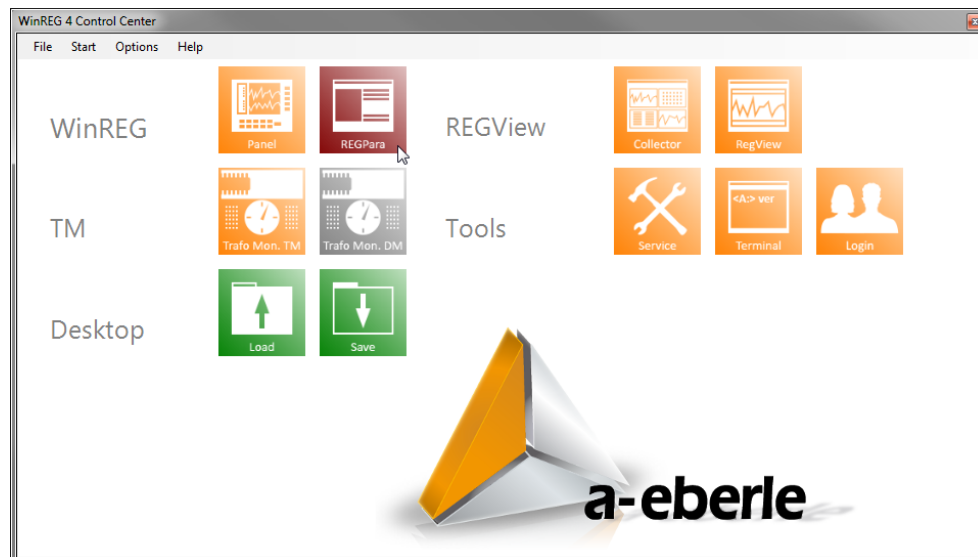


Configuration and Visualisation Software WinREG



ISSUE: 06/12/2021

IMPORTANT

READ CAREFULLY BEFORE USE

KEEP FOR FUTURE REFERENCE

Contents

1.	User guidance	3
1.1	Target group	3
1.2	Warnings.....	3
1.3	Tips.....	3
1.4	Other symbols	4
1.5	Applicable documentation.....	4
1.6	Keeping	4
1.7	Updated documentation.....	4
2.	Configuration and display software WinREG	5
2.1	General.....	5
2.2	Installation	5
2.3	Control Center.....	9
2.4	Communication with an A. Eberle device (e.g. REG-D™).....	11
2.4.1	Connection settings	11
2.4.2	Configuration	15
2.5	Panel.....	17
2.6	Terminal	20
2.7	Service.....	22
2.7.1	Control	22
2.7.2	Log.....	23
2.7.3	Statistics	25
2.7.4	Simulation	26
2.7.5	I/O extensions (COM3).....	27
2.7.6	Summertime Adjustment, UTC	28
2.7.7	REG-L.....	29
2.7.8	UDM	30
2.7.9	RAM-Backup.....	31
2.7.10	Features	32
2.7.11	User Management (COM).....	33
2.8	REGPara.....	35
2.9	REGView.....	41
2.10	Collector	46
2.11	WinTM/WinDM.....	49
3.	Index	50
4.	Contact	50

1. User guidance

This user manual contains a summary of the information needed for installation, commissioning and operation.

Read the user manual entirely and do not use the product unless you have understood its content.

1.1 Target group


The user manual is intended for skilled technicians and trained and certified operating personnel.

The contents of this user manual must be accessible to people tasked with the installation and operation of the software.

1.2 Warnings


Structure of the warnings


Warnings are structured as follows:


 SIGNAL WORD!	Nature and source of the danger.
	Consequences if instructions are not obeyed.
	➔ Actions to avoid the danger.

Types of warnings

Warnings are distinguished by the type of danger they are warning against:

 DANGER!	Warns of an immediately impending danger that can result in death or serious injuries when not avoided.
--	---

 WARNING!	Warns of a potentially dangerous situation that can result in death or serious injuries when not avoided.
---	---

 CAUTION!	Warns of a potentially dangerous situation that can result in fairly serious or light injuries when not avoided.
---	--

NOTICE!	Warns of a potentially dangerous situation that results in material or environmental damage when not avoided.
----------------	---

1.3 Tips



Tips on the appropriate use of the device or software and recommendations.

1.4 Other symbols

Instructions

Structure of the instructions:

- ➡ Instructions for an action.
 - ↪ Indication of an outcome, if necessary.

Lists

Structure of unnumbered lists:

- List level 1
 - List level 2

Structure of numbered lists:

- 1) List level 1
- 2) List level 1
 1. List level 2
 2. List level 2

1.5 Applicable documentation

For the safe and correct use of the installation, observe the additional documentation that is delivered with the system, as well as the relevant standards and laws.

1.6 Keeping

Store the user manual, including the supplied documentation, readily accessible near the system.

1.7 Updated documentation

The latest version of the document can be obtained from the A. Eberle headquarter. Please contact A. Eberle Support (+49(0)911/628108-101, regsys-support@a-eberle.de) or your local sales partner.

2. Configuration and display software WinREG

2.1 General

The WinREG software is used to configure and program the A. Eberle REG-D™ Relay for Voltage Control & Transformer Monitoring. WinREG has a modular structure and consists of several programs for control and configuration of the Relay for Voltage Control & Transformer Monitoring, as well as storage and display of data from it.

WinREG is designed so that a plurality of subprograms can access the connected devices (e.g. Panel and Service) at the same time. An exception is the Terminal. If this is in online mode, no access of another WinREG program is possible via this interface.

The SCADA system connections of the Relay for Voltage Control & Transformer Monitoring are performed using the SCADA system configuration software WinConfig. Instructions for WinConfig software use are not included in this manual.



WinREG version

The following chapters describe WinREG version 4.2 in detail.

2.2 Installation

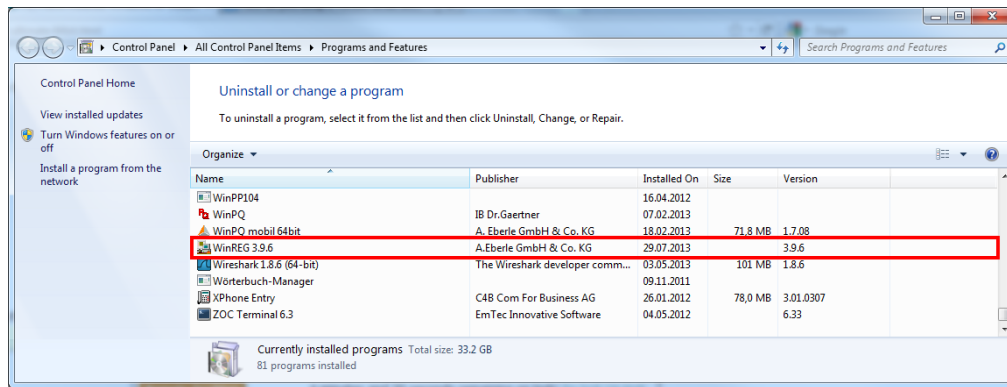
To run the WinREG software, the minimum hardware and software configuration is:

- A Personal Computer with a Pentium core
- 512 MB RAM
- 50 MB free disk space
- A serial interface or an USB with an USB serial adapter, or a network card for devices that are connected via TCP/IP
- Windows 7, Windows 8, Windows 10
- Windows Server as of 2003
- Microsoft DotNet Framework Version ≥ 3.5

During installation administrator rights are required

To install the software you start Windows. Do not insert the installation CD-ROM into the CD drive yet.

1. Run the "Software" program in the control panel folder ("Start/Settings/Control Panel").
2. An alphabetical list of all installed programs appears. Check first if WinREG is already listed.



WinREG under installed programs (Windows 7 example)

If that is the case, the older version should be uninstalled first. This applies even if an update is to be installed. The update process is described below.



No new installation in an existing WinREG directory

Absolutely avoid a new installation in an existing WinREG directory containing a previous version which should be retained. If, on the other hand, this is a new installation, or WinREG was uninstalled, please continue with point 6.

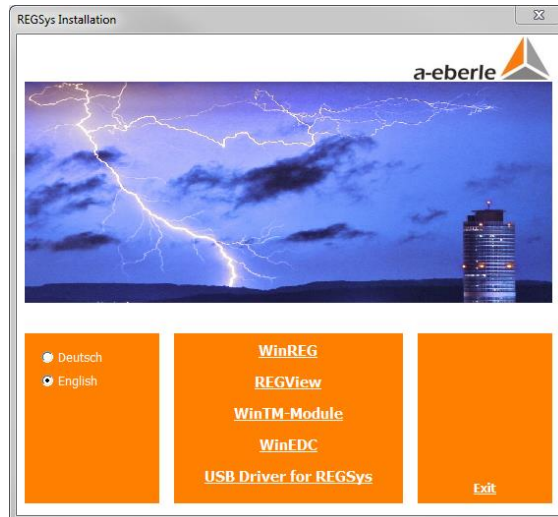
- Click on the line "WinREG" in the program list; it is highlighted. Now click on "Change or remove programs".
Some queries follow as to whether deletion is actually intended. Confirm these. However, with the request as to whether shared files should be deleted, select "Keep all" (or "Remove none") so as not to delete shared files.



Don't delete the CMMCONN.DAT file

In particular, the CMMCONN.DAT file should not be deleted because it contains your connection settings.

- The message that various WinREG program components could not be deleted can be ignored.
- Uninstallation ends with the message "Uninstallation successfully completed".
- Now insert the WinREG CD into the appropriate drive.
Normally, the installer will start automatically. If this automatic start is disabled on your computer, run the program Install.exe from the root directory of your CD drive.



REGSys™ installation program

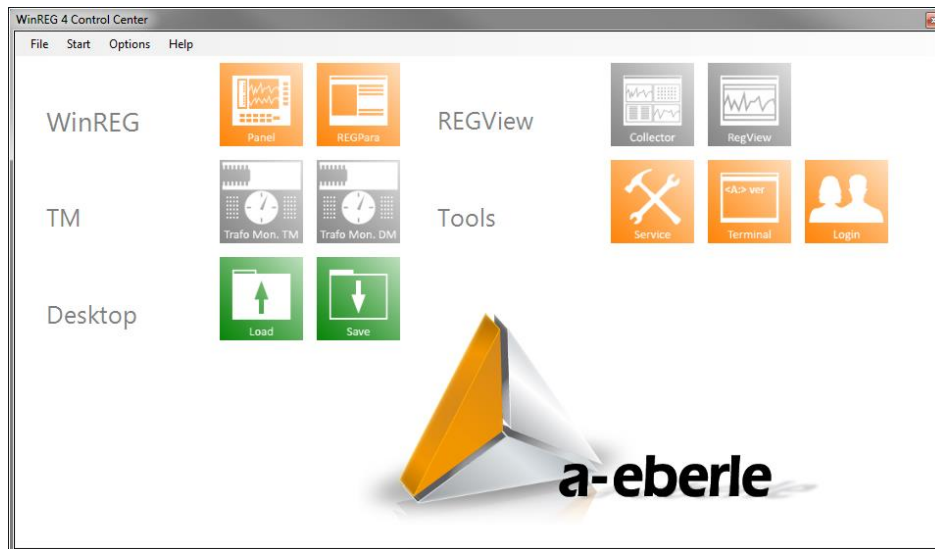
7. The Home screen appears. You can choose the installation language in the left column and install the programs you need by clicking on the text in the middle column.



Instruction:

If you received the WinREG installation via email or by other means (A. Eberle Homepage, USB pendrive), please run setup.exe directly. The other steps are identical to installing WinREG from the CD.

8. The program directory c:\programme\a-eberle\WinREG4 is proposed.
9. All further steps are described by appropriate instructions and queries.
10. When the installation is complete, you will find the WinREG Control Center under Start/programs.



WinREG Control Center (standard version)

The control center program contains the panel, REGSys™ configuration (REGPara), service, terminal, login, desktop load and desktop save.

The additional modules RegView and Collector (collector/recorder) are optional and included only if they have been ordered. The same applies to WinTM and WinDM.

The additional programs RegView, Collector, WinTM and WinDM must be installed separately. If you have installed the additional programs, the respective symbol appears in colour automatically after installing the program.



The panel does not start

If, after successful installation, the panel does not start and an error message appears instead, then please check the installation of Microsoft DotNet Framework 3.5 or 4 on your PC.

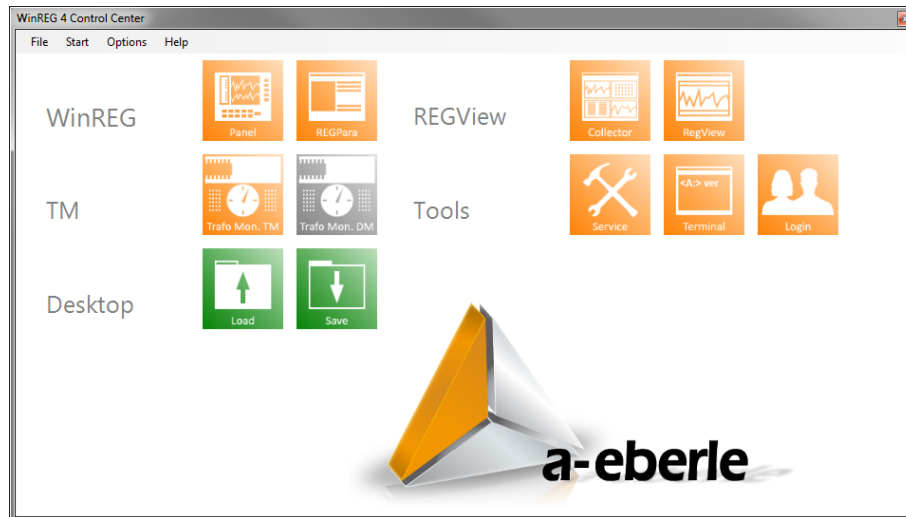


USB drivers for devices with the I1 feature

If your REGSys™ device has an interface to COM1 (feature I1) via USB, the desired driver can be installed via the menu item "USB driver for REGSys". If communication with the device takes place via a serial interface (RS232), USB/serial converter, or TCP/IP, installation of the USB driver is not necessary. The driver only works with A. Eberle devices which are equipped with a built-in USB interface. Please use the driver supplied by the manufacturer of the driver for an external USB/serial converter.

