

Documentation

for the TSG Software

TVis-Web



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Fordern Sie die Umbauanleitung auf **Deutsch** an, indem Sie den QR Code einscannen.

Demandez les instructions d'instruction de montage **en français**, en scannant le code QR.

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1 Safety information

The TSG door control unit and the TSG web interface are intended exclusively for controlling car and machine doors. The TSG door control unit and the TSG web interface carry dangerous electrical voltages and control moving mechanical parts. Failure to observe the instructions in this operating manual may result in death, serious bodily injury or considerable damage to property.

1.1 Safety and accident prevention regulations

In addition to the instructions in this operating manual, please also observe the statutory safety and accident prevention regulations. The persons responsible for the safety of the unit must ensure the following:

- Only appropriately qualified staff may work on and with the TSG door control unit.
- All staff working with the TSG door control unit must be familiar with all warnings and measures given in this description for the installation, operation and use of the TSG door control unit.
- Unqualified staff must not be allowed to work on the TSG door control unit.
- Staff must have knowledge of first aid measures as well as local rescue facilities.

1.2 Qualified staff according to VDE0105

Qualified staff are those persons who, on the basis of their training, experience, instructions received and knowledge of relevant standards, regulations, accident prevention rules and operating conditions, have been authorised by the person responsible for the safety of the installation to carry out the required activities.

1.3 Exclusion of any warranty in the event of modifications or conversions

The TSG door control unit must always be disconnected from the mains voltage before any intervention in the electrical or mechanical part of the system. Unauthorised modifications or conversions to or in the TSG door control unit, its components or accessories automatically exclude any warranty. These safety instructions do not claim to be complete. The manufacturer accepts no liability for damage or malfunctions that may result from failure to observe these operating instructions.

1.4 Explanation of symbols



WARNING:

You are advised of a possible impending danger that can lead to serious physical injuries or death.



CAUTION:

You are warned of a possible impending danger that can lead to minor physical injuries. You will also find this signal for warnings of property damage.



NOTE:

You will be informed about applications and other useful information.

2 Introduction

The TVis-Web software is for visualising the TSG door control unit on a LAN or WLAN-capable device with a web browser. For this purpose, the TSG web interface hardware is connected to the TSG door control device.

The system supports the following functions:

- Displaying all parameters
- Display of the calibrated door width (travel distance)
- Setting of the parameter sets P, c, b, h, A (see operating instructions 1.20.91000)
- Displaying and resetting the error counters
- Graphic display of the motor current, as well as setpoint and actual speed
- Displaying and changing the IP addresses of the TSG and the web interface
- Setting the signals "open door", "close door" and "reserve"
- Export/import of all parameters



NOTE:

No software needs to be installed for use, as only a suitable browser is used to retrieve data from the TSG web interface.

3 System requirements

To use the TVis-Web software, the following hardware and software are required:

- LAN or WLAN capable device
- Current web browser (we recommend Firefox)
- Java-Script® must be permitted
- Administrator rights on the system



NOTE:

It is assumed that a network card is already available and drivers have been installed.



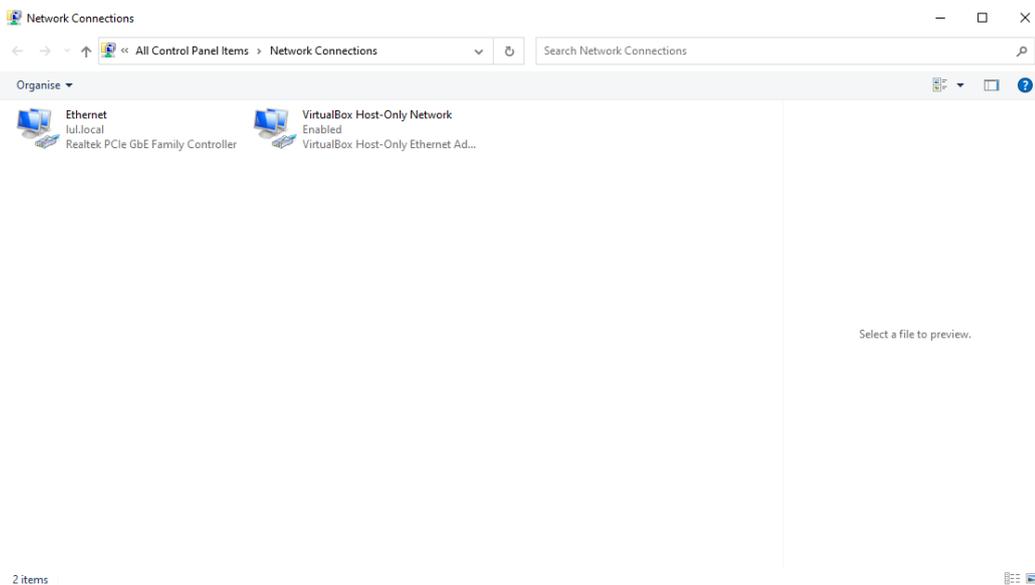
NOTE:

It is assumed that the TSG extension board has already been installed on the TSG door control unit.

