Product Description / Intendend Use

- The ELREHA Gateway serves as a frontend of a cooling plant by communication with control systems via interfaces.It prepares all recorded values and presents them on websites
- The ELREHA Gateway is designed to connect all ELREHA control systems with RS-485 interfaces
- To view, to adjust and to call up the values only a current browser is necessary
- Recording of alarm/state messages and measuring values
- Alarm messages can be sent by Email
- It can be integrated in PC networks by an ethernet connection
- All PC's in this network are able to access to all information
- In this way it is possible to connect and access the ELREHA Gateway to the internet
- 4x USB, 2x Ethernet
- The Web Gateway is provided for dry and dust-free environment

Content

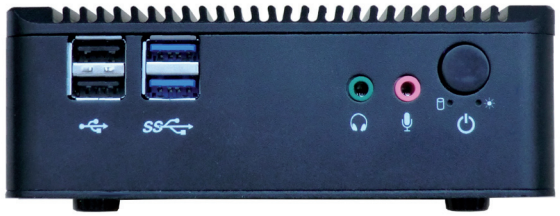
ELEKTRONISCHE REGELUNGEN GMBH

Technical Manual **5320022-00/04e**

from Software Version 3.5.1

ELREHA Gateway

Web Solution 2.0



Notice

The ELREHA Gateway can be operated with these browsers:

Internet Explorer from version 9
Mozilla Firefox from version 35
Microsoft Edge from version 12
Google Chrome from version 47

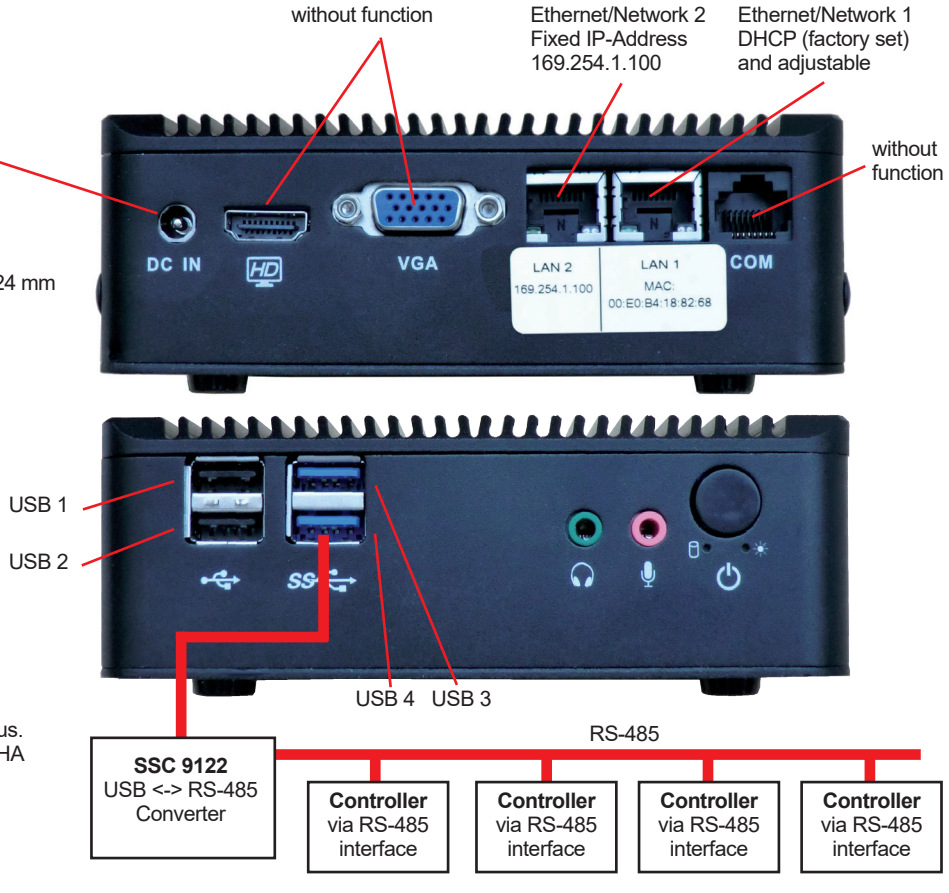
DANGER

Please note the Safety Instructions !

Electrical Connection

Power Supply Connector
Power Supply
12V DC, 5A

Dimensions .....(H x W x D) 46 x 134 x 124 mm
Ambient conditions
for operation: .....-20°C...60°C
0-95% relative humidity,
not condensing
Clean only with damp cloth



Controller networking via SSC <-> RS-485 Interface

The ELREHA Gateway communicates via an SSC-9122 interface converter and an RS-485, 2-wire connection with up to **64** controllers on a bus. Each controller that is connected to the ELREHA Gateway is assigned an individual address.

Supported Controllers

BMT	EVP 1130	EVP 1140	EVP 3150-2	EVP 3167	EVP 3168	HMR 3168	MSReco 3130	MSReco 3140	SM 501	SMZ	TAR x260-2	TAR x700-2	TAR x810-2	TAR x820-2
V1.0.1-V1.0.6	V1.02-V1.05	V1.03-V1.06	V1.58-V1.61	V1.03-V1.06	V1.02-V1.05	V1.0-V1.01	V1.01-V1.04	V0.53-V2.04	V1.0.1	V3.56-V3.59	V1.03, V2.0.0	V1.0.0	V1.0.1-V1.0.5, V2.0.0-V2.0.2	V1.0.0

TKP 19130/19140 TKP 3130,-40.-50	USP	VBZ 3006-2	VPR 5240-2	Daikin Outdoor Unit	Daikin Booster Unit	Daikin RTD	Diris A10	Diris A40
V2.10-V7.00	V1.31	V1.0.4	V02.17.04, V 02.18.00, V02.18.08, V02.19.00, V02.19.01, V02.20.00, V02.20.01	supported	supported	supported	supported	supported

Access Configuration

The configuration of the ELREHA Gateway must be done via the line Ethernet/Network 2. The IP-address is factory set to

169.254.1.100

1. The ELREHA Gateway is connected to the available network, or even directly via a Cross Over Ethernet Cable.

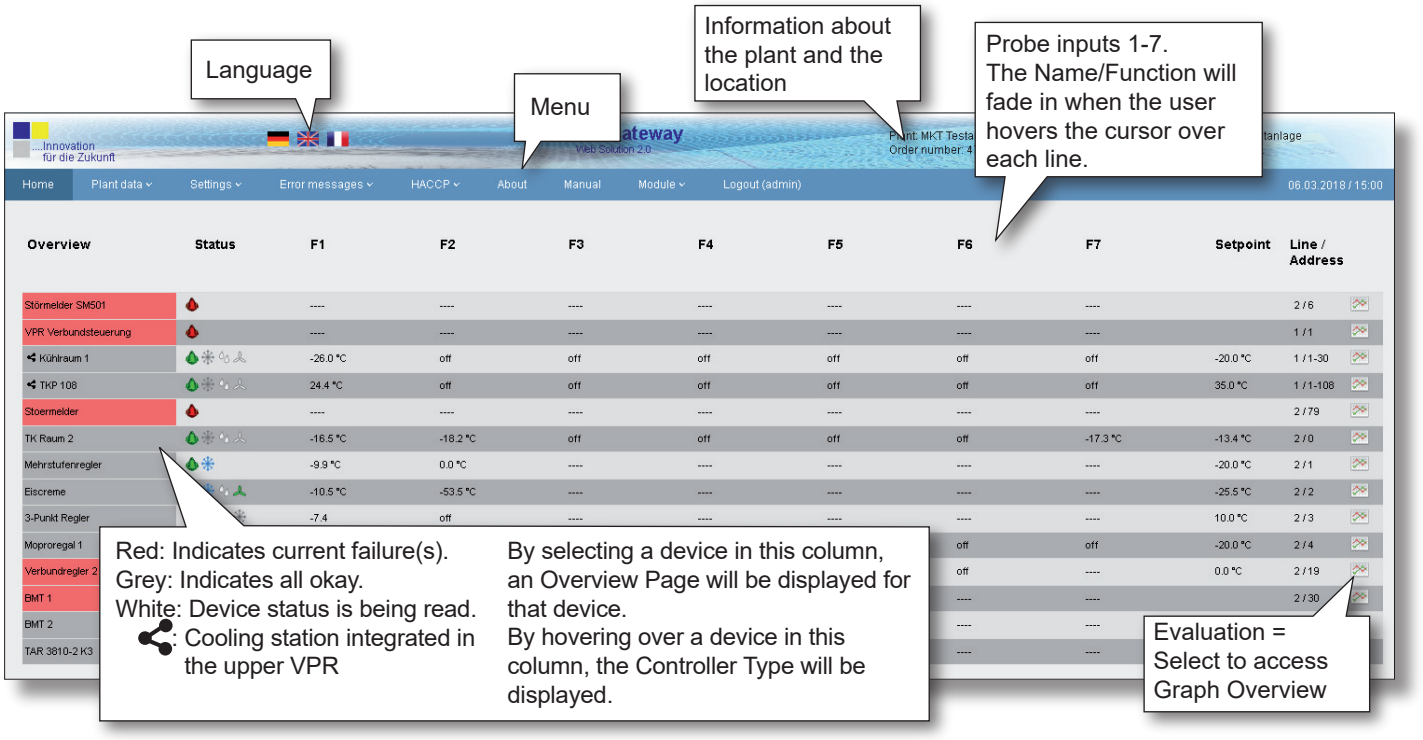
   The Ethernet cable connection must already be in place before the ELREHA Gateway is switched on.

2. Depending on the operating system, it may be necessary to change the IP address of the PC to the following range: 169.254.1.xxx.
   Otherwise, the ELREHA Gateway may not be detected.
3. Start browser and enter http://169.254.1.100 in the address bar. Please do not enter „www“ as part of the address. This will result in the ELREHA Gateway not being found and the following failure message will be displayed:
   'Page not available/Seite nicht verfügbar'.
4. A „login“ window will appear requesting a Username and Password to be entered.
   The default for both entries is 'admin'. The Username and Password can be changed by selecting 'Settings/Users'.

Overview

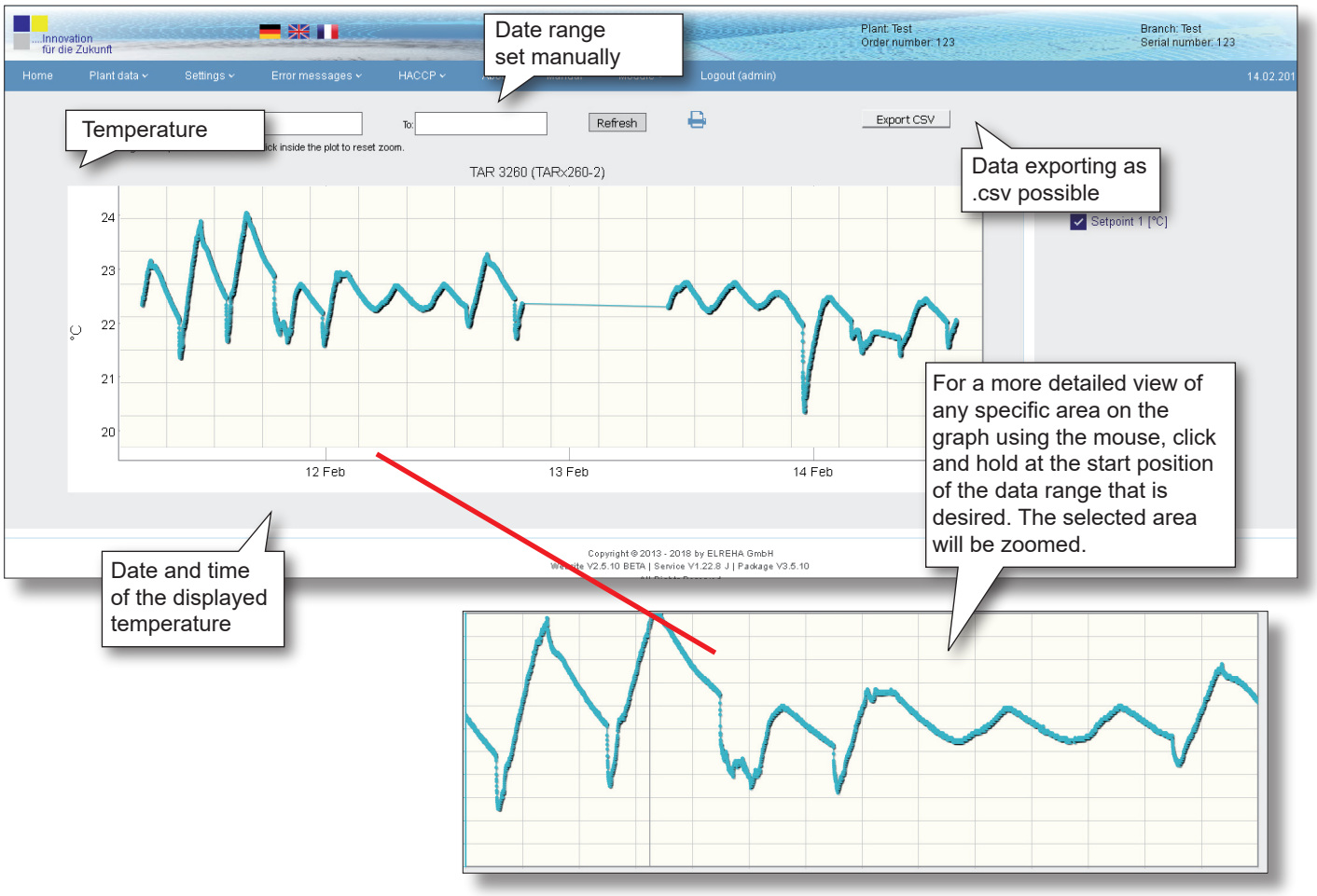
Once the user is logged in, an Overview page will appear, which will display all the current parameters of any controllers connected to the system, including temperatures, setpoints, and failure messages.