2.3 Control Center

The Control Center of the WinREG package unites all of its individual applications: panel, terminal, WinREG configuration, parameter setup (REGPara), connection editor and all add-ons.



WinREG Control Center (including optional Collector, REGVIEW and WinTM)

The Control Center allows:

- Starting each of the WinREG applications
- Saving a snapshot of all applications running on the desktop with position and current device (File\Save desktop)
- Restoring such a snapshot (File\Load desktop)
- Common termination of all currently running WinREG applications, (File\Exit: all)
- Termination of the HRServer (communication server of the WinREG)
- Integration of all WinREG applications and add-ons
- Access to each help file of the WinREG package
- Setting of important operating parameters (Options\Settings)
- Setting connections (Options\Connections)

All applications can also be started from the File menu.

Saving & Restoring the Desktop

WinREG has a function for storing the image of the current WinREG applications in a file at any time, and loading or restoring it again later. Both the positions of all WinREG applications and the current devices and their connections are saved.

To generate the image, select the menu item "File\Save desktop", or click on the Save icon in the Control Center and enter an arbitrary name in the subsequent "Save desktop" dialog.

To restore a once stored image, select "File\Load desktop" or click on the load icon in the Control Center and select the desired image from the list of desktop files. Then, all WinREG applications that were active at the time of storing are started and set to the old positions.

Loading can be terminated with the menu item "File\Cancel load desktop". This is especially useful when many applications are to be loaded on a modem connection that is not cumulative, as a click on Cancel will only abort the currently running selection process, not the entire loading process.

Please note that the repeated loading of a desktop file – without terminating the earlier applications again in advance – calls the WinREG applications and places them exactly one above the other.

Language setting

The language of WinREG can be set in the "Options\Language" menu or using the F9 key.

Backing up and restoring connections

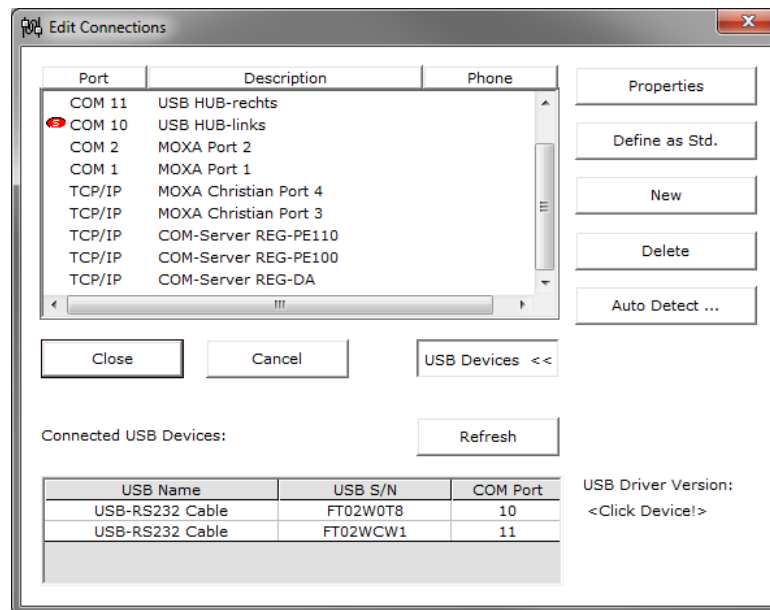
WinREG connections can be backed up to a file and restored from a file via the menu items "Options\Save connections" and "Options\Restore connections". Thereby, for example, all connections of an existing WinREG installation can be moved to a new installation on another PC.

2.4 Communication with an A. Eberle device (e.g. REG-D™)

2.4.1 Connection settings

WinREG's communication connections are set up and managed in the menu "Options\Connections".

The default connection is indicated with a white "S" placed in a red ellipse. This connection is opened as soon as a WinREG subprogram starts.



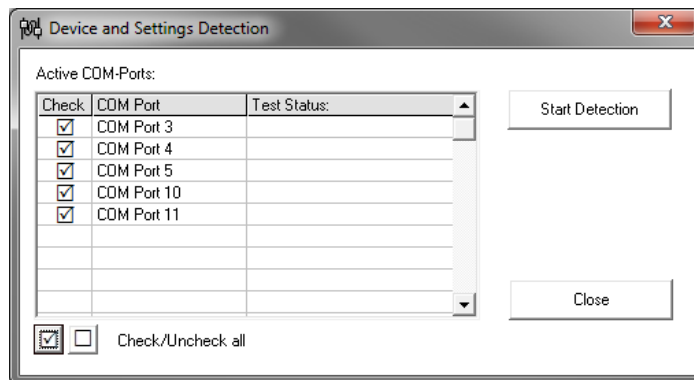
WinREG "Edit Connections"

A. Eberle devices which are equipped with a USB interface (feature I1), are automatically detected by WinREG. If a USB device is connected to the PC, the corresponding driver must be installed first. This driver is included on the WinREG CD. If the WinREG connection dialog opens, a connection is automatically created for each connected A. Eberle USB device. This is confirmed by a message. Subsequently, the desired device can now be selected in the connection list.

With USB devices, the assigned COM interface is displayed in the phone field. This information is useful when the A. Eberle USB device is to be used with a program that does not support automatic recognition. With the "USB device" button details such as driver version of the connected devices can be displayed.

Automatic searching for devices

This function offers the possibility to search for connected A. Eberle devices. The "Device and Settings Detection" wizard opens after pressing the automatic search button.



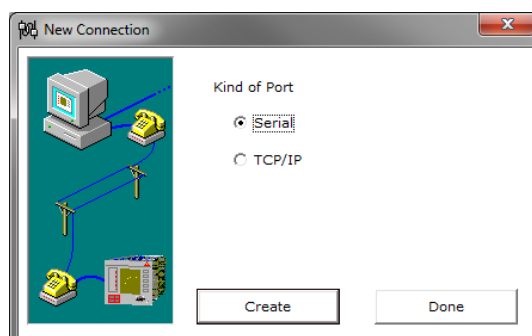
WinREG "Device and Settings Detection "

Here, among the existing COM interfaces, you can select which A. Eberle device should be searched for. After a device is found, a connection for the device can be set. The communication settings are automatically taken over from the device itself.

Manual setup of a COM connection (direct connection, modem, star coupler)

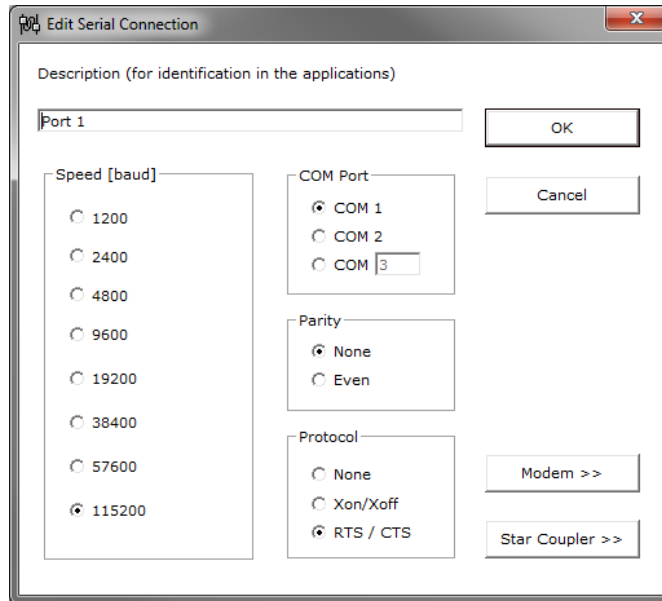
Start setting up the connection by pressing the "New" button in the "Edit Connections" dialog (Options\Connections).

Select the serial interface type and confirm your choice with Create.



Manual setup of a COM connection (1)

In the dialog that opens, set the communication parameters according to the values of the A. Eberle device. The figure shows the default values of the device.



Manual setup of a COM connection (2)

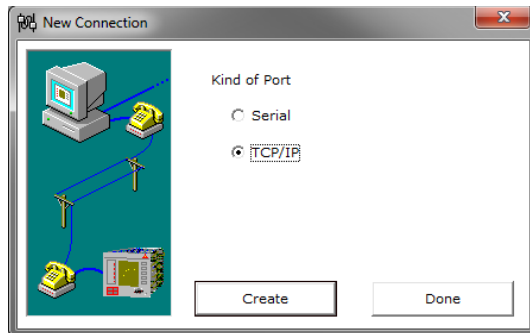
Parameter	Description
Description	Freely selectable text for naming the connection
Speed	Baudrate of the serial communication
Parity	Parity of the serial communication
Interface	COM interface (COM port) on the PC, the COM number can be obtained from the control panel (device manager)
Protocol	Handshake of the serial connection, generally, RTS/CTS is recommended, however, it must be ensured that the interface (particularly USB/serial converters) supports hardware handshake.
Dial the remote network via modem.	Establish a connection via a dial-up modem (e.g. analog modem); do not activate with a direct serial connection (null-modem cable).
Telephone number	Number of the remote site (such as a modem in the substation)
Modem initialization	String prefix for the number which is sent to the modem. By default, the selections ATDT (normal initialization) and ATX3DT0, (extension initialization) are possible. Generally, another string can also be used.
Star coupler Siemens 7XV5550 channel number	Here you can select whether the serial communication is to run via a Siemens 7VX5550 star coupler. The channel number parameter selects the channel on the star coupler to which the A. Eberle device is connected.

Confirm all your entries with OK.

If the newly created connection is to be opened for a WinREG program (e.g. Panel) you want to open, select it as the default connection.

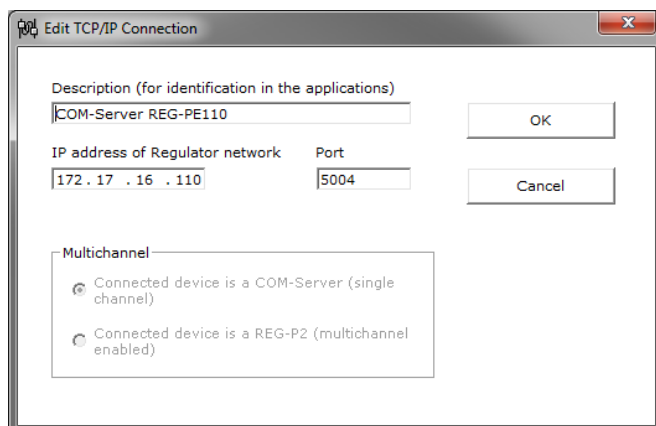
Establishment of a TCP/IP (COMServer) connection

Start setting up the connection by pressing the "New" button in the "Edit Connections" dialog (Options\Connections). Select the interface type TCP/IP and confirm your choice with Create.



Establishment of a TCP/IP (COMServer) connection (1)

In the dialog that opens, set the communication parameters.



Establishment of a TCP/IP (COMServer) connection (2)

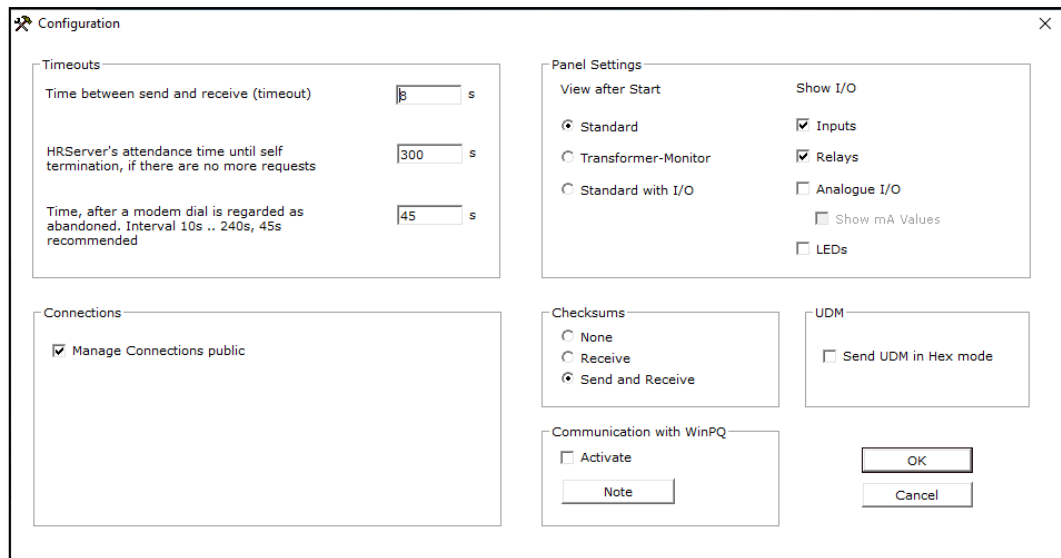
Parameter	Description
Description	Freely selectable text for naming the connection
IP address of the regulator network	IP address of the COM server, which is connected or integrated to the A.Eberle device (REG-P(ED), REG-COM)
Port	TCP/IP port of the COM server on which the communication takes place (often used at A.Eberle: 1023, 5001, 8000)

Confirm your entries with OK.

If the newly created connection is to be opened for a WinREG program (e.g. Panel) you want to open, select it as the default connection.

2.4.2 Configuration

Other parameters regarding the communication and general settings are located in the menu "Options\WinREG Configuration".



The image shows the 'Configuration' dialog box for WinREG. It contains several sections: 'Timeouts' with three input fields for 'Time between send and receive (timeout)' (set to 10s), 'HRSERVER's attendance time until self termination, if there are no more requests' (set to 300s), and 'Time, after a modem dial is regarded as abandoned. Interval 10s .. 240s, 45s recommended' (set to 45s). 'Panel Settings' includes 'View after Start' with radio buttons for 'Standard', 'Transformer-Monitor', and 'Standard with I/O', and 'Show I/O' with checkboxes for 'Inputs', 'Relays', 'Analogue I/O', 'Show mA Values', and 'LEDs'. 'Connections' has a checked checkbox for 'Manage Connections public'. 'Checksums' has radio buttons for 'None', 'Receive', and 'Send and Receive'. 'UDM' has a checkbox for 'Send UDM in Hex mode'. 'Communication with WinPQ' has an unchecked checkbox for 'Activate' and a 'Note' button. 'OK' and 'Cancel' buttons are at the bottom right.