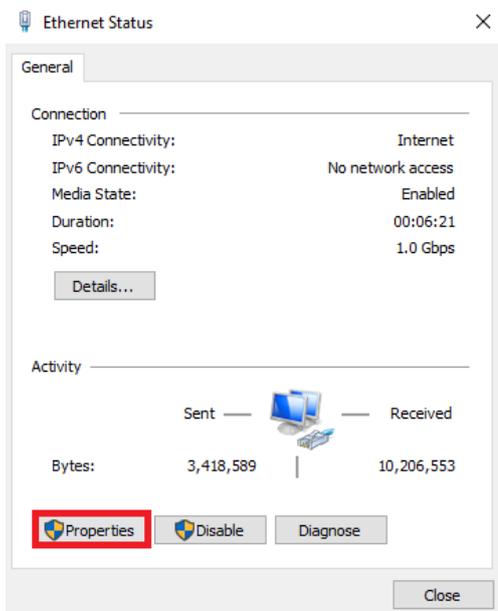
3.1 IP address PC

To be able to speak to TVis-Web directly via a network cable for the first time, a fixed IP address must be set up on the PC or notebook.

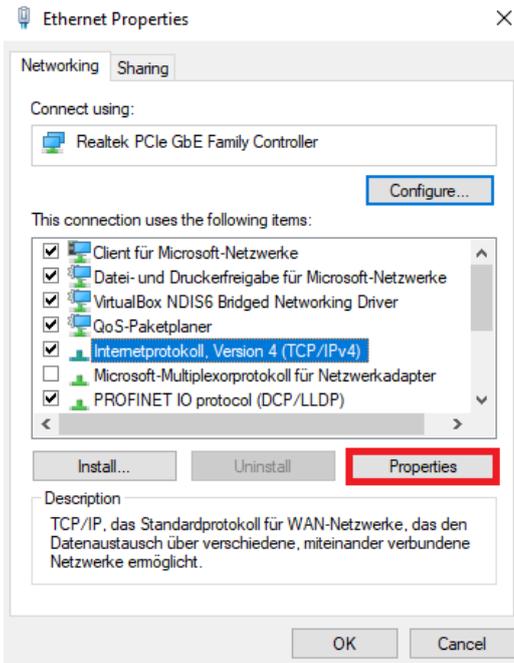
Click on "Start -> Settings -> Network and Internet-> Change adapter options".



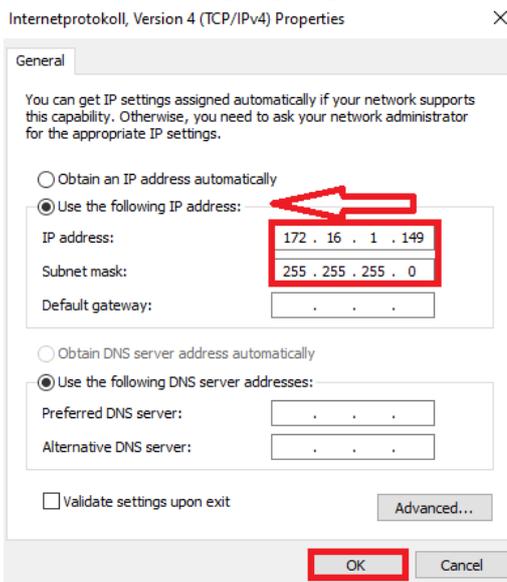
Double-click on the network card LAN. A new, small window opens.



Click on the Properties button.



Select the line Internet protocol, version 4 (TCP/IPv4) and click on Properties and enter a fixed IP address with subnet mask 255.255.255.0.



Click on OK and close all open windows.



NOTE:

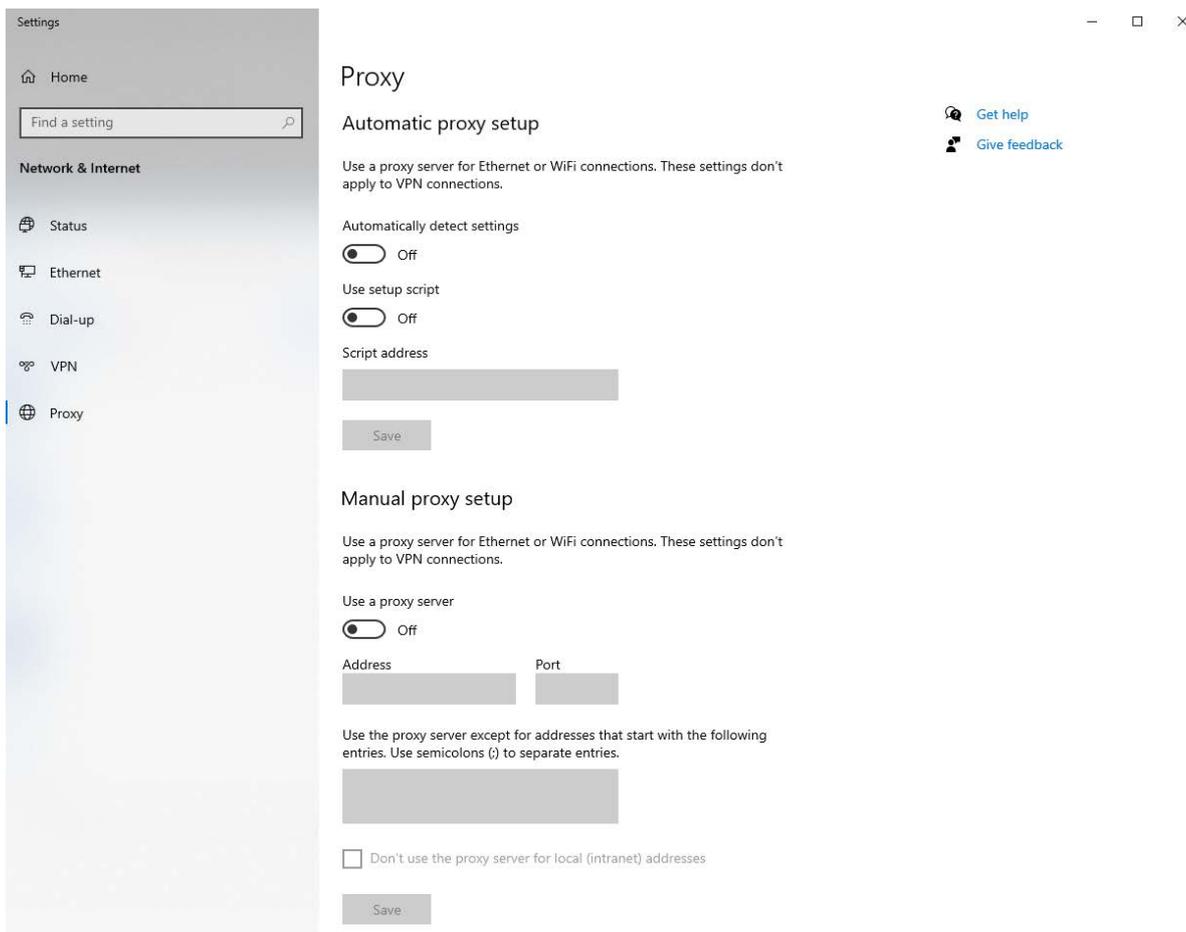
The IP address must be in the range from **172.16.1.50** up to a maximum of **172.16.1.254**, but do not use IP address **172.16.1.150** as this is assigned to the TSG by default.

3.2 Switch off any proxy server

To be able to access TVis-Web directly via a network cable for the first time, the proxy server on the PC or notebook must be switched off.

To switch off the proxy server, proceed as follows under Windows® 10:

Click on "Start -> Settings -> Network and Internet -> Proxy".



4 Program start

Connect the TSG door control unit to your PC or notebook using a network cable and the TSG extension board.

Start your web browser and enter the IP address **172.16.1.150** in the address line. The TVis-Web login window appears.



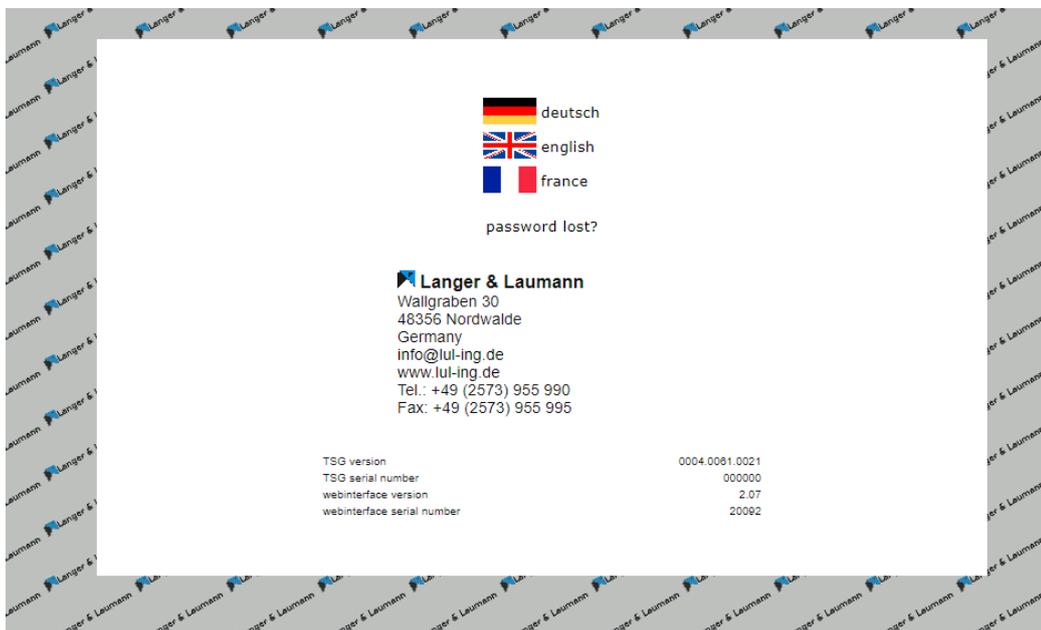
NOTE:

The IP address of the PC or notebook must be in the same subnet as the TSG. This IP address must be between **172.16.1.50** and **172.16.1.254** with a subnet mask of **255.255.255.0** (see also chapter 3.1 IP address PC / page 7).