Via the Menu on this page, the user is also able to access all sub-pages, and can also view graphs of temperature sequences.



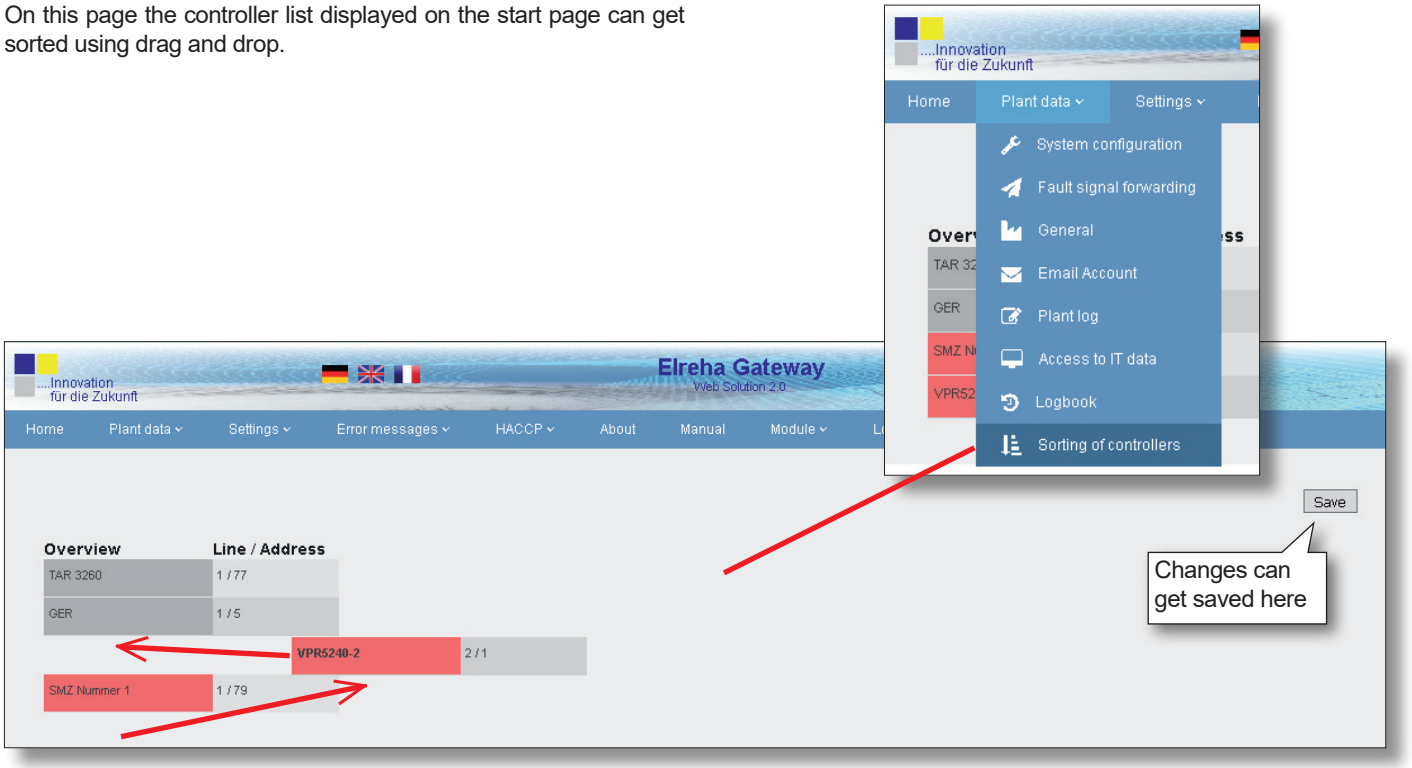
Page 'Evaluation' (Graphical Overview)

By selecting the 'Evaluation' icon for any device on the 'Overview Page', a new page will be displayed with a graph of all the actual data points. The user can zoom into specific time periods and data points at any time. By double clicking, the whole view can then be restored.



Page 'Sorting of controllers'

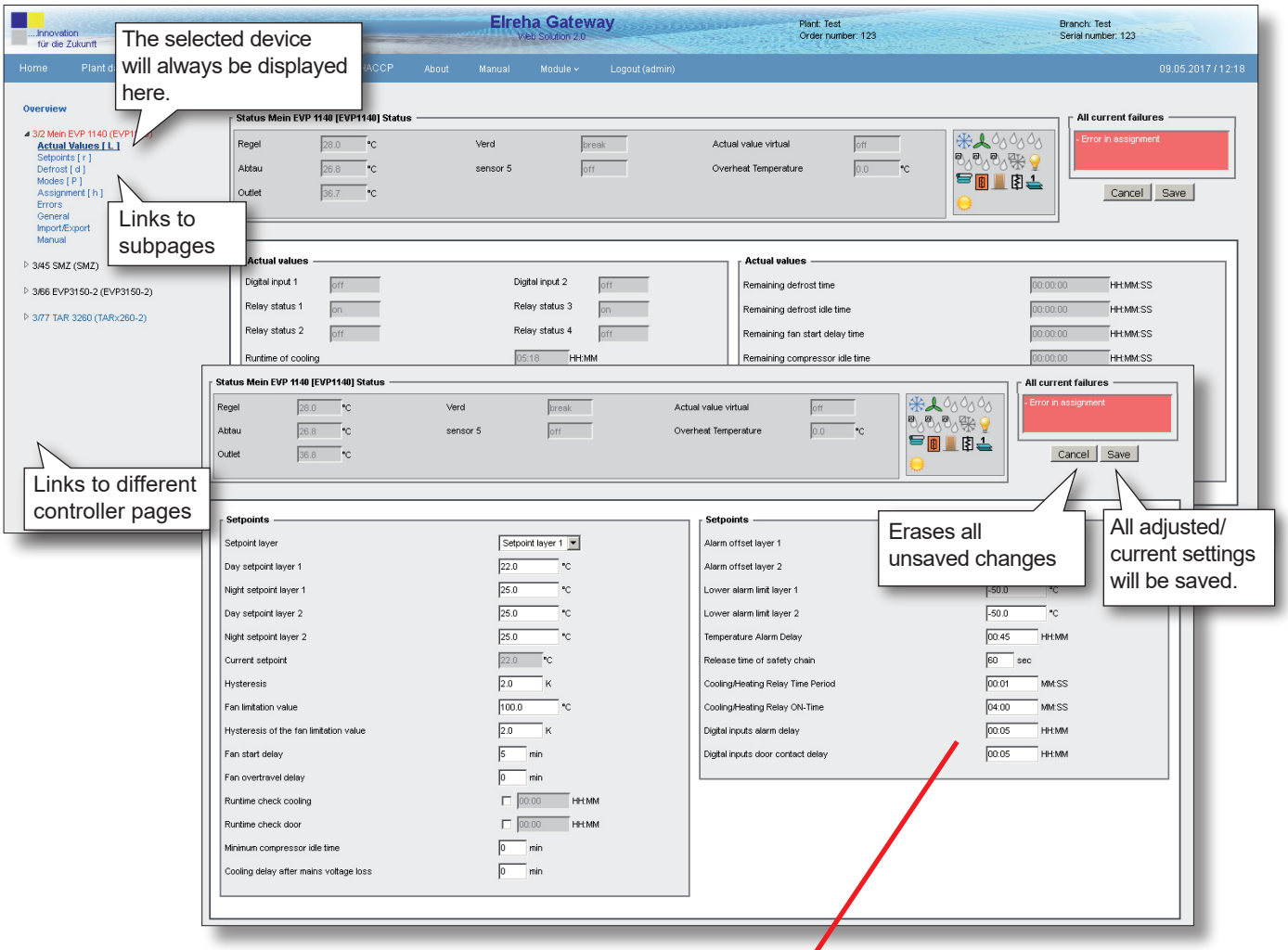
On this page the controller list displayed on the start page can get sorted using drag and drop.



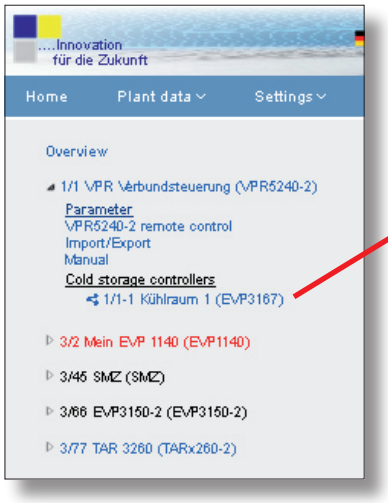
Overview about the settings of all Controllers

On this page all configured controllers will be shown with their subdirectories and set/settable parameters.

Grey fields indicates that the value has not yet been read and cannot be changed. Each controller type is displayed individually.



Use the 'TAB' key to shift focus from field to field.
Any new entries will only be saved by selecting the 'Save' button on the page.

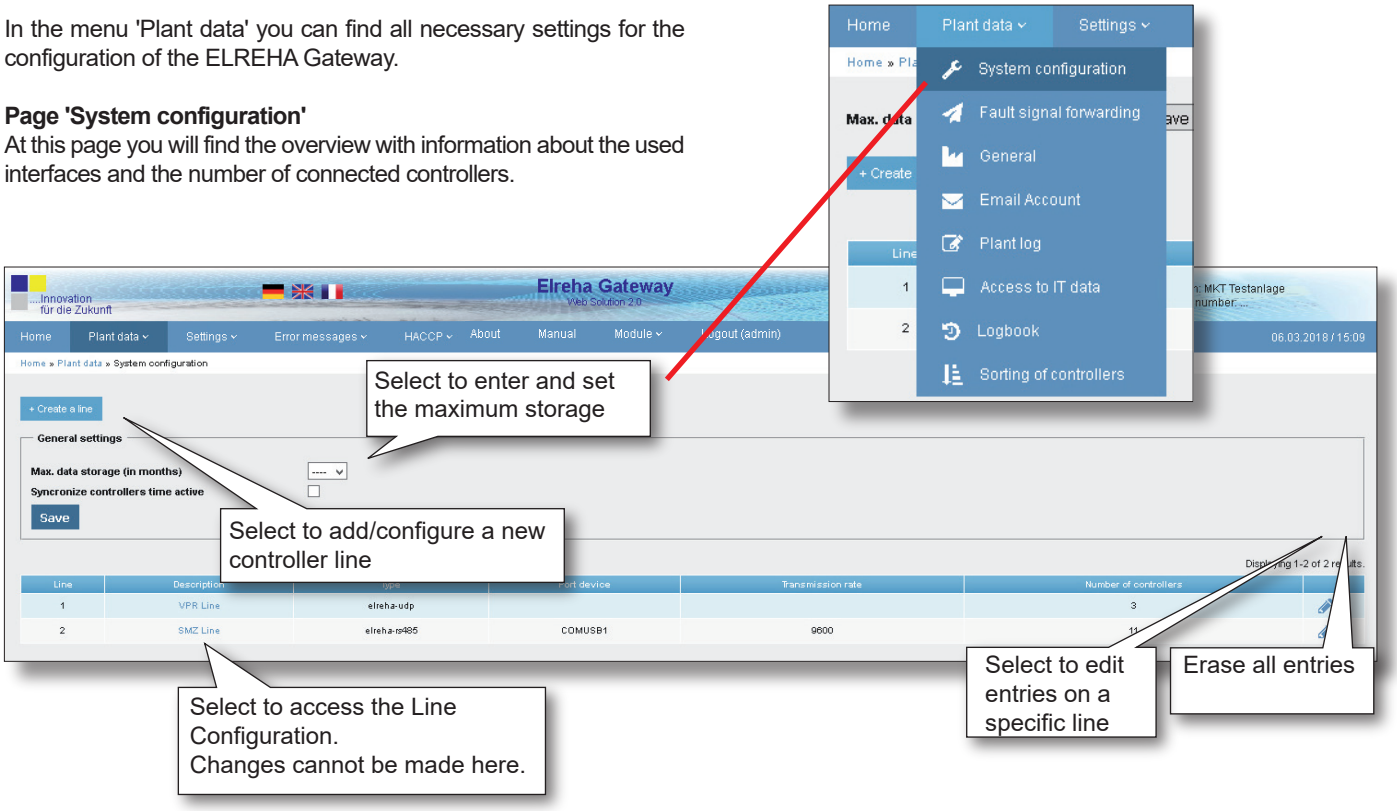


In the VPR system integrated cold storage controllers will be displayed in the VPR directory under "Cold storage controllers".

