elproMONITOR

Operation Manual

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Used Symbols and Designations

Information

IMPORTANT INFORMATION AND WARNINGS

<xxxxxxxxx>	Syntax for placeholders Placeholders are written between < > characters.
YYYYYYYY	General function names are written in light-blue italic capitals. For example: *SAVE*
→	Course of action
⇨	Reference to resuming chapter or document Example for a chapter: 2.1 *Login* / Database Settings / Session Time]
	Current cursor position
ECOLOG-PRO / ECOLOG-NET	Name of the module series with network connection (Ethernet) Data are loaded to the elproMONITOR via local network. The functional description and technical data of the modules are included in the corresponding operating manuals.
elproEVENT	elproEVENT logs all actions that occur while elproMONITOR is running. ⇨ SV3031E
elproUSER	User management program ⇨ SU3031E.

In the interest of our customers, we reserve the right to make any changes resulting from technical advancement. Therefore, schematic diagrams, descriptions, and scope of delivery are subject to change without notice.

1 Before You Start

1.1 Introduction to elproMONITOR

This application is used for monitoring, displaying and archiving the sensor data of the I/O modules (ECOLOG-PRO, ECOLOG-NET) and for forwarding alarm messages.

Basic functions

The following functions are part of the elproMONITOR program:

- Monitoring of sensors and logging of measurement values.
- Alarm monitoring
- Audit Trail.

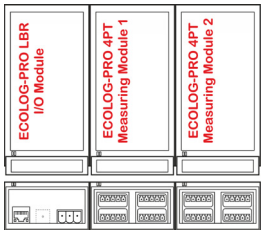
1.1.1 System Requirements

⇨ For details of system requirements, see ELPRO shop:
System_Requirements for ECOLOG Unlimiteed with software elproMONITOR 2018.3

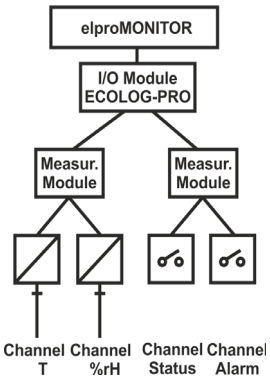
1.1.2 Software Licensing

⇨ SM3032E elproMONITOR Installation

1.2 ECOLOG-PRO



THE ORDER OF THE MEASURING MODULES AFTER SERVICING MUST BE IDENTICAL TO THE ORDER BEFORE SERVICING.



I/O modules are the link between the elproMONITOR monitoring software and the measuring modules. The measuring modules with their sensors and contact inputs register the system data and alarms are triggered via the contact outputs. The channels of the ECOLOG-PRO measuring modules cannot be configured until the corresponding
I/O module is detected by elproMONITOR.

ECOLOG-PRO LBR

I/O module for the connected measuring modules. The module is needed to supply the measuring modules with power and for communication with elproMONITOR via the Ethernet network. The module does not contain any measuring parameters which can be recorded with elproMONITOR. It is not included in the list of measuring modules.

⇨ 7.5.1 *I/O Module - ECOLOG-PRO LBR*

ECOLOG-PRO 4PT

4-channel measuring module capable of logging temperatures from -200°C to 200°C. Pt100 sensors are used as temperature sensors. It has an internal memory with a capacity to hold 10,000 measured values. It is connected to an ECOLOG-PRO LBR module for operation.

⇨ 7.5.2.1 *Parameterizing - ECOLOG-PRO 4PT*

ECOLOG-PRO 4MA

4-channel measuring module for logging 4-20 mA signals. It has an internal memory with a capacity to hold 10,000 measured values. It is connected to an ECOLOG-PRO LBR module for operation.

⇨ 7.5.2.2 *Parameterizing - ECOLOG-PRO 4MA*

ECOLOG-PRO 2TH

Module for 2 T/RH sensors for temperature and humidity recording. It has an internal memory with a capacity to hold 10,000 measured values. It is connected to an ECOLOG-PRO LBR module for operation.

⇨ 7.5.2.3 *Parameterizing - ECOLOG-PRO 2TH*

ECOLOG-PRO 4DI

Module with 4 contact inputs (digital inputs). It has an internal memory with a capacity to hold 10,000 measured values. It is connected to an ECOLOG-PRO LBR module for operation.

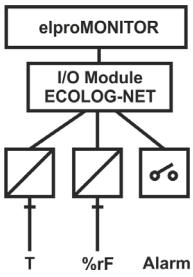
⇨ 7.5.2.4 *Parameterizing - ECOLOG-PRO 4DI*

ECOLOG-PRO 4DO

Module with 4 contact outputs (digital outputs). It is connected to an ECOLOG-PRO LBR module for operation.

⇨ 7.5.2.5 *Parameterizing ECOLOG-PRO 4DO*

1.3 ECOLOG-NET Loggers



The ECOLOG-NET loggers are referred to as I/O modules in the elproMONITOR monitoring software. The feature provided in ECOLOG-PRO in the separate communication module is directly integrated in the ECOLOG-NET loggers. The ECOLOG-NET loggers with their sensors and digital inputs record the system data. Before the ECOLOG-NET loggers are used they must be programmed in the elproLOG ANALYZE software.

⇨

ECOLOG-NET LP4

4-channel loggers for recording temperatures with Pt100 sensors. 64,000 measurement values can be logged. The logger communicates directly with elproMONITOR via the Ethernet network.

⇨ EL6006E Operating Manual ECOLOG-NET LP4

ECOLOG-NET LA8

8-channel logger for logging 4-20 mA signals. 64,000 measurement values can be logged. The logger communicates directly with elproMONITOR via the Ethernet network.

⇨ EL 6005E Operating Manual ECOLOG-NET LA8

ECOLOG-NET LR8

The wireless system consists of the ECOLOG-NET LR8 wireless logger to log data from up to 8 wireless sensors and a maximum of 64,000 measurement values. The wireless logger communicates directly with elproMONITOR via the Ethernet network.

⇨ EL6007E Operating Manual ECOLOG-NET LR8

1.4 Alarm Interface LAN

Ethernet alarm interface

2-channel alarm interface handled directly by elproMONITOR.

⇨ 7.7 *Alarm Interface LAN*

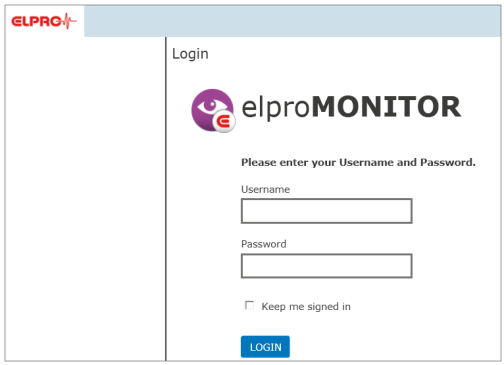
1.5 General Safety Information

Datalogger Operation Manual

Information on the current product range and datasheets can be found at: ELPRO_shop

2 Starting elproMONITOR

2.1 Login



1. *Login window*

Start thesSoftware

Step 1 Entering your user name

Step 2 Entering your password

Step 3 Keep me signed in
The user is automatically logged in to elproMONITOR and remains continually logged in.

Step 4 LOGIN Click

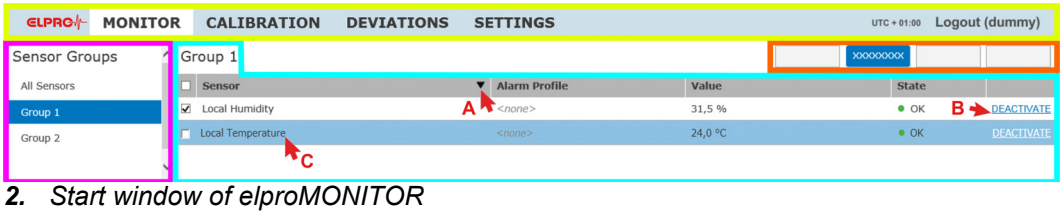
Database Settings

- Keep me signed in
  Can be activated in the elproMONITOR database. This function is deactivated by default.
- Session Time
  Time after last user operation until you are automatically logged out of elproMONITOR.

⇨ To configure the elproMONITOR database.

2.2 User Interface

Once successfully logged in, elproMONITOR switches over to the start window which is split up into 4 areas.



