

Winlog.pro

Version 2.8.1

Operation Manual

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Program Start

1 Start the software by double-clicking on the desktop-icon or with *Start-Programs*.

2 Enter your user name and password.



After a new installation of the software enter **Admin** for the user name and leave password blank. You will be asked to select a new password. Enter your new password twice and press OK.

For security reasons it's recommended to change the Administrator-password.



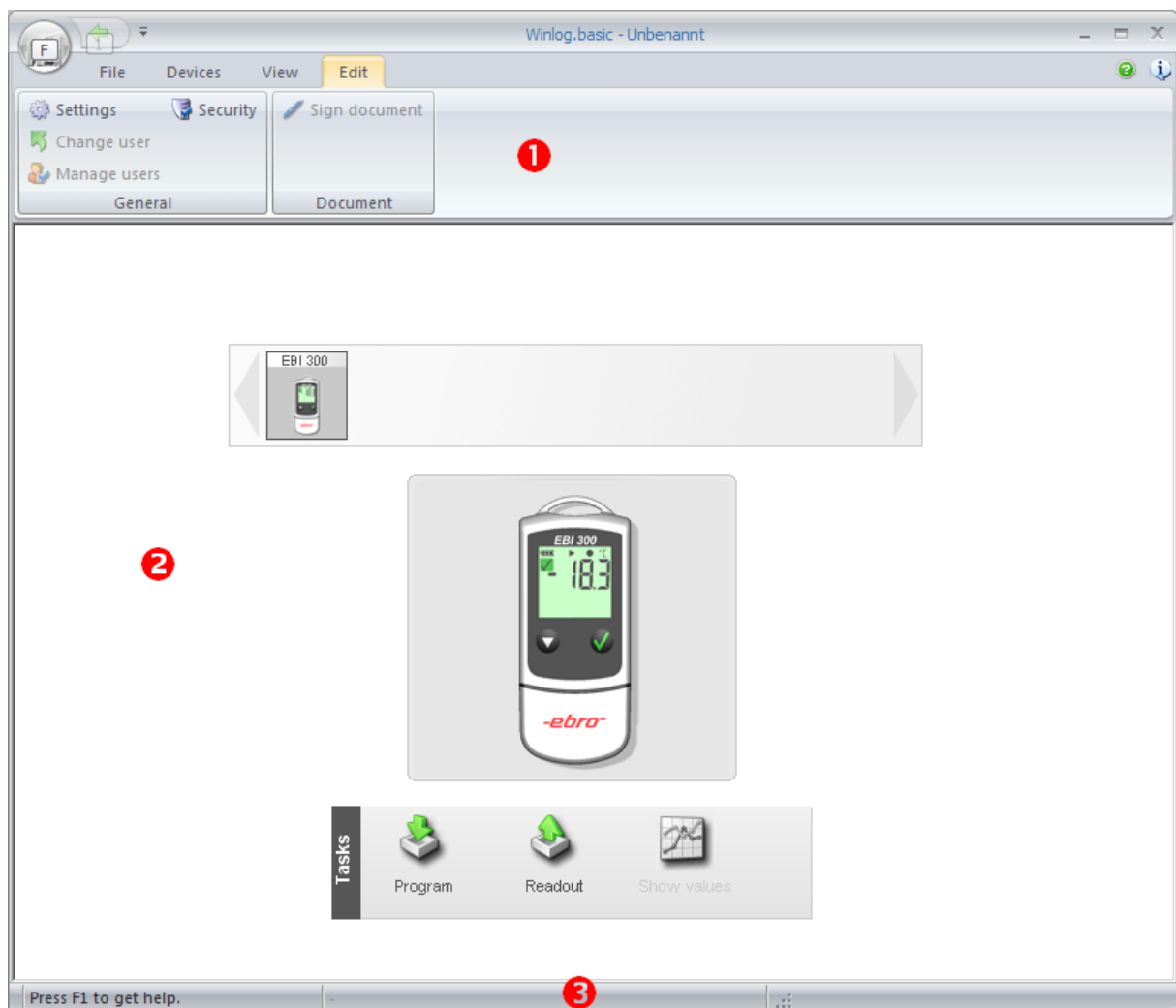
If 21 CFR Part 11 functionality is deactivated in [Security Settings](#) there will be no login prompt at start-up.

3 The Software is searching automatically for connected data loggers and interfaces. After the search process is finished, all detected devices will be displayed -> [Device Selection](#).

Basic Operating

The Winlog user interface is divided in 3 areas:

- 1 Ribbon
- 2 Display area
- 3 Status bar



Ribbon

The ribbon is used to select program functions.

All functions are organized in groups which will be selected by clicking the appropriate menu item.

Winlog Button



New

Creates a new workspace. All logger data are stored in a workspace. A workspace contains the data of one or more loggers which are read out one after another. Measurement values of one logger is called a document.

Open

Opens existing Winlog files.

Save

Saves the current workspace to the default folder.

Save as

You can define where to store the workspace.

Recent files

Shows a list of all recently opened files. To open one of these documents click on the document name.

Exit

Exit Winlog software.

Menu File

New

Creates a new workspace. All logger data are stored in a workspace. A workspace contains the data of one or more loggers which are read out one after another. Measurement values of one logger is called a document.

Save

Saves the current workspace to the default folder.

Save as

You can define where to store the workspace.

Save as PDF

Creates reports for the current workspace and print it to PDF.

Import

Import files from different applications (e.g. Winlog 2000, or Winlog.med)

Export

Export the current workspace to Microsoft® Excel®.

Print

Creates reports for the current workspace.

Menu Devices

Search

Scans for all connected logger and interfaces ([Device Selection](#)).

USB Sticks

Open the dialog for device configuration with a USB-stick – e.g. EBI 40 ([USB Stick Transfer](#)).

Firmware Update

Upgrade logger and interface firmware. Not all devices are supporting firmware upgrades.

Refer to [Firmware Update](#).

Menu View

Device Selection

Go to [Device Selection](#)-view.

Measurement data

Go to [Measurements](#)-view.

Audit-Trail

Opens the [Audit-Trail](#).

Signatures

Shows all signatures for the current workspace.

Errors

Shows measurement values with errors (Hi/Low).

Alarmlist

If a EBI 310 is used with [Multiple Alarm Ranges](#), the alarm ranges and alarm status is displayed.

File Explorer

Shows a file explorer where you can select files with formats known to the software.

Field Chooser

Within the [Measurement View](#) you can add additional fields (e.g. average, variance etc.) to the curve overview.

Menu Edit

Settings

Opens the [Settings Window](#).

Change User

Opens the login screen.

User Administration

Opens the [User Administration](#).

Security

Opens the [Security Settings](#).

Sign

Opens the signature dialogue to sign the current workspace.

Comment

Opens the dialogue to enter a comment for the current workspace or to show the comment of the workspace.

Images

Opens the [Picture Manager](#).

Menu Diagram

All menu items are described in chapter [Measurement View](#).

Menu Scripts

Execute or manage scripts.

Settings

Program

1 Click on Menu *Edit-Settings*.

2 **Units**

Define the units for temperature and pressure.

3 **User Information**

Enter the user information which will be printed on all reports.

4 **Logger texts**

Depending on the logger type, up to four information fields can be stored in the logger. The header for these fields can be defined with *Label1* to *Label 4*.

5 **Logo**

Click on ... to select the logo which will be printed on all reports. The logo must have a size of 362x75 pixel.

6 **Warnings**

Several program actions require a user confirmation. You can suppress these messages by activating *Don't show this message again* within the message window.

To show the messages again click on *Reset warnings*.

7 **Battery-check**

Activate this option if a message should appear when battery level is below the stated level.

8 **Calibration**

If a message should appear when next calibration is due, enter calibration interval and calibration reminder.

Files and Folders

1 **Standard document path**

Select the default folder for your documents. This folder is used when saving a new document.

2 **Automatically generate filenames**

Enable this option to automatically generate filenames based upon certain parameters. Click on



to specify filename generation parameters.

Filename generation parameters

1 Format

Enter the filename format here.