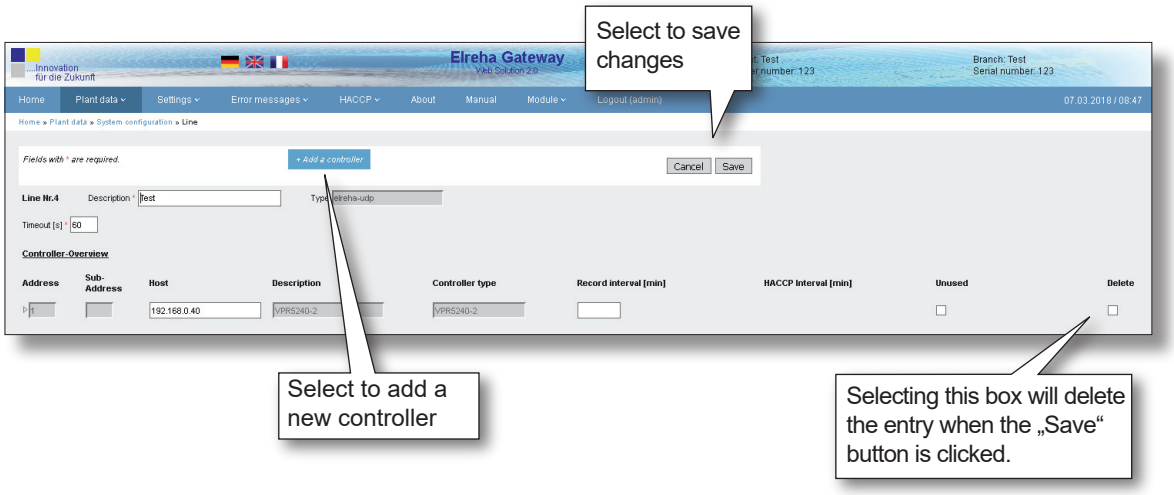
Function Pages

In the menu 'Plant data' you can find all necessary settings for the configuration of the ELREHA Gateway.

Page 'System configuration'
At this page you will find the overview with information about the used interfaces and the number of connected controllers.



Page 'Line'
Use this page to enter the controllers which are connected to the ELREHA Gateway.



Basic Entries

Description
Name assigned to the connection.

Type
Data connection type being utilized.

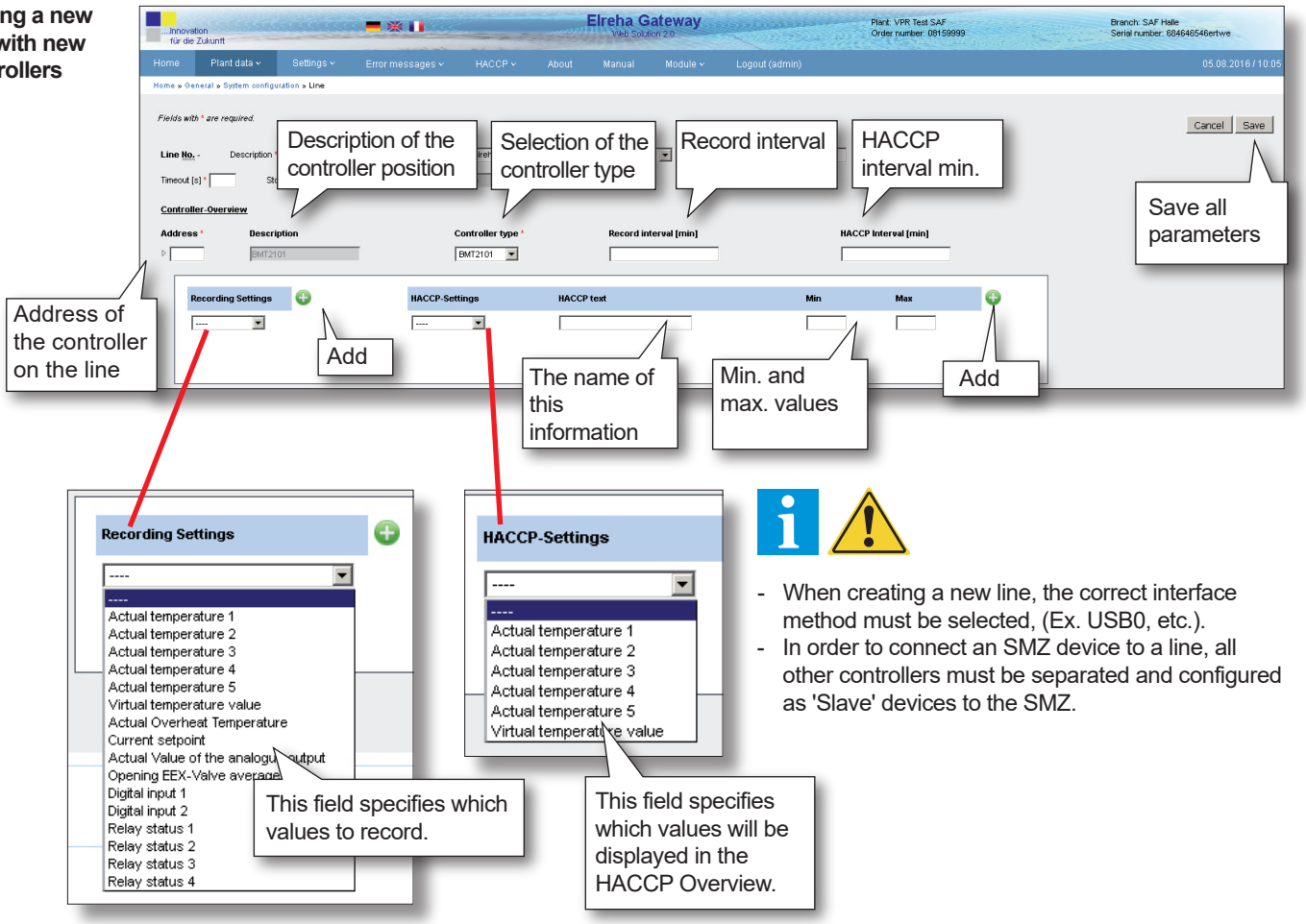
Port device
Method of interface (Ex. USB, etc.).

Timeout
Remaining time until time-out expressed in seconds.

Transmission rate
Maximum transmission speed in Baud, e.g. 9600, 57600

Under the 'Controller List', all controllers that are entered will be listed. Only the host and the recording intervals can be changed in this list.

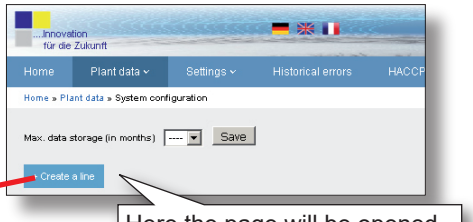
Adding a new line with new controllers

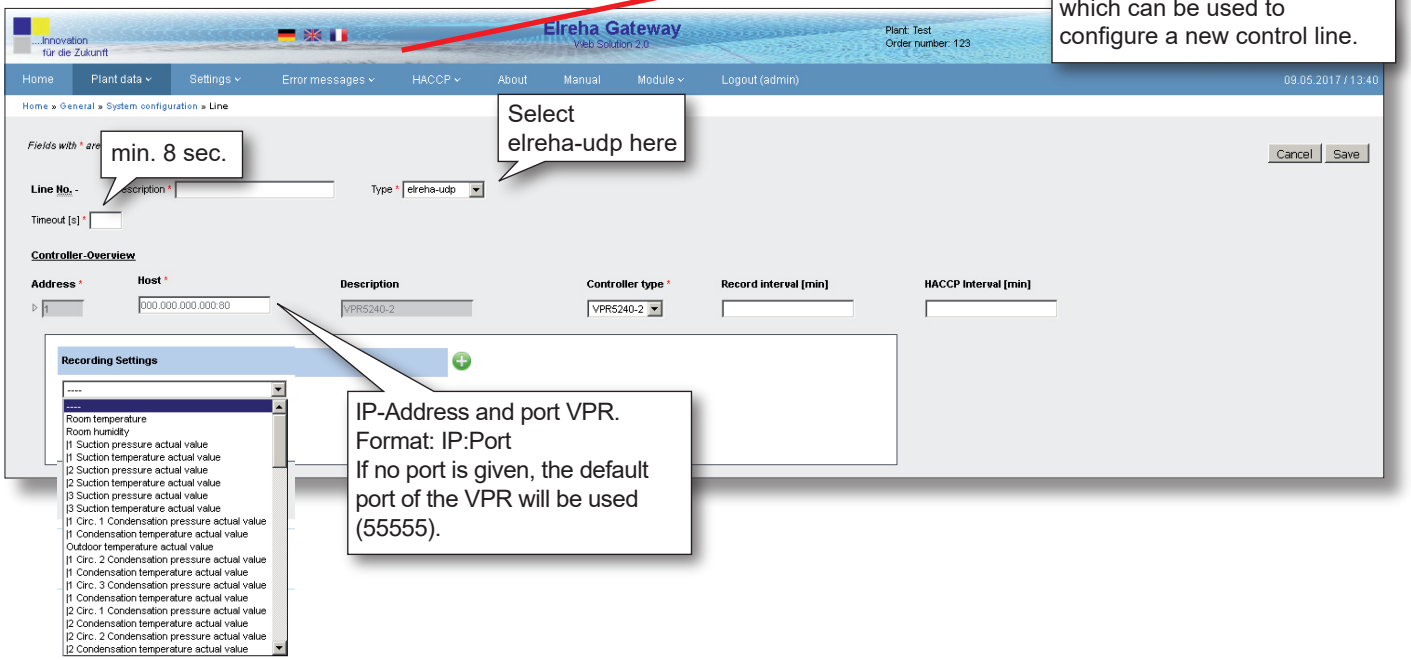


- When creating a new line, the correct interface method must be selected, (Ex. USB0, etc.).
- In order to connect an SMZ device to a line, all other controllers must be separated and configured as 'Slave' devices to the SMZ.

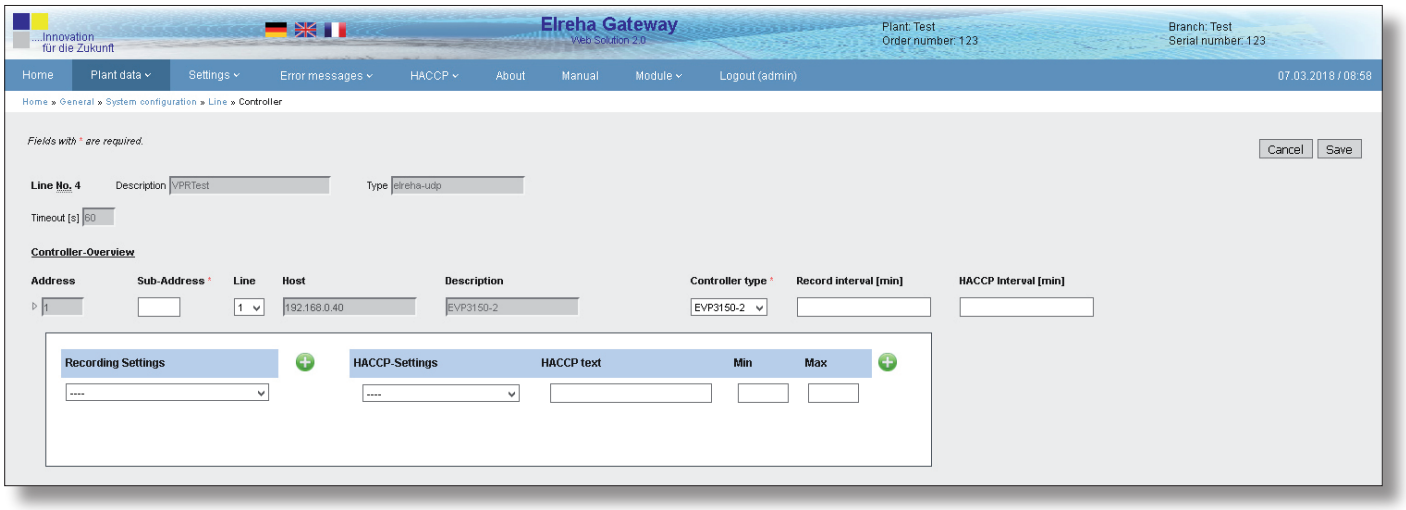
Adding a new line with VPR

Is a VPR selected at this line, only cold storage controllers can be integrated to the VPR.