2. *Start window of elproMONITOR*

⇨ 2.2.1 *Header*

Overview column for groups, filters and settings.

Applicable functions.
The description of these functions is given in the corresponding chapters.

Details column
All the information on the groups, filters or settings selected in the overview column are contained in this area.
The details column comprises a column header (Group 1) and column content.

Information dependent on the current selection.

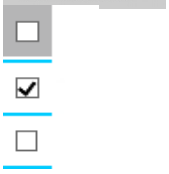
Legend for the detail column

Group 1

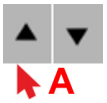
The information table header: Group 1 relates to the information selected in the overview column.

EXAMPLE - Group 1
The information table contains all the information on the sensors in this sensor group. You can block the sensor alarm and the related scheduler in the current monitor using the function: DEACTIVATE. No alarms are then forwarded, but the measurement values continue to be logged.

Column Header	EXAMPLES Sensor name
Sensor	Name of the I/O module to which the sensor is connected.
I/O Module	



The usable functions are executed on all selected lines at the same time.



The lines can be sorted in ascending or descending order, depending on the content of a particular column. The arrow tips are only displayed after first-time sorting. Start the sorting procedure by clicking the mouse on the column header.

These are functions executed directly on this line.

EXAMPLE - DEACTIVATE

Left-click on the line to open:

MONITOR	⇨ 3.2 *Sensor Analysis*
CALIBRATION	⇨ 4 *CALIBRATION*
DEVIATIONS	⇨ 5.6.1 *DETAILS* Example of a Deviation log
SETTINGS	⇨ 6 *SETTINGS*
USER	⇨ User management, further details are in the operating instructions SU3031E

PREVIOUS
NEXT

Allows page by page scroll down or up in the table.

2.2.1 Header

Clicking on the ELPRO logo opens up the elproMONITOR information window ... with the current version number.

3. *Information window*

MONITOR ⇨ 3 *MONITOR*

CALIBRATION ⇨ 4 *CALIBRATION*

DEVIATION ⇨ 5 *DEVIATIONS*

SETTINGS ⇨ 6 *SETTINGS*

USER ⇨ Starts the user administration, further details are in the operating instructions SU3031E

BASE ⇨ Starts the application ECOLOG-PRO Base Maintenance, further details are in the operating instructions EP6002E

This application is only available on the ECOLOG-PRO Base!

Loading..... elproMONITOR measurement values are updated.

UTC + 01:00 Time zone, selectable in: 6 *SETTINGS* - User - Profile

Logout (tenant1 / user)

- Logs out from elproMONITOR.
- Name of user logged in: user
- Tenant: tenant1 (optional)

2.2.2 Confirmations

Performed actions are confirmed with a message relating to the action.

Successful

Return to the previous view.

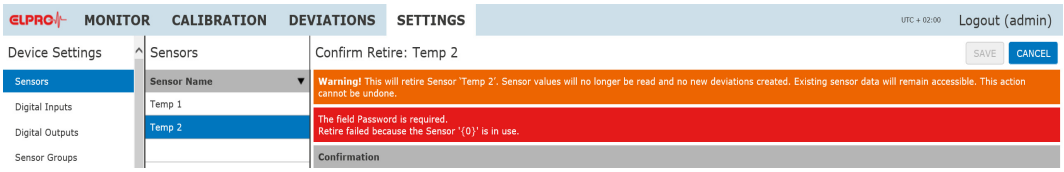
Warning

Warnings are information regarding the current, as yet unperformed action.

Error

Errors can be caused by incorrect or missing inputs.

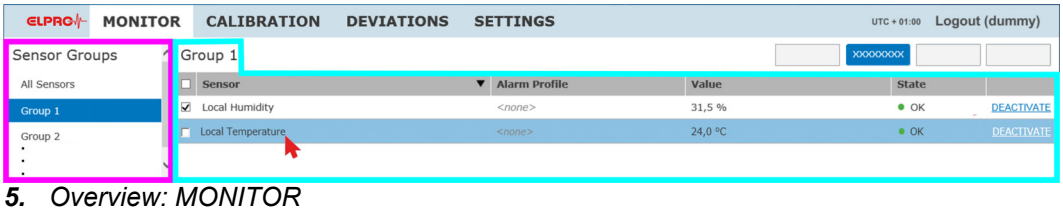
EXAMPLE - deletion of the "Temp 2" sensor has failed



Error cause No comment or incorrect password entered for confirming the action.

4. *Warning & Error*

3 MONITOR



5. *Overview: MONITOR*

Left-clicking on a specific line opens the sensor analysis for that line.

⇨ 3.2 *Sensor Analysis*

Sensor Group

The overview column lists all the available sensor groups.
EXAMPLE - Group 1
This sensor group is assigned to a temperature and an air humidity sensor.

Group 1

Sensor list with all the sensors belonging to the selected group. The information below is available for each sensor:

Sensor	Sensor name	⇨ 7.1 *Sensors*
I/O Module	Name of the I/O module	⇨ 7.5 *ECOLOG-PRO series*
Alarm Profile	Assigned alarm profile	⇨ 6.3.1 *Profile*
Value	Current measurement value	
State	Current sensor status	⇨ 3.1 *State*

Only sensor groups assigned to the corresponding user group are displayed (see elproUSER).

XXXXXXXX

CALIBRATION

The current time is entered into the calibration log as the starting date and the sensor status switches over to: Deactivated by calibration. Once calibration is complete, the status switches back to OK.

⇨ 4 *CALIBRATION*

ANALYSIS

Change to the sensor analysis for all selected sensors

⇨ 3.2 *Sensor Analysis*

DEACTIVATE

- Opens the window for deactivating the sensor alarm for all selected sensors.
  In the ongoing monitoring, the data is still recorded but not taken into account in the statistics. No alarms are triggered for limit violations.
- Deactivation is only possible once a comment template has been selected or a comment has been entered and authenticated with the password.
- EXAMPLE - maintenance work
  A missing sensor signal caused by maintenance work triggers no alarm if the sensor is deactivated.

ACTIVATE

ACTIVATE releases deactivated sensors.

3.1 State

State	Priority	
OK	1	All OK.
Low Battery Notification	2	The state of the sensor power supply is at low battery level.
Upper Limit Warning	3	The measurement value is higher than the upper warning limit.
Lower Limit Warning	3	The measurement value is lower than the lower warning limit.
Upper Limit	4	The measurement value is higher than the upper alarm limit.
Lower Limit	4	The measurement value is lower than the lower alarm limit.
Digital Input Alarm	4	The state of the digital input corresponds to the alarm criterion.
Logger Interval Error	4	Wrong logging interval for reloading.
Sensor Failure	5	The sensor has failed.
No Connection	6	elproMONITOR has no connection with the measuring module/data logger to which the corresponding sensor is connected.
Deactivated by Calibration	7	The sensor alarm has been deactivated by the calibration process.
Deactivated by scheduler	7	The sensor alarm was deactivated by the scheduler.
Deactivated by user	8	The sensor alarm was deactivated by the user.
Retired	9	The sensor is no longer monitored and cannot be reactivated. The logged measurement values are not deleted. A "retired" sensor is not deleted from the license list!

Priority

Defines which sensor state is displayed if a sensor has many simultaneous states.

- Only the status with the highest priority is displayed. Only one of these statuses is possible at any one time. The statuses have the same value.