WinREG „configuration“

Parameter	Description
Time between sending and receiving (timeout)	Monitoring time for communication. If an inquiry by the WinREG receives no response from the device within the set time, the inquiry is terminated.
HRSERVER waiting time until self-termination...	The HR server is the communication server of WinREG. It runs in the background and coordinates requests from the various subprograms of WinREG to the devices. This time determines how long the HRSERVER remains active if all WinREG programs are closed. This is helpful, for example, when working with a modem connection and the server does not have to establish the connection again after each program termination and start of another program. With a correspondingly long selected follow-up time, the connection remains open on changing.
Time after which modem dialling is considered failed.	Monitoring time for connection establishment via modem. After the interval further dial attempts are not made.
Checksum procedure	Setting of the checksum procedure for communication between the A. Eberle device and the PC.
Communication with WinPQ	WinREG is able to communicate through the server of the WinPQ software. This allows parallel operation of WinPQ and WinREG via a serial connection. To this end, the WinPQ server must be set to continuous operation and a registry entry set (function in the PQ-Manager). Caution:

Parameter	Description
	<p>If the communication with WinPQ is active, WinREG will try to reach all connections found in WinPQ and WinREG via the PQServer (e.g. COM1, COM3, TCP/IP 192.168.55.199). If the PQServer is not active, WinREG cannot connect.</p> <p>If the communication is selected via the WinPQ, no UDM files can be sent!</p>
Panel Settings	Here you can select the view of the panel to be displayed when the panel is started.
Manage connections public	<p>Enables Global Connection Management. All users who have set this checkbox access a central connection list in the folder ... \ProgramData\withWinREG. Users who have not activated central administration continue to work with their own connection list.</p> <p>There is no automatic transfer of connections between the separate connection lists and the central list. If you already have a user who has all or most of the relevant connections, please secure these connections with "Save Connections" function. Then, change the connection management into central and restore connections using the Restore Connections feature. From this point in time, any user with central connection management can access to all of these connections. It also allows any user to add new connections, which are then available to all other users.</p>
Send UDM in Hex mode	UDM files are loaded in the service and REGPara in hex mode. This method have to be used when sending in normal mode is unsuccessful due to the character set used on the PC (e.g. Chinese locale). The transmission process takes significantly longer in HEX mode.

2.5 Panel

With the Panel you can bring your devices directly to the desktop. It displays an accurate replica of each device and its operating options. The current device with identifier and name, as well as the connection used are listed in the title bar.

The Panel can be operated both using the mouse and the keyboard.

Operation with the mouse

The controls correspond to the buttons on the related device. A (single) click with the left mouse button on a control is equivalent to pressing the relevant button on the unit. Double clicks are unnecessary.

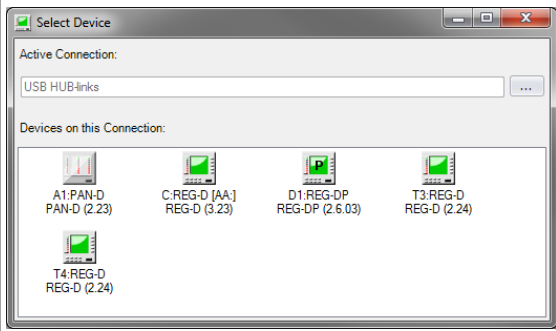
Home screen (view after start) of the panel

The home screen can be selected in the WinREG configuration (see page 15).

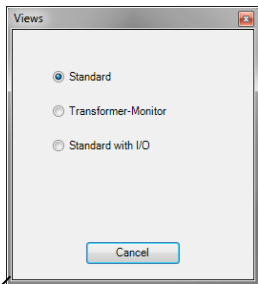
Standard view (all supported devices)

Here, only the current front panel of the main unit (e.g., REG-D™) is shown. The status of the inputs and outputs is not visualized.

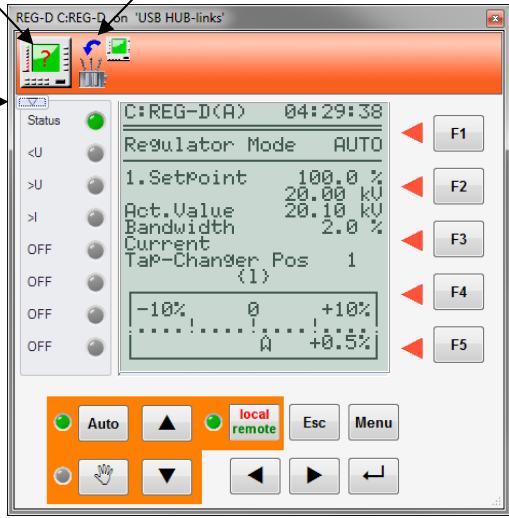
Device selection, alternatively, you can click in the display to change device.



Selection of view.
Here, depending on the device and the software features various views can be switched to.



Button to fold the menu bar out and in.



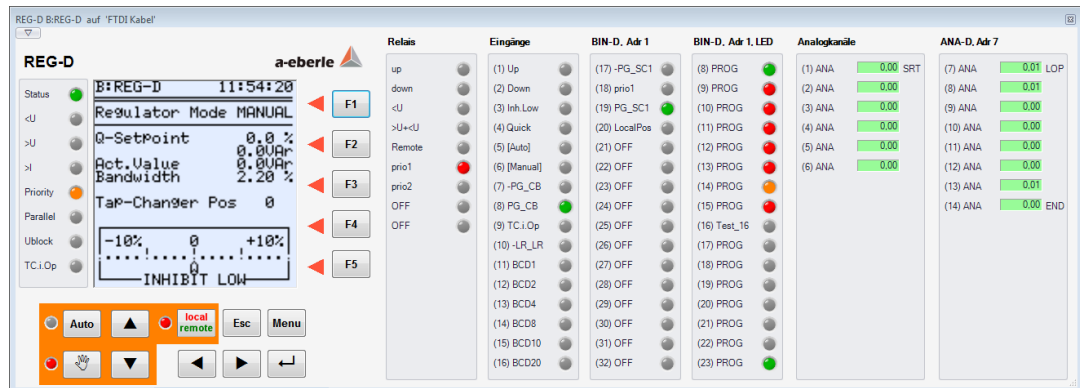
Operation with the keyboard

When operating with the keyboard, the following keys are processed (upper or lower case letters are not distinguished):

PC key	Function of the device
1	F1 key
2	F2 key
3	F3 key
4	F4 key
5	F5 key
a	Automatic key
h	Manual key
r	Local/remote key
m	Menu key
<	Left arrow key
>	Right arrow key
+	Up arrow key
-	Down arrow key
#	Enter key
!	ESC key
k	Display list of available devices by name
K	Display list of available devices without name

Standard view with I/O (only REG-D™, REG-DA and PAN-D)

Here the main device (e.g. REG-D™) is displayed with the connected COM3 expansion modules BIN-D with binary inputs, relays and LED and as well ANA-D analogue channels. If no COM3 modules are present, only the main device with internal inputs, relays, LEDs and analogue channels are shown.



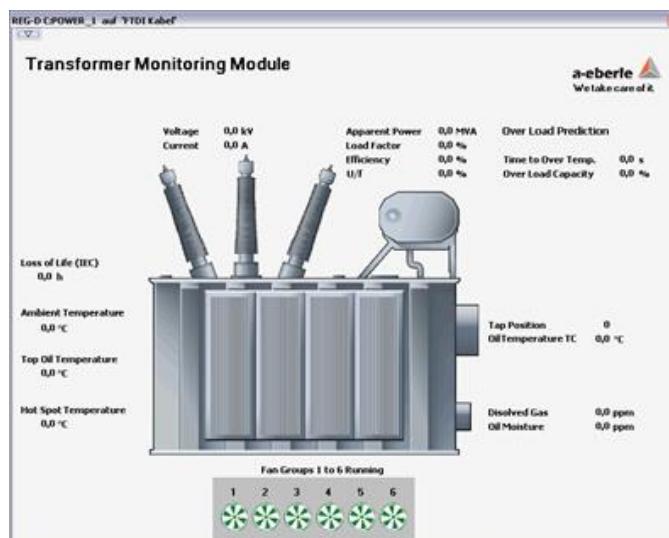
Standard panel view with inputs and outputs

The designation of the “LEDs” is taken from the relay or binary input assignment. For this purpose, the channels of the BIN-Ds must be assigned to the inputs and outputs of the REG-D™ (COM3 mapping).

The relay is displayed with red LEDs, binary inputs are displayed with green LEDs. The color of the LEDs from a BIN-D with free programmable LEDs is adopted from programming. That means the LED lights up in the panel with the same color as on the BIN-D. Exceptions are special conditions such as flashing LED. In this case, the LED in the panel is shown in red.

Transformer-Monitoring – View (only REG-D™ and REG-DA)

In the TM view important parameters are displayed for transformer monitoring. This view can only be selected when the REG-D(A)™ has the TM1/T1 feature.

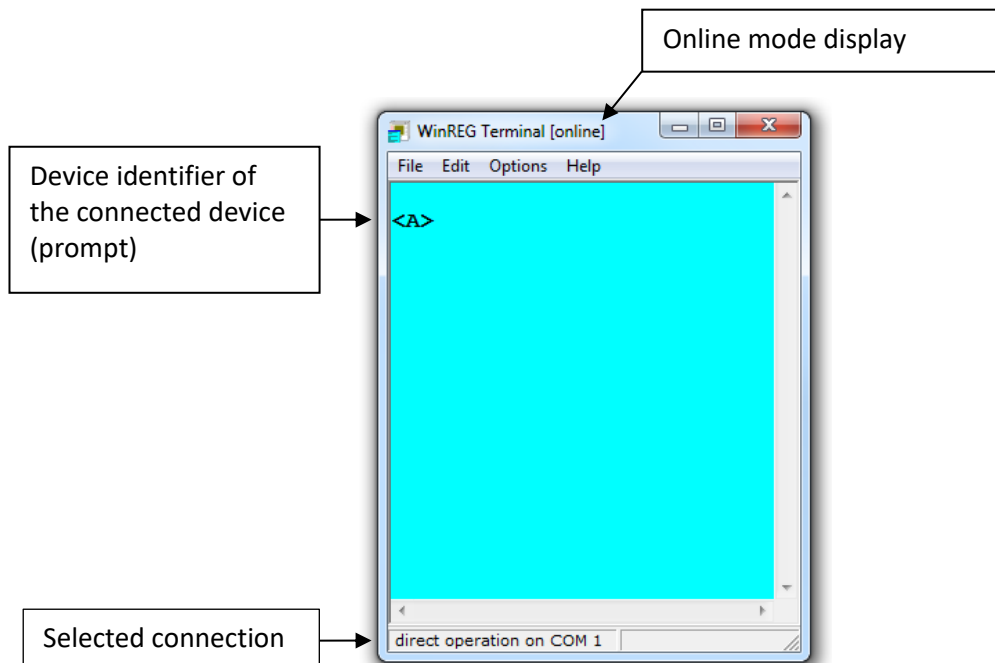


Panel TM view

2.6 Terminal

The Terminal opens up the possibilities of direct communication with the system using the programming language REG-L, via which all parameters and functions of the device can be adjusted.

After starting the terminal, the device identifier of the connected device (prompt) appears after pressing the enter key, provided that a connection is correctly established with the device. The connection through which communication is established with the device is visible in the lower left corner and can be changed any time via "File\Connection".



Using "File/Recording" it is possible to record entered commands and responses of the device in a text file. In particular, the recording function is useful for recording the REG-L instruction reference. Under "File/Recording" first enable recording of the terminal and select a text file in which the recording will be saved. Then enter the instruction "? book" in the terminal and press Enter. This will read the entire REG-L instruction reference from the device. This process can take up to 15 minutes to complete. Once the instruction reference has been read out, the recording should be stopped again under "File\Recording".

Moreover, in the Terminal under Options the following settings can be made:

Menu item	Description
Colours	The background and font colours (foreground) of the terminal can be changed.
Fonts	Adjusting the font of the terminal.
Translation	If an OEM font is used, it has to be translated to Windows ANSI to be properly displayed. In this case "Translate" must be activated.
Online mode	In online mode, the interface is completely occupied by the terminal and output on the connection occurs continuously without delay.
ECLADR mode	The ECL address mode can be used to specifically address multiple COM1 interfaces converted to RS485 and mutually connected.
Reset	With Reset, the ongoing dialog can be reset or aborted. For example, readout of the REG-L instruction reference can be terminated.
Settings	Timeout, the time the terminal waits for a response to a sent command, can be configured under settings.



Terminal help menu item

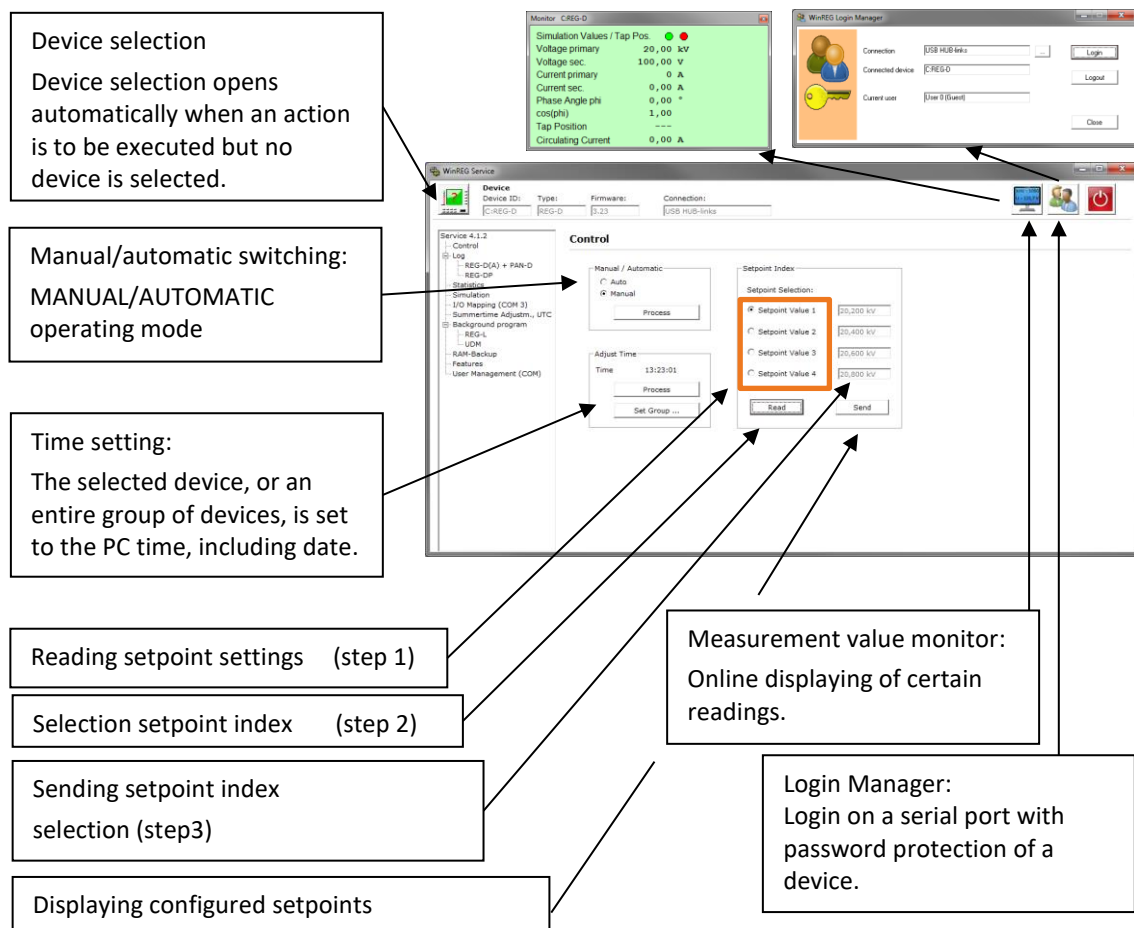
Further information about the terminal is also available in the help menu item of the terminal.