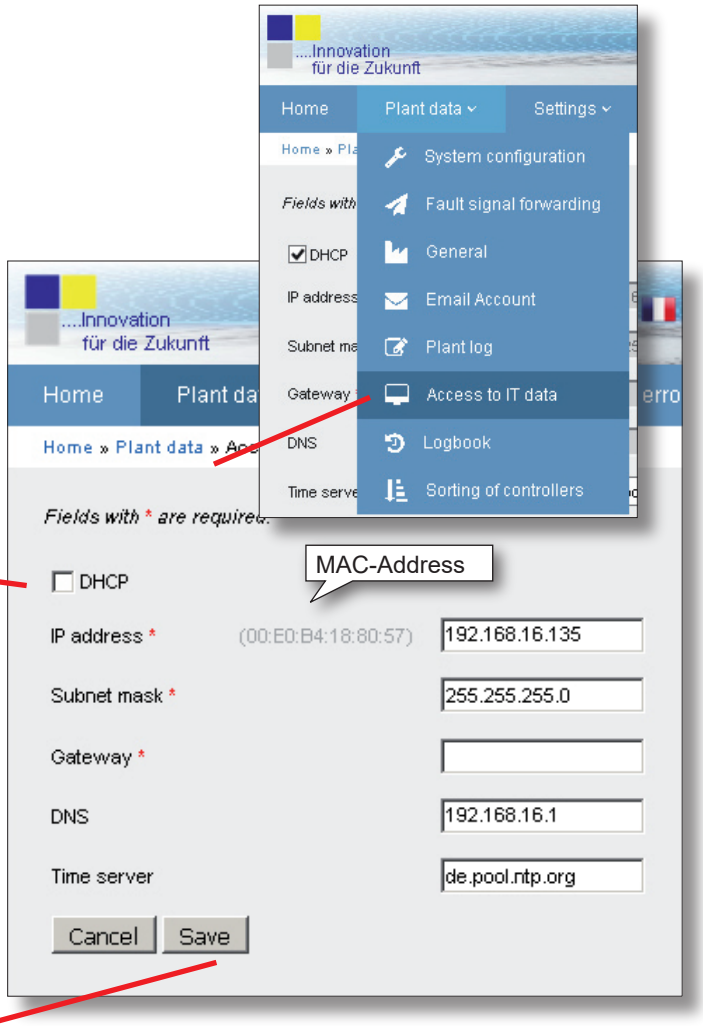


After a new line has been created for a VPR, this page appears after the call, which also contains an overview of the controllers connected to the VPR.



Page 'Access to IT data'

On this page you will find all settings which are necessary to integrate the ELREHA Gateway into a network.



DHCP
When the DHCP box is selected, the IP address, the subnet mask, and the gateway will be applied automatically. The same information will need to be entered manually if this box is not selected.

IP Address
Address in the network

Subnet mask
Mask setting of the network

Gateway
IP address for the outside connection

DNS
Nameserver

Time server
Server for synchronization of the time of day, e.g.: de.pool.ntp.org

With 'Save' all parameters will be saved

After saving, the server will reboot in order to apply the changes. The server will not be accessible during this time.

Standard HTTP access occurs via port 80, via Port 443 can be accessed by HTTPS (Hypertext Transfer Protocol Secure) to the Gateway.
Depending on which port is enabled in the customer's network, the access can be enforced via HTTP or HTTPS.
If both ports are unlocked, the access is possible via HTTP or HTTPS.

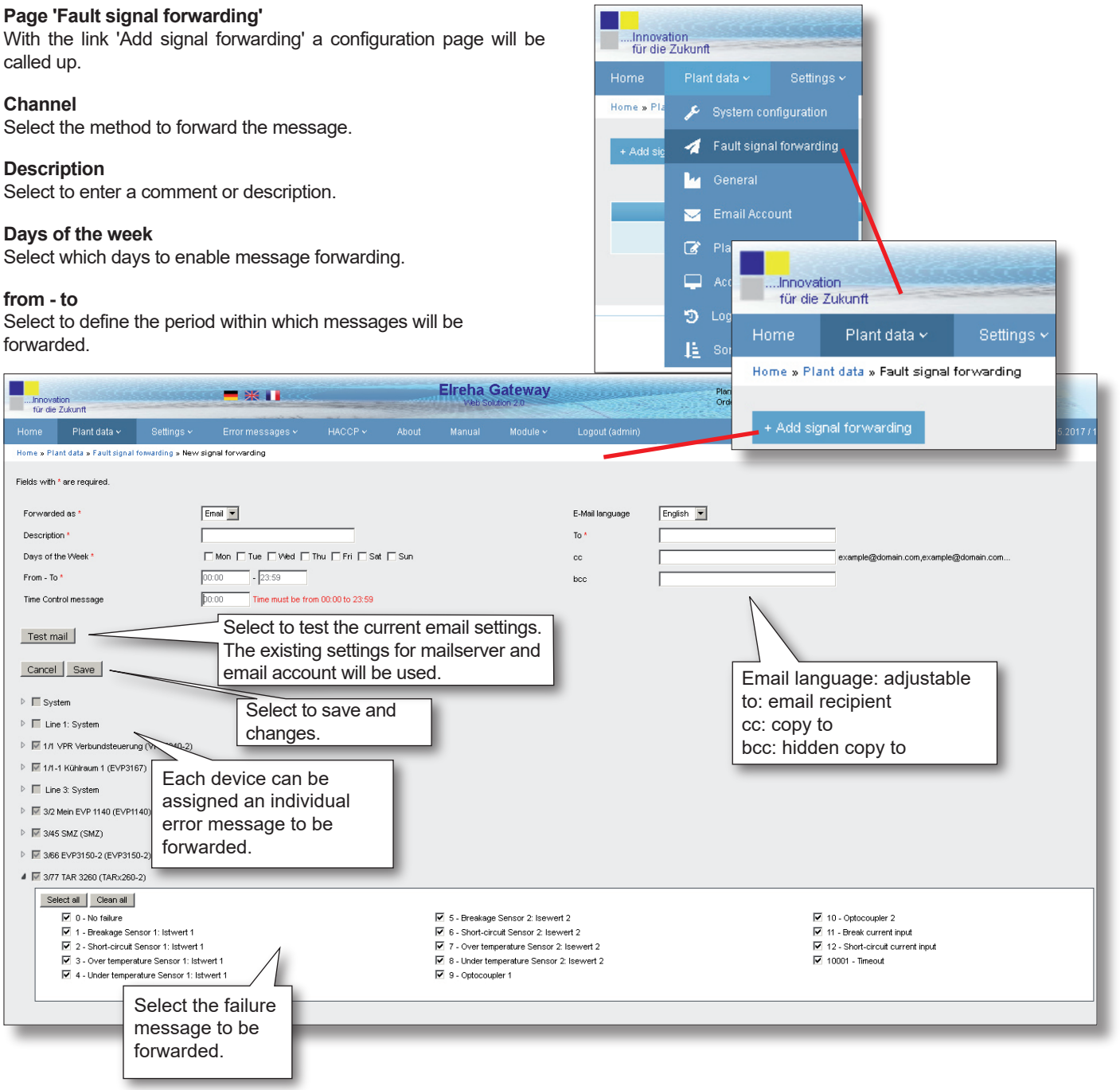
Page 'Fault signal forwarding'
With the link 'Add signal forwarding' a configuration page will be called up.

Channel
Select the method to forward the message.

Description
Select to enter a comment or description.

Days of the week
Select which days to enable message forwarding.

from - to
Select to define the period within which messages will be forwarded.



Host
SMTP mailserver

SMTP-Port
Mailserver port

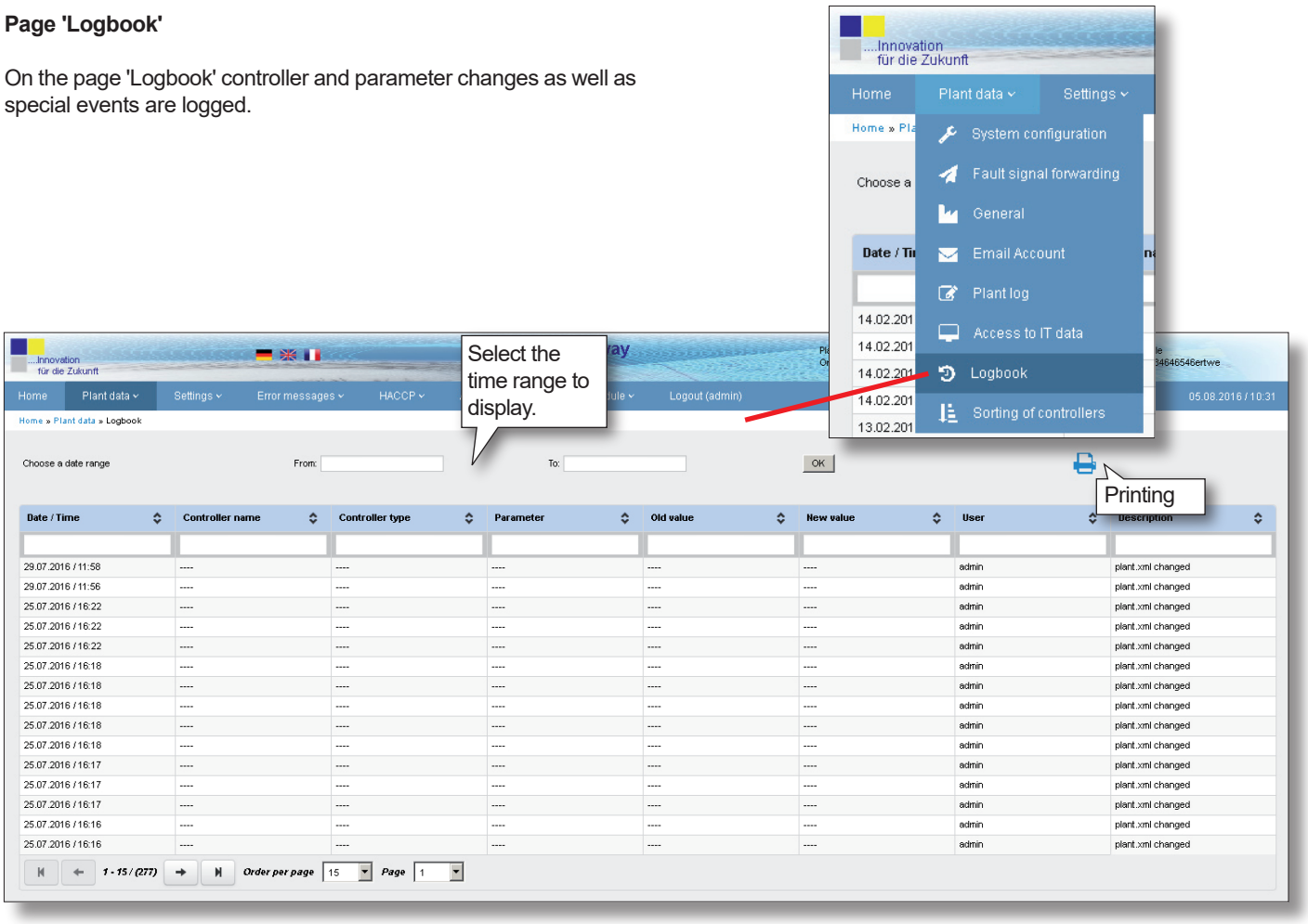
Connection Security
Here the corresponding methods can be selected

User / Password
The necessary data for transmission

When the 'Fault Signal Forwarding' page is opened, any existing entries will be displayed in an overview list. This can be edited at any time.

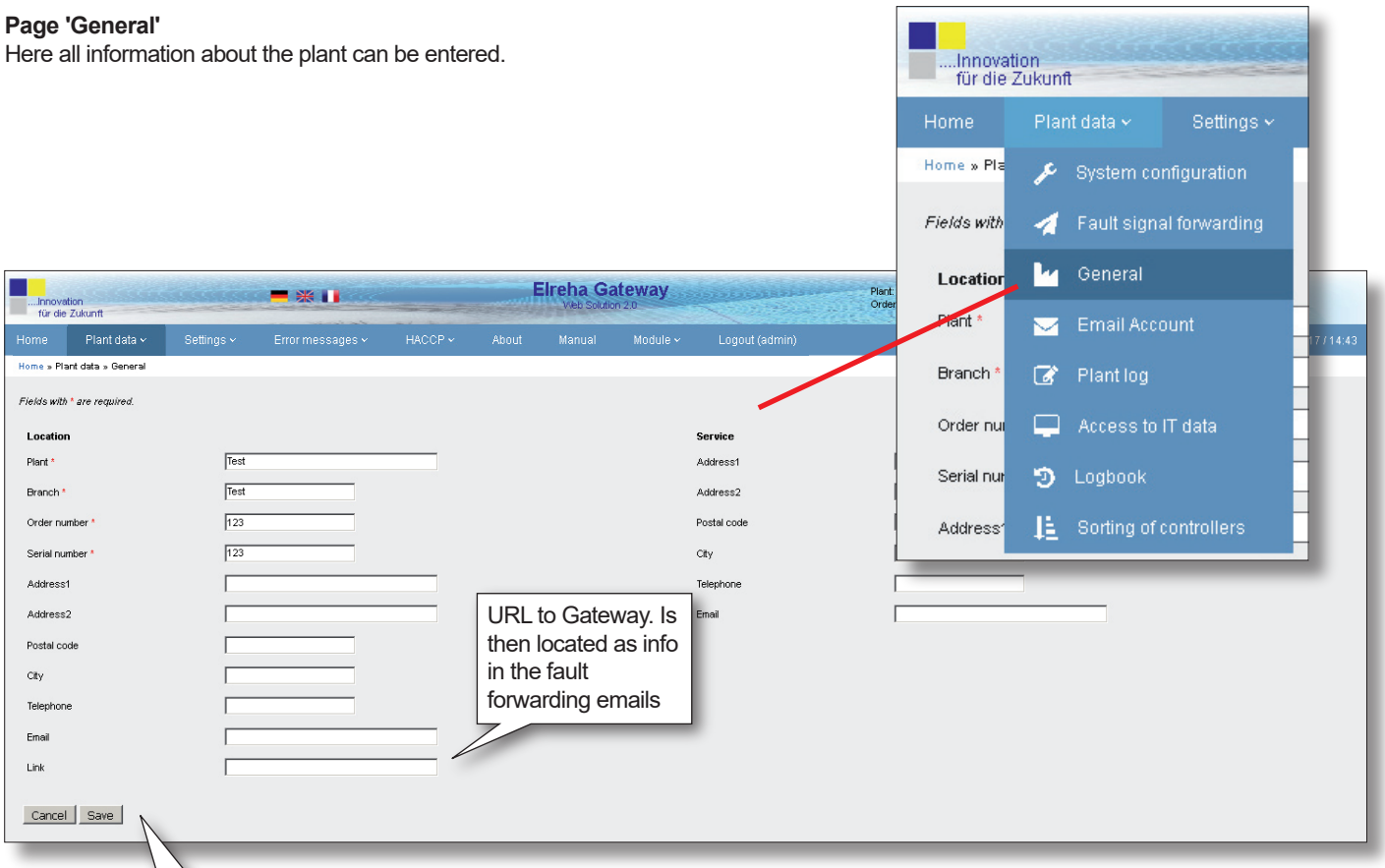
Page 'Logbook'

On the page 'Logbook' controller and parameter changes as well as special events are logged.