2 Tags

Filenames can be generated by using one or more of the following place holders (tags):

{SERIAL}	- serial number
{DATE}	- date of filename creation
{TIME}	- time of filename creation
{TYPE}	- logger type
{NAME}	- name of logger
{REMARK}	- measurement remark
{LOCATION}	- location
{OWNER}	- owner

Additionally you can use any characters except : " \ : * ? " < > | "

3 Preview

A sample filename based upon your settings will be displayed here.

Click on OK to apply your changes.

Communication

1 Maximum device search time

During software start, when executing command *Devices – Search*, or after connection of an USB device, Winlog is scanning all communication interfaces (USB, RS232, Ethernet) for loggers and interfaces. The maximum time for this scan process will be defined here.



If some devices are not detected properly (mainly RS232 devices), you should increase search time.

2 TCP/IP

If you want to use devices with an Ethernet connection, activate *TCP/IP support*.

Port

Enter the communication port for TCP/IP.

Automatically search for devices

Winlog will send a broadcast to identify all ebro devices in the network.

Manually address devices

Choose this option to address TCP/IP devices directly. You have to enter the IP-address for every connected device.

3 Wireless

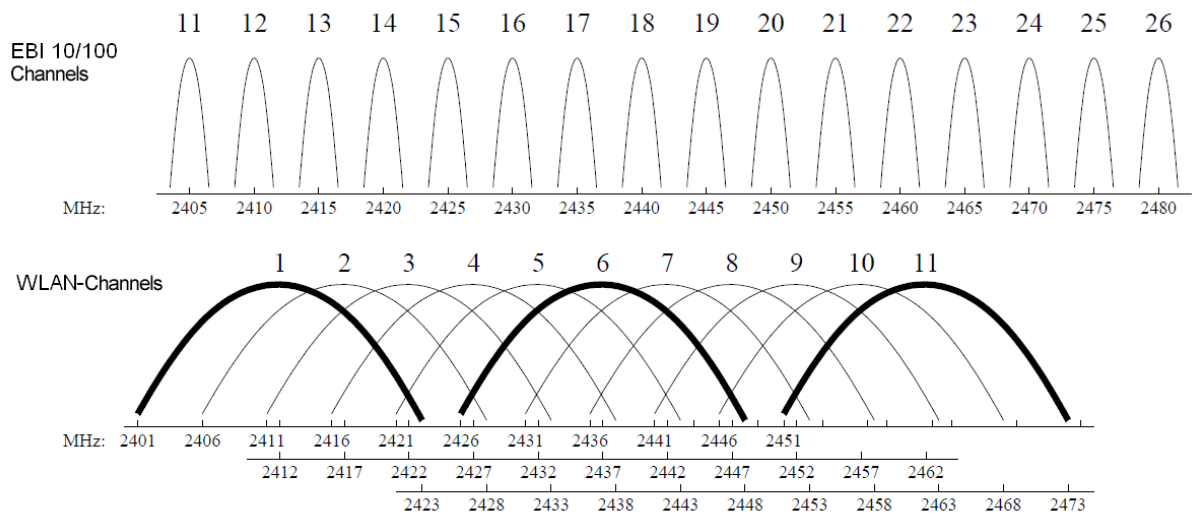


This option applies only to the logger Series EBI 10/100 and the corresponding interfaces.

EBI 10/100 loggers communicate over an IEEE 802.15.4 radio interface utilizing the 2.4 GHz frequency range

This frequency range is also used by WLAN and Bluetooth. Using 2 radio systems on the same frequency range on the same location can cause interference. To avoid this, you can choose one of 16 channels for radio transmission.

4 channels are used for communication when loggers have been inserted into the interface (1 channel per interface port). Additional 4 channels are used when utilizing wireless transmission



As you can see in the image, EBI 10/100 and WLAN frequencies overlap depending on the used channels. Example: When using a WLAN network on channel 1 you can select channel 15 or higher for EBI 10/100 communication.

You are not required to use different channels for local interface communication, however, using the wireless mode requires different channels in order to utilize multiple radio systems simultaneously.

Chart settings

1 Use pre-defined chart colors

By default, curves are displayed in a unique color by the chart. Alternatively you can use specific colors for the different measurements (temperature, humidity, pressure, ...).

2 Save chart properties with the workspace file

Enable this option to save chart modifications within the workspace file.

Settings Reports

Reports can be created in a different language from the language of the Winlog software.
Select the language for the reports.

Security

1 In menu *Edit* click *Security*

Winlog has a 21 CFR Part 11 compliant security concept with user management, electronic signatures and audit trail. If you want to use these security features, activate *21 CFR Part 11*.

2 **Passwords**

Define the password settings (password length, expiration etc.).

3 **Security**

Define the response of the software on false logins.

4 **e-mail settings**

If *send warning email* in case of a repeated false login is activated, enter one or more recipients for this email. Click on *Advanced* to edit the sender configuration.

E-Mail Configuration

Sender

You have to enter a name, an email sender address, a user name including password for the program in order to gain access to the server. Select one of the below authentication methods for the server access:

<i>none</i>	Neither user name nor password are required for the server access.
<i>CRAM MD5</i>	Challenge-Response Authentication Mechanism. User name and password are transmitted encoded. This method is said to be bug-proof.
<i>AUTH LOGIN</i>	User name and password are transmitted consecutively to the server without coding.
LOGIN PLAIN	User name and password are transmitted to the server as plain text. In contrast to AUTH LOGIN, LOGIN PLAIN transmits user name and password as string instead of consecutive transmission.

Server

Enter the host-name or IP-address and the port-number (usually 25) of the email-server.

Misc

Define here

- whether the connection to the internet is to be made automatically
- which IP address should be used for the connection
- which character set should be used for coding the message

5 Electronic Signatures

All relevant software actions (e.g. logger-programming, logger-readout) can be verified by one or two electronic signatures.

Activate *Force comment* if a comment for all electronic signatures is required.

Click on *Advanced* to define for which actions an electronic signature is required.

6 Activate Audit Trail

If Audit-Trail is activated, all relevant program actions will be stored with time-stamp and the name of the user who has executed the actions.



To be 21 CFR Part 11 compliant at least one signature must be selected and the audit trail has to be activated.

Manage users



User management is only active if *21 CFR Part 11* is activated in [Security Settings](#).

The Administrator has all rights to grant every other user individual rights.

1

In menu *Edit* click on *Manage users*.



It's recommended to create additional users for different tasks.
User *Admin* should be used only for administrative tasks.

2

Create a new user

Click on *New* to create a new user.

3

Define properties

Enter a user name and the full name of the user. The user name is used for login and will be printed on all reports. The full name is used only to identify the user in the user management..

Enter the password for the user and retype it.

4

Define user rights

You can grant every user one or more rights for all program functions.



Rights *Calibration* and *Adjustment* are deactivated by default. To perform calibration and adjustments you have to grant these rights.

5

Save

When all information is entered click on *Save*.

Sign Document

If [21 CFR Part 11](#) is activated a signature dialogue will be opened after every action which is defined in [Security Settings](#).

- 1 Enter name and password of the user for the first signature.
- 2 If two signatures are required, enter name and password of the user for the second signature in the section *Verified by*.
- 3 If applicable, enter a comment for this signature.
If force comment is activated in [Security Settings](#), you have to enter a comment before proceeding.
- 4 Click on OK to save the signature.

Remark

To enter a comment for a document, click on *Menu-Edit-Remark*

After saving a document you can view or edit the comment by clicking on *Menu-Edit-Remark*.