NOTE:

Before connecting the TSG to a company or house network, the assignment of the IP address must be coordinated with the network administrator.

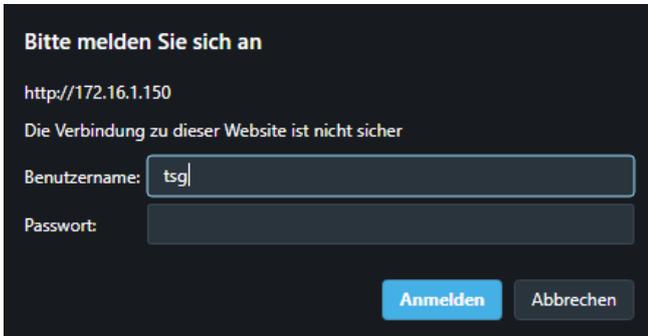


Select your language by selecting the country flag. You will be automatically routed through.

If there is a hardware communication error between the TSG electronics and the TSG web interface, a warning message appears. If the error is corrected, the TSG can be accessed again by switching it back on and updating the IP address in the address line. After correct installation and successful login as a user, the control panel is displayed with the menu. By selecting the menu items, various monitoring functions can be viewed and settings can be made.

Please enter the user name and, if necessary, the password to log in to the TSG:

Username: **tsg** (please note upper and lower case)
Password: (when logging in for the first time, no password is entered)



NOTE:

You can change the password in the TVis-Web menu. See also chapter 7.4 User / page 24.



NOTE:

The password is not dependent on the TSG web interface, but is stored in the TSG electronics. Thus, a separate password can be assigned for each TSG electronics.

5 Menu item monitoring

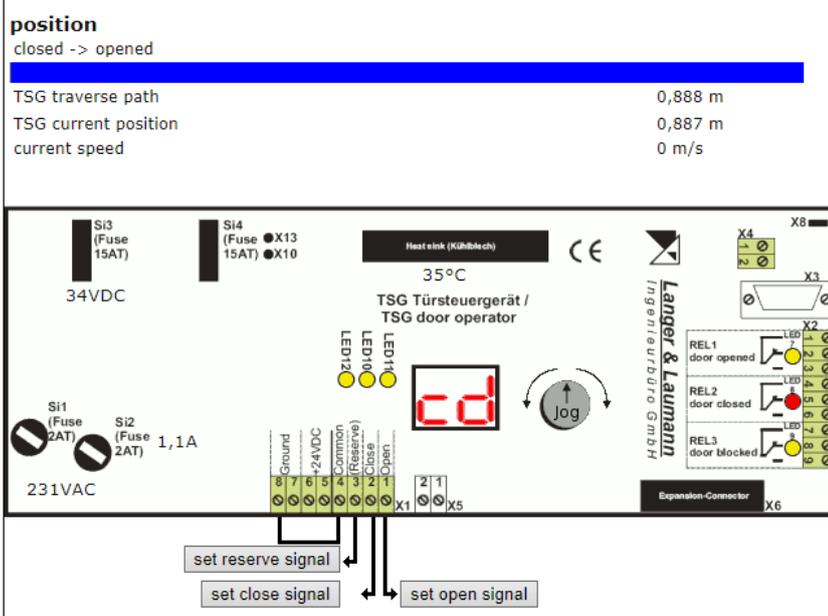


NOTE:

For further explanations on monitoring, settings and parameter explanations, see also: 1.20.91000 TSG operating instructions.

5.1 Control panel

- control**
- control unit
- scope
- error counter
- settings**
- opening
- blocked in open
- closing
- blocked in close
- end position
- add. drive
- para. overview
- V4-functions
- system**
- network
- electronics
- export/import
- user
- contact**
- contact
- lul-ing.biz



The following items are displayed in the menu item **Operating Panel**:

- TSG travel: the measured travel of the door control unit.
- TSG Position: the current position of the door.
- Current speed: the current speed of the TSG.
- Duration of last travel: the time of the last travel is displayed.
(available from TSG version CNC 4.60.21 and TVis-Web version 2.10).
- Open: if an open command is present, the yellow LED11 changes colour to red.
- Close: when a close command is present, the yellow LED10 changes colour to red.
- Reserve: if a reserve command is present, the yellow LED12 changes colour to red.
- Open: if the door is open, the yellow LED7 changes colour to red.
- Closed: if the door is closed, the yellow LED8 changes colour to red.
- Blocked: if the door is blocked, the yellow LED9 changes colour to red.
- Temperature: the current temperature of the power unit is displayed.
- Motor current: the current motor current is displayed.
- TSG Display: the TSG display is shown.

The signals for opening, closing and reserve can be set via the buttons below the TSG image. The respective input signal from TVis-Web has the same priority as the command at the hardware inputs of the TSG, whereby opening always has priority over closing. If a command is set in TVis-Web and another menu item is selected, all commands set in TVis-Web are deleted within 4 minutes and the hardware commands are processed.



WARNING:

By operating the inputs on the web interface, dangerous door movements can be switched on the TSG. The user must ensure that no danger can emanate from the door control unit.