Page 'General'

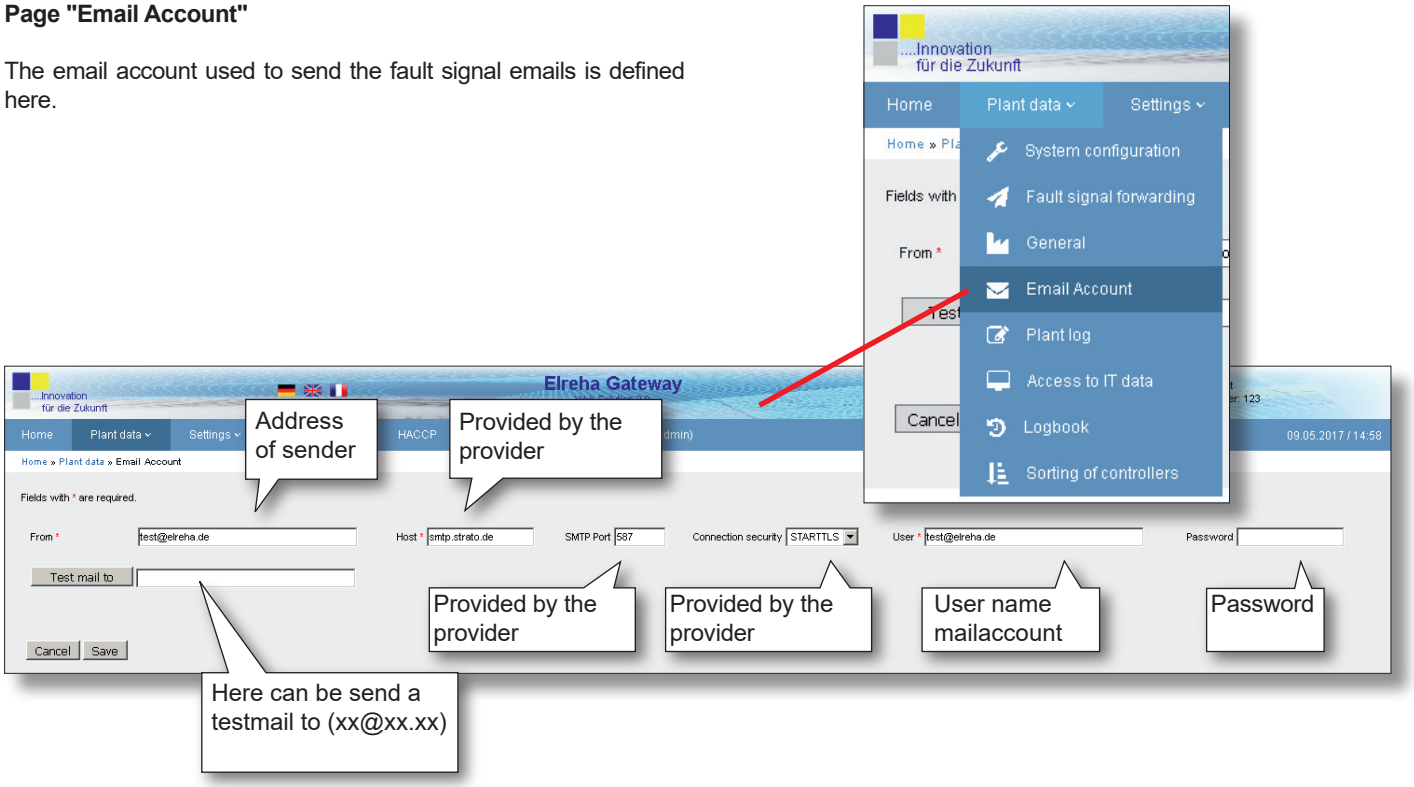
Here all information about the plant can be entered.



The information marked with ' * ' will be displayed at the top right corner of each page.

Page "Email Account"

The email account used to send the fault signal emails is defined here.



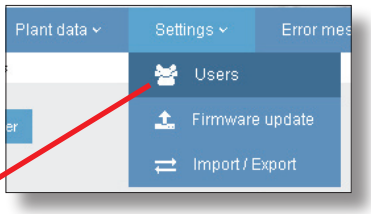
Host
SMTP Mailserver

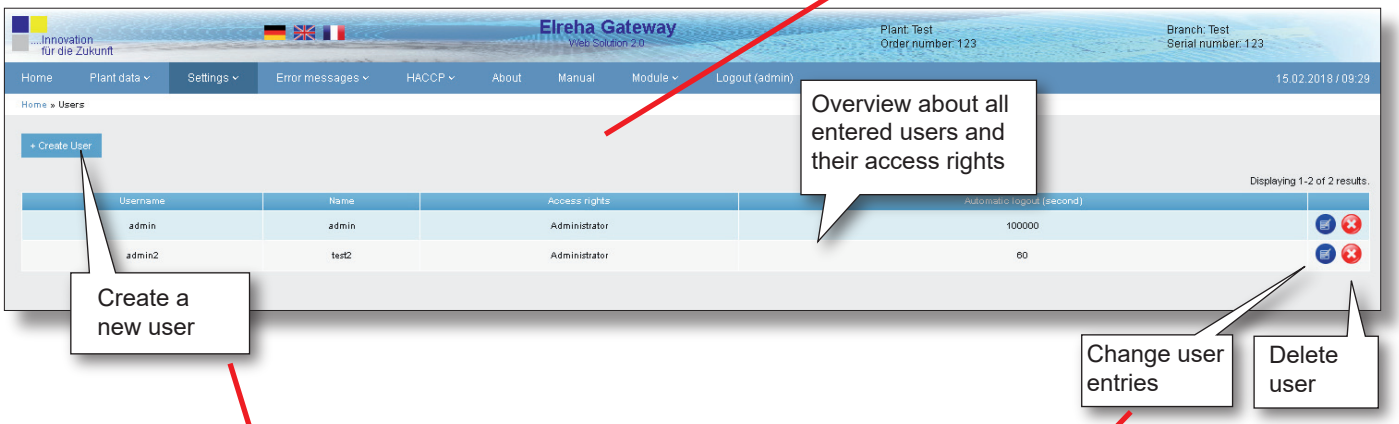
SMTP Port
Mailserver Port

Connection security
The relevant protocols are defined here

User / Password
The data required for transmission

Page 'Users'
This page is used to define and enter user access and rights.
The system provides 4 levels of user access from 'Administrator' to 'Read Only'.



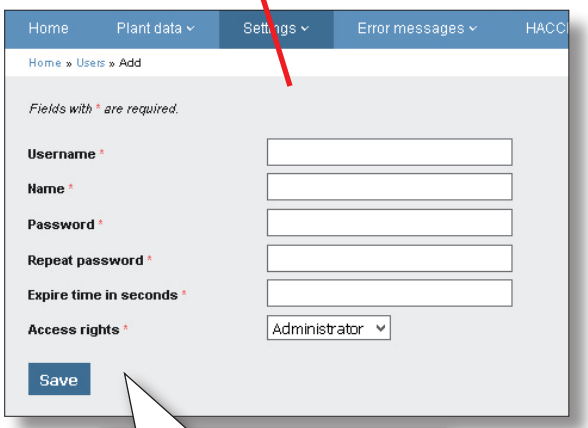


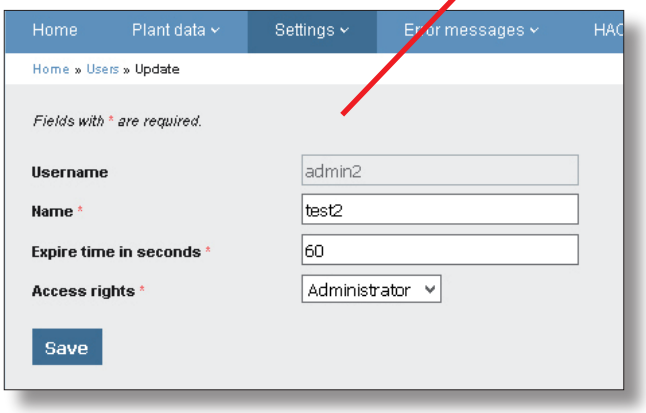
Overview about all entered users and their access rights

Create a new user

Change user entries

Delete user





All fields marked with ' * ' must be filled.
With a click here, the new user will be confirmed and stored.

Access Rights

1 : Administrator
2 : Service
3 : Technician
4 : Customer / read only

1. Administrator Rights / Possible Settings
- All Access Rights
- Read User Information
- Adding User
- Erase User
- Edit User

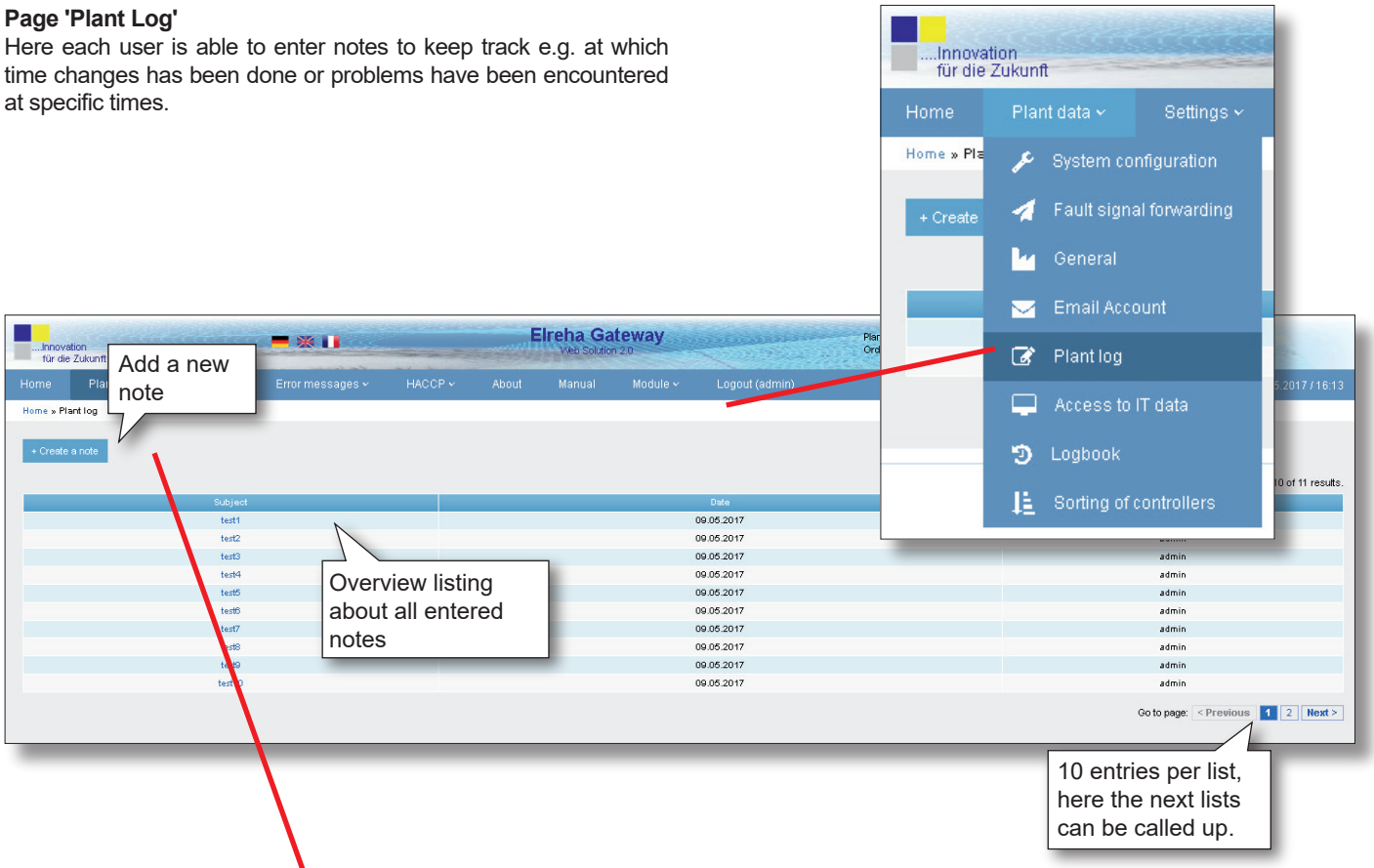
2. Service Rights (rights 3 + 4 possible)
- Change Plant Configuration
- Erase Plant Configuration