2.7 Service

Service makes it possible to read and archive logbook and tap statistics of the connected devices. Moreover, settings can be made for daylight savings time, allocation of add-on modules, remote control of simulation mode, sending and readout of background programs, as well as RAM-Backup. In addition it's possible to manage the software features and the password protection of the COM interfaces.

2.7.1 Control

In the upper left pane of the Service program device selection is located. Furthermore in the upper right pane the monitor for measured value and login manager for a connection to a serial port with password protection can be started. A way for switching between AUTO/manual state, setting up the time and set points is possible in the main screen of the menu "Control".



2.7.2 Log

The logbook of the REG-D(A)TM and PAN-D can be read, archived and deleted via the tab "Log\REG-D(A)+PAN-D".

WinREG Service

Device ID: C:\REG-D Type: REG-D Firmware: 3.23 Connection: USB HUB-links

Service 4.1.2

- Control
 - Log
 - REG-D(A) + PAN-D
 - REG-DP
 - Statistics
 - Simulation
 - I/O Mapping (COM 3)
 - Summertime Adjustm., UTC
 - Background program
 - REG-L
 - UDM
 - RAM-Backup
 - Features
 - User Management (COM)

Log / REG-D(A) + PAN-D

Date	Time	Event
2017-08-21,	13:45:18,066	LOG cleared

Read Open File ... Archive -> Clipb. Print Delete

Display screen for logbook

Deleting content of the logbook on the device

Printing contents of the logbook

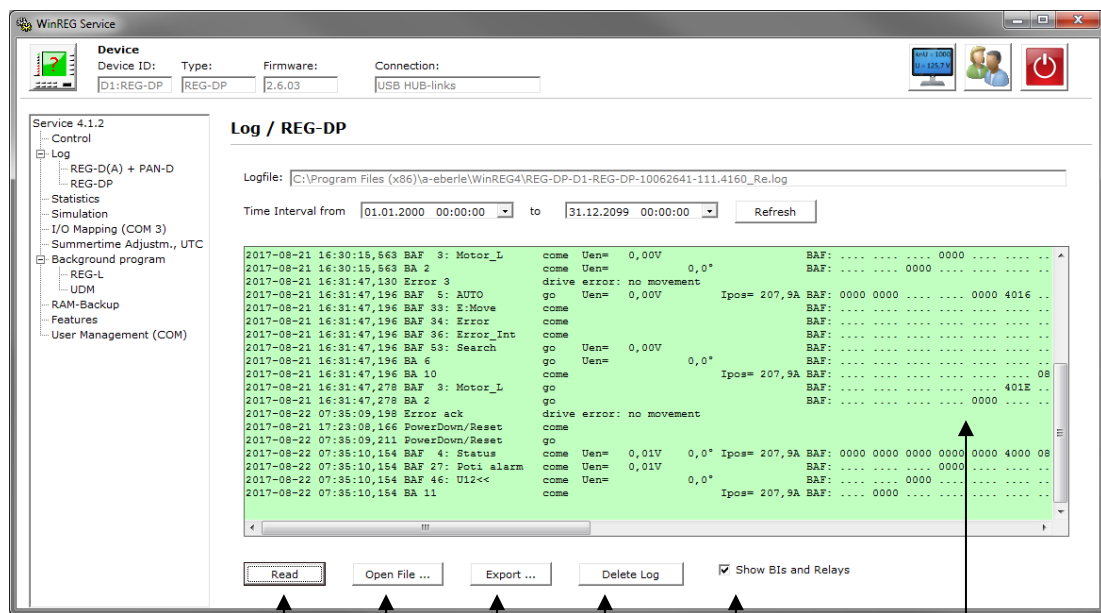
Copying contents of the logbook to the clipboard

Saving contents of the logbook to a file (*.log)

Opening/viewing a logbook file on the PC

Reading of the logbook from the selected device (step 1)

Furthermore the logbook of the REG-DP(A) is available via the menu “Log\REG-DP”.



WinREG Service

Device: D1:REG-DP Type: REG-DP Firmware: 2.6.03 Connection: USB HUB-links

Service 4.1.2

- Control
 - REG-D(A) + PAN-D
 - REG-DP
- Statistics
- Simulation
- I/O Mapping (COM 3)
- Sunmeritime Adjustm., UTC
- Background program
 - REG-L
 - UDM
 - RAM-Backup
 - Features
 - User Management (COM)

Log / REG-DP

Logfile: C:\Program Files (x86)\a-eberle\WinREG4\REG-DP-D1-REG-DP-10062641-111.4160_Re.log

Time Interval from 01.01.2000 00:00:00 to 31.12.2099 00:00:00 Refresh

2017-08-21 16:30:15,563	BAF 3: Motor_L	come	Uen= 0,00V	BAF: 0000 0000 0000 0000
2017-08-21 16:30:15,563	BA 2	come	Uen= 0,0°	BAF: 0000 0000 0000 0000
2017-08-21 16:31:47,130	Error 3	drive error: no movement		
2017-08-21 16:31:47,196	BAF 5: AUTO	go	Uen= 0,00V	Ipos= 207,9A BAF: 0000 0000 0000 4016
2017-08-21 16:31:47,196	BAF 33: E.Move	come		BAF: 0000 0000 0000 0000
2017-08-21 16:31:47,196	BAF 34: Error	come		BAF: 0000 0000 0000 0000
2017-08-21 16:31:47,196	BAF 53: Error_Int	come		BAF: 0000 0000 0000 0000
2017-08-21 16:31:47,196	BA 6	go	Uen= 0,0°	BAF: 0000 0000 0000 0000
2017-08-21 16:31:47,196	BA 10	come		Ipos= 207,9A BAF: 0000 0000 0000 0000
2017-08-21 16:31:47,278	BAF 3: Motor_L	go		BAF: 0000 0000 0000 0000
2017-08-21 16:31:47,278	BA 2	go		BAF: 0000 0000 0000 0000
2017-08-22 07:35:09,198	Error ack	drive error: no movement		
2017-08-21 17:23:08,166	PowerDown/Reset	come		
2017-08-22 07:35:09,211	PowerDown/Reset	go		
2017-08-22 07:35:10,154	BAF 4: Status	come	Uen= 0,01V	Ipos= 207,9A BAF: 0000 0000 0000 0000
2017-08-22 07:35:10,154	BAF 27: Poti alarm	come	Uen= 0,01V	BAF: 0000 0000 0000 0000
2017-08-22 07:35:10,154	BAF 46: U12<<	come	Uen= 0,0°	BAF: 0000 0000 0000 0000
2017-08-22 07:35:10,154	BA 11	come		Ipos= 207,9A BAF: 0000 0000 0000 0000

Read Open File... Export... Delete Log ☒ Show BIs and Relays

Display screen for logbook

Show binary inputs and relays in the logbook of the device

Deleting content of the logbook on the device

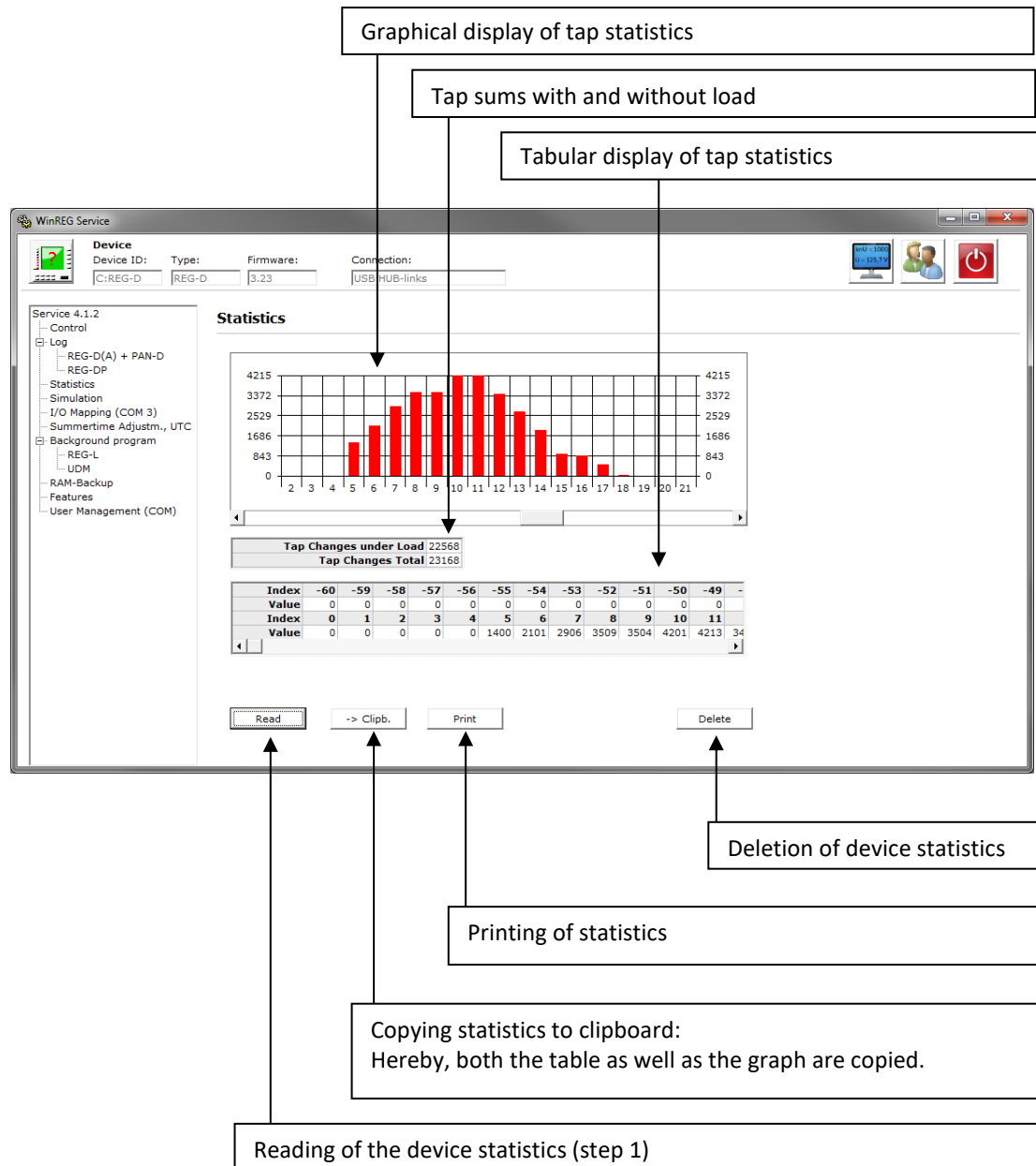
Saving contents of the logbook to a file (*.log)

Opening/viewing a logbook file on the PC

Reading of the logbook from the selected device (step 1)

2.7.3 Statistics

The statistics of REG-D™ can be read out and displayed with the Statistics function of the Service screen.



2.7.4 Simulation



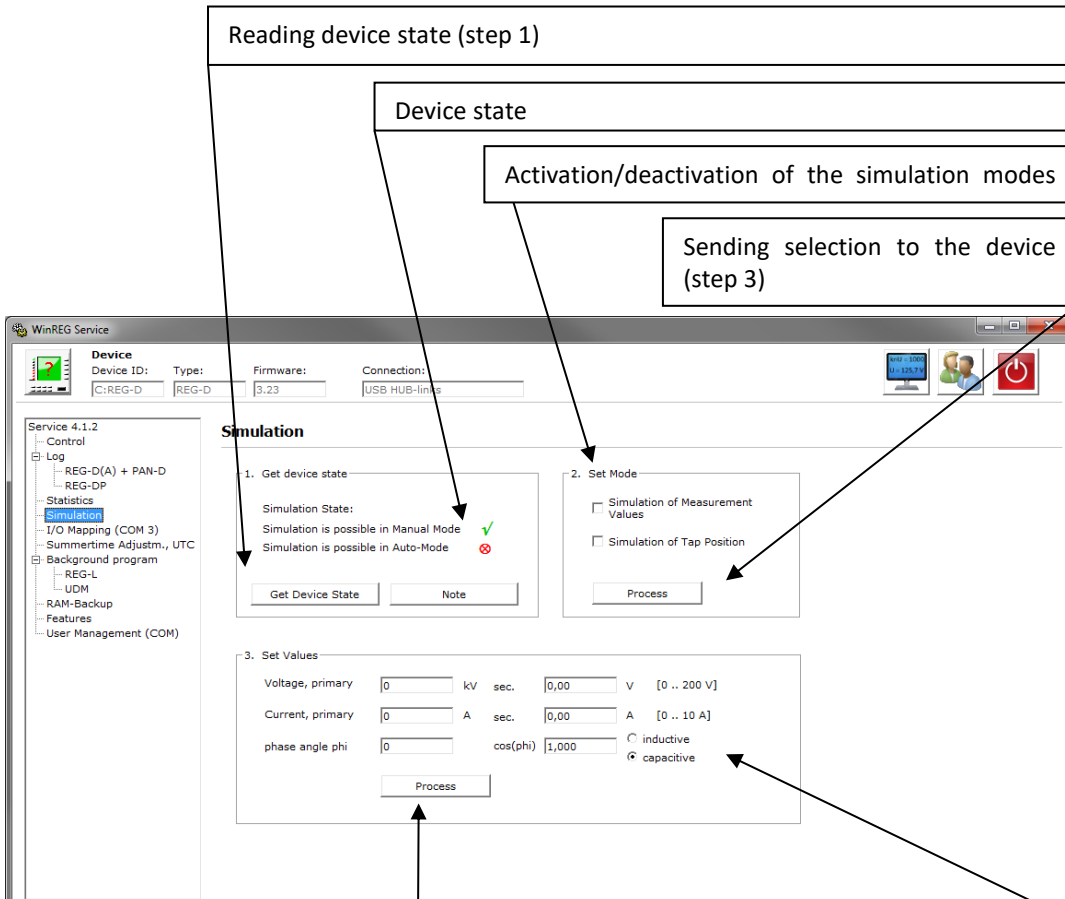
DANGER!