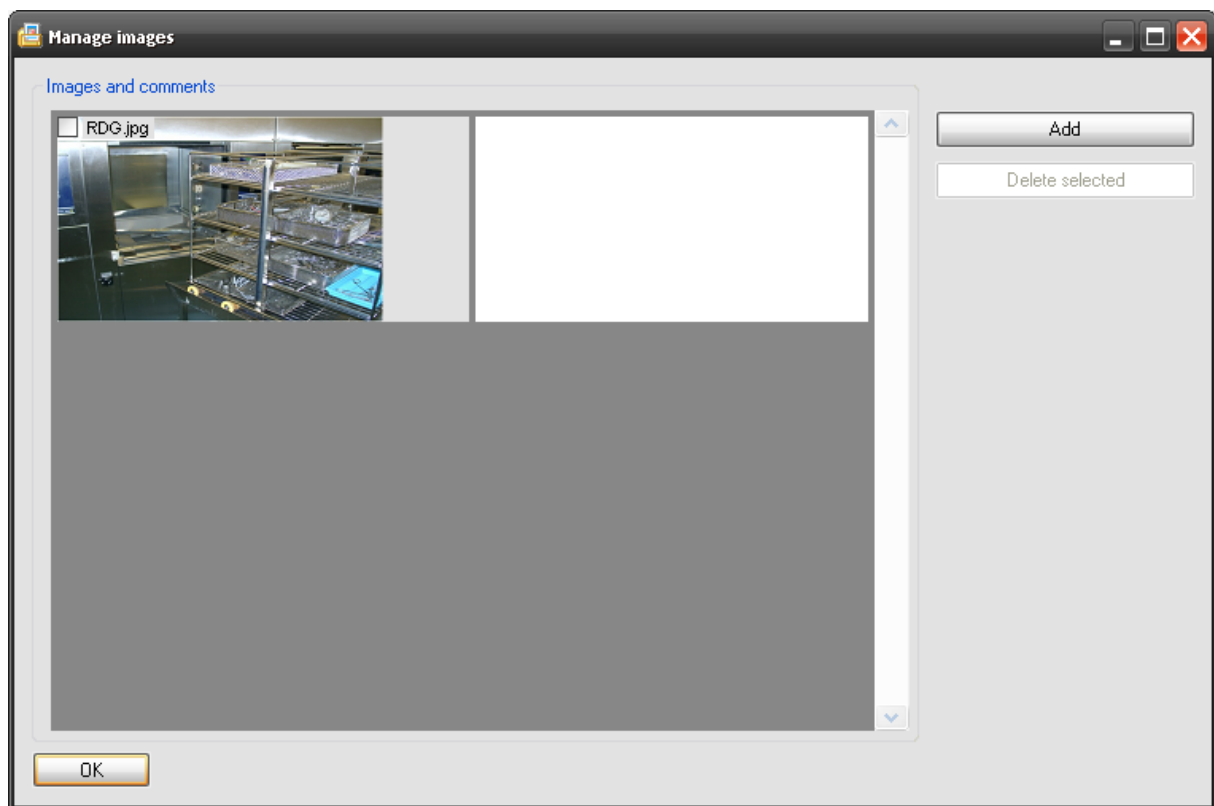
Manage images

Use the image manager to include pictures, sketches or audit reports.

For instance, you can use a picture of your steam sterilizer and place the loggers in process on the picture.

All pictures will be added to the current workspace report.

- 1 In menu “edit”, click on images.
- 2 Click on “add” to add a picture to the image manager.



- 3 Provide a comment for the current picture
- 4 Right-click on the picture to change advanced settings.
You can transform the image to grayscale and rotate or mirror the image.
Use [Place loggers on this image](#) to visually place sensors on the image.
- 5 Click OK to apply your changes.

Place loggers

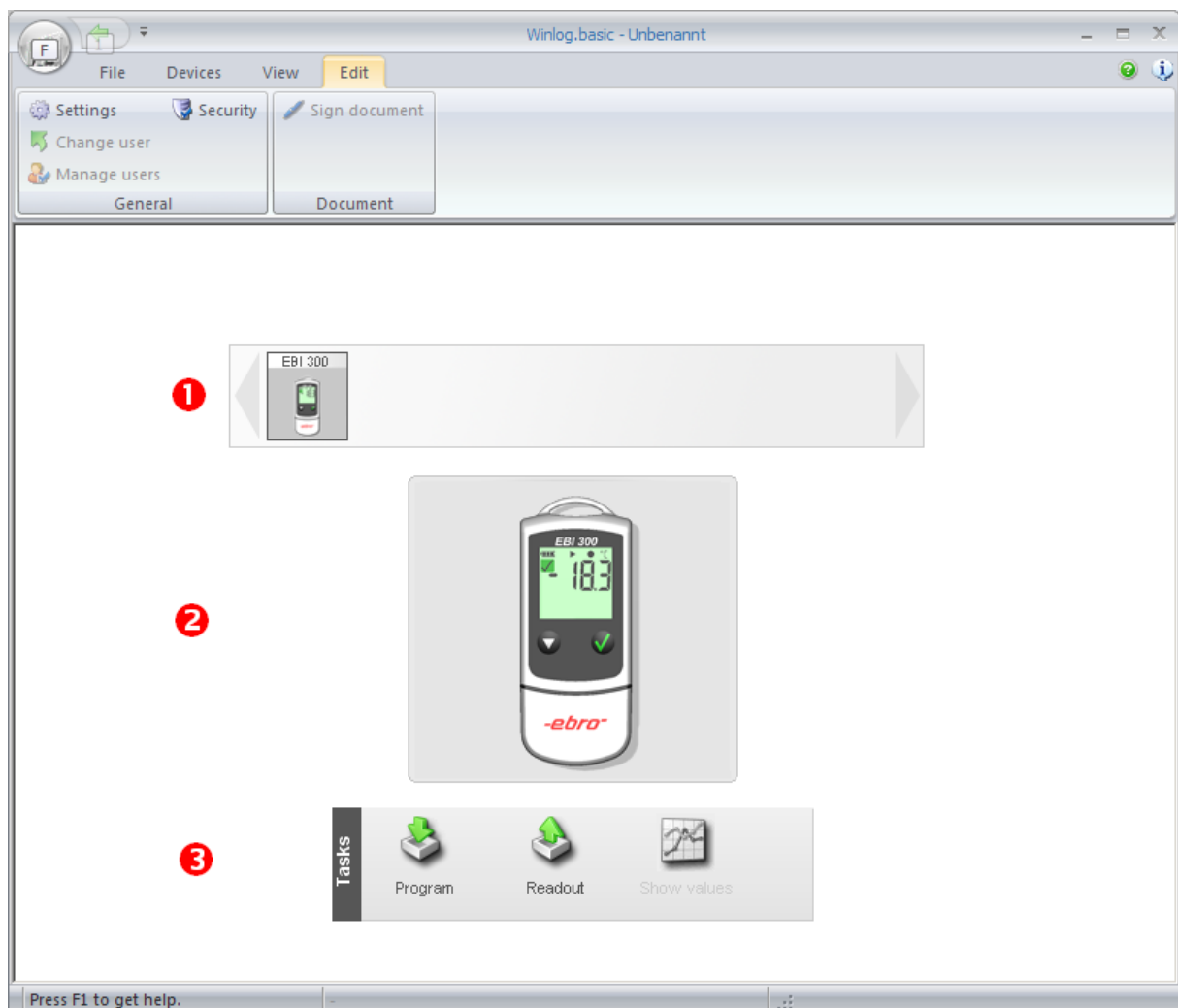


- 1 Left click on the loggers' serial you want to place and drag to the image while holding the left mouse button pressed.
- 2 When using multichannel loggers, you can also move the individual channels to a specific position.
- 3 Click on this button to export the image for further use.
- 4 Click on OK to apply your changes.

Device Selection

All connected devices are displayed as an icon on the start screen.

USB devices will be automatically detected as soon as they are connected to the PC. To detect RS232 devices click on *Menu-Devices-Search*.



- 1 Click on the icon of the device you want to use.
- 2 The active device is display with a picture.
- 3 In the task bar select the function to execute. The available functions are depending on the device type.

Task-bar

General Functions



- 1 Click on *Program* to configure a logger. The [Logger-Programming](#) dialogue will be opened.

If you click on the black arrow you can select a [Configuration](#) for programming.



