^2
Reversing ramp OPEN / CLOSE	mm/s^2
Acceleration ramp CLOSE	mm/s^2
Braking ramp CLOSE	mm/s^2
Reversing ramp CLOSE / OPEN	mm/s^2
Continuous torque (power) OPEN	A
Continuous torque (power) CLOSE	A
Cutter push torque	A
Opening force static	N
Closing force static	N
Cutter force static Close	N
Nudge force static Close	N

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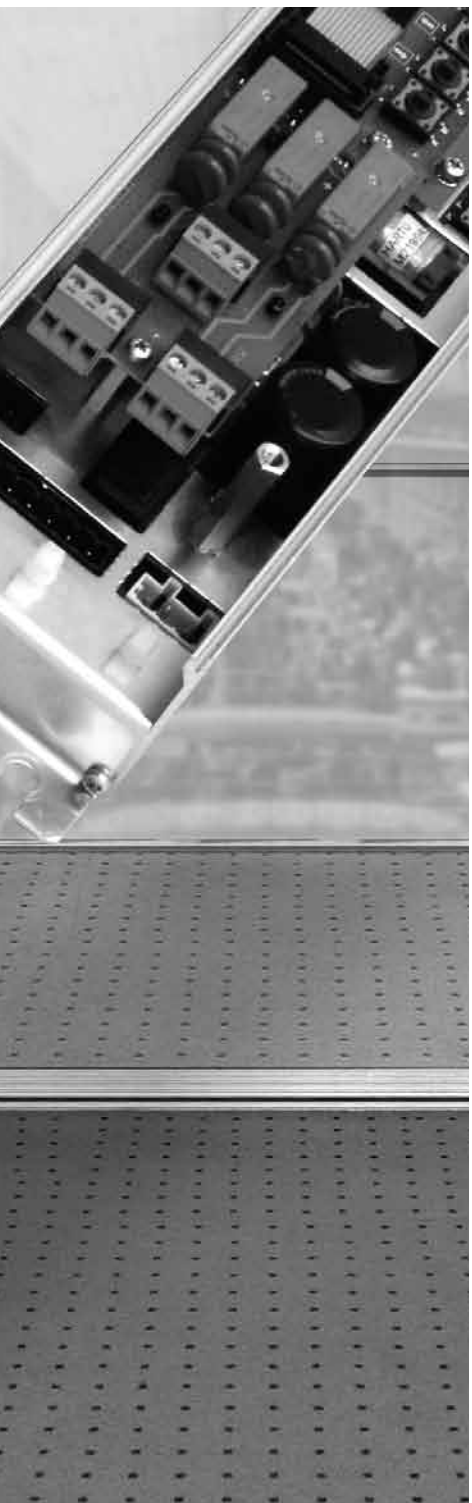

Ansprechpartner/Contact partner

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