Tap commands which are triggered in simulation mode are actually output over the relays.

Since measured voltage is not used in simulation mode, this can lead to impermissible changes in the actual voltage at the transformer!

- ➡ If the transformer the regulator is connected to is in operation, the simulation mode should only be used under extreme caution. Here, tap commands from the regulator to the tap changer must be separated in terms of hardware (e.g. opening of the terminals).

The Simulation tab enables remote control of the REG-D(A) simulation mode.



Reading device state (step 1)

Device state

Activation/deactivation of the simulation modes

Sending selection to the device (step 3)

Simulation

1. Get device state

Simulation State:
Simulation is possible in Manual Mode ✓
Simulation is possible in Auto-Mode ✗

Get Device State Note

2. Set Mode

☐ Simulation of Measurement Values
☐ Simulation of Tap Position

Process

3. Set Values

Voltage, primary 0 kV sec. 0,00 V [0 .. 200 V]
Current, primary 0 A sec. 0,00 A [0 .. 10 A]
phase angle phi 0 cos(phi) 1,000 ☐ inductive ☒ capacitive

Process

Setting measurement values for the simulation (step 4)

Simulating measurement values in the device (step 5)



Measurement value monitor

On starting the simulation, the measurement value monitor starts automatically. Here the simulated measurements can be checked.

2.7.5 I/O extensions (COM3)

In the tab "I/O Mapping (COM3)" assignment of the BIN-D and ANA-D expansion modules to the inputs and relays of the REG-D(A) can be made/changed.

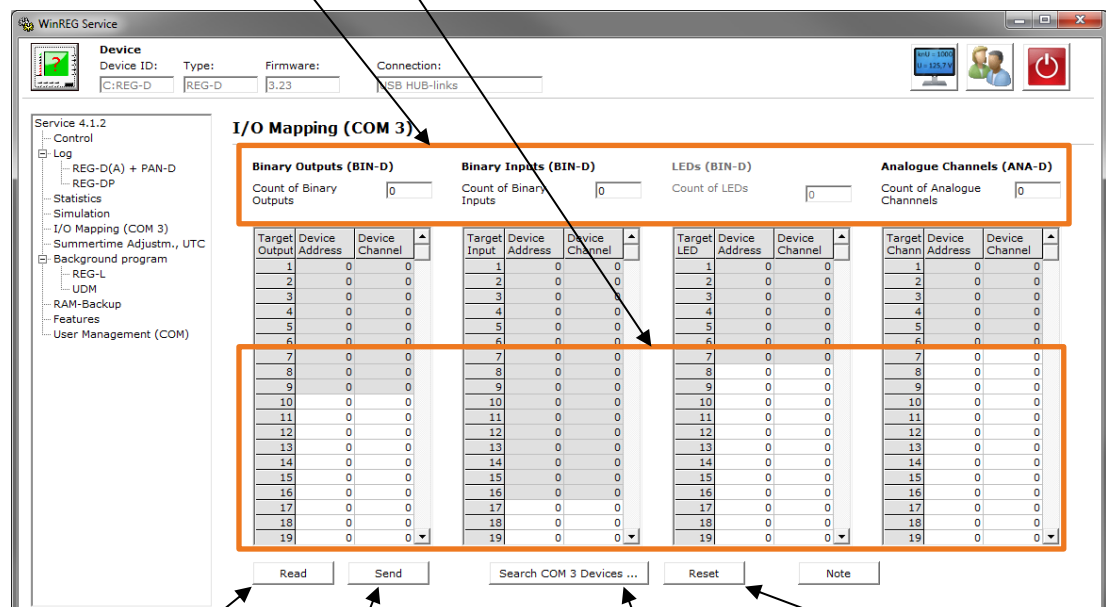
Number of channels including the channels of the device (e.g. REG D™).

Here, virtual channels can be generated, which can then be assigned values via Modbus, for example.

Manual mapping; mapping information can also be specified manually for each channel (e.g. relays of REG D™).

Assignment is done by entering the COM3 device address and device channel in the corresponding row.

By selecting multiple channels and pressing the right mouse button, a completion assistant can be used.

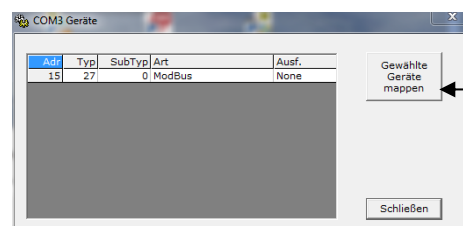


Sending mapping to the device

Reading mapping information from the device (step 1)

Deleting mapping settings; all channels are set to address 0 and device channel 0 (no mapping).

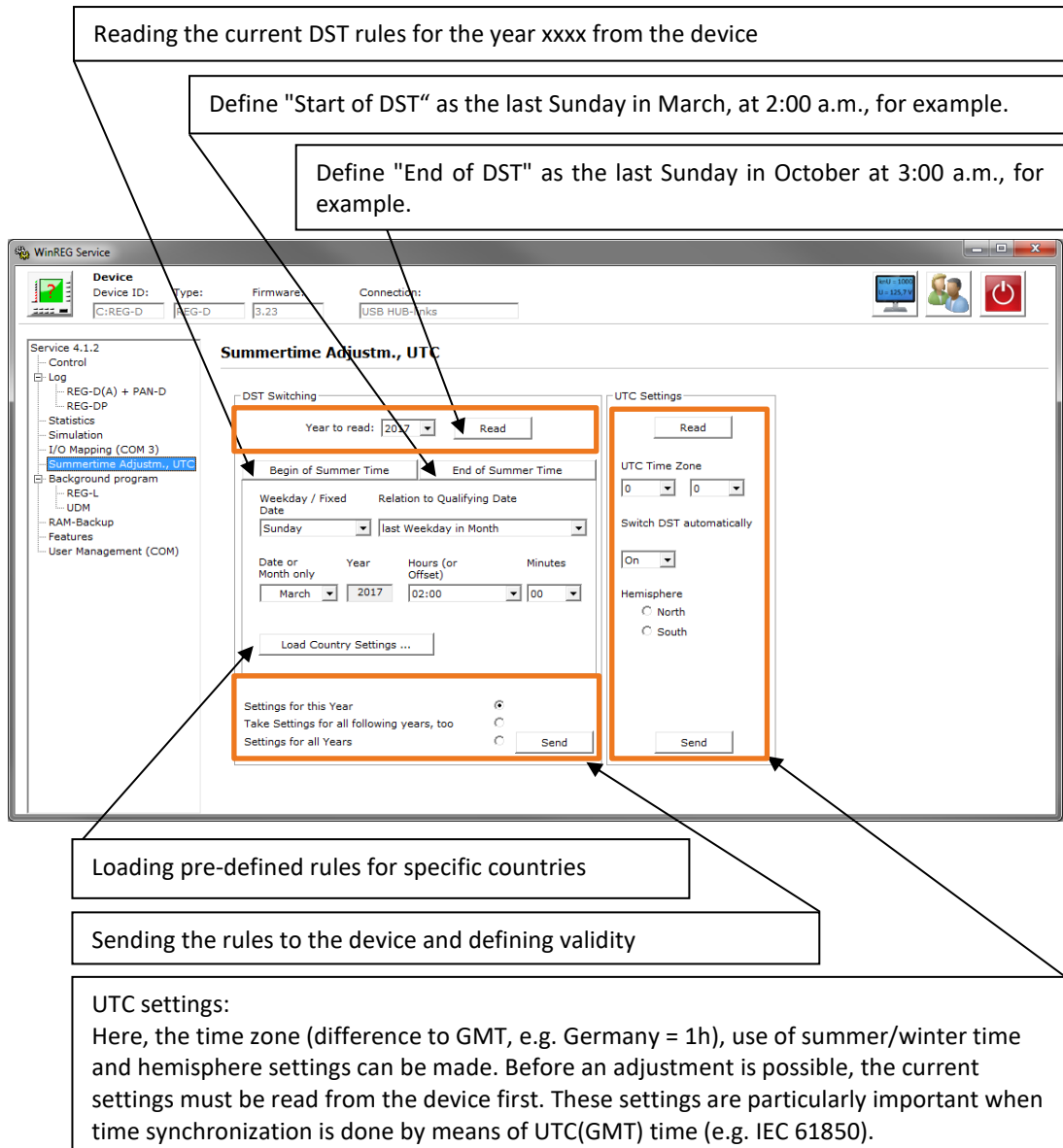
Wizard for the automatic assignment of COM3 devices



Starting automatic assignment

2.7.6 Summertime Adjustment, UTC

The tab "Summertime Adjustment, UTC" allows you to define rules for daylight saving time and the time zone setting. There are templates for certain countries.



Reading the current DST rules for the year xxxx from the device

Define "Start of DST" as the last Sunday in March, at 2:00 a.m., for example.

Define "End of DST" as the last Sunday in October at 3:00 a.m., for example.

WinREG Service

Device: Device ID: C:\REG-D Type: REG-D Firmware: 3.23 Connection: USB HUB-Link

Service 4.1.2

- Control
- Log
- REG-D(A) + PAN-D
- REG-DP
- Statistics
- Simulation
- I/O Mapping (COM 3)
- Summertime Adjustm., UTC**
- Background program
- REG-L
- UDM
- RAM-Backup
- Features
- User Management (COM)

Summertime Adjustm., UTC

DST Switching

Year to read: 2017 Read

Begin of Summer Time End of Summer Time

Weekday / Fixed Date Relation to Qualifying Date

Sunday last Weekday in Month

Date or Month only Year Hours (or Offset) Minutes

March 2017 02:00 00

Load Country Settings ...

Settings for this Year

Take Settings for all following years, too

Settings for all Years Send

UTC Settings

Read

UTC Time Zone

0 0

Switch DST automatically

On

Hemisphere

North

South

Send

Loading pre-defined rules for specific countries

Sending the rules to the device and defining validity

UTC settings:

Here, the time zone (difference to GMT, e.g. Germany = 1h), use of summer/winter time and hemisphere settings can be made. Before an adjustment is possible, the current settings must be read from the device first. These settings are particularly important when time synchronization is done by means of UTC(GMT) time (e.g. IEC 61850).

2.7.7 REG-L

The "REG-L" tab allows you to open, edit, send, read and save REG-L Files (e.g. H-programs).

Opening a REG-L file

Saving a REG-L file

Saving a REG-L file under a new name

Sending an open REG-L script to a device

Sending an open REG-L script to several devices

Reading REG-L from a device

Delete REG-L from a device

Service 4.1.2
Control
Log
REG-D(A) + PAN-D
REG-DP
Statistics
Simulation
I/O Mapping (COM 3)
Summertime Adjustm., UTC
Background program
UDM
REG-L
RAM-Backup
Features
User Management (COM)

Device
Device ID: C:\REG-D Type: REG-D Firmware: 3.23 Connection: USB HUB Links

Background program / REG-L

```
#####
# file-name: 111_2596_001_V01.rgl
# date: 31.01.2017
# version: 01
# device-type: REG-D/Reg-DA/PAN-D
# customer: 
# create: 31.01.2017, GJ A. Eberle GmbH & Co. KG
# revise: 
#####
# stop the background-program
#break
# set the Prompt to the own identification
rem;aa::
# delete the lines 0..31
d 0..31=""
p 0..31=""
q 0..31=""
# delete register
a *=0
b *=0
# delete the customer-menu
menuappn """,menuapp *=-1
```