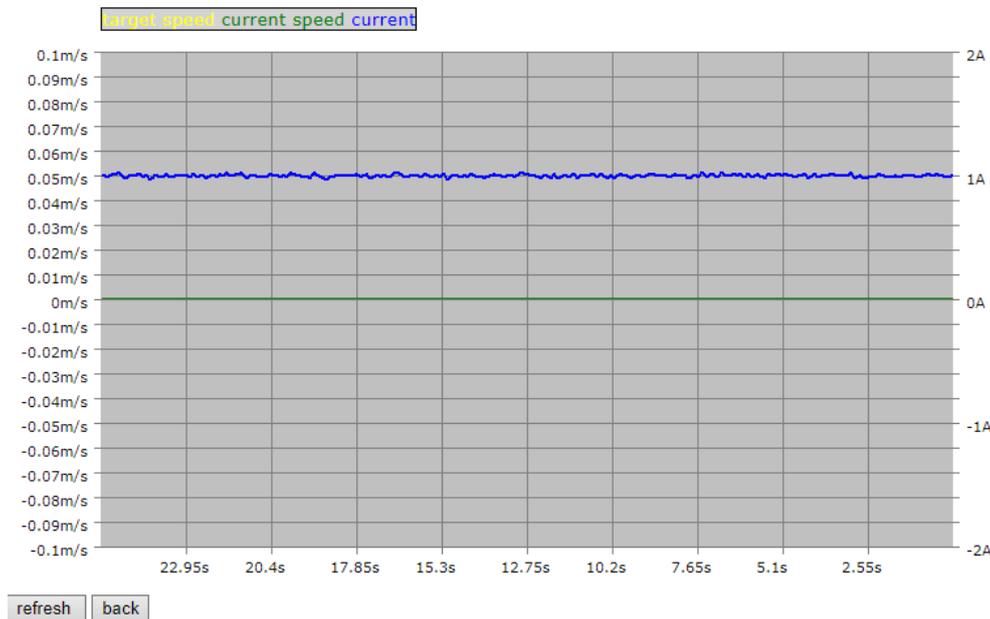
In addition, the jog wheel can be controlled by TVis-Web. By clicking on the arrow keys, the jog wheel is turned virtually to the left or right. By pressing "Jog", the jog wheel is pressed. Thus, the TSG can also be adjusted or remotely controlled in this way.



NOTE:

In TVis-Web, the same display is shown as is controlled by hardware. This means that a user at the TSG sees the same display as the user in TVis-Web.

5.2 Diagram



By selecting the menu item **Diagram**, the travel curve with the set and actual values of the speed and the current height of the TSG drive is displayed. By default, the last 25.6 seconds since calling up the diagram are transmitted from the TSG to the PC. The sensitivity of the recording of the values is set to 100 [ms] in the standard and cannot be changed.

The curves for target speed, actual speed and current are displayed in different colours.

It is possible to zoom in on a range of the displayed curves. To do this, press the left mouse button with the mouse pointer at the beginning of the area to be zoomed, hold it down and release it again at the end of the area. To return to the standard view, simply perform a single click with the left mouse button within the diagram.

5.3 Error counter

control		
control unit	E.0: not limited way	0
scope	E.1: distance blocked	0
<u>error counter</u>	E.2: eeprom errors	2
settings	E.3: blocked while reversing	0
opening	E.4: Encoder signals are not available	0
blocked in open	E.5: V3: Encoder signals are not available V4: Monitoring current sensor triggered	0
closing	E.6: V3: Encoder signals are not available V4: internally error	0
blocked in close	E.7: blocked after restarting	0
end position	E.8: mains startups	9
add. drive	E.9: V4: Monitoring stop input amplifier	0
para. overview	E.A: V4: TSG device protection	0
V4-functions	E.b: V4: error voltage	0
system	E.C: V4: Motor error	0
network	E.d: Motor detection errors	0
electronics	<input type="button" value="E.F: delete errors"/>	
export/import		
user		
contact		
contact		
lul-ing.biz		

In the menu item **error counter**, the occurring errors are listed with their number. The error counter can be deleted by pressing the button "E.F. Clear Error Counter" and then confirming the security question.

6 Menu item settings

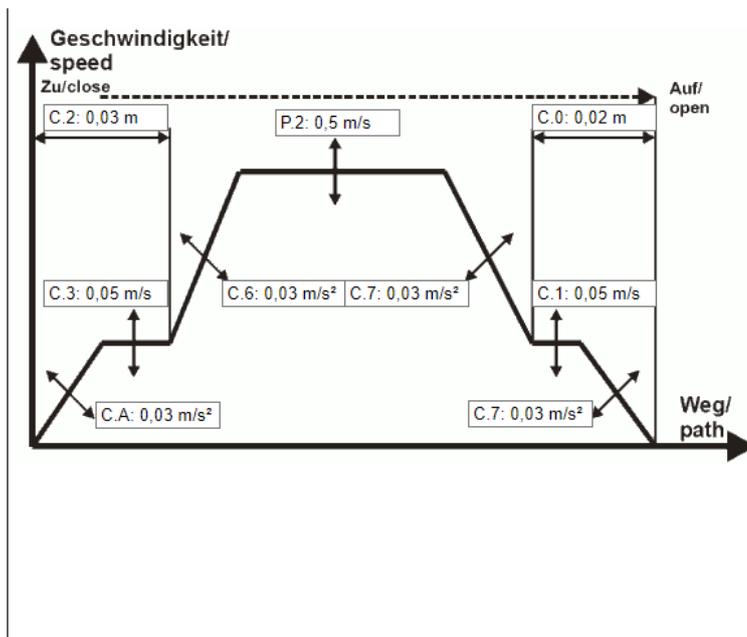


NOTE:

For further explanations on monitoring, settings and parameter explanations, see also: 1.20.91000 TSG operating instructions.