Upper Limit
Lower Limit

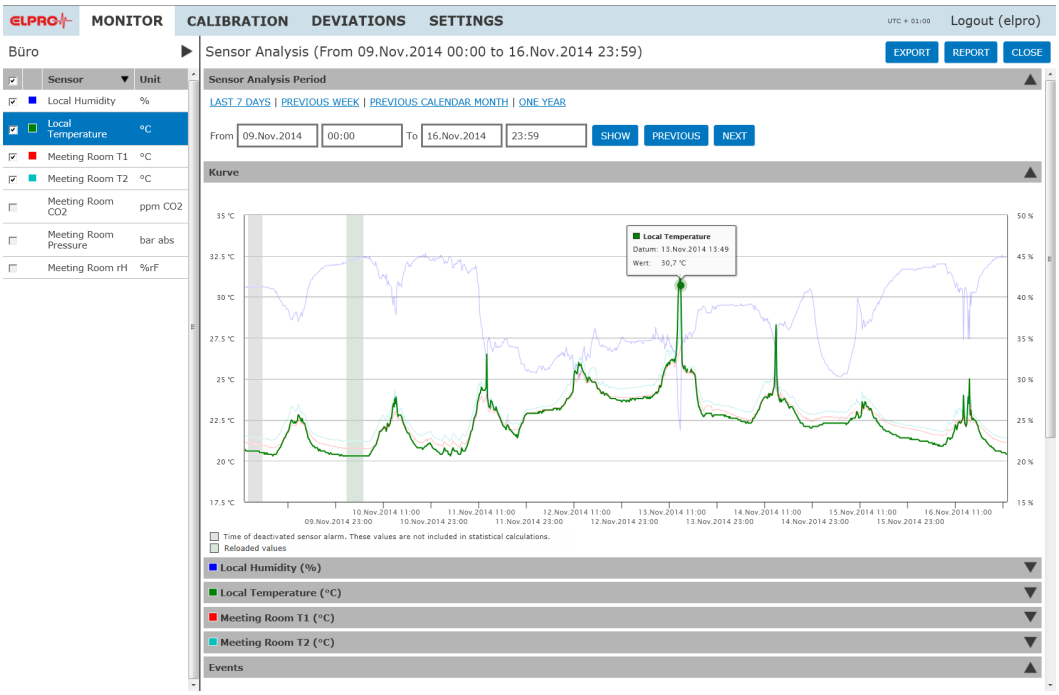
The two states are displayed immediately. The alarm is only triggered at the end of the delay time ("Delay").

⇨ 8 *Annex: Alarm Text Placeholders*

3.2 Sensor Analysis

elproMONITOR has a number of functions to analyze and export the recorded measurement values.

3.2.1 Chart



6. *Evaluation*

Sensor Analysis Period Default of time range of logged data contained in the chart. You can zoom the displayed range by limiting the time range.

XXXXXXXX

EXPORT With EXPORT the data is exported to an MS-EXCEL file.

⇨ 3.2.5 *EXPORT*

CLOSE Close the current window

SHOW The time range specified with "From: ... To:" is displayed

NEXT
PREVIOUS Permits up and down scrolling page by page in the logged data.

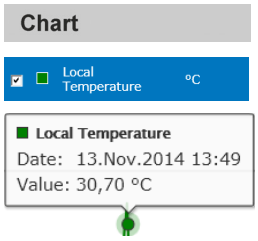
REPORT

- Created a sensor analysis report

  ⇨ 3.2.4 *Example: elproMONITOR Sensor Analysis Report*

- In the sensor analysis of the calibration, the calibration report is created.

  ⇨ 4.5 *Example: elproMONITOR calibration report*



The sensor data in the measurement value chart above are taken from the Office group: Local Humidity, Local Temperature, Meeting Room T1, and Meeting Room T2.

Select the curve: Local Temperature (green) to highlight it and then use the cursor to measure it.

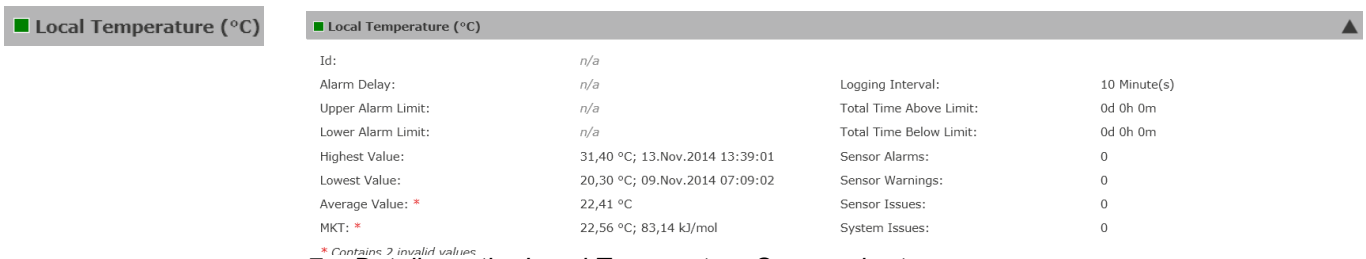
Deactivated sensor ⇨ 3.2.3 *Statistics*

Reloaded measurement values ⇨ 3.2.2 *Reload Measuring Values*

Calibration duration
For the duration of calibration the sensor is deactivated and these measurement values are not taken into account in the statistics.

⇨ 3.2.3 *Statistics*

Details Below the chart, detail information is provided for every sensor in the form of a list and an event report. This information always corresponds to the displayed time range.



7. *Details on the Local Temperature Sensor chart*

Events

Events

Date & Time	Event	User	Incident No.	Type	Priority
13.Nov.2014 11:43:49	Sensor activated	monitoradmin	567	Information	Medium

Key	Value
Sensor Name	Meeting Room T1
Full Name	elproMONITOR Administrator

Date & Time	User	Comment
13.Nov.2014 11:43:49	monitoradmin	123

13.Nov.2014 11:41:57	Sensor deactivated	monitoradmin	566	Information	Medium

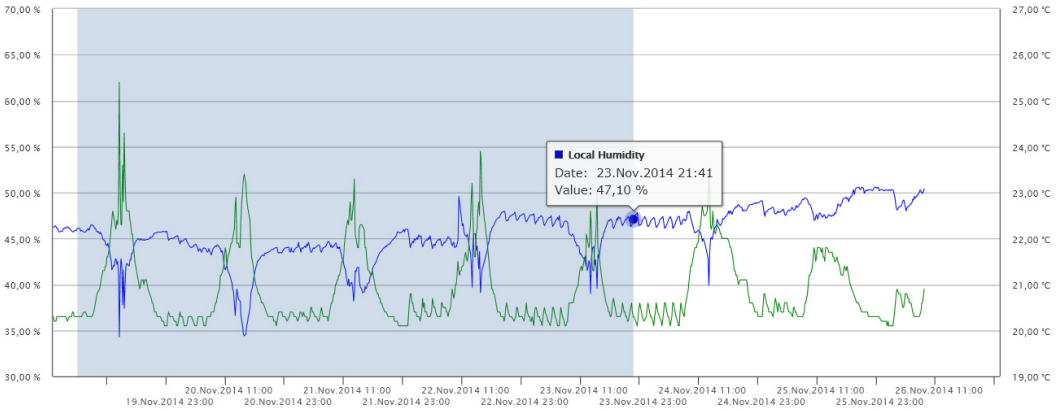
8. *Event Report*

Error Message

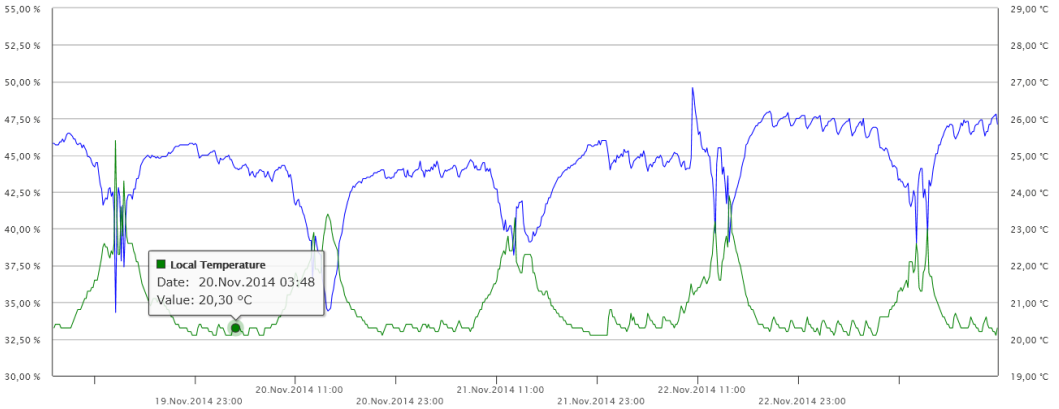
A maximum of 2 different measurement value units and a maximum of 25 sensors can be displayed.

3.2.1.1 Zoom

Highlighting a section of the chart displays it in enlarged form.