☐ Monitor ☐ Log

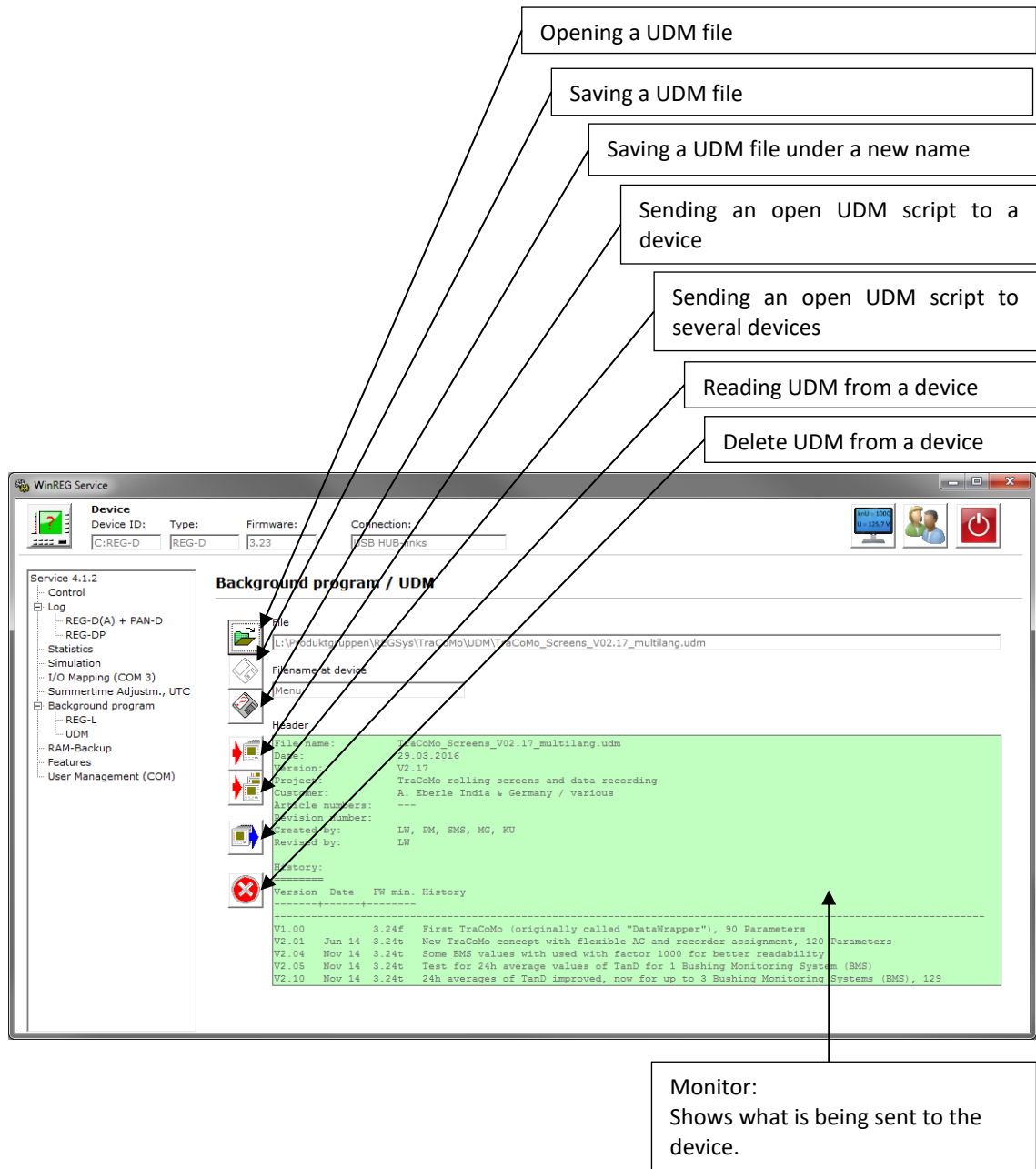
Monitor:
Shows what is being sent to the device.

The log function produces a recording of communication to a file. It must be activated prior to sending.

Only certain parts (markings, lines, etc.) of the REG-L scripts can be sent via the context menu (right click).

2.7.8 UDM

The "UDM" tab allows you to open, edit, send, read and save UDM Files. This feature is not available with activated communication via WinPQ.



2.7.9 RAM-Backup

The "RAM-Backup" tab allows you to control backup of parameters and the background program in the flash memory. The prerequisite for this is a bootloader version $\geq V2.12$ and appropriate hardware. Details on RAM-Backup can be read in chapter RAM-Backup of REG-D(A) manual. This feature is not available with activated communication via WinPQ.

Starting the bootloader. With firmware version $< V2.22$ or the feature `bootload = 0`, the bootloader must be started manually (step 1).

Date of the last backup, if a backup is available. An existing backup is not detected until after starting the bootloader.

Backing up in the flash memory (step 2: creating a backup).

Restoring data from a backup. As of firmware version V2.22, when needed, this is run automatically after a power-on reset (step 2: restoration).

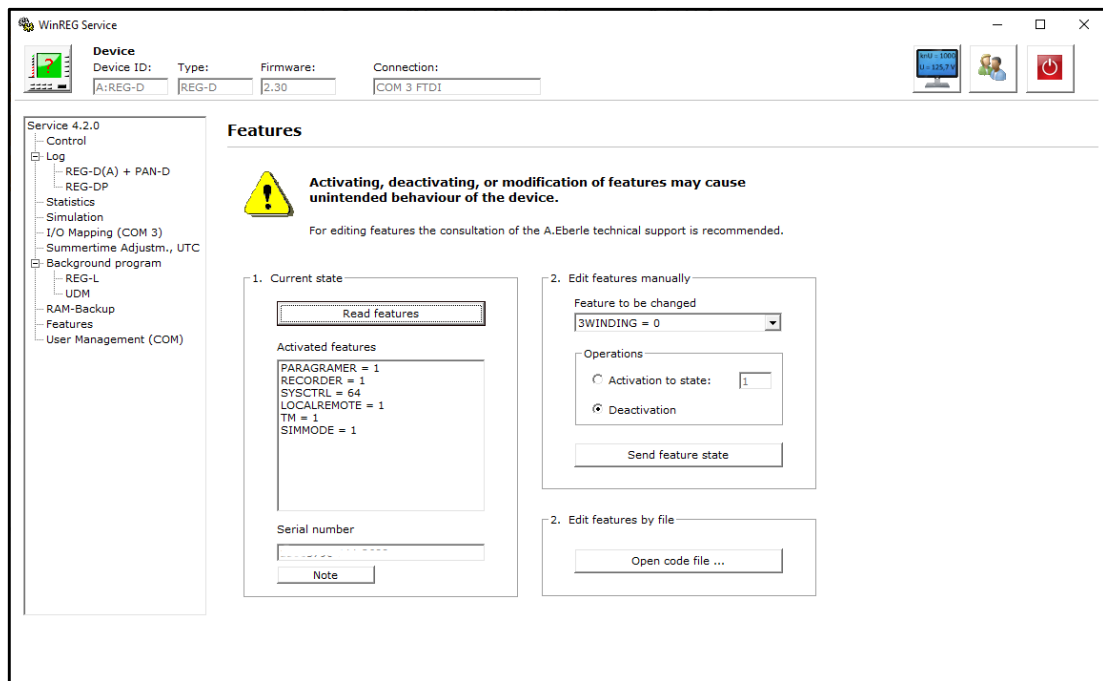
Exit the bootloader (step 3).

2.7.10 Features

The software features of the devices can be modified on the "Features" tab.

Both the modification of free features and the activation of protected features (for a fee) are possible.

A device-specific activation code or a corresponding code file is required to activate protected features.



CAUTION!

Changing the device behavior by changing the software features

Changing software features and the resulting altered behavior of the device can lead to unwanted reactions of the device and damage to the equipment.

- ⚡ Do not make any changes to the software features if you are not sure about the effects. In case of doubt, contact the A.Eberle Support.



Changing software features via parameterization (REGPara)

Depending on the feature to be changed and the settings (Activate Sending of Protected features) of REGPara, the software features can also be edited in the parameterization and sent to the device. However, it is not possible to enable the features by code there.

2.7.11 User Management (COM)

The user management (password protection) for the serial interfaces can be set up on the "User management (COM)" card.

To do this, the current status of the password protection is first read from the device using the "Read" button. If no password protection is active yet, it can be activated by assigning an Admin password. Subsequently, the authorizations for the individual users, their passwords and the timeout can be set. The timeout determines the time after which the corresponding user is automatically logged out. The setting zero means that no automatic logout takes place.

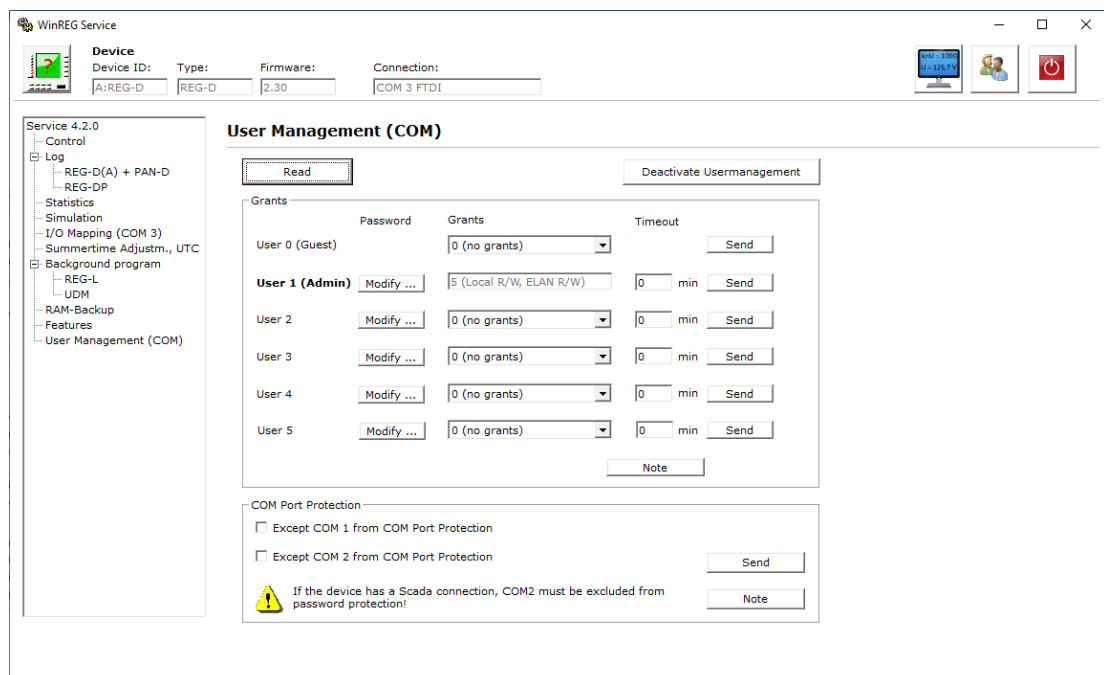
The following settings are available for the rights (grants):

Auswahl	Beschreibung
0 (no grants)	The user have no grants*
1 (Local R/-, ELAN -/-)	The user is allowed to read data on the local device
2 (Local R/-, ELAN R/-)	The user is allowed to read data on the local device and via E-LAN
3 (Local R/W, ELAN -/-)	The user is allowed to read and write data on the local device
4 (Local R/W, ELAN R/-)	The user is allowed to read and write data on the local device and to read data via E-LAN
5 (Local R/W, ELAN R/W)	The user is allowed to read and write data on the local device and via E-LAN

* certain information can be read even without read or write grants

With the button "Deactivate usermanagement" the password protection for the serial interfaces can be switched off.

The settings in the "COM Port Protection" field can be used to exclude certain serial ports from password protection.



The screenshot shows the WinREG Service interface for User Management (COM). The top bar displays device information: Device ID: A:REG-D, Type: REG-D, Firmware: 2.30, and Connection: COM 3 FTDI. The left sidebar lists various service options, with "User Management (COM)" selected. The main panel is titled "User Management (COM)" and contains a "Read" button and a "Deactivate Usermanagement" button. Below these, there is a table for user management with columns for Username, Password, Grants, and Timeout. The table lists six users: User 0 (Guest), User 1 (Admin), User 2, User 3, User 4, and User 5. Each user has a "Modify ..." button next to their name. The "Grants" column shows the selected grant level for each user, and the "Timeout" column shows the timeout value in minutes. At the bottom of the panel, there is a "COM Port Protection" section with two checkboxes: "Except COM 1 from COM Port Protection" and "Except COM 2 from COM Port Protection". A "Send" button is located next to these checkboxes. A warning icon and text indicate that if the device has a Scada connection, COM2 must be excluded from password protection. A "Note" button is also present.



Exception of the COM2 from the password protection for the SCADA connection!

If the device has a SCADA system connection, the SCADA interface card is usually connected to the COM2 of the device. In this case, **COM2 must be excluded from the password protection!**



User management (COM) and Role Based Access Control (RBAC)

The user management (COM) can only be used for simple password protection of the COM interfaces. It does not represent a role-based user management.

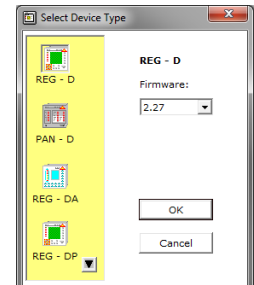
If the role-based access control is used by means of the SCADA interface card, no settings are required for the user management (COM). If settings are nevertheless made, these are superimposed on the RBAC.

It is not possible to log on to the COM interfaces with the RBAC access data.

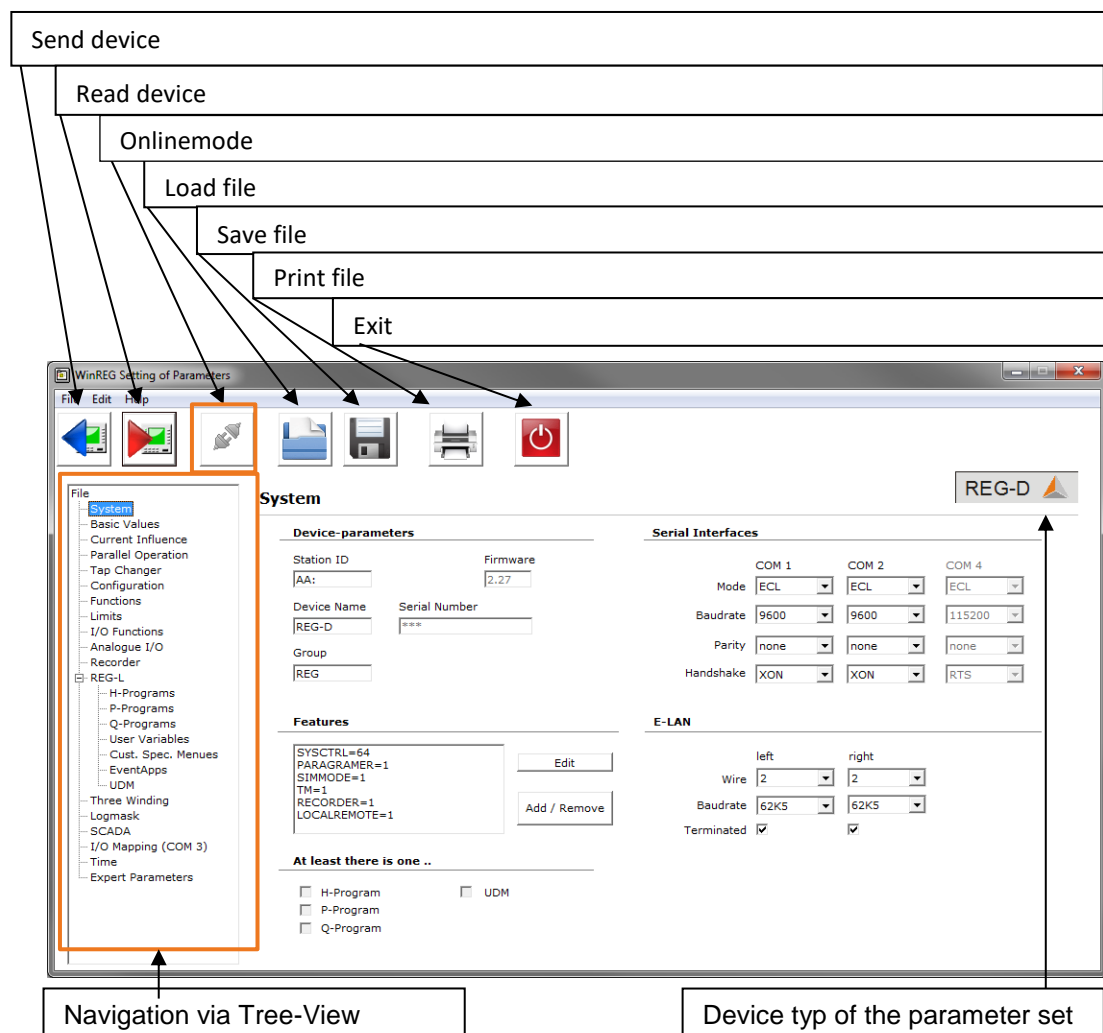
2.8 REGPara

REGPara is used for simple parameter assignment of individual components. Individual parameters can be entered with a tree-view arrangement, stored for future use, or transferred to another regulator. This transfer is also possible via E-LAN.