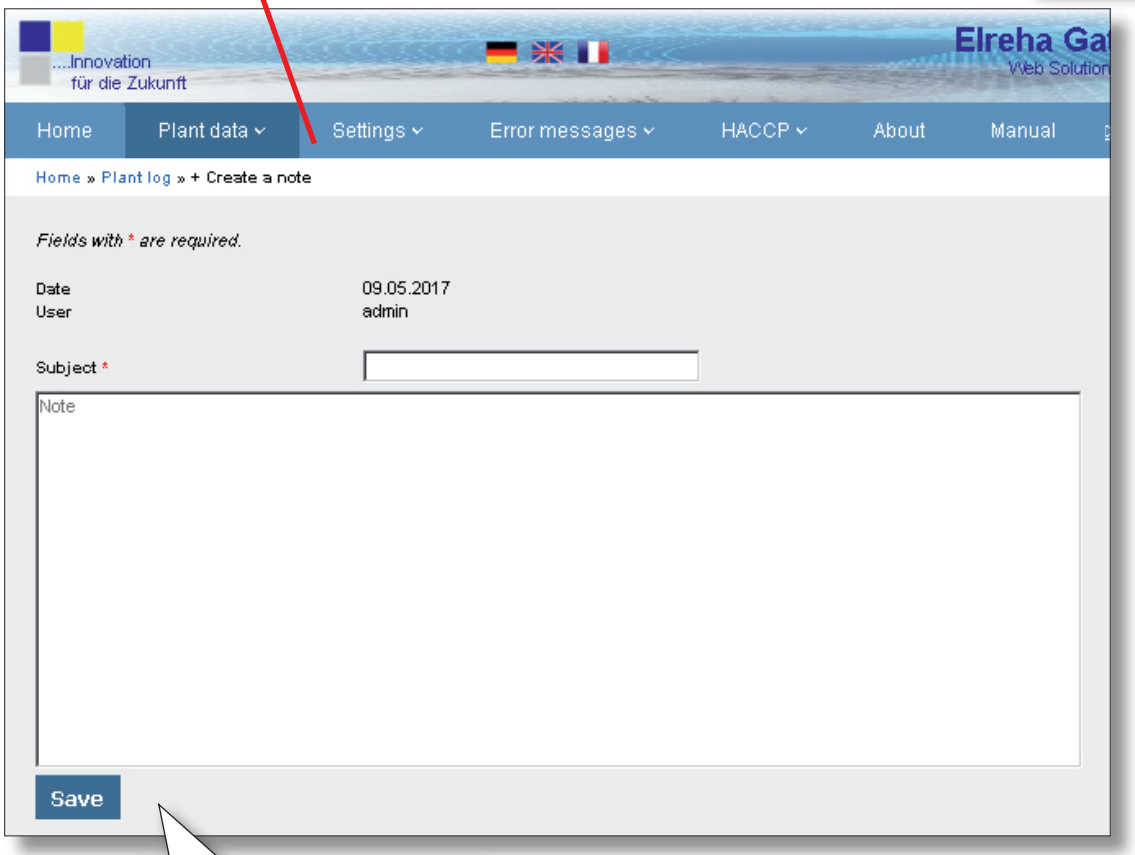
3. Technician Rights (right 4 possible)
- Alarm Forwarding, setting and changing
- Erasing of set Alarm
- Write/Edit Controller Parameters

4. Customer / read only
- Read Current Failures
- Read Historic Failures
- Read set Alarm Forwardings
- Read Plant Configuration
- Read Controller Parameters

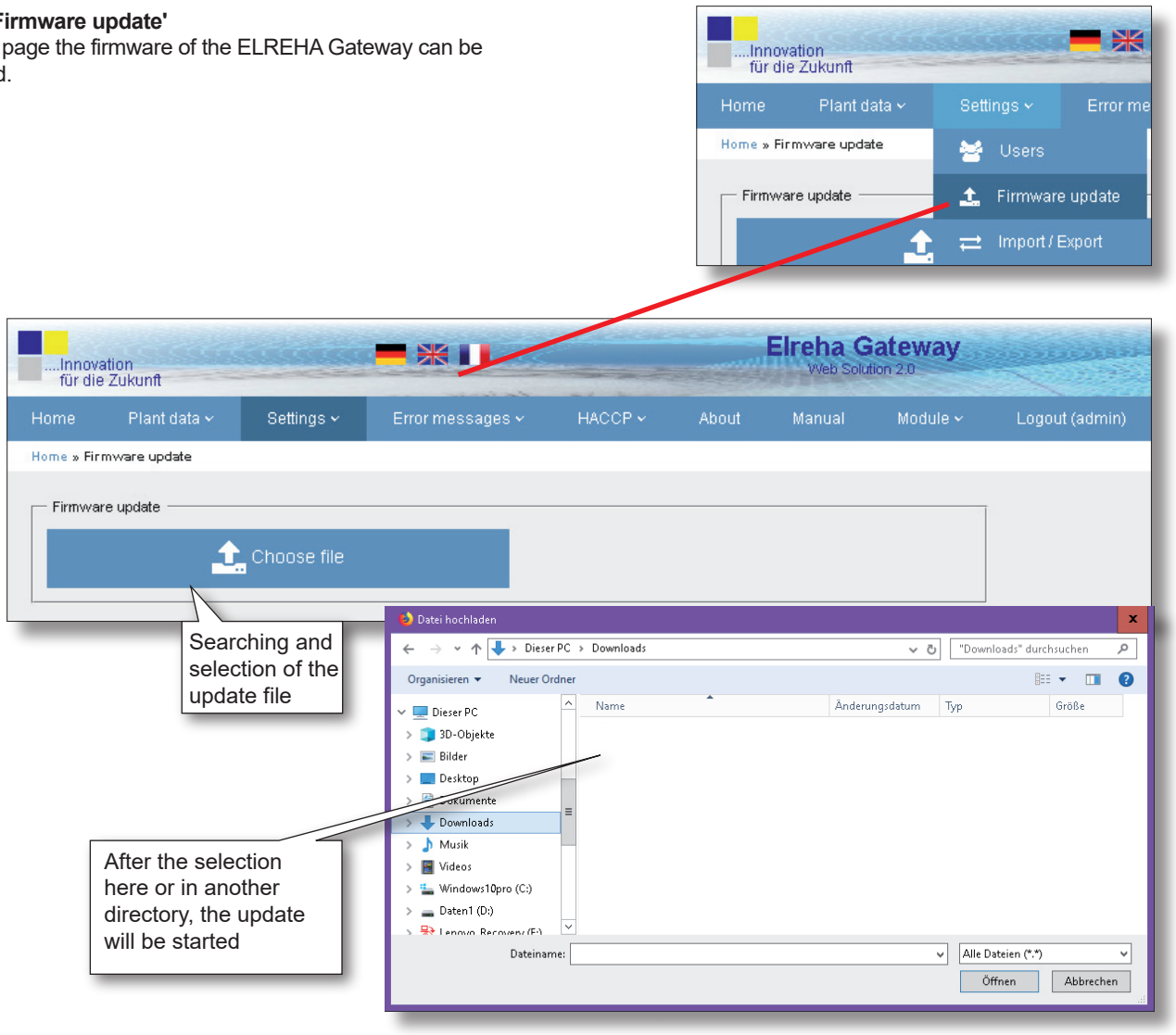
At least one access with administrator rights must be created. If this is not done and only the access right 2-4 are used, the ELREHA Gateway can not longer be fully administrated.

Page 'Plant Log'
Here each user is able to enter notes to keep track e.g. at which time changes has been done or problems have been encountered at specific times.



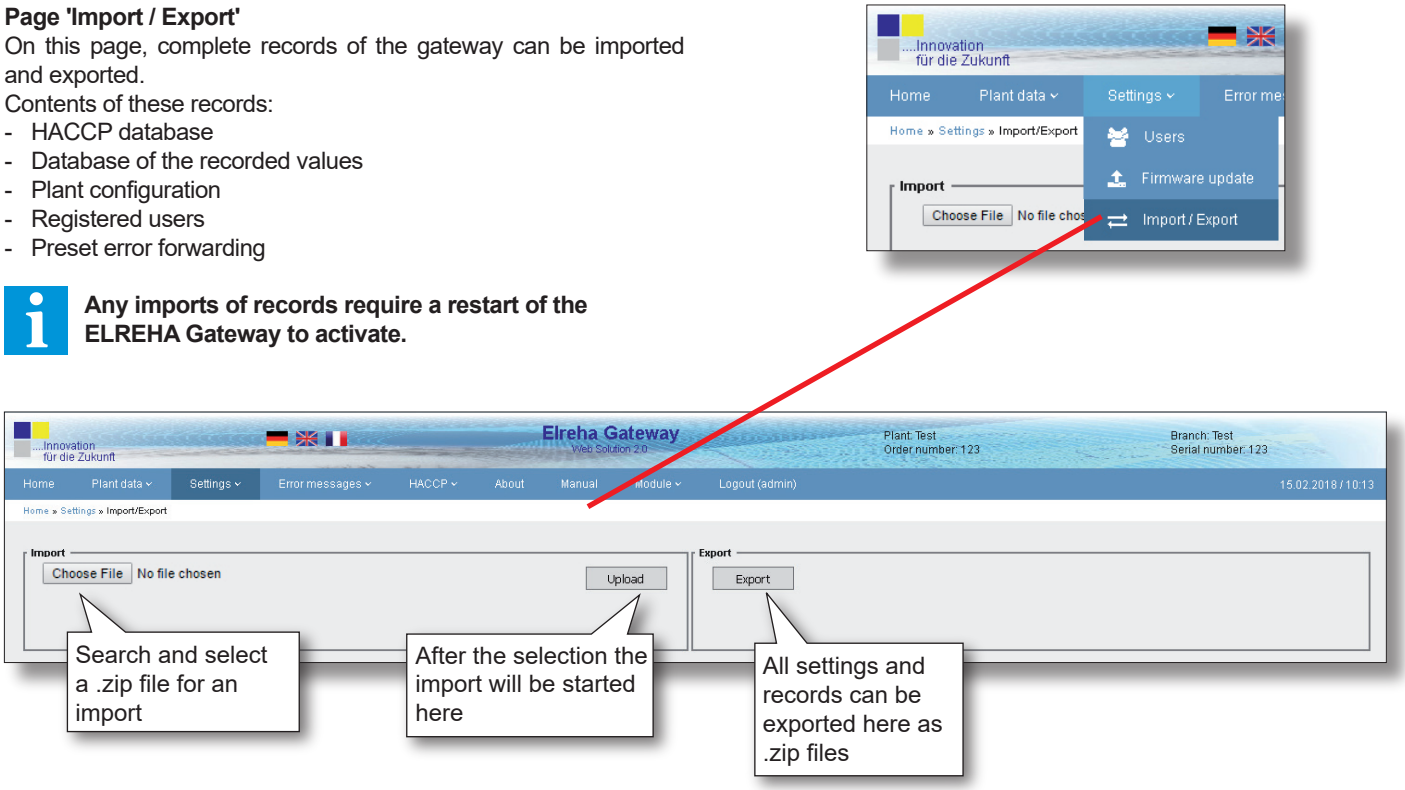


Page 'Firmware update'
On this page the firmware of the ELREHA Gateway can be updated.