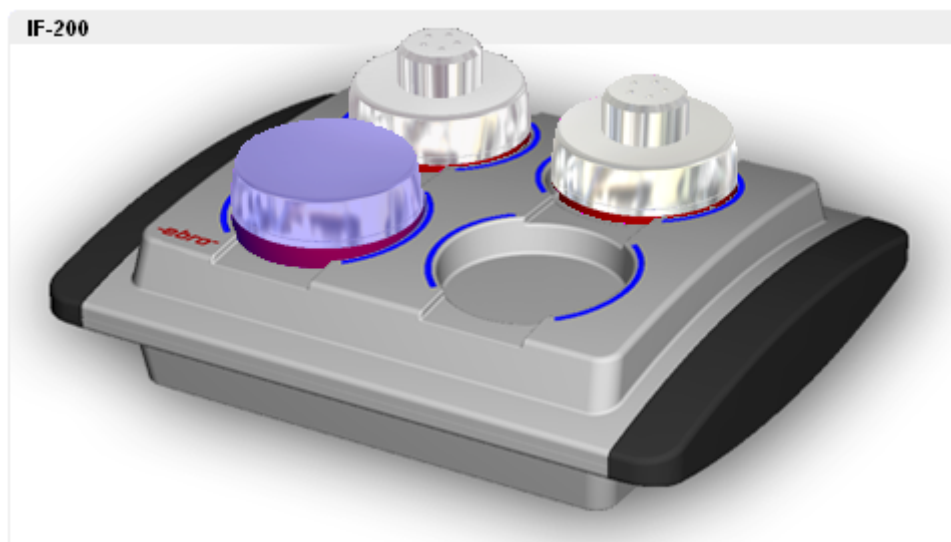
- 2 Click on *Readout* to transfer the measurement data to the software.
- 3 As soon as all measurement data was read out, button *Show values* is activated. All current readings will be displayed.

Specific functions for EBI 10/11/100 Interfaces



- 1 Click on “Search loggers” to scan the interface for available loggers. If a logger is currently in radio mode, the transmission will be canceled.

After scanning has been completed, available loggers are visually displayed.



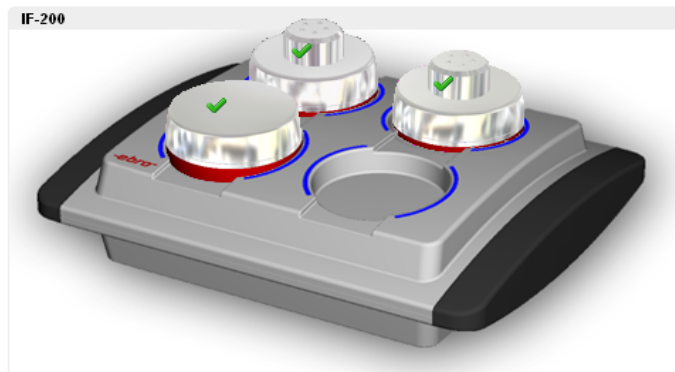
Select the logger to program or read by left clicking with the mouse. The selected logger will be displayed in a blue tone. To select more than one logger, open a selection rectangle by pressing and holding the left mouse button while moving the mouse to the opposite corner. Alternatively you can select multiple loggers by pressing and holding the CTRL-Key while selecting loggers with the left mouse button

- 2 Click on [Program](#) to configure selected loggers.



Programming more than one logger simultaneously requires the use of [Configurations](#).

Successfully programmed loggers are marked with a green check mark.



- 3** Click on “Readout” to read out the measurement data of the selected logger.
Successfully read out loggers are marked with a data symbol.
- 4** In case you are using EBI 10 loggers in radio mode, click on “Radio mode” to start the radio transmission ([EBI 10 Radio Mode](#)).
- 5** Click on “Show values” to display the measurement data of all read out loggers.

Program

On the task bar click on *Program*.

1 The section *General* contains all basic logger information. Click on *Refresh data* if you want to read the logger information again.

2 All programming-options are organized in groups. Click on the tabs to change the settings. Programming options are described below.



Please note that depending on the logger type programming options can vary.

3 Enter all parameters for programming the logger.

4 Click on *Program Logger* to transfer the settings to the logger.

Measurement



Please note that depending on the logger type not all options available.

1 Type

The following logging types are available (depending on the logger type):

- **Endless mode measurement**
Measurement starts immediately and runs endless. As soon as the logger memory is full, the oldest readings will be overwritten.
- **Measure upon start time**
Measurement starts at a given time and stops when the memory is full.
- **Start immediately until memory full**
Measurement starts immediately and stops when the memory is full.
- **Start/Stop Measurement**
Measurement starts and stops at a given time.
- **No measurement / Start upon key pressed**
Recording is stopped (logger is switched off). Logger with a start key can be started manually.
- **Advanced...**
Opens the [Event triggered measurement mode](#) dialog.

2 Interval

Select the sample rate.

3 Start time

Enter the start time for logging types *Measure upon start time* and *Start/Stop Measurement*.

4 Stop time

Enter the start time for logging type *Start/Stop Measurement*.

5 Start delay

You can define a start delay for the logging types *Endless mode measurement* and *Start immediately until memory full*. Recording starts after the delay time.

Event Triggered Measurement

Logging can be started and stopped either by selecting a standard logging mode (start immediately, start and stop at time) or controlled by events. An event can be reaching a temperature or pressure level or reaching a time. Additionally the sample rate of the logger can be changed when an event occurs.

1 Events

List of all defined events. Up to 8 events can be defined.

2 New

Define a new event.

3 Edit

Select the event to edit and click on *Edit*.

4 Delete

Deletes the selected event.

5 Delete All

Deletes all events.

6 Details

Type

To start/stop the logging or to change the sample rate you can choose out of the following event types:

Time (relative)

The event is raised at defined time relative to the start time of the logging.

Time (absolute)

The event is raised at an absolute time.

Measurement dependent

The event is raised depending on a measurement value.

Action

When an event is raised, the following actions can be performed:

- **Start**
Logging will be started.
- **Stop**
Logging will be stopped.
- **Change Measurement Interval**
Sample rate will be changed.

Channel

If event type is *Measurement dependent*, you have to select the logger channel for the measurement value which controls the event (e.g. temperature channel or pressure channel).

Operator

Select the mathematical operator which is used to control the event.

Example: If event type is *Measurement dependent* and you want to start the logger at a temperature higher than 60°C, select > for the operator and enter 60 in the *Value* field.

Value

Value can be a measurement value (temperature or pressure or a time) This value will be compared by means of the operator with the current measurement value or the current date/time. If the comparison is true, an event will be raised.

Measurement Interval

Enter the new sample rate which should be used when an event is raised and Action is Change Measurement Interval.

Process Event once

When this option is selected an event is raised only one time even if the event condition is true for more than one time.



When using the Event Triggered Measurement there must be at least one start event.



Add Event

Add the new or edited event to the event list.

Network



This tab only appears when using radio transmission capable loggers (EBI 10)

The radio mode enables you to transmit measurement data wirelessly directly from the currently monitored process.

1 Channel

You can use 4 different radio channels for wireless transmission. This enables you to use up to 4 independent wireless logger-networks.

2 Transmission interval

You should set up the transmission interval depending on the number of loggers used. More loggers means sustained intervals. This prevents collision based communication issues.

3 Activity time

The activity time specifies the time period the logger transfers measurement data wireless. You should adapt the activity time to your selected process time. Additionally to the wirelessly transferred measurement data, all measurement values are stored by the logger and can be read out after finishing the measurement by using the local interface.



Transmission interval and activity time do have impact on the battery's operating time. Sustained and frequent wireless transmissions increase the logger's power consumption leading to short battery life.

4 Activate radio mode

Activates the radio mode

Limits

Define the limits for all measurement channels.

The limits will be shown in the charts and will be used by the logger for alarm indication.



If you are using an EBI 40 Logger, you can change the number of active channels here.

Descriptions

Depending on the logger type you can store up to four texts in the logger.

Refer also to [Program Settings](#).

Alarm Monitoring

Alarm monitoring defines if [limits](#) will be displayed in the software and how the logger reacts on limit violations.

Enable alarm monitoring

If alarm monitoring is activated, the limits of the logger will be displayed in the software. Depending on the logger type limit violations will be indicated as an alarm by the logger.

LED active

If the logger has an alarm LED you activate the LED to indicate an alarm.



Activating Alarm-LED will slightly reduce battery run time.

Activate alarm pause via key press

This option is only available for EBI 300/310 Logger. Refer to [EBI 300 alarm monitoring](#).

Delay

Alarm delay defines the time a limit violation has to occur until an alarm will be raised.

Logger state

1

Battery-capacity

Shows the remaining capacity of the logger battery.

2

Last battery replacement

Shows date and time of last battery replacement.

3

Replace battery

Click on this button to start the battery replacement wizard.