9. *Manual zoom*

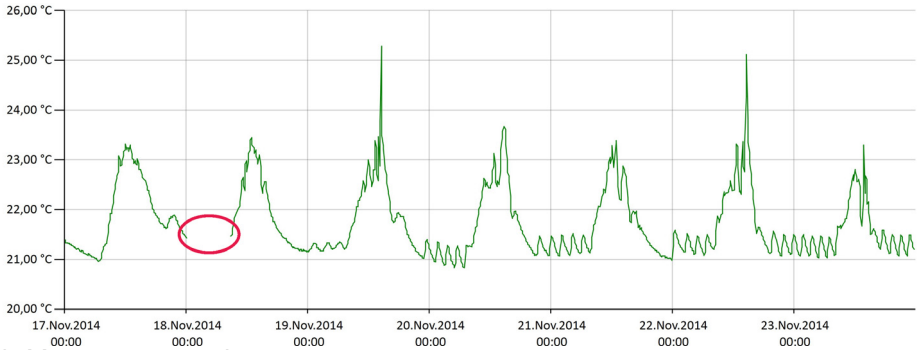


10. *Zoomed section*

3.2.1.2 Invalid Measurement Values

Sensor Failure

The chart does not display invalid measurement values. The curve is interrupted (gap).



***11.** Measurement values: nc*

3.2.2 Reload Measuring Values

After a system failure, elproMONITOR loads the missing measuring value to the datalogger from the internal storage. Missing data is automatically reloaded with this process and any logging gaps are closed.

ECOLOG-PRO

THE LAST 17 DAYS CAN BE RELOADED IN AN ECOLOG-PRO WITH 4 CHANNELS AND A LOG INTERVAL OF 10 MINUTES. THE RELOADING FUNCTION IN THE ECOLOG-PRO IS INDEPENDENT OF THE LOG INTERVAL OF THE INDIVIDUAL MEASURING MODULES.

ECOLOG-NET

EVERY ECOLOG-NET LOGGER HAS TO BE PROGRAMMED TO A LOGGING INTERVAL OF 1 MINUTE. THE TYPICAL TIMES FOR RELOADING ARE 5 DAYS (8-CHANNEL LOGGER) OR 11 DAYS (4-CHANNEL LOGGER).

System failure

MONITOR

State
No Connection

No reloading with incorrect logging interval

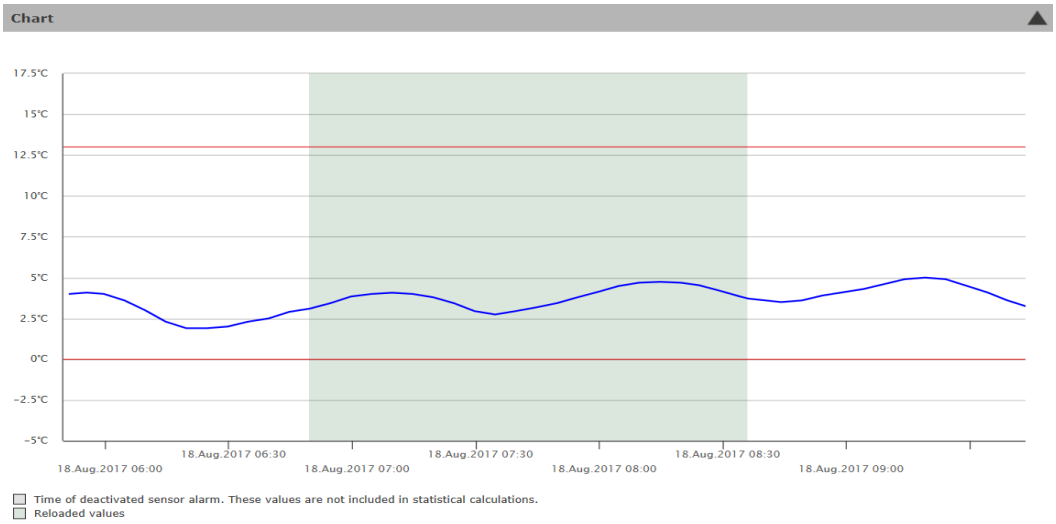
MONITOR

State
OK

DEVIATIONS

Event	Sensor	Alarm State	Acknowledged
Logger Intervall Error	Andreas_rH	Occurred	

***12.** Error message: Logger Interval Error, for an ECOLOG-NET logger with the wrong logging interval. No data is reloaded!*



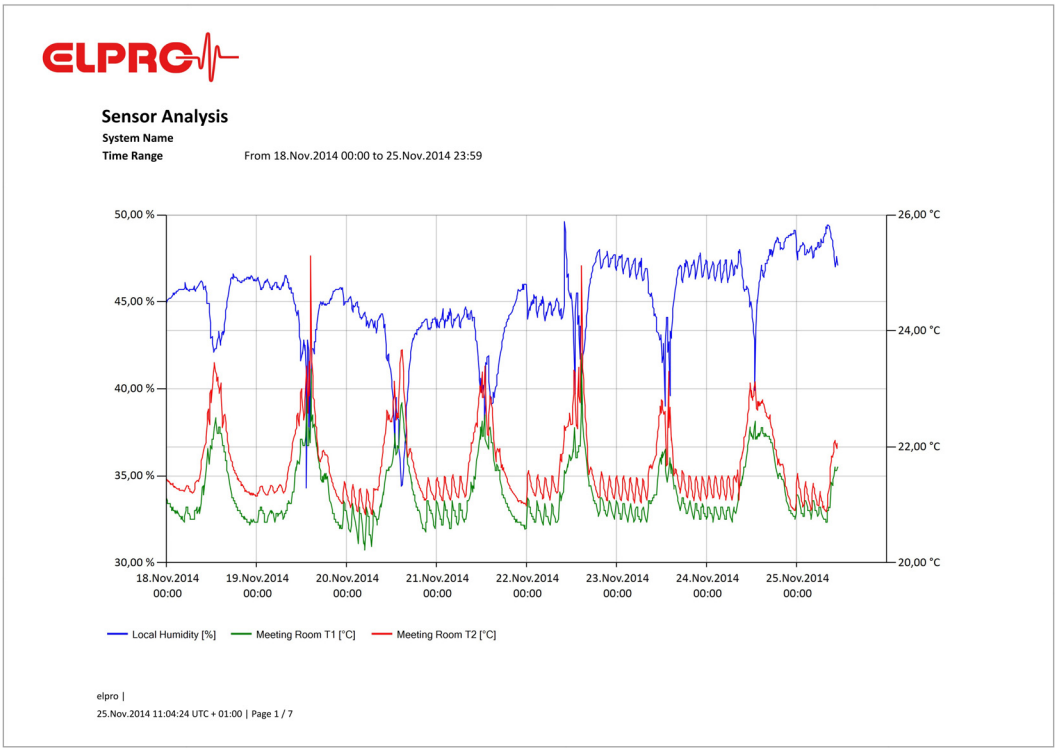
***13.** Reloaded measuring values*

3.2.3 Statistics

- Range
  The evaluation range always corresponds to the time range shown in the chart.
- Deactivated
  Deactivated sensors are not taken into account in the calculations.
- Average
- Lowest/Highest Value
  The minimum/maximum values measured in the corresponding time range is determined.
- MKT
  Mean Kinetic Temperature
  See related technical literature for information on the theory of MKT calculation.

3.2.4 Example: elproMONITOR Sensor Analysis Report

The Sensor Analysis Report contains an overview chart on Page 1, followed by measurement value charts and event data for each sensor. This report treats sensors and digital inputs with equal weighting, i.e. the size (number of pages) of the sensor analysis report generated as a *.pdf file is dependent on the number of sensors and digital inputs.