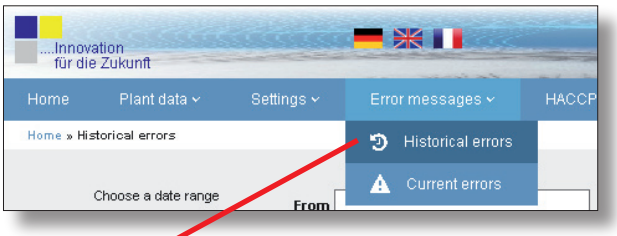
Page 'Import / Export'
On this page, complete records of the gateway can be imported and exported.
Contents of these records:
- HACCP database
- Database of the recorded values
- Plant configuration
- Registered users
- Preset error forwarding

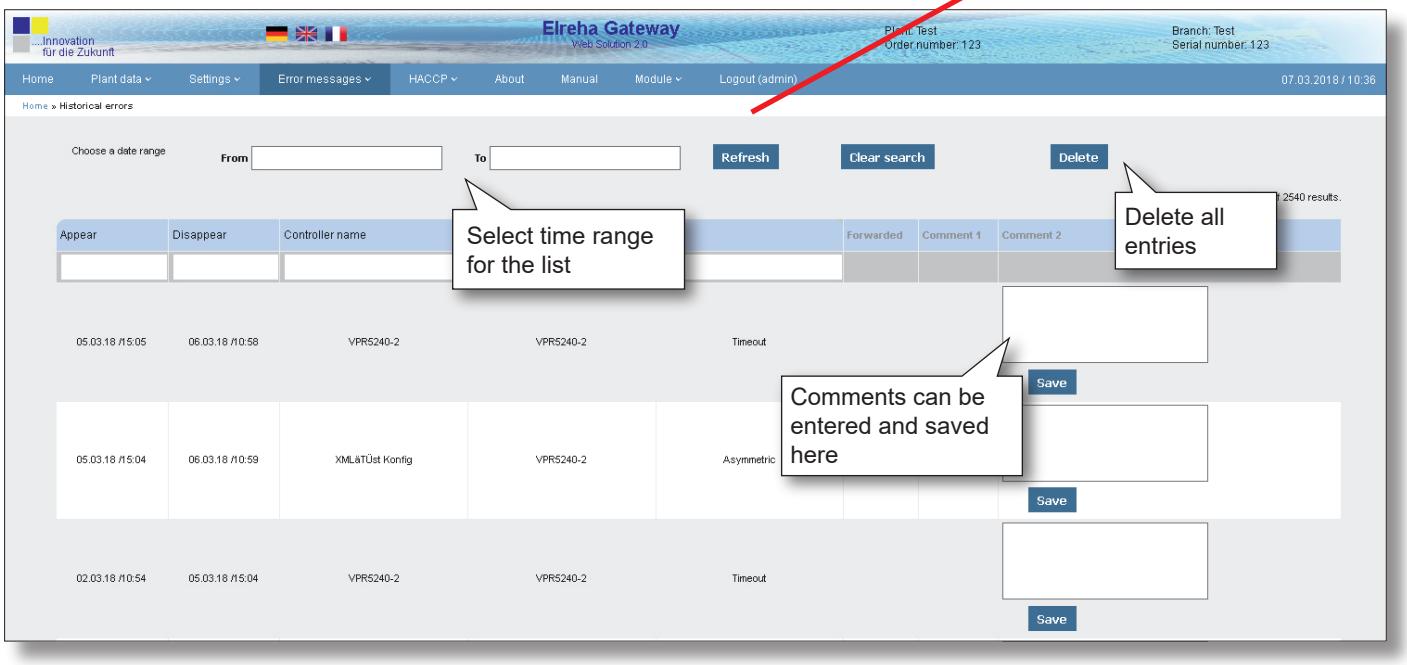
Any imports of records require a restart of the ELREHA Gateway to activate.



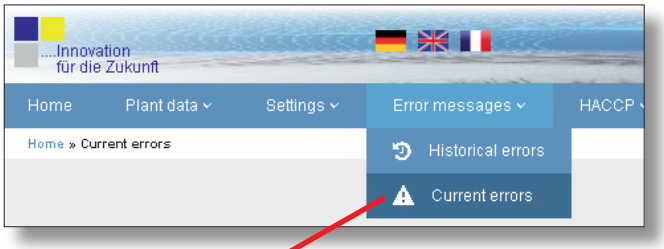
Page 'Historical errors'
This page offers an overview about all recorded alarm messages. These can be selected in a date range.

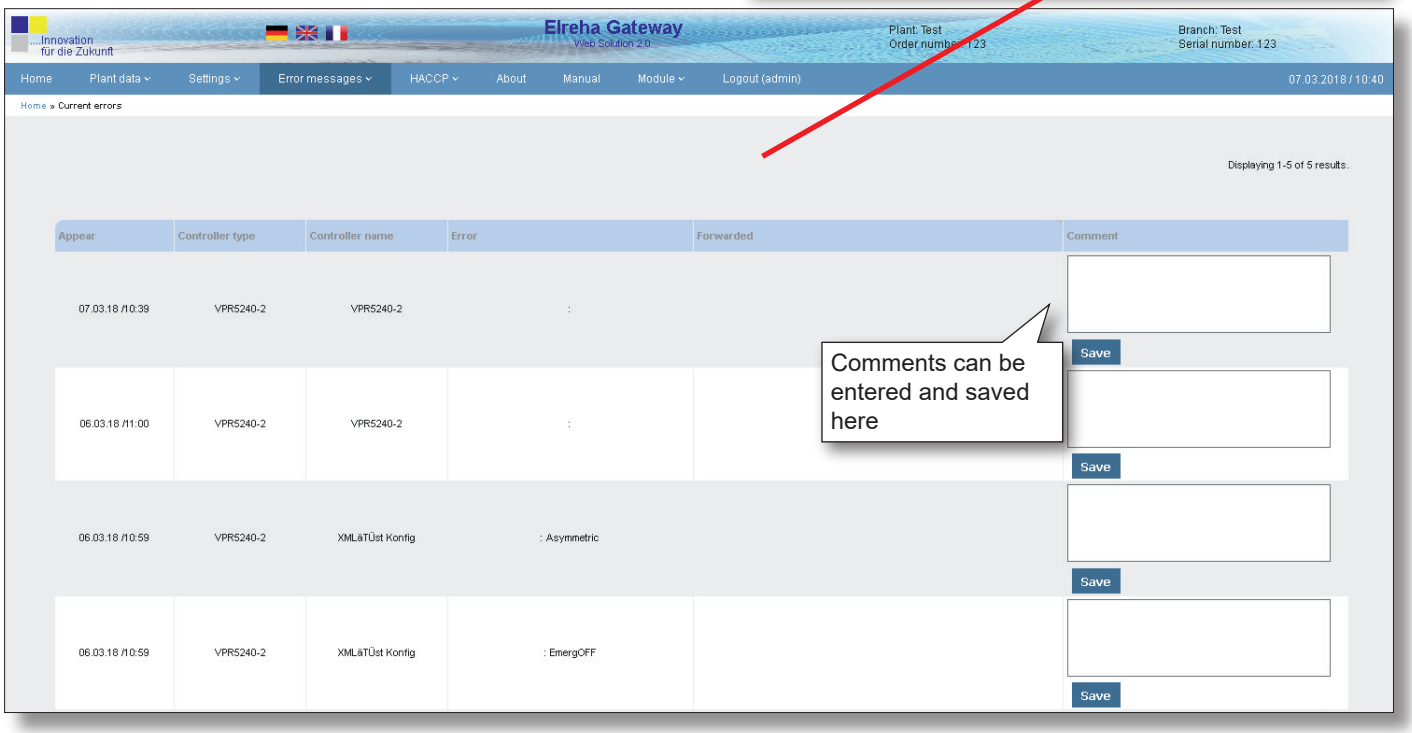
Current error messages are not displayed here!





Page 'Current errors'
This page provides an overview of all current errors.

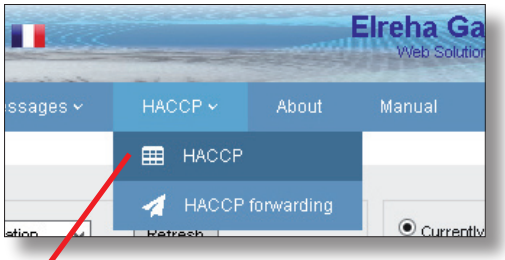




Page 'HACCP'

This page provides an overview of selected data points from various time periods. These can be printed at any time.

For printing HACCP data, the browser must allow pop up windows for the Gateway Website.

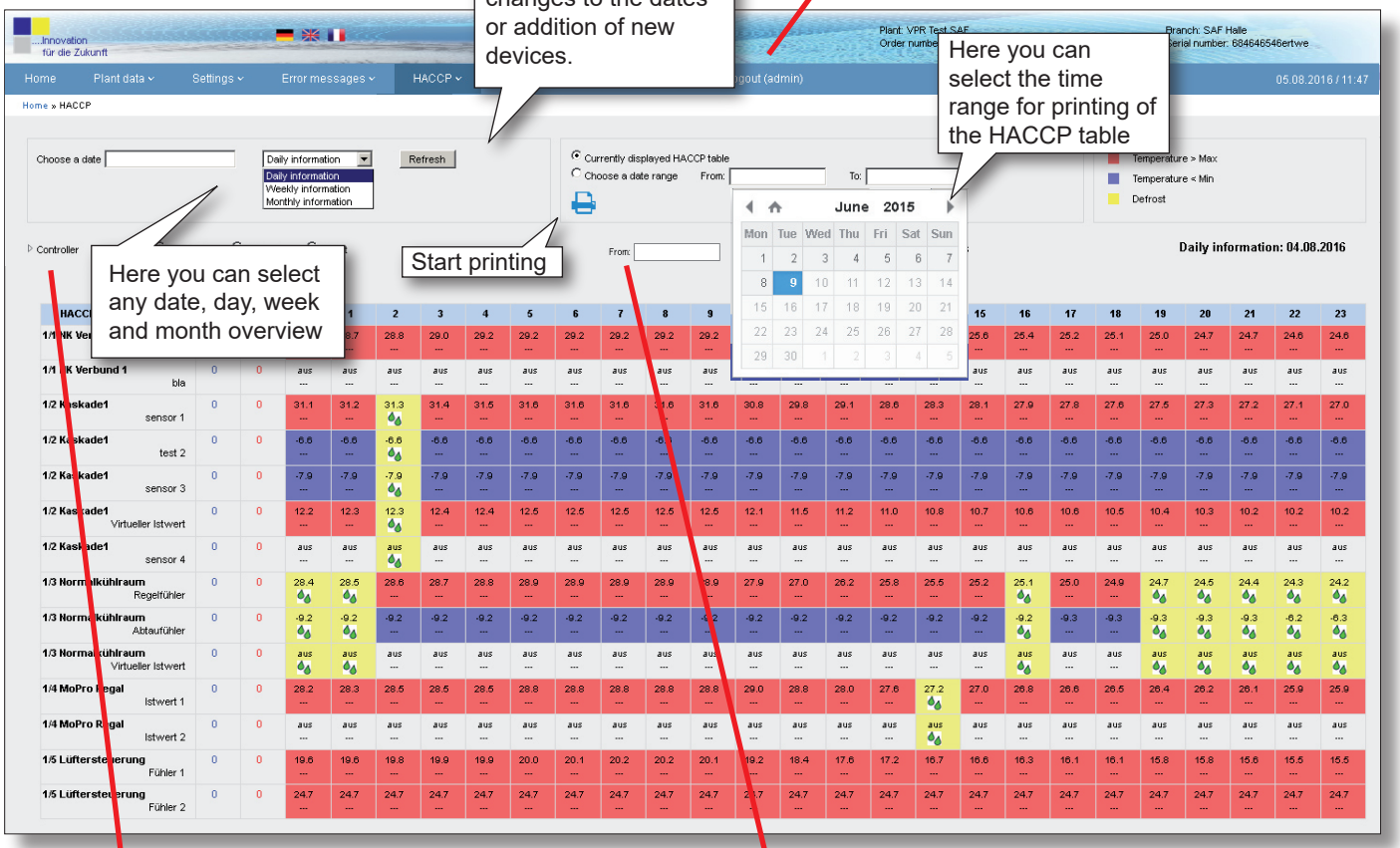


Select to update any changes to the dates or addition of new devices.