6.1 Opening

- control**
 - control unit
 - scope
 - error counter
- settings**
 - opening
 - blocked in open
 - closing
 - blocked in close
 - end position
 - add. drive
 - para. overview
 - V4-functions
- system**
 - network
 - electronics
 - export/import
 - user
- contact**
 - contact
 - lul-ing.biz



In the menu item **opening**, the travel curve for opening the door is shown.

The values of the individual parameters can be changed by simply clicking on the fields. An input field opens in which the new value is entered and accepted by pressing the "Set value" button.

6.2 Blocked in open

control
control unit
scope
error counter

settings
opening
blocked in open
closing
blocked in close
end position
add. drive
para. overview
V4-functions

system
network
electronics
export/import
user

contact
contact
lul-ing.biz

b.5: limit force open mode	on	<input type="button" value="off"/>
b.6: limit force open mode in 30% of open distance	on	<input type="button" value="off"/>
b.7: limit force open 150[N]	<input type="text" value="9,5 A"/>	
b.8: reaction of relais blocked open	pulse	<input type="button" value="constant"/>
b.9: reaction of the door if blocked in open	stop	<input type="button" value="reverse"/>
b.A: lenght of impulse if blocked (only if b3 and/or b8 = on)	<input type="text" value="1 s"/>	
b.C: distance slow end open distance without limit force 150[N]	<input type="text" value="0,01 m"/>	

In the menu item **blocked in open** the relevant parameters are displayed. The parameters can be changed by simply pressing the buttons next to the status message.

The values of the individual parameters can be changed by simply clicking on the fields. An input field opens in which the new value is entered and accepted by pressing the "Set value" button. The active settings are shown on the left.

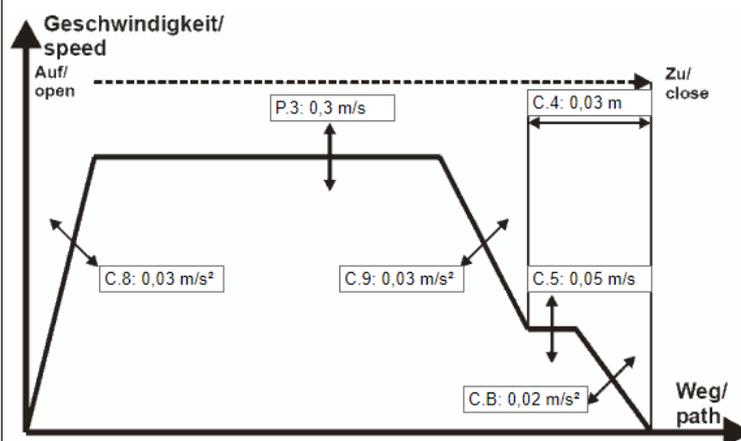
6.3 Closing

control
control unit
scope
error counter

settings
opening
blocked in open
closing
blocked in close
end position
add. drive
para. overview
V4-functions

system
network
electronics
export/import
user

contact
contact
lul-ing.biz



In the menu item **closing** the travel curve for closing the door is displayed.

The values of the individual parameters can be changed by simply clicking on the fields. An input field opens in which the new value is entered and accepted by pressing the "Set value" button.

6.4 Blocked in closed

control

control unit
scope
error counter

settings

opening
blocked in open
closing
blocked in close
end position
add. drive
para. overview
V4-functions

system

network
electronics
export/import
user

contact

contact
lul-ing.biz

b.0: limit force close mode
b.1: limit force close mode in 30% of close distance
b.2: limit force close 150[N]
b.3: reaction of relais blocked close
b.4: reaction of the door if blocked in close
b.A: lenght of impulse if blocked (only if b3 and/or b8 = on)

on

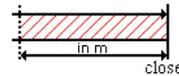
on

4 A

constant

stop

1 s



b.b: distance slow end close without limit force 150[N]