14. *Page 1 of the Sensor Analysis Report; overview chart containing all* sensors

Name:	Local Humidity				
Id:	n/a				
Time Range:	From 18.Nov.2014 00:00 to 25.Nov.2014 23:59				
Alarm Delay:	n/a	**Total Time Above Limit:**	0d 0h 0m	**Sensor Alarms:**	0
Logging Interval:	10 Minute(s)	**Total Time Below Limit:**	0d 0h 0m	**Sensor Warnings:**	0
Upper Alarm Limit:	n/a	**Highest Value:**	49,60 %; 22.Nov.2014 10:19:07	**Sensor Issues:**	0
Lower Alarm Limit:	n/a	**Lowest Value:**	34,30 %; 19.Nov.2014 13:29:07	**System Issues:**	0
MKT:	n/a	**Average Value:**	45,08 %		

Time of deactivated sensor alarm. These values are not included in statistical calculations.

elpro |
25.Nov.2014 11:04:24 UTC + 01:00 | Page 2 / 7

15. *Page 2 of the Sensor Analysis Report: Chart of Sensor 1*

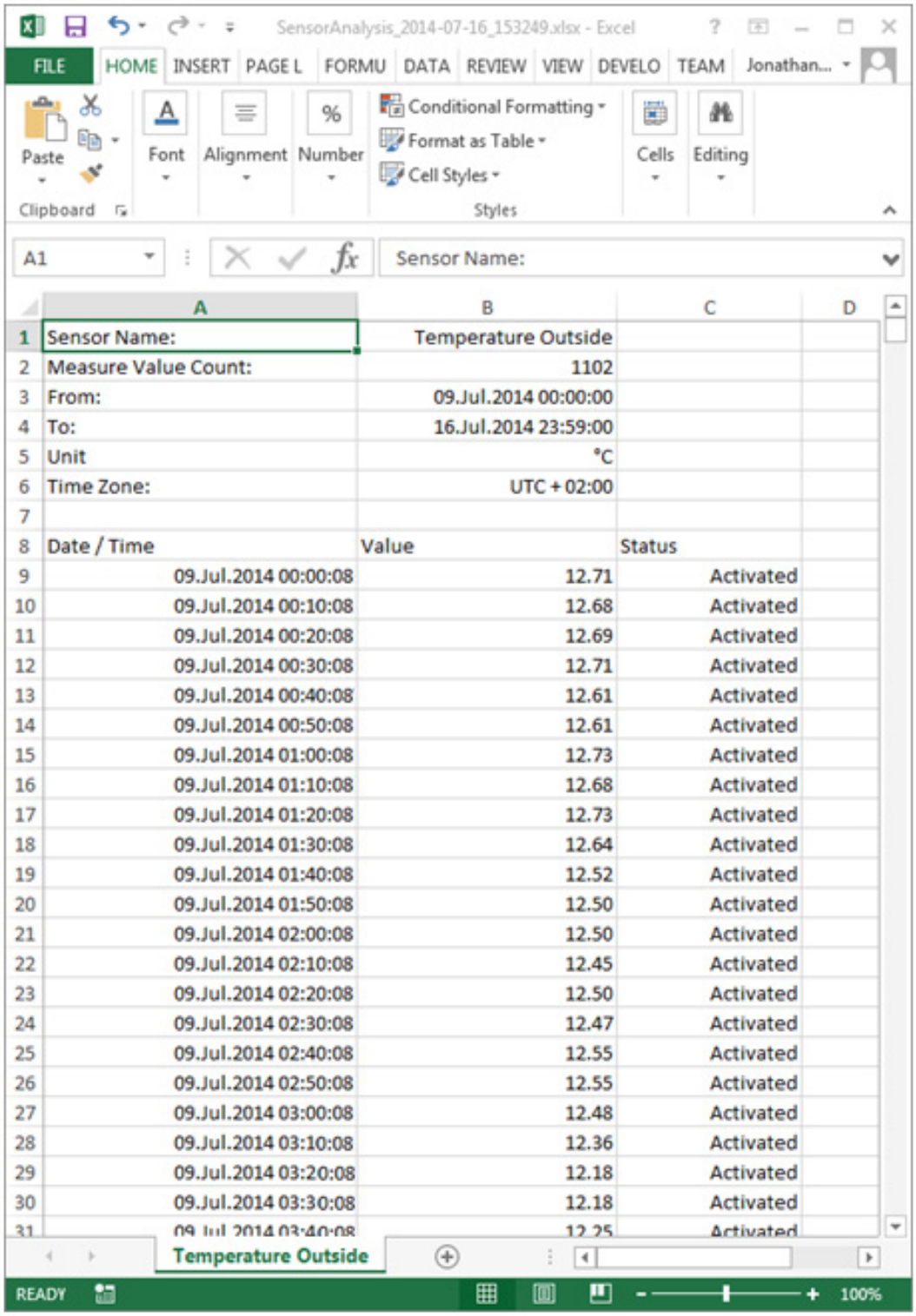
Date & Time	Event	User	Incident No.	Priority	Type	Code
20.Nov.2014 11:01:07	Recipient properties changed	elpro	708	Medium	Information	143
	Key	**Value**				**Code**
	Sensor Name	Local Humidity				1074
	Sensor Id	n/a				1080
	Sensor Set A Issues Recipient	Andreas				1090
	Recipient E-Mail To - Old Value	sascha.giambalvo@elpro.com				1062
	Recipient E-Mail To - New Value	andreas.gubler@elpro.com				1062

elpro |
25.Nov.2014 11:04:24 UTC + 01:00 | Page 3 / 7

16. *Page 3 of the Sensor Analysis Report: Events of Sensor 1*

3.2.5 EXPORT

The logged measurement value data can be exported in tabular form.



	A	B	C	D
1	Sensor Name:	Temperature Outside		
2	Measure Value Count:	1102		
3	From:	09.Jul.2014 00:00:00		
4	To:	16.Jul.2014 23:59:00		
5	Unit	°C		
6	Time Zone:	UTC + 02:00		
7				
8	Date / Time	Value	Status	
9	09.Jul.2014 00:00:08	12.71	Activated	
10	09.Jul.2014 00:10:08	12.68	Activated	
11	09.Jul.2014 00:20:08	12.69	Activated	
12	09.Jul.2014 00:30:08	12.71	Activated	
13	09.Jul.2014 00:40:08	12.61	Activated	
14	09.Jul.2014 00:50:08	12.61	Activated	
15	09.Jul.2014 01:00:08	12.73	Activated	
16	09.Jul.2014 01:10:08	12.68	Activated	
17	09.Jul.2014 01:20:08	12.73	Activated	
18	09.Jul.2014 01:30:08	12.64	Activated	
19	09.Jul.2014 01:40:08	12.52	Activated	
20	09.Jul.2014 01:50:08	12.50	Activated	
21	09.Jul.2014 02:00:08	12.50	Activated	
22	09.Jul.2014 02:10:08	12.45	Activated	
23	09.Jul.2014 02:20:08	12.50	Activated	
24	09.Jul.2014 02:30:08	12.47	Activated	
25	09.Jul.2014 02:40:08	12.55	Activated	
26	09.Jul.2014 02:50:08	12.55	Activated	
27	09.Jul.2014 03:00:08	12.48	Activated	
28	09.Jul.2014 03:10:08	12.36	Activated	
29	09.Jul.2014 03:20:08	12.18	Activated	
30	09.Jul.2014 03:30:08	12.18	Activated	
31	09.Jul.2014 03:40:08	12.25	Activated	

17. EXAMPLE - MS EXCEL export

4 CALIBRATION

THIS FUNCTION IS ONLY AVAILABLE FOR ECOLOG-PRO MODULES!
UP TO 10 MODULES CAN BE CALIBRATED AT ONCE!

18. *Overview: CALIBRATION*

The sensor alarm is deactivated for calibration. This is shown by the “Deactivated by calibration” status. The calibration interval is 10 seconds and cannot be adjusted. The duration of the calibration is highlighted in the sensor analysis with a red background color in the chart. Calibration is documented by creating a report or exporting data.

Calibration is started by the function: CALIBRATION.

⇨ 3 *MONITOR*

Left-clicking on a specific line opens the sensor analysis of the respective calibration. The representations correspond to the representations in:

⇨ 3.2 *Sensor Analysis*

The criteria listed in this column are used to limit the listed calibrations. The criteria are described in the following chapters.

⇨ 4.1 *Filter*

⇨ 4.2 *Filter by Date*

⇨ 4.3 *Search*

⇨ 4.4 *Calibration Log*

EXAMPLE

No.	Calibration status
2006	Calibration started, still no stop date
2007	Calibration complete

XXXXXXXX

COMPLETE

Logs the end of calibration and is entered into the calibration log as the stop date.

Calibration is started with the CALIBRATION function.

4.1 Filter

This filter is used to limit the calibrations listed in the calibration log to those calibrations required for evaluation.

Active Only active calibrations which have not yet been completed are listed.

All Calibrations All detected calibrations are listed.

4.2 Filter by Date

The duration of the listed calibrations is limited to specifications of the start and stop times.