Here you can select the time range for printing of the HACCP table

Here you can select any date, day, week and month overview

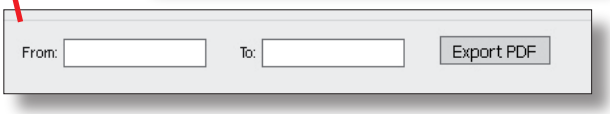
Start printing



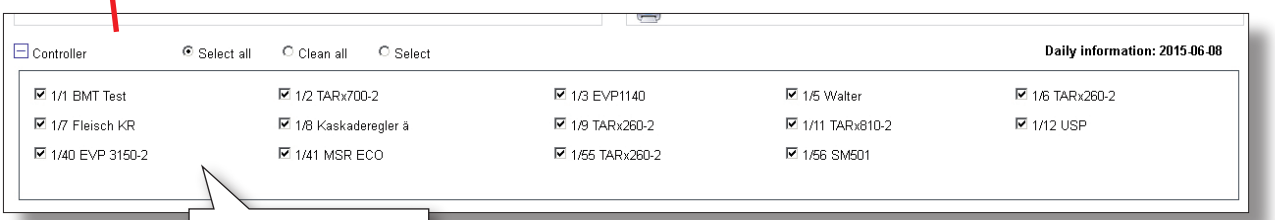
Symbols

- Break
- Short Circuit
- Failure
- No Connection
- Defrost

Colours:
- Temperature > max.
- Temperature < min.
- Defrost

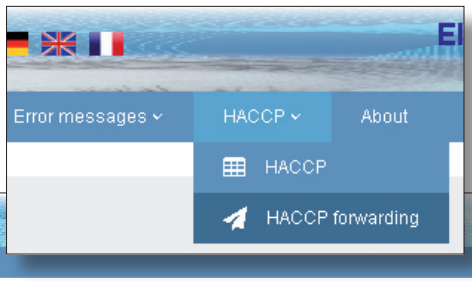


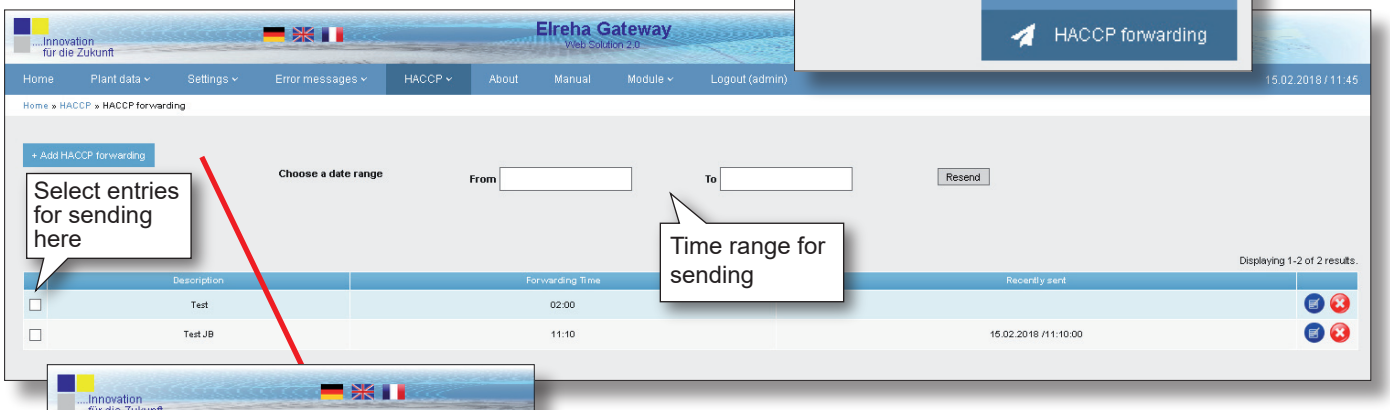
Pdf files can get exported to a USB flash drive, that is connected to the ELREHA Gateway

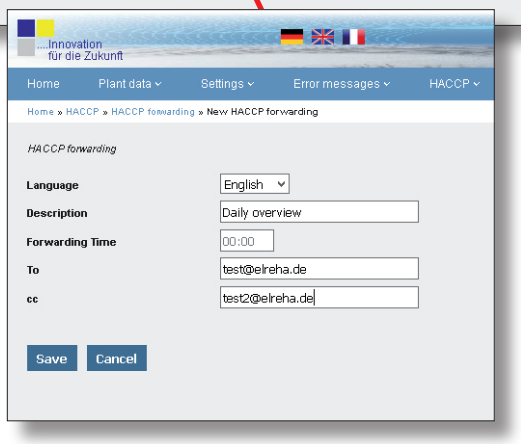


Select the device and HACCP data to be displayed.

Page 'HACCP forwarding'
From this page you can send HACCP information as email.
This information is included in an attached pdf file.







Language
German, Enlish, French

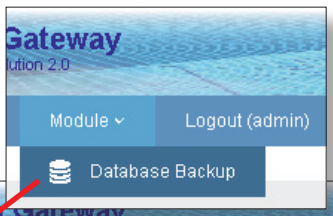
Description
As you like

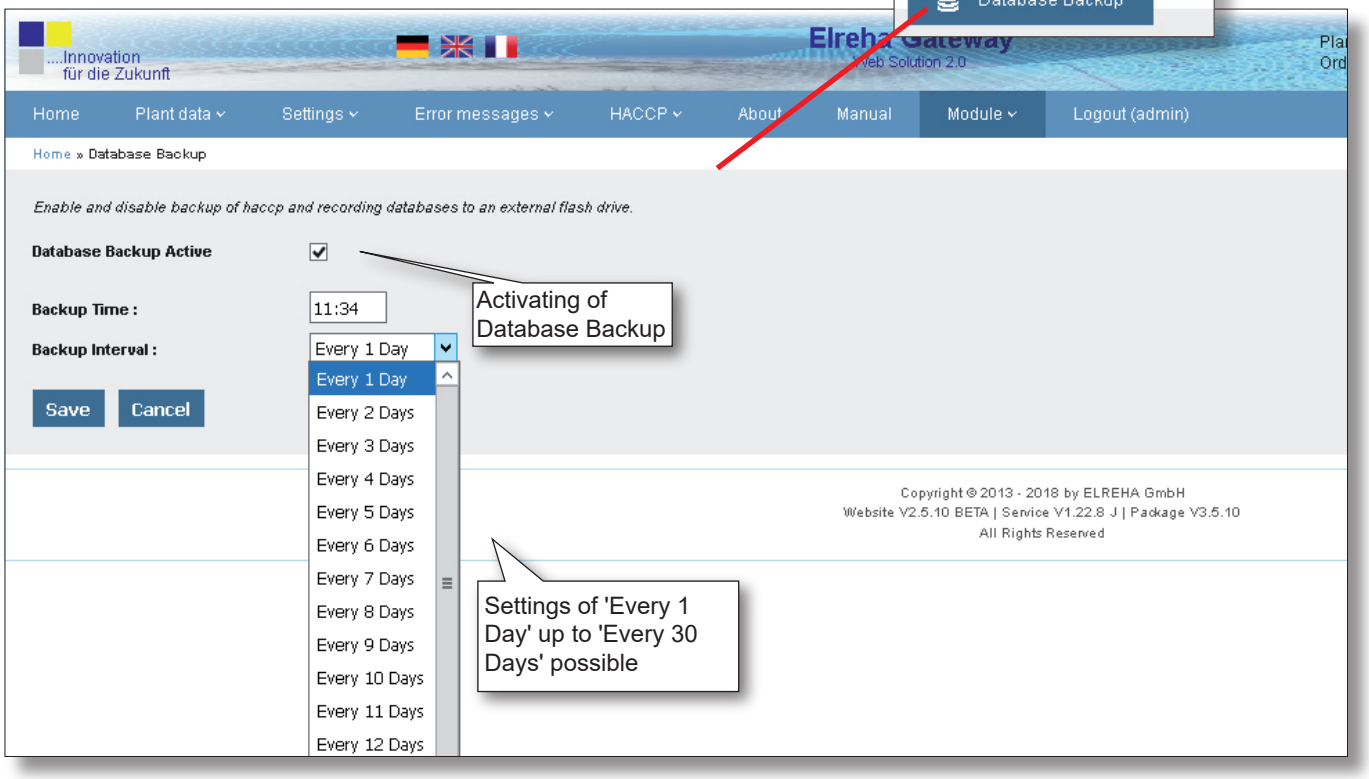
Forwarding Time
From 00:00 up to 23:59 o'clock

To
Recipient email address

cc
Carbon copy email address

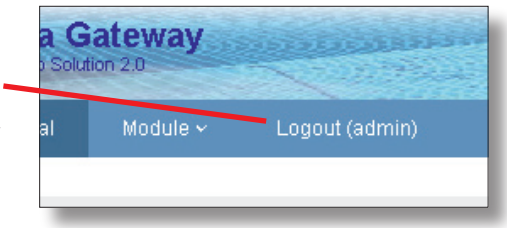
Page 'Database Backup'
Internal databases are automatically saved to a USB flash drive that is connected to the ELREHA Gateway at the given time.





Manual
Here you can open the manual for this product

Logout
Due to safety reasons, it is recommended to log out after every session.



CONNECTION INFORMATION & SAFETY INSTRUCTIONS

Notice

The guarantee will lapse in case of damage caused by failure to comply with these operating instructions! We shall not be liable for any consequent loss! We do not accept liability for personal injury or damage to property caused by inadequate handling or non-observance of the safety instructions! The guarantee will lapse in such cases.

This manual contains additional safety instructions in the functional description. Please note them!

Danger

If you notice any damage, the product may not be connected to mains voltage! Danger of Life!
A riskless operation is impossible if:
- The device has visible damages or doesn't work
- After a long-time storage under unfavourable conditions
- The device is strongly draggled or wet
- After inadequate shipping conditions

- Never use this product in equipment or systems that are intended to be used under such circumstances that may affect human life. For applications requiring extremely high reliability, please contact the manufacturer first.
- **Electrical installation and putting into service must be done from qualified personnel.**
- **During installation and wiring never work when the electricity is not cut-off ! Danger of electric shock!**
- **Never operate unit without housing. Danger of electric shock!**
- Please note the safety instructions and standards of your place of installation!

Caution

- Before installation: Check the limits of the ELREHA Gateway (see tech. data), e.g.:
  - Supply voltage
  - Environmental limits for temperature/humidity.
  Outside these limits malfunction or damages may occur.
- Mounting the controller close to power relays is unfavourable. Strong electro-magnetic interference, malfunction may occur!
- Take care that the wiring of interface lines meets the necessary requirements.

EC Declaration of Conformity

CE

*For the device **ELREHA Gateway** we state the following: When operated in accordance with the technical manual, the criteria have been met that are outlined in the EMC Directive **2014/30/EC** and the Low Voltage Directive **2014/35/EC**.*
This declaration is valid for those products covered by the technical manual which itself is part of the declaration.

Following standards were consulted for the conformity testing to meet the requirements of EMC and Low Voltage Guidelines:

EN 61010-1:2010, EN 55022:2010, EN 61000-3-2:2014, EN 61000-3-3:2013, EN 55024:2010+A1:2015,
EN 61000-4-2:2009, EN 61000-4-3:2006+A1:2007+A2:2010, EN 61000-4-4:2012, EN 61000-4-5:2014
EN 61000-4-6:2014, EN 61000-4-8:2010, EN 61000-4-11:2004, FCC Part 15, Subpart B:2013, ANSI C63.4:2009

CE marking of year: 2017

This statement is made for the manufacturer / importer

ELREHA Elektronische Regelungen GmbH
D-68766 Hockenheim
www.elreha.de
(*Name / Address*)

by:

Werner Roemer, *Technical Director*

Hockenheim.....**3.2.2017**.....
City *Date* *Signature*

set up: 14.3.18, tkd/jr	checked: 16.3.2018, ek/jb	approved: 20.3.2018, mv/sha	transl.(E):	upd:

Date of commissioning	
Server Number	
Contact Person IT / Phone Number	
Notes	

	Entry	**Example**
Network		
DHCP / static		
IP address Gateway internal		(e.g. 192.168.1.2)
Subnet mask		(e.g. 255.255.255.0)
DNS		(e.g. 192.168.1.1)
Default Gateway		(e.g. 192.168.1.1)
Time server		(e.g. de.pool.ntp.org)
IP address Gateway external		
Port 80 internal: Forwarding to external port		
Port 443 internal: Forwarding to external port		
Port 22 internal: Forwarding to external port		
Email		
Return Address		(e.g. störung_kaelte@ mustermann.de)
User Name		(e.g. störung_kaelte@ mustermann.de)
Password		(e.g. secret)
Outgoing Mail Server		(e.g. smtp.strato.de)
Port Outgoing Mail Server		(e.g. 465, 587,...)
Security Setting Mail Server		(e.g. no, SSL, STARTTLS)
Register Address 1		(e.g. service@kaelte.de)
Register Address 2		(e.g. service@kaelte.de)
User 1		
User name		
Password		
Authorization		(e.g. Customer, Service, Technician, Administrator)
Time up to automatic logout		

	Entry	Example
User 2		
User name		
Password		
Authorization		(e.g. Customer, Service, Technician, Administrator)
Time up to automatic logout		
User 3		
User name		
Password		
Authorization		(e.g. Customer, Service, Technician, Administrator)
Time up to automatic logout		
Line 1		
Interface		(e.g. COM 1)
Baudrate		(e.g. 9600 Baud)
Timeout		
Controller 1		
Type		(e.g. EVP 1130)
Address		(e.g. 5)
Controller 2		
Type		
Address		
Controller 3		
Type		
Address		
Controller 4		
Type		
Address		
Controller 5		
Type		
Address		
Controller 6		
Type		
Address		

	Entry	Example
Controller 7		
Type		(e.g. EVP 1130)
Address		(e.g. 5)
Controller 8		
Type		
Address		
Controller 9		
Type		
Address		
Controller 10		
Type		
Address		
Controller 11		
Type		
Address		
Controller 12		
Type		
Address		
Controller 13		
Type		
Address		
Controller 14		
Type		
Address		
Controller 15		
Type		
Address		
Controller 16		
Type		
Address		
Controller 17		
Type		
Address		

	Entry	Example
Controller 18		
Type		(e.g. EVP 1130)
Address		(e.g. 5)
Controller 19		
Type		
Address		
Controller 20		
Type		
Address		
Controller 21		
Type		
Address		
Controller 22		
Type		
Address		
Controller 23		
Type		
Address		
Controller 24		
Type		
Address		
Controller 25		
Type		
Address		
Controller 26		
Type		
Address		
Controller 27		
Type		
Address		
Controller 28		
Type		
Address		

	Entry	Example
Controller 29		
Type		(e.g. EVP 1130)
Address		(e.g. 5)
Controller 30		
Type		
Address		
Controller 31		
Type		
Address		
Controller 32		
Type		
Address		
Controller 33		
Type		
Address		
Controller 34		
Type		
Address		
Controller 35		
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Controller 36		
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Controller 37		
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Controller 38		
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Controller 39		
Type		
Address		