0,005 m

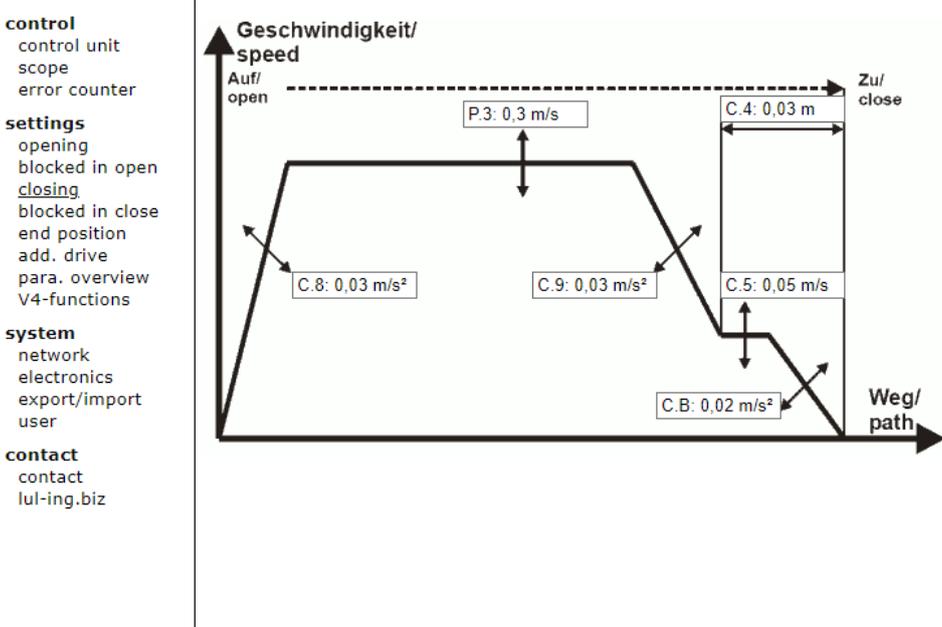
In the menu item **blocked in closed** the relevant parameters are displayed. The parameters can be changed by simply pressing the buttons next to the status message. The values of the individual parameters can be changed by simply clicking on the fields. An input field opens in which the new value is entered and accepted by pressing the "set value" button. The active settings are shown on the left.

6.5 End position

control control unit scope error counter settings opening blocked in open closing blocked in close end position add. drive para. overview V4-functions system network electronics export/import user contact contact lul-ing.biz	c.C: idle torque open without signal „door open“	<input type="text" value="1 A"/>
	c.d: idle torque close without signal „door close“	<input type="text" value="1 A"/>
	c.E: idle torque open with signal „door open“	<input type="text" value="1 A"/>
	c.F: idle torque close with signal „door close“	<input type="text" value="1 A"/>
	h.6: increased speed after power is turned on	<input type="text" value="0,09 m/s"/>
	h.8: max. force for test endposition in close	<input type="text" value="3,5 A"/>
	h.9: max. force for test endposition in open	<input type="text" value="1 A"/>
	h.d: max. force for test endposition in close at learning	<input type="text" value="3 A"/>
	h.E: max. force for test endposition in open at learning	<input type="text" value="3 A"/>

In the menu item **end position** the parameters for the behaviour of the TSG in the end positions door open and door closed are set. The values of the individual parameters can be changed by simply clicking on the fields. An input field opens in which the new value is entered and accepted by pressing the "Set value" button.

6.6 Additional drive



In the menu item **add. drive** the parameters for the control of an additional drive of a locking device in the closed position are set (e.g. control of the blade drive for QKS9 L&L). The values of the individual parameters can be changed by simply clicking on the fields. An input field opens in which the new value is entered and accepted by pressing the "Set value" button.

6.7 Parameter overview

control		
control unit	P2: maximum speed open	0.5 m/s
scope	P3: maximum speed close	0.3 m/s
error counter	P4: slow end speed	0.05 m/s
settings		
opening	P5: acceleration/ deceleration ramp open	0.03 m/s ²
blocked in open	P6: acceleration/ deceleration ramp close	0.03 m/s ²
closing	P7: slow end distance	0.03 m
blocked in close	P8: limit force in close direction	4 A
end position	P9: learn and weight	90 kg
add. drive	c.0: slow end open distance	0.02 m
para. overview		
V4-functions		
system		
network	c.1: slow end speed open	0.05 m/s
electronics	c.2: slow start open distance	0.03 m
export/import	c.3: slow start speed open	0.05 m/s
user	c.4: slow end speed close	0.03 m
contact		
contact	c.5: slow end close distance	0.05 m/s
lul-ing.biz	c.6: acceleration ramp open	0.03 m/s ²
	c.7: deceleration ramp open	0.03 m/s ²
	c.8: acceleration ramp close	0.03 m/s ²
	c.9: deceleration ramp close	0.03 m/s ²

In the menu item **parameter overview** all parameters are displayed in tabular form.

6.8 V4 Functions

control		
control unit	A.1: braking when reverse	0,15 m/s ²
scope	A.2: Enabling mode: speed open	0,8 m/s
error counter	A.3: Enabling mode: acceleration ramp open	0,07 m/s ²
settings		
opening	A.4: Enabling mode: deceleration ramp open	0,07 m/s ²
blocked in open	A.5: Enabling mode: speed close	0,6 m/s
closing	A.6: Enabling mode: acceleration ramp close	0,07 m/s ²
blocked in close	A.7: Enabling mode: deceleration ramp close	0,07 m/s ²
end position		
add. drive		
para. overview		
V4-functions		
system		
network		
electronics		
export/import		
user		
contact		
contact		
lul-ing.biz		

In the menu item **V4-functions** the parameters for the additional functions can be set.

7 System menu item



NOTE:

For further explanations on monitoring, settings and parameter explanations, see also: 1.20.91000 TSG operating instructions.