4

Number of cycles above 100°C

Temperatures above 100°C have an impact on the logger's electronics. For this reason an internal cycle counter increases by 1 if the logger is used at temperatures above 100°C. The logger's life time has been constructed for up to 500 cycles. Exceeding this will cause warning messages on future use.



The cycle counter is only displayed only when using EBI 10, EBI 100 or EBI 11 loggers.

Battery replacement

Follow the wizards' instructions.



The battery replacement wizard is displayed only when using EBI 10, EBI 100 or EBI11 loggers.

Calibration

① Last factory calibration

Shows date and time of last factory calibration.

② Last user calibration

Shows date and time of last user calibration.

③ Calibration

You can calibrate and also adjust data loggers depending on the logger type,. Click on “Calibration” to start the calibration wizard.

④ Restore to factory calibration

You can reset the user calibration if the logger supports user calibrations and already has been adjusted by you. Click on this button to reset the calibration to factory settings.

Configurations

For recurring tasks, you can prepare configurations. A logger configuration contains all parameters you have set up in the various tabs.

Using configurations ensures that loggers are programmed with identical parameters. Furthermore, using configurations speeds up the programming process.

By creating a new configuration, all currently selected parameters are stored in the configuration.

You can change a configuration by clicking on edit.

The individual parameters are combined in the following groups:

- Measurement
- Network
- Limits
- Alarms
- User texts
- PDF Options

To activate individual groups for programming, change the groups program-parameter to “yes”.

Click on OK after finishing your changes.

Save the configuration.

Show values

After logger readout the Diagram View will be opened:

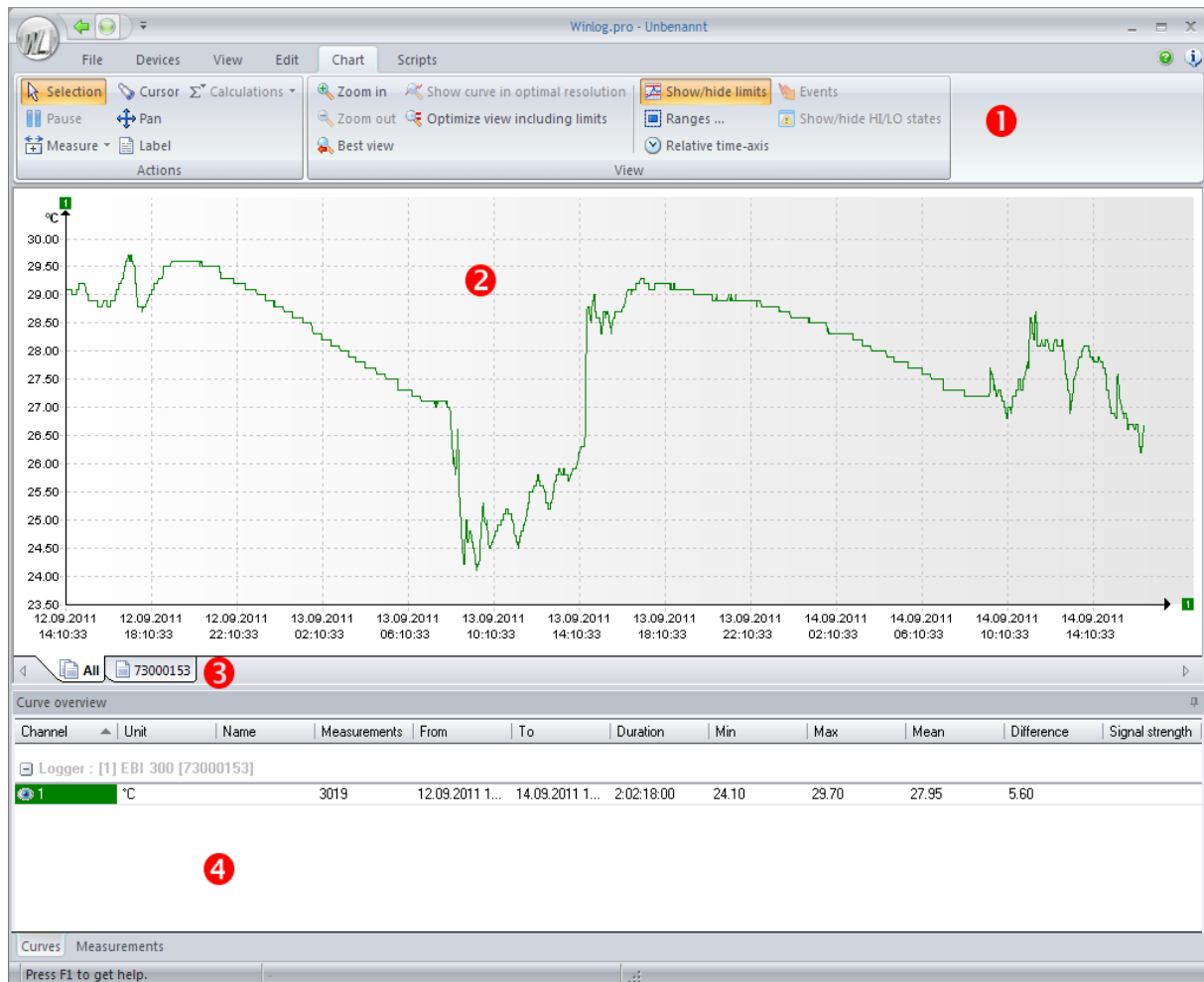


Diagram View is separated into four areas:

- 1 Ribbon – Menu Diagram
- 2 Diagram
- 3 Chart-Selection
- 4 Curve overview

Menu Diagram

The menu contains all tools to adjust the chart according to your requirements. The following functions are available:



Selection-Mode

Use this mode to select and edit chart objects (axes, curves, text fields, etc.).



Cursor

Activates the Cursor-mode. In this mode, you can walk through all data points of a curve and see their values. With a mouse click you can add text fields to the curve. These text fields show the date and time and the measurement value. You can remove a text field by using selection mode. Click on the text field and press DEL-key.

If you click on a curve while in cursor mode, the cursor will follow the curve, showing the current date and time and measurement values in the window "legend".



Pan

Click with left mouse button into the chart. Hold the button and move the mouse. The chart will be moved according to the mouse movement.



Measurement

Activates the measurement mode. By clicking the measurement curve followed by dragging the cursor to a second position, the difference between two measurement values – both in time and value – can be detected.



Label

Click on this button to add a text-field to a chart. An empty text field will appear. Double-click in this field to add text. Click with the left mouse key on a text-field and press the DEL-key to delete it.



Calculations

Click on the button's arrow. You can select one of the predefined calculations (F-Value, A-Value, PU-Value). Using a calculations creates a new virtual channel.



Zoom in

Click on this button to zoom a part of the chart with the mouse.



Zoom out

Click on this button to cancel the last zoom.



Best View

Click on this button to display the chart in its optimal size.



Show curve in optimal resolution

Click on this button to show the selected curve in its optimal size.



Optimal view including limits

Click on this button to show the chart in its optimal size including all limit values.



Show/hide limits

Shows or hides the limit value display.



Ranges

Shows the Range mode. Ranges mark areas in the measurement curves.

The buttons  and  allow to add and remove ranges. For each range its starting and end date and time are shown. Each range can be named and commented.

The button  allows the saving of the marked measurement values in a separate file.

The button  allows saving the range as a picture, which is added to the workspace.

Several calculations can be done over a range's measurement values. The type of calculation can be selected via the according drop-down-menu. The calculation can be started via the button .



Relative time axis

Changes x-axis time format from absolute to relative time. This is particular helpful if you want to compare curves of different periods.



Events

Visually displays measurement events (start, interval change, stop, ...)



Show/hide status

If a logger has measured High or Low, this will be shown in the chart. Click on *Show/hide state* to show or hide the respective mark.

2 Chart

All measurement values are displayed graphically in the chart view.

Curve selection

You can select single curves by clicking with the selection tool  on the curve. The selected curve will be highlighted.

Within tabular view the selected curve is automatically activated.

Context menu

Frequently used functions like zooming are available in the context menu. To open the context menu, click with the right mouse-button into the chart.

Chart properties

Open the context menu and select *Properties*.

You can define colors, fonts, scaling etc.