Search function
The magnifying glass is only active after entering the time range.

4.3 Search

Search for a single calibration by specifying the calibration number.

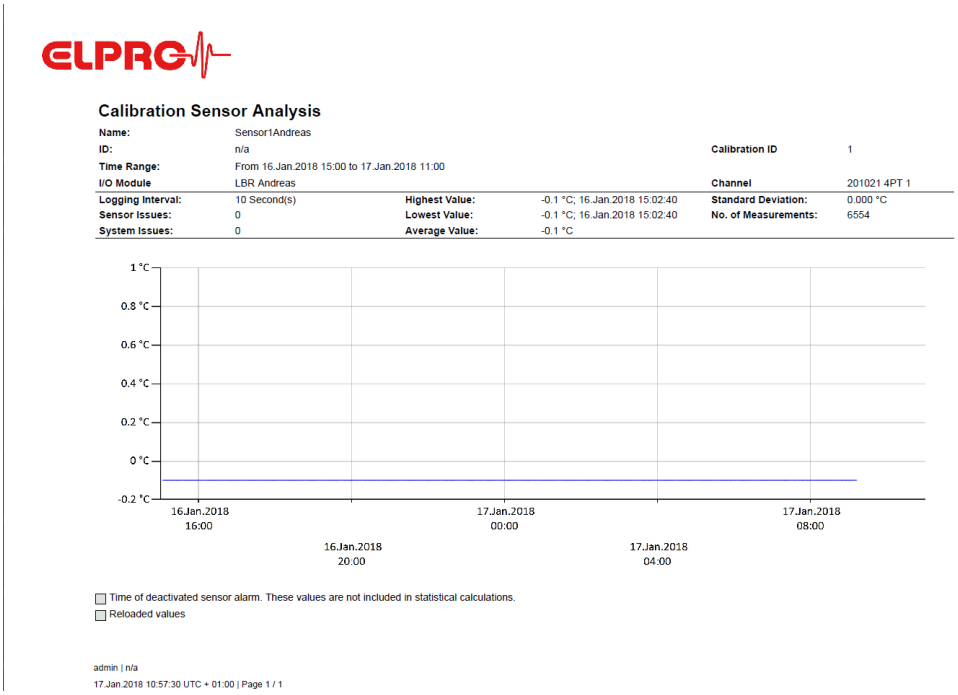
Search function
The magnifying glass is only active after entering the time range.

4.4 Calibration Log

The status information regarding the performed calibrations is included in the calibration log.

No	The calibrations are clearly numbered.
Start Date	Start of calibration
Stop Date	End of calibration - COMPLETE
Sensor	Sensor name
I/O Module	I/O Module name
Elapsed Time	Time between start and stop of calibration

4.5 Example: elproMONITOR calibration report

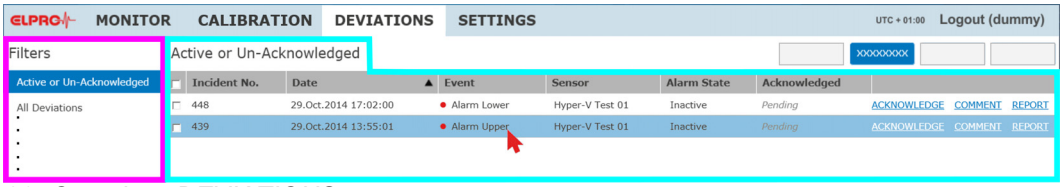


Calibration Sensor Analysis

Name:	Sensor1Andreas				
ID:	n/a			**Calibration ID**	1
Time Range:	From 16.Jan.2018 15:00 to 17.Jan.2018 11:00				
I/O Module	LBR Andreas			**Channel**	201021 4PT 1
Logging Interval:	10 Second(s)	**Highest Value:**	-0.1 °C; 16.Jan.2018 15:02:40	**Standard Deviation:**	0.000 °C
Sensor Issues:	0	**Lowest Value:**	-0.1 °C; 16.Jan.2018 15:02:40	**No. of Measurements:**	6554
System Issues:	0	**Average Value:**	-0.1 °C		

19. *Calibration report*

5 DEVIATIONS



***20.** Overview: DEVIATIONS*

The DEVIATIONS menu lists and acknowledges logged threshold violations and alarm messages. The thresholds and alarm conditions used are defined in SETTINGS. Alarms can be forwarded with:

- SMS
- E-mail
- ECOLOG-PRO 4DO
- Alarm Interface LAN

⇨ 6 *SETTINGS*

Left-clicking on a specific line opens the detailed view of this deviation.

⇨ 5.6.1 *DETAILS*, Example of a deviation log

The criteria in this column are used to limit the events listed in the incident list. The criteria are described in the following chapters.

⇨ 5.1 *Filter*
⇨ 5.2 *Filter by Date*
⇨ 5.3 *Search*
⇨ 5.4 *Include*

⇨ 5.5 *Incident List*

XXXXXXXX

DETAILS ⇨ 5.6.1 *DETAILS*

ACKNOWLEDGE ⇨ 5.6.2 *ACKNOWLEDGMENT*

COMMENT ⇨ 5.6.3 *COMMENT*

REPORT ⇨ 5.7 *EXAMPLE - elproMONITOR Deviation Report*

General Features

CANCEL The last performed action is aborted, then return to the previous window

CLOSE Close the current window

SAVE The changes in the settings are checked for their validity on closing the window. Permitted entries are accepted. In all other cases, they trigger an error message

5.1 Filter

The criteria listed in this column are used to restrict the incidents contained in the incident list to the alarm messages needed for evaluation.

Only sensors groups assigned to the corresponding user group are displayed (see elproUSER).

Active or Un-Acknowledged

Only active or unacknowledged error messages are listed. The following states are included in the incident list.

Alarm State	Acknowledged	"MustConfirmAlarms" activated	"MustConfirmAlarms" not activated
Active	Pending	A	a
Inactive	Pending	A	b
Active	Date/Time/User	A	a
Inactive	Date/Time/User	B	b
Occurred	Pending	A	b
Occurred	Date/Time/User	B	b

Legend
A = Error message is included in the incident list.
B = Error message is not listed.
A = Error message is included in the incident list.
B = Error message is not listed.

The elproMONITOR database defines how to handle error messages. A distinction is made between warnings and alarms. When "MustConfirmAlarms" is activated, you are required to acknowledge the error message. The acknowledgment of an error message is logged together with the date, time, and user.

Database ⇨ To configure the elproMONITOR database.

All Deviations All error messages detected are listed.

5.2 Filter by Date

The duration of error messages listed is limited to indications of the start and end times.

Search function
The magnifying glass is only active after entering the time range.

5.3 Search

Only the incident belonging to this incident number is listed.

Search function
The magnifying glass is only active after entering the time range.

5.4 Include

When you select one of these filters, only the error messages belonging to this filter are added to the incident list.

Filters	Error messages	
Sensor Alarm	Upper Limit, Lower Limit, Digital Input Alarm	
Sensor Warnings	Upper Limit Warning,Lower Limit Warning	
Sensor Failure	No Connection, Sensor Failure, Low Level Battery ⇨ 3.1 *State*	
System Issues	Critical Device Error	The I/O module is defective. No new measurement values are logged.
	Internal Error	Programming error with error message.

5.5 Incident List

The incident list contains the following information columns:

Incident No	Consecutive incident number. Every error message is assigned a unique number.
Date	Date and time of error message
Event	Error message classification ⇨ 3.1 *State*
Sensor	Sensor name
I/O Module	I/O Module name

Alarm State ⇨ 5.1 *Filter - Alarm State*

Acknowledge ⇨ 5.1 *Filter - Acknowledged*

5.6 Functions

5.6.1 DETAILS

Opens the Incident Report (Audit Trail) for the current error message.

***21.** Incident Report*

The Incident Report lists all the parameters on the sensor which issued the error message. These parameters can be specified in SETTINGS.

⇨ 6 *SETTINGS*

These are functions in the incident protocol.