7.1 Network

<p>control control unit scope error counter</p> <p>settings opening blocked in open closing blocked in close end position add. drive para. overview V4-functions</p> <p>system <u>network</u> electronics export/import user</p> <p>contact contact lul-ing.biz</p>	<p>get ip from DHCP Server</p> <p>TSG ip address subnet mask gateway address</p> <p>TSG webinterface ip address subnet mask gateway address</p>	<p>TSG</p> <p>TSG webinterface <input type="checkbox"/></p> <p>off <input type="checkbox"/> on <input checked="" type="checkbox"/></p> <p>172 . 16 . 1 . 150</p> <p>255 . 255 . 255 . 0</p> <p>0 . 0 . 0 . 0</p> <p>172 . 16 . 1 . 150</p> <p>255 . 255 . 255 . 0</p> <p>0 . 0 . 0 . 0</p>
---	---	---

In the menu item **network**, the IP address can be changed.
For more information on setting the IP address, etc., see also Chap. 3.1 IP address PC / Page 7.

The user can select whether the IP address from the TSG electronics or from the TSG web interface is used to address the TSG. These IP addresses can be different.

Obtain IP address from: TSG:

The IP address is obtained from the TSG door control device.
The IP address of the TSG can also be set directly at the device in the parameters A.c-A.F. These are only recognised after a restart of the TSG or the web interface.
This setting can also be made from the TSG if the IP address of the TSG web interface has been lost.

Obtain IP address from: Web interface:

The IP address is obtained from the TSG web interface. This has the advantage that if the TSG web interface is changed from one TSG electronics to the next, the IP address remains the same. This is also the default setting, by default the set IP address is: 172.16.1.150.

Resetting the IP address from the web interface

This can be achieved by setting the parameter A.b. in the TSG menu. The menu item can be found directly on the door control unit under P0 → A.u. → A.b. After restarting the TSG, the TSG web interface obtains its preconfigured IP address (172.16.1.150). If the electronics are restarted a second time, the IP address is set to the address set in the web interface.

7.2 Electronics

control			
control unit	blocked counter		0
scope	operating hours		1433 h
error counter	movements counter		554
settings	TSG version	0004.0061.0021	
opening	TSG serial number	000.000	
blocked in open	webinterface version	2.07 #767	
closing	webinterface serial number	20092	
blocked in close			
end position			
add. drive			
para. overview			
V4-functions			
system			
network			
electronics			
export/import			
user			
contact			
contact			
lul-ing.biz			

The menu item **electronics** contains important data on the TSG and its values.

7.3 Export/Import

control	<input type="button" value="Datei auswählen"/> Keine ausgewählt
control unit	
scope	<input type="button" value="import config data to TSG"/>
error counter	<input type="button" value="export config data from TSG"/>
settings	<input type="button" value="E.E: load default setting"/>
opening	Parameter checksum:6626
blocked in open	
closing	
blocked in close	
end position	
add. drive	
para. overview	
V4-functions	
system	
network	
electronics	
<u>export/import</u>	
user	
contact	
contact	
lul-ing.biz	

In the menu item **export/import**, the entire set parameters can be exported to a file as well as imported. To export, press the "Export" button with the mouse, a message appears to save the file "configuration.csv".



CAUTION:

The exported file must not be changed, otherwise it cannot be imported again!

Before importing a parameter file, the file to be imported must first be selected with the "Browse..." button. Then press the "Import" button to start the import process. After importing the parameters, the file "import.log" is output.

By pressing the button "E.E. Load default settings" the default parameters are loaded into the TSG.



CAUTION:

Loading the default settings overwrites all parameters. Previously changed parameters are irrevocably lost!



NOTE:

To prevent changed parameters from being irrevocably overwritten by the default settings, it is recommended to export the parameters. See also chapter 7.3 Export/Import / page 22.

In the menu item **Parameter set** different parameter sets can be selected and imported into the TSG. The definitions of the individual parameter sets can be requested directly from L&L.

7.4 User

control
control unit
scope
error counter

settings
opening
blocked in open
closing
blocked in close
end position
add. drive
para. overview
V4-functions

system
network
electronics
export/import
user

contact
contact
lul-ing.biz

Passwort

clear pass

In the menu item **user** the user's password can be changed. Up to 10 characters can be entered, consisting of letters, numbers and special characters.



CAUTION:
Passwords are case-sensitive!

When first delivered, the password is empty and can be changed by the user during initial operation to prevent unauthorised access.



NOTE:
Make a note of your password. If the password is forgotten, contact **Langer & Laumann Ingenieurbüro GmbH** directly.

8 Connecting the TSG web interface via WLAN

To monitor and operate the TSG door control device via radio, a WLAN router can be connected to the TSG web interface via a network cable.

It is important that the TSG web interface is in the same IP address range as the WLAN router.
Langer & Laumann Ingenieurbüro GmbH supplies a pre-configured router.

Procedure:

1. Connect the WLAN router to the web interface and the TSG.
2. Plug in the WLAN router
3. Search for the network "lul-webinterface" and connect
Password: webinterface
4. Proceed as described in chapter 4 Program start / page 10

9 Contact

If you have any questions or concerns, we can be reached at the following address:

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