Add auxiliary lines

You can add as many auxiliary lines in your diagram as you like. Mark the axis on which you would like to add the auxiliary lines and click with the left mouse key into the chart. A new auxiliary line will be created automatically. The auxiliary lines can be moved in any way with the left mouse key. If you want to delete the auxiliary line, click on the line with the right mouse key and the line will disappear automatically.

Add this detail to workspace

You can add the current chart view as image to the workspace by right clicking on the chart. Select "add this detail to workspace" to add the current chart to the workspace. You can review the image by using the [Image manager](#).

3 Chart Selection

If there is more than one logger in a workspace, you can display the curves of all loggers by clicking on tab *All* or show only the curves of one logger by clicking on the tab with the serial number of this logger.

4 Curve Overview

Refer to [Curve Overview](#).

Curve overview

The curve overview shows all loggers of the current workspace with their channels.

There are two view modes which will be activated by clicking on the tab:

Curves:

Shows an overview of all loggers and channels together with statistical data.

Values:

Shows the measurement values in a tabular view.

Context menu-Curves

You can access additional functions in view mode *Curves* with a context menu.

Click with the right mouse button on a channel to open the context menu.

The context menu is separated into two groups: channel and document.

Channel:

Visible: Hide and shows the curve of the selected channel.

Limits: Hide and shows the limits of the selected channel.

Change name: Change the name of the selected channel.

Document:

Delete document:

Deletes the measurement data of one logger (document) from the current workspace.

Audit Trail:

When opening the Audit Trail by clicking on *Menu-View-Audit Trail*, all Audit Trail data will be shown.

When opening the Audit Trail with the context menu, only the Audit Trail data of the current document will be shown.

Properties: Shows the user-texts of the selected logger.

Field chooser

You can adapt the visible statistic fields in the curve overview to your own needs.

- 1 Open the menu "View" and select "Field Chooser"
- 2 Click on the field you want to add and drag it to the header of the curve overview by pressing and holding the left mouse button. The insert position is marked with two red arrows

- 3 To remove fields from the curve overview, select the appropriate field in the header and drag it to the chart area.

Audit Trail

All important software actions (login, logger programming and readout etc.) are stored in the Audit Trail with time-stamp and user information.



Audit Trail is only available if *21 CFR Part 11* is activated in [Security settings](#) .

- 1 By selecting a column and moving it to the header you can group the Audit Trail data.
- 2 You can search for information in the Audit Trail by pressing CTRL + F.
- 3 To print the Audit Trail, select *Menu File Print*.
- 4 By clicking on the arrow symbol the Audit Trail will be closed.

Firmware Update

Some loggers and interfaces are supporting firmware updates..

- 1 Start the update program in [Device Selection](#) by using menu *Devices-Firmware Updater*.
- 2 In the list click on the device which should be updated.
- 3 If your PC has an Internet-connection, click on *Update*.
- 4 In the device list you will see the current firmware version of your device and the version of the new firmware. If the state is **up to date**, no firmware update is necessary.



During firmware upgrade do not disconnect the device from the PC!

- 5 Click on *Close* after all devices are updated.

EBI 10 Radio-Mode

Optionally, you can use EBI 10 loggers in radio- or interface-mode.

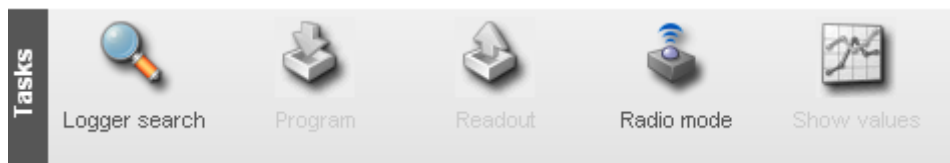
Interface-Mode:

Use the interface-mode to monitor your process offline. Program the loggers and place them into the process to be monitored. After process-end put the loggers back into the interface and read out the measurement data.

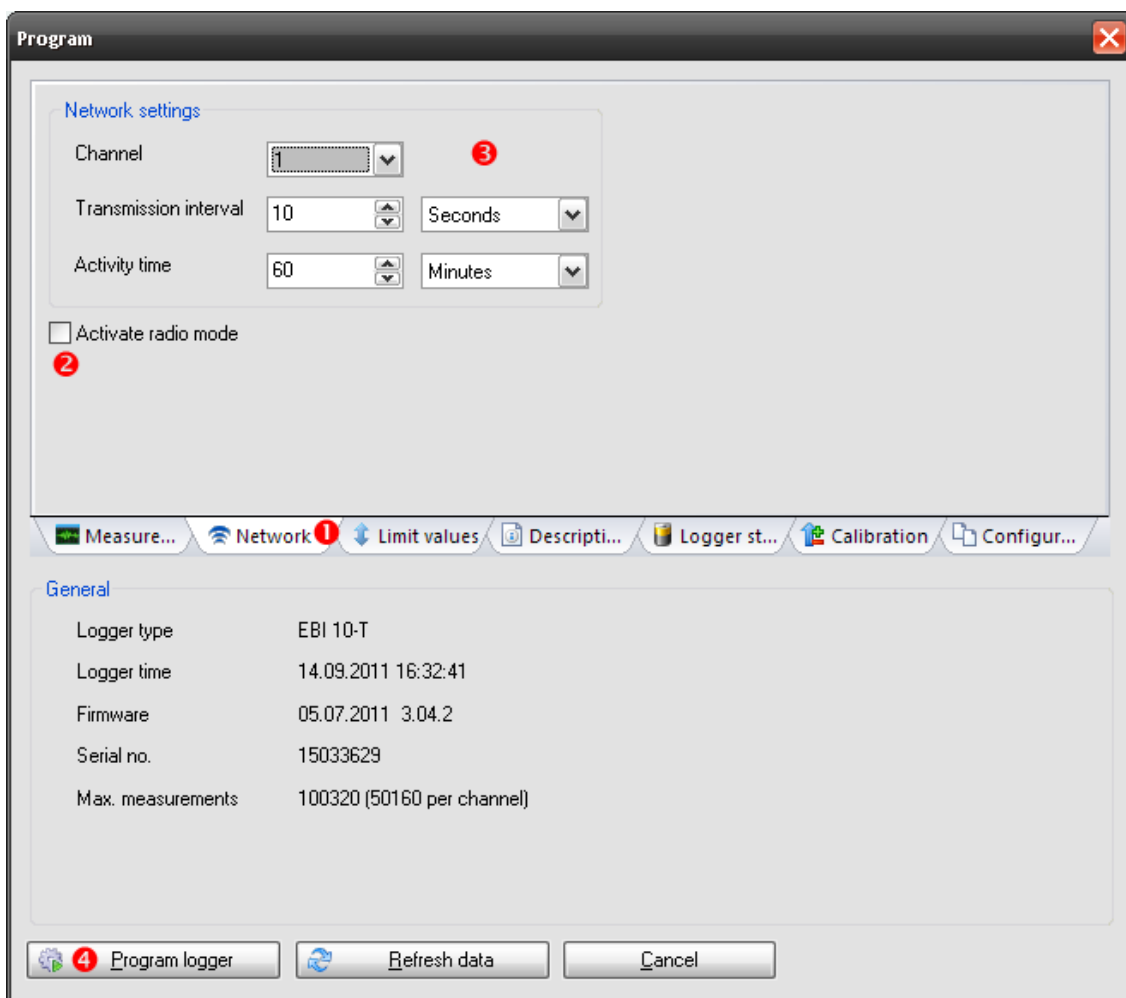
Radio-Mode:

When using the radio mode, the loggers are programmed and radio mode is activated when placed in the interface. During use, the loggers will send measurement data according to the selected transmission interval and activity time. The software will receive display the measurement data in real time.

Activate the logger's radio mode



- 1 Initiate the logger scan and select the logger to be programmed.
- 2 Click on "Program" and specify your measurement parameters.



- 3 Click on "Network".
- 4 Activate the radio mode
- 5 Set up the wireless parameters.

Channel:

EBI 10 loggers can utilize 4 different channels for wireless transmission. This enables you to use multiple radio networks in parallel without having collision based communication issues.