On starting REGPara, a window appears next to the WinREG configuration for selecting device type. Select the appropriate device, in this case REG-D™, and click OK to load the WinREG configuration interface corresponding to the device.



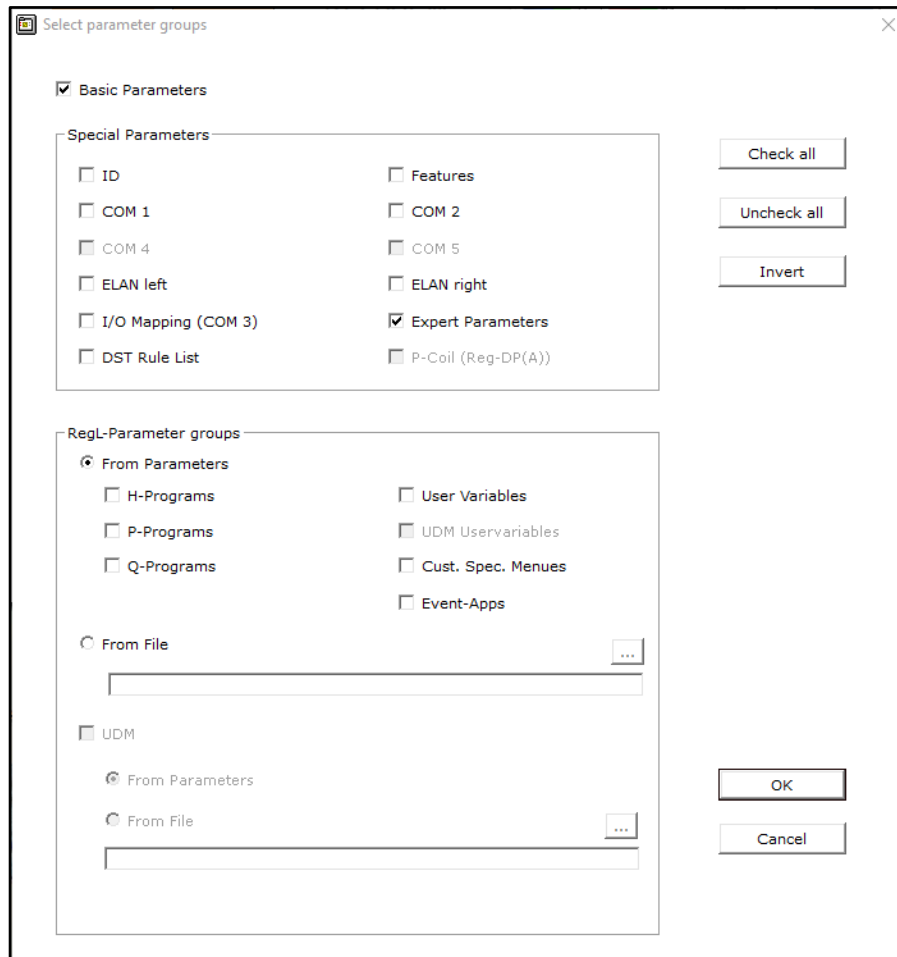
The WinREG configuration interface is structured as follows:



The following actions are available via the File menu (partly also available as shortcuts in the WinREG configuration interface):

Menu item	Description
Read Device 	Starts reading a device. After starting, a dialog opens for selecting the device to be read.
Send to Device 	Starts sending the current parameterization to a device. A dialog opens to select the target device. After the action "Send to device" a final dialog for selecting the parameters to be sent is displayed. The following parameters can be selected for sending: <ul style="list-style-type: none"> ● Basic parameters ● Identifier ● Features ● COM interface settings ● E-LAN interface settings ● COM3 mapping ● Expert parameters ● DST settings ● P-Coil (Reg-DP(A)) ● REG-L parameter groups
Load file 	The dialog "Load parameter file" appears to open existing REGSys™ parameter files (*.prm).
Save	Buffering of saved parameter sets
Save as ... 	By clicking on "Save as" an "Additional data" dialog appears first (see also "Edit/Additional data"), where a printout heading and a comment can be entered. With the button "Insert ...", recently used printout headings / comments or templates can be attached. By clicking OK in the "Additional data" dialog, the window "Save parameter file" appears for specifying location and name. By clicking Save, the PRM file is stored as indicated.
Import ...	Import of csv-files
Export ...	Export the configuration in xml- (RSEI) and csv-format.
Print 	The Print dialog appears, in which the printer and presentation can be defined. Firstly, font and font size can be set under presentation. Secondly, the order of the parameters can be arranged either as in the configuration of WinREG, i.e., according to the different index cards, or as in the device, i.e., sorted in accordance with setups 1 to 6.
Previous sessions	Up to four of the last opened PRM files can be opened using the shortcut.
Exit 	Exits the software.

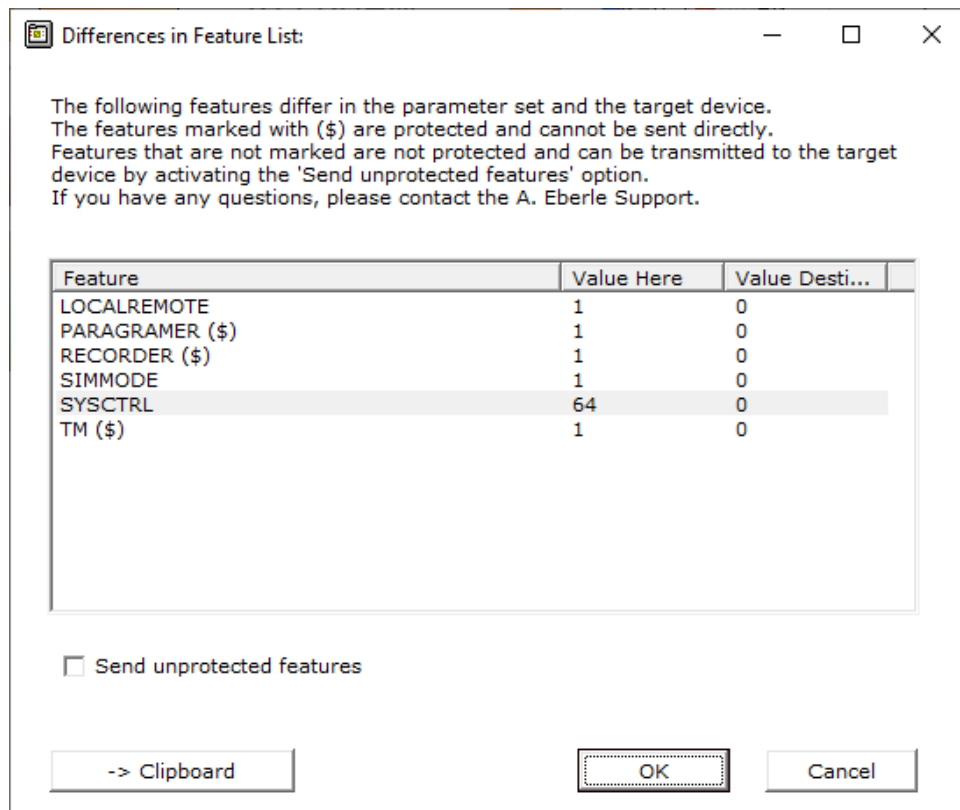
After pressing the "Send to device" button, the dialog for selecting a target device opens. When the according device is selected, another dialog box appears for selecting the parameters to be sent. Each parameter group can be transferred individually to the device. With the help of buttons on the side of the window, all or no parameters can be selected. It is also possible to reverse the selection of the parameters using the "Invert" function.



Select parameter groups to be send to a device

With the "OK" button, the selection is confirmed and the data transfer to the device starts.

If there are differences in the software features between the parameter set and the target device, these differences are displayed:



Dialog „Differences in Feature List“

In the default setting, the non-protected features (no \$ sign) can be transmitted to the target device by activating the "Send unprotected features" option. Protected features must be activated with an activation code via the service tool.

If the "Activate Sending of Protected features" option is active in REGPara, protected features can also be sent to the target device. This function is password protected and normally reserved for A. Eberle.

CAUTION!

Changing the device behavior by changing the software features

Changing software features and the resulting altered behavior of the device can lead to unwanted reactions of the device and damage to the equipment.

- ➡ Do not make any changes to the software features if you are not sure about the effects. In case of doubt, contact the A.Eberle Support.



Software features (Features)

With the software features, additional functions can be enabled or the system behaviour of the device can be adapted. Some parameters are only available if the corresponding feature is set. It is therefore important that the target device has the same features as the parameter set. If this is not the case, the behaviour of the device may deviate from the behaviour expected from the parameter set. Furthermore, error messages may occur during the transmission of the parameters.

The progress bars for the transmission of the individual parameter groups then appear. For the basic parameters, a comparison is also performed before transmission.

At the end of the transmission, a dialog shows which parameter groups were transmitted and whether errors occurred.

The following actions are also available via the Edit menu:

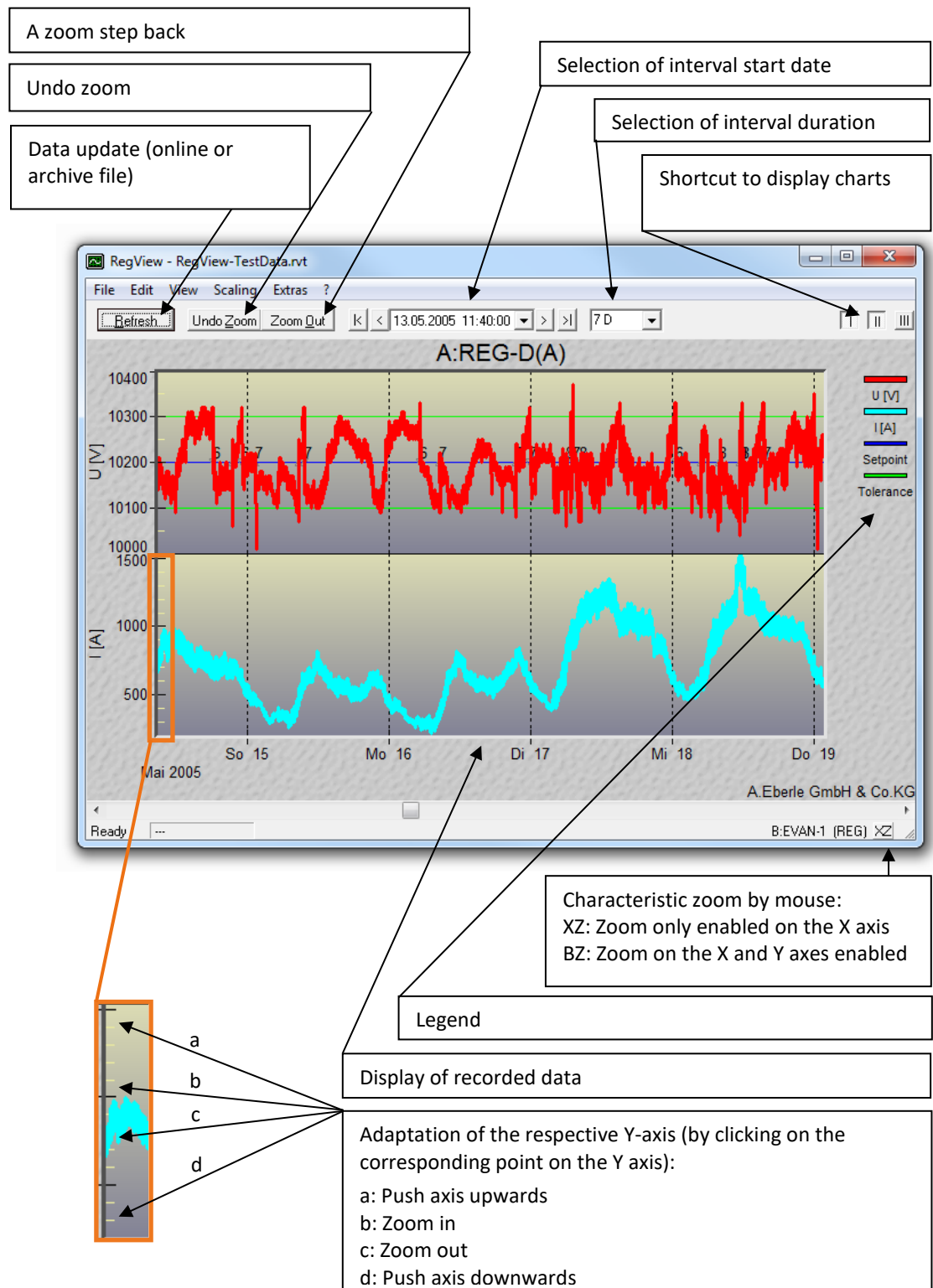
Menu item	Description
Compare	<p>There are two modes available:</p> <p>The current parameter settings can be compared to a device, or also to an existing parameter file (*.prm). After the comparison, a related dialog appears in which the various parameters are listed with their respective values.</p> <p>H-Programs are not included in the comparison.</p>
Additional Data	<p>Here a printout heading and a comment for the current configuration can be entered. With the button "Insert ...", recently used printout headings / comments or templates can be attached. The "Additional data" dialog also appears the first time you save the current configuration, or with Save as.</p>
Change Device Type	<p>Device type, e.g. REG-D™ or PAN-D, can be changed here. Please note that all previously altered parameters may be irretrievably lost with change of device type. If necessary, save the current parameter settings before starting.</p>
Convert	<p>With the convert function, a set of parameters of a REG-D™ can be converted to a set of parameters of a REG-DA and vice versa. This results in changes, in particular, with regard to the available binary inputs/outputs and analog channels. To transfer a parameter set to a device, the device type of the parameter set must match the type of device. A conversion can also be made between different firmware versions.</p>
Configuration	<p>Enabling special features:</p> <p>This feature allows you to send locked (often fee required) characteristics of the parameter file to a device. By default, sending locked features is not available. The function is password protected.</p> <p>Edit the expert parameters:</p> <p>This parameter activates editing the expert parameters. The function is password protected.</p> <p>Read Service informations:</p> <p>If this parameter is active the WinREG reads additional service information about the device and the E-LAN during parameter readout. This could be very helpful in case of any issue. With this setting active the parameter readout takes significantly longer.</p>



REGPara help menu item

Further information about configuration is also available in the configuration help menu item.