XXXXXXXX

ACKNOWLEDGE ⇨ 5.6.2 *ACKNOWLEDGMENT*

COMMENT ⇨ 5.6.3 *COMMENT*

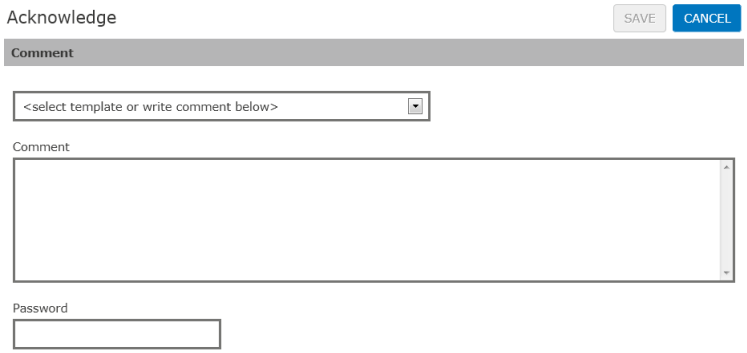
REPORT ⇨ 5.7 *EXAMPLE - elproMONITOR Deviation Report*

CLOSE Close the current window

5.6.2 ACKNOWLEDGMENT

Without Electronic Signature

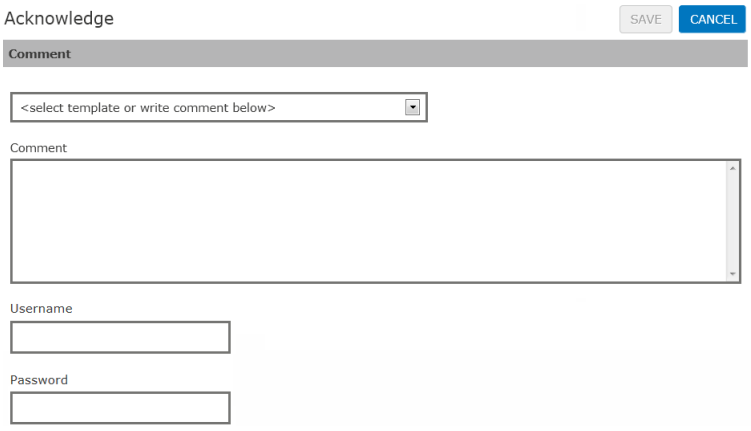
Use Acknowledgment to acknowledge an error message. The process can be given a comment. When the password function is activated in the elproMONITOR database, conclude the process by entering your password. Possible default comments can be defined in SETTINGS.



***22.** Window: Acknowledge*

With Electronic Signature

It is defined in the database settings how many users have to acknowledge an error message. Until all of the users have acknowledged the error message, it remains listed in the filter view as active or unacknowledged. In the standard setting, only one user is required for acknowledgment.
In the DEVIATIONS, Acknowledged column, all acknowledgments are listed with date/time stamp and user. A new line is added to the list for every acknowledgment.



***23.** Window: Electronic Signature*

CANCEL The last performed action is aborted, then return to the previous window.

SAVE The changes in the settings are checked for their validity on closing the window. Permitted entries are accepted. In all other cases, they trigger an error message.

5.6.3 COMMENT

Opens a window to document the error message. Default comments can be defined in SETTINGS.

⇨ 6.2.2 *Comment Templates*

***24.** Window: Comment*

XXXXXXXX

CANCEL The last performed action is aborted, then return to the previous window.

SAVE The changes in the settings are checked for their validity on closing the window. Permitted entries are accepted. In all other cases, they trigger an error message.

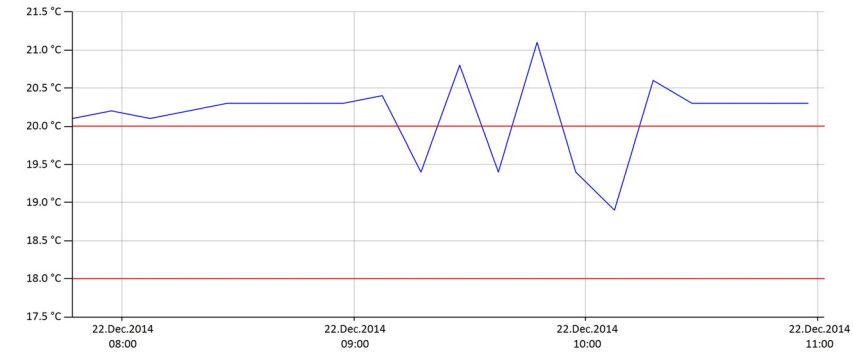
5.7 EXAMPLE - elproMONITOR Deviation Report

The Deviation Report contains the measurement value chart of sensors causing an error and the associated Incident Report. The number of incidents determines the size (number of pages) of the deviation report generated as a *.pdf file.

Deviation Report

Sensor Name:	Hyper-V Test 01				
Incident No.:	448				
Upper Alarm Limit:	9,00 °C	**Highest Value:**	5,00 °C; 29.Oct.2014 17:02:00	**Deviation Time:**	0d 14h 50m
Lower Alarm Limit:	6,00 °C	**Lowest Value:**	5,00 °C; 29.Oct.2014 17:02:00	**Time Outside Limits:**	0d 14h 50m
Alarm Delay:	0 Logging Interval(s)				

Note: Alarm statistics refer to time outside limits



Time of deactivated sensor alarm. These values are not included in statistical calculations.

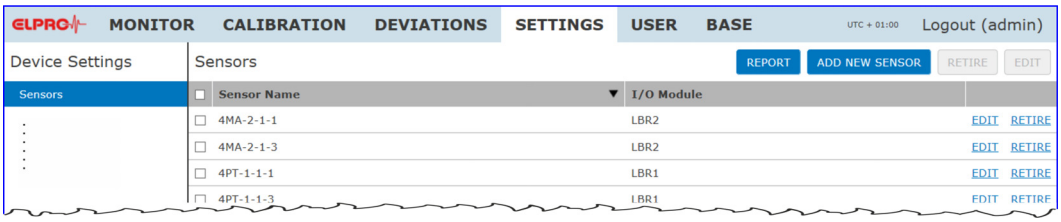
25. *Page 1 of the Deviation Report - Measurement Value Chart*

Date & Time	Event	User	Incident No.	Priority	Type	Code
29.Oct.2014 17:02:00	Deviation occurred	elproMONITOR	448	High	Alarm	104
	Key	**Value**				**Code**
	Entry Reason	Alarm below lower limit				1155
	I/O Module Name	Hyper-V Simulator				1003
	I/O Module Id	111111				1004
	Sensor Name	Hyper-V Test 01				1074
	Upper Alarm Limit	9,0				1173
	Lower Alarm Limit	6,0				1174
	Alarm Delay	0				1175
	Upper Warning Limit	none				1176
	Lower Warning Limit	none				1177
	Warning Delay	none				1178
	Active Profile	Profile Set A				1179
	Schedule Profile	none				1180
	Sensor Failure Setting	none				1181
	No Connection Setting	none				1182
	Deviation Sensor Value	5				1183
	Sensor Unit	°C				1184

26. *From Page 2 of the Deviation Report -Incident Report*

6 SETTINGS

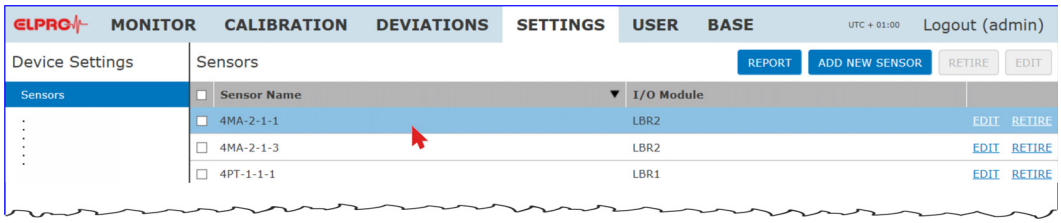
The SETTINGS menu specifies the parameters which the elproMONITOR software uses for the current monitoring task. The information is shown in an overview comprising a table with 2 columns.



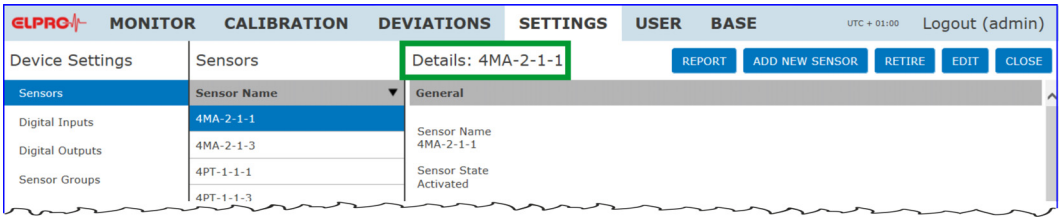
***27.** Overview: SETTINGS*

Details

Left-clicking on a specific line opens the detail view for that line. The detail view includes all information belonging to this line. But no changes can be made.