Transmission interval:

Here you can specify the interval for sending the measurement data to the interface. Example: Using a measurement interval of 1 second and transmission interval of 10 seconds will initiate a data transmission of 10 measurements every 10 seconds.

The shorter the transmission interval the greater the logger's power consumption will be. Use preferably long intervals to increase battery lifetime.

Using lots of loggers (>10) in radio mode at short intervals (<30s) can cause the data transmission to be interrupted. Use preferably long intervals to prevent communication issues.

Activity time:

Here you can specify the time period the radio mode will be active. Adjust this value to your process duration in order to minimize power consumption.

When the activity time has been exceeded, the logger will cease radio transmission – measurement values will still be recorded though.

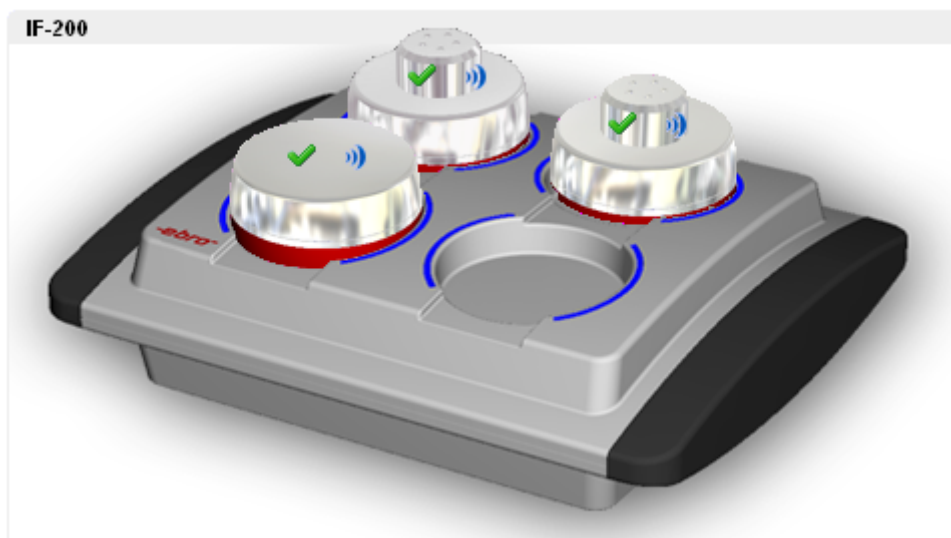
6 Click on "Program"

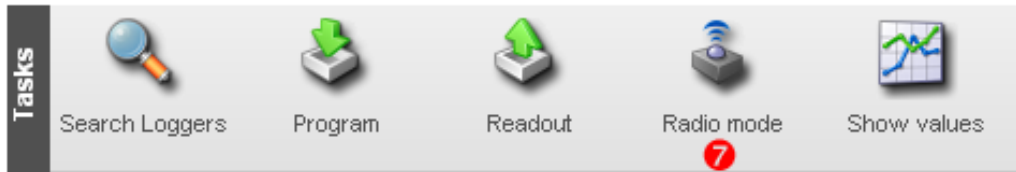
Programmed loggers will be marked with symbols for radio mode and completed programming.

Repeat this procedure for all loggers in the interface.



You can also program all loggers simultaneously by using a [Configuration](#).





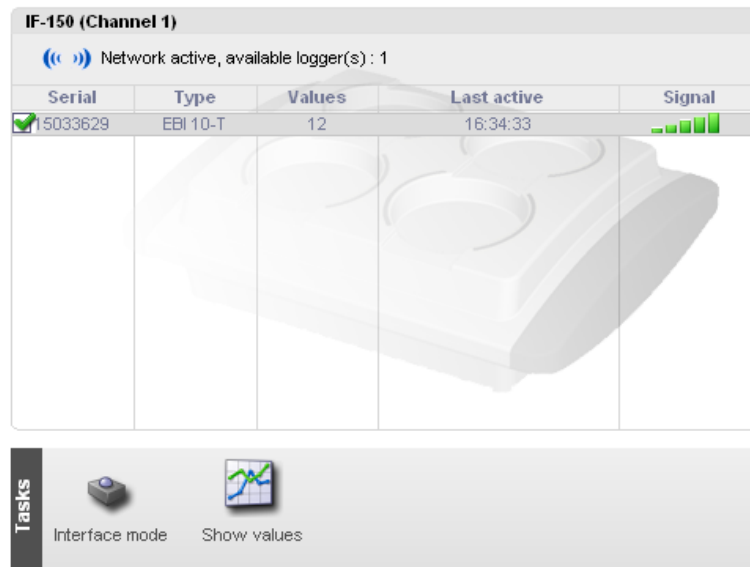
- 7 After all loggers have been programmed click on “Radio Mode”.

Initiating the radio mode will cause all recorded measurement values to be deleted in the logger.
Confirm the message.

Select the appropriate network channel (the channel you have chosen when programming the logger)

Working with the Radio-Mode

After the radio mode has been started, you can see a list of all active loggers available in the currently active network.



Interface Mode

Click on this button to cease the radio mode. Loggers can then be programmed or read out locally.

Show values

The measurement values will be displayed (see [Show values](#)).

As soon a logger transfers new measurements in radio mode, the measurement view will automatically be refreshed.

In order to analyze particular curves (e.g. zooming, using the cursor mode, etc.), it is necessarily to pause the automatic refresh.

Click on the pause button  to temporarily pause the automatic refresh.

To re-enable automatic refresh click on the pause button again.

USB-Stick Transfer

EBI 40 series data loggers can be programmed in two different ways:

Program via direct USB connection to your PC

Program by using a USB-Stick

Program an EBI 40 data logger by using an USB-Stick

In order to use a USB-Stick for programming, the stick has to be configured first:

Prepare the USB-Stick

- 1 Plug in your USB-Stick
- 2 Click on File->USB Sticks
- 3 Select the stick you want to configure from the list of available sticks
- 4 Click on EBI 40 and then on "Add"
- 5 Click on "OK".

The stick will be prepared for use with EBI 40 loggers and will appear as virtual data logger in the [device selection view](#).

EBI 300/310

Basic programming of EBI 300/310 series loggers is described in chapter [Program](#).

There are several additional programming options for EBI 300/310 loggers:

External Probes

EBI 300/310 series loggers can measure with internal sensor or external probes. To use an external probe activate the option *External Probe*.



Older firmware versions do not support an external probe. In this case the option *External Probe* is not available. To use external probes a [firmware update](#) is necessary.

If you select *External Probe*, a drop-down menu with the probes viable for the logger appears. Here you can select the probe you want to connect to the logger. In addition, the option *activate internal temperature channel* appears. When checked, the logger's internal channel will measure in addition to the channel(s) of the external probe. This way there can be up to three measurement channels. The image on the right side of the window displays the location of each channel.

If *External Probe* is activated and the logger is programmed with logging mode *No Measurement / Start at keypress*, logging starts at probe connection.

Measurement-Stop Condition

Stop Condition defines which events will stop the data recording.

After PDF-Creation:

As soon as the EBI 300/310 is connected to a PC and a PDF-document was created, recording will be stopped.

Key press:

Data recording will be stopped when recording is stopped with the EBI 300/310 function menu. If an external probe is used, logging stops at probe disconnect.

None:

Recording stops according to the programmed logging type (endless, start-stop, measure until memory full).

Measurement-Maximum measurement time

Set the time in minutes or hours the measurement period shall encompass. The logger logs the measurement data until the maximum measurement time is over. Thereafter the logger will erase its measurement data and begin a new measurement period. Therefore only the data of the current measurement period is shown.

Measurement-Set Password

Set the password that shall be required in order to be able to program the logger in the future. The password will be requested when hitting the button *Program Logger*.

Measurement-Delete Password

Should the logger already have a password for programming, this button will appear and replace the button *Set Password*. Click on *Delete Password* in order to erase the password from the logger's memory. Thereafter it can be programmed without the necessity to enter a password, and the button *Set Password* appears.

Limits-Multiple Alarm Ranges



Multiple Alarm ranges are supported only by EBI 310 loggers.

With EBI 310 loggers up to 6 temperature zones can be used for an advanced alarm-handling. Only one channel can have this feature. Therefore you have to select the channel at *alarm ranges*.

By hitting the button  you can open the window for the alarm range settings.