2.9 REGView



REGView is used to view and analyse data of the S1 recorder. These can either be accessed directly on the REG-D(A) (online), or via data from an archive file of the Collector.

The following actions are also available in the File menu:

Menu item	Description
Open	Opens the RegView dialog to select the recorder data file.
with Refresh on Update	If you are at the end of a RegView file, a screen refresh is run automatically on updating this file (exception: not in zoom mode, nor with activated measuring bars). The option is enabled by default.
Online	The connected device is read using the refresh button.
Device selection ...	If the menu item Online is enabled, the device to be read can be selected here.
Edit Connection List ...	Opens the "Edit connections" dialog.
Data-Export	Opens the "Data export" dialog in which recorder data can be extracted.
Chart-Export	Opens the "Chart export" dialog in which the current display of RegView can be exported in various file formats.
Statistics ...	Evaluates a specified period for Umax (with time stamp) / Umean / Umin (with time stamp) and tap statistics.
Print	Opens the Print dialog
Previous sessions	Up to five of the last opened REGView files can be opened using the shortcut.
Exit	Exits the software.

The following actions are available in the Edit menu:

Menu item	Description
Copy Chart	Copies the chart to the clipboard.
Copy Readings	Measurements can be applied with a double click on the RegView graph field. The values are shown below the heading. With the menu item, displayed measurements can be copied to the clipboard.
Remove Llast Reading	Remove the last measurement.
Remove All Readings	Remove all measurements.
Modify Last Reading	The time stamp of the last measurement can be adjusted.
Edit Current REGView File	Opens the current RegView recorder data file in the text editor.
Quick Setup ...	Opens the "Quick setup" dialog to configure the curve display, the clipboard format and select whether the window size and position, and the skin settings are to be saved at end of program.
Chart Setup ...	Under this menu item, the chart can be configured in detail.

The following actions are available via the View menu:

Menu item	Description
Curve Selection	Opens the "Quick setup" dialog
Tile Vertically	By default, this parameter is set active, the recorded channels are shown as individual superimposed graphs. If the parameter is deactivated, the recorded channels are plotted simultaneously in a graph.
Compress from 24h / 14days (DP) on	If the parameter is enabled, with a REG-D™ and a representation of >24h, or with a REG-DP and a representation of >14d, the data is shown compacted in order to optimize computing power. The compression can partially result in display problems. In this case, disable the parameter again.
Interval Start	Interval start time can be set in this menu item.
Interval Period ...	A click on this menu item leads to selection of the interval duration on the RegView screen.
Box Zoom	If Box Zoom is enabled, a zoom in the X and Y axis directions can be carried out using the mouse. If Box Zoom is disabled, a zoom can only be carried out in the X axis using the mouse.
Undo Zoom	Zoom out of the interval
Zoom Out	A zoom step back
Zoom range → Full Range or Last Full Range	A zoom step back
Refresh	Reloads the recorder data file or the recorder data of the connected device.

The following actions are available via the Scaling menu:

Menu item	Description
Apply Knu, Kni	If the menu item is selected, recorded secondary data (e.g. on 100V normalized voltage) are multiplied by the regulator Knu for display, to indicate primary values.
U AUTO	Automatic scaling of the voltage graph
U +/-3%	Scaling of the voltage graph to U +/-3%
U +/-5%	Scaling of the voltage graph to U +/-5%
U +/-10%	Scaling of the voltage graph to U +/-10%
U +/-20%	Scaling of the voltage graph to U +/-20%
U Tolerance band	Scaling of the voltage graph to the tolerance band

The following actions are available in the Extras menu:

Menu item	Description
Start Collector	Starts the Collector program.
Edit Device Associations in REGView-LookUp.ini	Under this menu item, an INI file is created to set a title line, subtitle line and footer for all devices collectively and for each device individually.
Path Settings	Here the exact path settings of the recorder data files, etc. can be specified.
Recall Skin Settings	There are several pre-defined skin settings to choose from.
Store Skin Settings	Save current skin settings.



REGView help menu item

Further information about REGView is also available in the REGView help menu item.

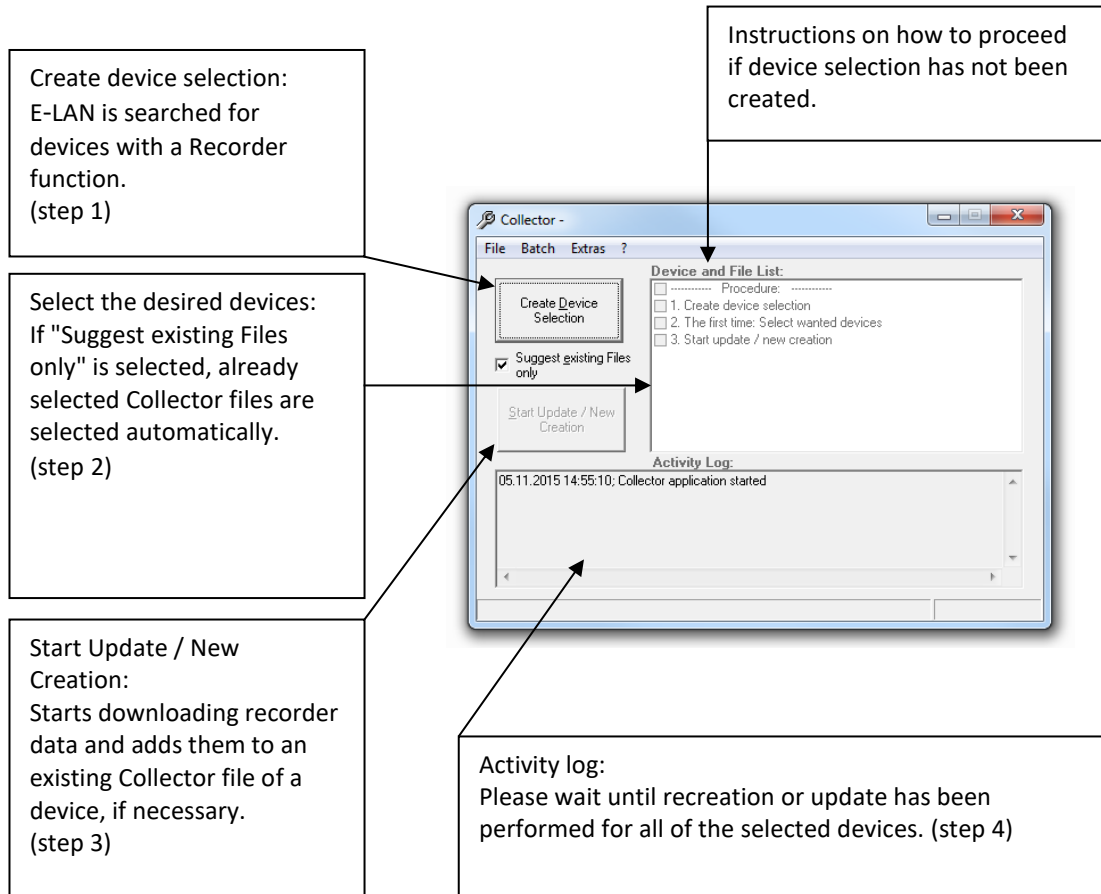


Data of Recorder S2

For devices with characteristic S2, other recording options are available in addition to the data of recorder S1. The data of the S2 recorder cannot be visualized with REGView. For this purpose, please use the A.Eberle Toolbox™ software.

2.10 Collector

The Collector reads the data from the Recorder function S1 of the REG-DA and archives them on the PC.



Message: "File header does not correspond to actual device data"

The message "File header does not correspond to actual device data" may appear in step 3 of "Update / New Creation" in case of updating an existing Collector file. This message is generated when parameters, such as the voltage transformer factor Knu, have changed since the last update. In this case, it is advisable to create a new Collector file, as otherwise it may lead to incorrect calculation of primary values from the secondary values stored in the Collector file in the RegView software.

The following actions are available via the File menu:

Menu item	Description
Create Device Selection	E-LAN is searched for devices with a Recorder function.
Start Update / New Creation:	Starts downloading recorder data and adds them to an existing Collector file of a device, if necessary.
Device Selection + New Creation	E-LAN is searched for devices with a Recorder function. It starts after download of the recorder data.
Select Connection ...	Starts the Select Connection dialog.
Close Connection ...	Terminates the active connection.
Edit Connection List ...	Starts the Edit Connections dialog.
Visualize highlighted File	Starts displaying the selected file in the RegView program part.
Edit highlighted File	Opens the selected file in the Editor.
Update highlighted File	Updates selected file.
Exit	Exits the software.

The following actions are available via the Batch menu:

Menu item	Description
Create/Execute Batch	Opens the "Collector Batch" dialog, in which a batch file can be created and run.
Execute Batch File ...	An existing batch file can be selected to be executed.
Edit Batch File ...	An existing batch file can be selected to be edited.
Execute Single Batch Command ...	Run batch command directly.
Alarms ...	Opens the "Collector - Alarms" dialog, in which different alarms can be defined.
Cancel All Alarms ...	Deletes all alarms defined in the "Collector - Alarms" dialog.
Quick-Access Allocation	Batch files can be assigned to a key combination.
Abort Batch (ESC)	Cancels the currently running batch.

The following actions are available via the Extras menu:

Menu item	Description
Extended File Test ...	Opens a new window with the integrated, self-explanatory recorder file test and repair program.
with Device Time Sync	With this menu item, the time synchronization of the REGSys™ device time built-in as of V1.3.2 can be activated by the PC clock. Time synchronization takes place before updating/rereading.
with Complete File Test	With this menu item the file test built-in from V1.3.2 can be activated and deactivated. The file list will be executed after the update, each file line is checked for correctness (message box in case of error).
Precedure on Header Change	Four selection options: Do not overwrite, overwrite, ask (default), do not overwrite but update
With Additional REG-D(A)/PAN-D Logbook Update Of All Listed Devices	Device logbooks of REG-D™, REG-DA and PAN-D devices can be automatically saved/updated as of REG-D™, REG-DA and PAN-D firmware V2.11. On the next update, the recorder data are read first and then the logbook data. For unticked devices, no recorder data are read, but the logbook is read.
View Logbook Of Highlighted Device	Opens the logbook of the selected device.
Optional Start Date ...	If recorder data are first to be stored as of a certain date, the start date can be set with this menu item. This date is only considered on creating files!
Path Settings	From software version V1.4.0, the file name extension of ".txt" was changed to ".rvt" and already existing files are renamed accordingly on updating. In the "Extras\Path Settings" menu the extension can be manually changed to ".txt".
Log Events	Selection of events to be logged
View Log File	Opens the log file of the Collector.



Collector help menu item

Further information about the Collector is also available in the help menu item of the Collector.



Data of Recorder S2

For devices with characteristic S2, other recording options are available in addition to the data of the recorder S1. The data of the S2 recorder cannot be read out with the WinREG Collector. For this purpose, please use the A.Eberle Toolbox™ software.

2.11 WinTM/WinDM

The WinTM module (parameters for the transformer monitoring module) and the WinDM module (parameters for the transformer monitoring device without Relay for Voltage Control & Transformer Monitoring) complete the software package. These modules are not part of this user manual.

3. Index

Collector	46	Panel.....	17
Connections		Settings.....	16
Backup and Restore.....	10	Parameter setup.....	35
Connection settings.....	11	RAM-Backup.....	31
Control Center	9	REG-L	29
Desktop save & load	9	REGPara.....	35
Features		REGView	41
Activation	32	Service	22
Differences	38	Summertime Adjustment.....	28
H- program	29	Terminal	20
Hardware handshake.....	13	UDM	30
I/O extensions (COM3)	27	USB driver.....	8
Language.....	10	User management (COM)	33
LED	19	UTC	28
Log	23	WinDM	49
Logbook	23	WinREG.....	5
Null-modem cable	13	WinTM.....	49

4. Contact

For questions, please contact the A. Eberle REGSys™ support team:

A.Eberle GmbH & Co.KG
 Frankenstr. 160
 D-90461 Nuremberg

E-mail: regsys-support@a-eberle.de
 Phone: +49 911 / 62 81 08 -101
 Fax: +49 911 / 62 81 08 -96
 Homepage: <https://www.a-eberle.de>



A. Eberle GmbH & Co. KG

Frankenstraße 160
D-90461 Nuremberg

Tel.: +49 (0) 911/62 81 08-0
Fax: +49 (0) 911/62 81 08 96
E-Mail: info@a-eberle.de

<https://www.a-eberle.de>

Edition of: 06/12/2021

Version: BA_WinREG_4.2_EN_2021_12_06.docx

Copyright 2018 - 2021 A. Eberle GmbH & Co. KG

Subject to change without prior notice.