The green zone is the valid temperature zone for which no alarm will be raised.

Limit:

Temperature threshold between 2 Zones.

Alarm after:

If temperature is above the limit for at least the time defined in *alarm after* an alarm will be raised.

Single Event:

Every single limit violation will be checked against the *alarm after* time. If the time above the limit is greater than the alarm after time, an alarm will be raised.

Cumulative Event:

The time of all limit violations will be summed. If the sum of all times is greater than the time *Alarm after*, an alarm will be raised.

Violations:

Additional, the maximum number of permitted violations can be selected before an alarm will be raised. If *unlimited* is activated the number of violations will not affect the alarm state.

LEDs:

For every alarm condition of one zone, an indication with the yellow and/or red LED can be selected. To activate the LED, click on the LED-symbol of the regarding alarm zone. If LED-alarming is active, the LED-symbol is filled. The alarm of one zone can be indicated with one or both LEDs.

PDF-Options

Format

File name generation:

Define the format of the PDF-document name.

Decimal separator

Define the character used as the decimal separator.

Profile-ID

You can define an unique number (ID) with up to 4 characters for the programming of a EBI 300. which will be printed on the PDF-document. If option *Show in display* is activated the ID will also be shown on the logger display.

Date format

Define the format for all date strings in the PDF-document.

Time format

Define the format for all time strings in the PDF-document.

Time zone

Define the time zone which is used for the internal clock of the logger.

Texts

Report title:

Defines the title of the PDF-document.

Texts:

You can write a short comment – e.g. a description of the measurement – which will be printed on the PDF-header.

Misc settings

Language:

The EBI 300/310 can create a PDF-file of the in different languages. Select the language for the PDF-file.

Layout:

The Layout file defines the appearance of the PDF-document – e.g.. colors, text distribution, line styles etc.

Chart:

The chart of the PDF-document will be scaled by default automatically depending on the measurement values. You can also define a fixed scaling for the Y-axis – e.g.- from -20°C to +30°C.

MKT activation energy:

Here the MKT activation energy can be entered in kJ/mol.

Alarm Monitoring

You can deactivate an activate alarm monitoring without a PC with the EBI 300/310 device menu. With this option, it is possible to stop alarm monitoring before the logger will be connected to a PC for PDF-printout thus avoiding an alarm due to heating up. After the logger is back at the monitoring location (e.g. freezer) alarm monitoring can be started again.

Configurations

You can create an directly executable program for programming EBI 300/310 loggers with the current program options.

With Quickstart it is possible to program EBI 300/310 loggers with every Windows PC also if there is no Winlog software installed.

Click on button *Create Quickstart* and select a name and folder for the Quickstart-program.

Quickstart

Create Quickstart

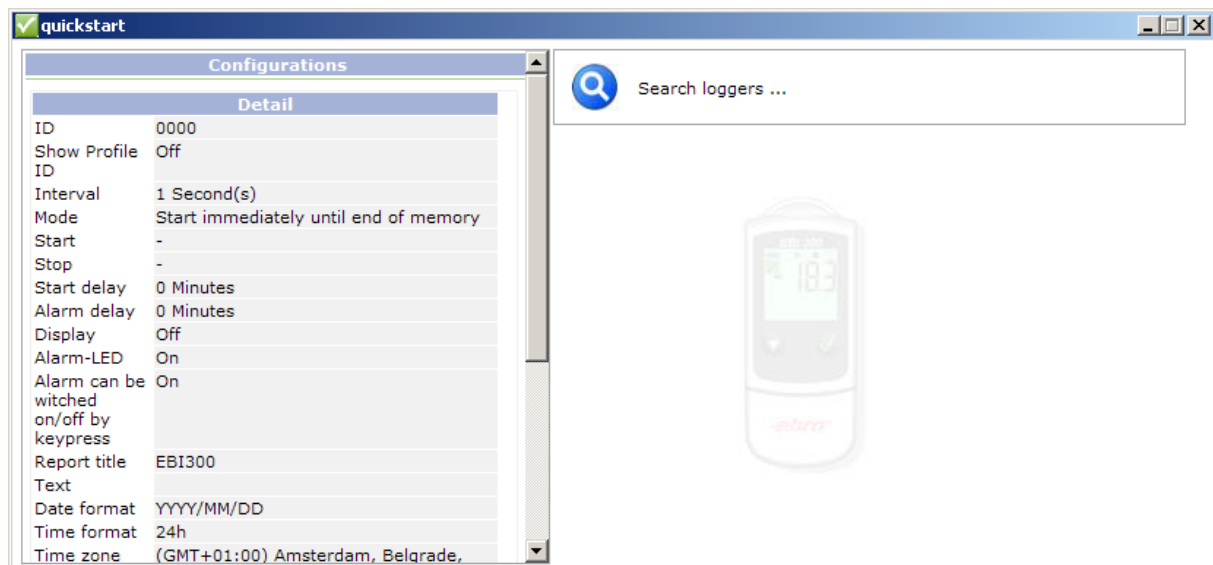
Quickstart is a fast and easy way to program one or more EBI 300/310 Logger without installing a software.

- 1 Enter all program parameters as described in [Program](#) and [EBI 300 Program Options](#).
- 2 Select *Configurations* and click on *Create Quickstart*.
- 3 Enter a name for the Quickstart program and select a folder.
- 4 Click on *Save*.

The created file – e.g. quickstart.exe – can be directly started on every Windows PC.

Program EBI 300/310 Loggers with Quickstart

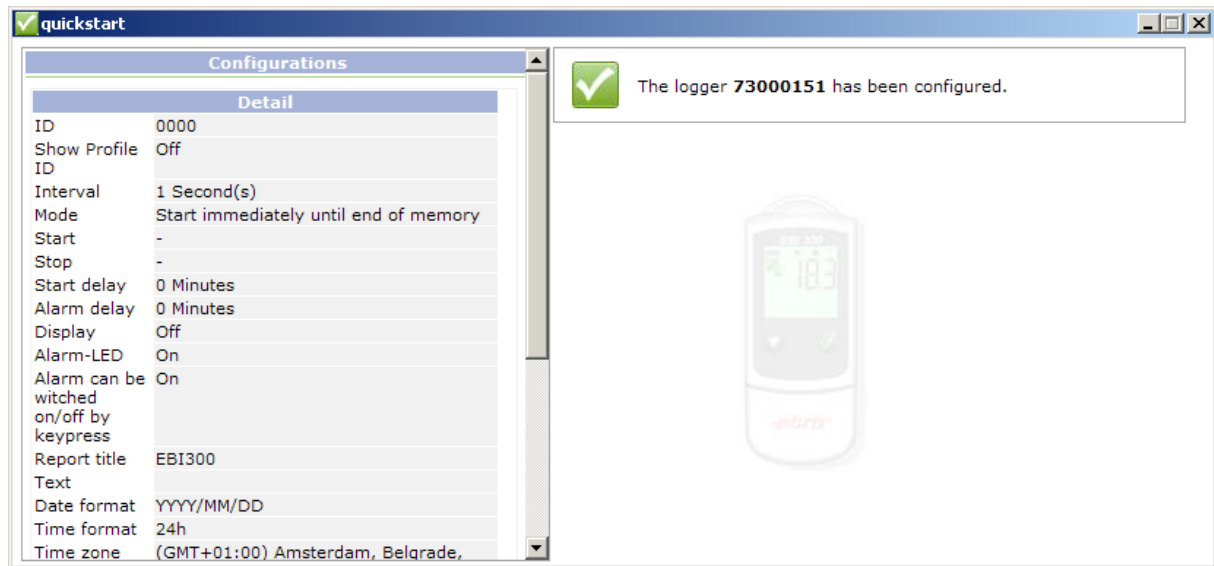
- 1 Start the Quickstart program.



On the left side all configuration details are displayed.

On the right side the status of the connected loggers is shown.

- 2 Connect a EBI 300/310 Logger to USB.
- 3 As soon as the logger is detected it will be programmed automatically.



- 4 Disconnect the EBI 300 Logger from USB.

It is possible to program multiple loggers one after the other. For this connect the next logger to USB, wait until the logger is programmed and continue in the same way with all loggers.



You can not use Winlog and Quickstart simultaneously.