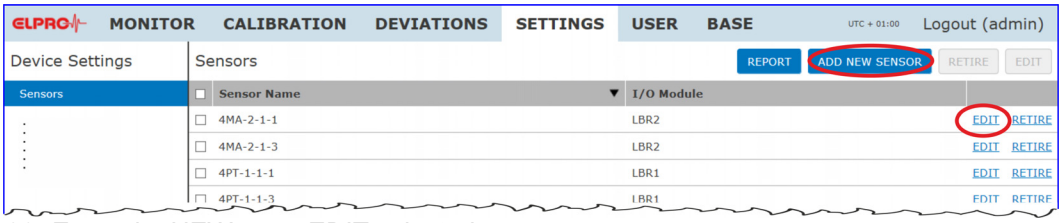
***28.** Example: Line marked*



***29.** Example: Details view - Sensors*

New, Edit

With a left click on NEW .... or EDIT, the display changes to the detail view with input fields for the parameterization.



***30.** Example: NEW .... or EDIT selected*

***31.** Example: SETTINGS - Sensors - Create new sensor*

The settings for: Device Settings, Profiles, Application Settings and User Settings and their subitems listed in this column are described in the following chapters.

⇨ 7 *Device Settings*

⇨ 6.1 *Profiles*

⇨ 6.2 *Program*

⇨ 6.3 *User Settings*

List of existing objects (sensors) for the selected subitem.

Column relating to the selection in the overview column.

XXXXXXXX

These are general functions in the detail view. The number and type of functions depend on the selected settings..

6

REPORT

⇨ 6.5 *Example: elproMONITOR Settings Report*

CLOSE

Close the current window.

RETIRE

- Opens the window to permanently retire the selected sensor or digital input. No further data are logged. Retirement is only possible once a comment template has been selected or a comment has been entered and authenticated with the password.
- However, the existing data are not deleted from the database. This action cannot be revoked.

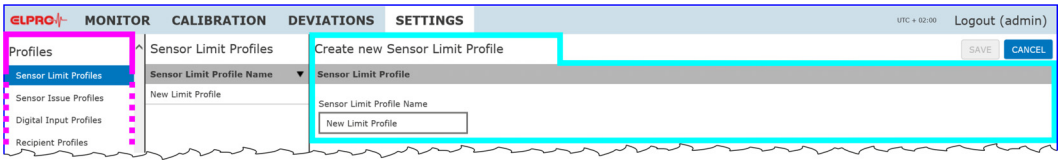
SAVE

The changes in the settings are checked for their validity on closing the window. Permitted entries are accepted. In all other cases, they trigger an error message.

CANCEL

The last performed action is aborted, then return to the previous window.

6.1 Profiles



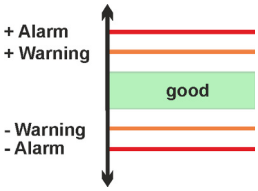
***32.** Menu: Profiles*

The various sub-items define parameters for:

- ⇨ 6.1.1 *Sensor Limit Profiles*
- ⇨ 6.1.2 *Sensor Failure Profiles*
- ⇨ 6.1.3 *Digital Input Profiles*
- ⇨ 6.1.4 *Recipient Profiles*
- ⇨ 6.1.5 *Schedule Profiles*
- ⇨ 6.1.6 *Data Destination Profiles*
- ⇨ 6.1.7 *Data Export Profiles*

Column relating to the selected menu item.

6.1.1 Sensor Limit Profiles



This profile defines the upper and lower limits for a sensor. The limits can be used for warnings or alarms. Warning limits should permit a narrower deviation compared with the OK range than alarm limits.

Delay

Delay in the event of a threshold violation until an alarm is issued. A threshold violation must remain active for longer than the delay time if it is to be logged as an alarm.

Sensor Limit Profiles

- Sensor Limit Profile Name
  The sensor limit profile must be given a unique name.
- Upper Limit
  Lower Limit
  From these measurement values, the measurements which exceed the good area trigger a warning or an alarm.
- Upper Limit Delay
  Lower Limit Delay
  A warning or an alarm is only triggered once this time has elapsed.
  Delay Time: Enter in logging interval steps

☐ | ☑

Entering a tick causes invalid values (no connection, sensor failure) to be taken into consideration as a violation of the alarm limit.

6.1.2 Sensor Failure Profiles

This profile defines the alarm response in the event of sensor failures.

Sensor Issue Profiles

The sensor limit profile must be given a unique name.

No Connection Alarm

Communication between the I/O module used by the sensor and the elproMONITOR software is interrupted.

☐ ☑

The alarm is activated only by ticking the hook.

Sensor Failure

The following states are treated as sensor failures:

- Value overflow in measurement range
- Value underflow in measurement range
- Faulty sensor
- Unplugged sensor

☐ ☑

The alarm is activated only by ticking the hook.

Delay...

Delay time for a connection abort until the alarm is triggered. A disconnect must remain active for longer than the delay time in order to be registered as an alarm.

Low Battery

The battery level of the wireless sensor is low. This means the battery is almost empty. The battery level is monitored independently of the elproMONITORsoftware. It is performed by the I/O module itself.

☐ ☑

The alarm is activated only by ticking the hook.

6.1.3 Digital Input Profiles

This profile defines the alarm response for contact inputs.

Digital Input Profile

- Digital Input Profile Name
  The digital input profile must be given a unique name.
- I/O Module Type
  Only the ECOLOG-PRO 4DI module is currently available.
- Log Mode

STANDARD	The contact status is used as an alarm criterion.
• Text if input = 1 Text if input = 0	Text field for entering the message text.
TIME MONITORING	The duration of the contact status (open, closed) as a percentage of the logging interval is used as the alarm criterion (min. 200 ms).
• Limit higher than Limit lower than	Limit values in % of the logging interval.
• Text if outside limits Text if inside limits	Text field for entering the message text.
EDGE COUNTER	The number of contact status changes (rising, falling) per logging interval is used as the alarm criterion (min. 200 ms).
• Limit higher than Limit lower than	Limit values in number of edge changes.
• Text if outside limits Text if inside limits	Text field for entering the message text.

- Logic

Alarm if Input = 1	Switch between contact input 1 or 2 and GND closed
Alarm if Input = 0	Switch between contact input 1 or 2 and GND open

- Delay
  Delay time, enter in logging interval steps

6.1.4 Recipient Profiles

The recipient profiles contain contact information about the message recipient and a user-generated text field. Define the content of the alarm message sent by writing the text field yourself. External alarm components can also be switched via contact outputs or plugins.

General

Recipient Profile Name
The profile must be given a unique name.

☑ E-Mail

- The e-mail alarm is activated by ticking the checkbox. All information needed to identify an issue is automatically contained in the e-mail
- To, Cc, Subject
  This information is used to address the e-mail.
- Text
  This field should contain information such as process information, responsibilities, and instructions, and is attached to each e-mail.

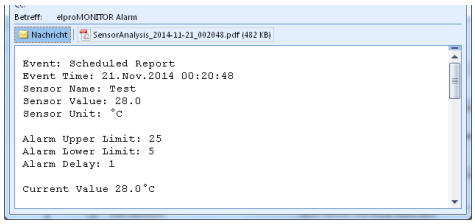
  ⇨ 6.1.4.1 *EXAMPLE - Alarm Text Placeholder*

  ⇨ Test functions

XXXXXXXX

SEND TEST E-MAIL
XXXXXX/XXXXXX

Function to test e-mail settings. The test is ended by an OK or NOK confirmation.



***33.** EXAMPLE - e-mail*

☑ SMS

The SMS text alarm is activated by ticking the checkbox.

- SMS Number
- SMS Text
  This field should contain information such as process information, responsibilities, and instructions, and is attached to each SMS.

  ⇨ 6.1.4.1 *EXAMPLE - Alarm Text Placeholder*

XXXXXXXX

SEND TEST SMS
XXXXXX/XXXXXX

Function for testing settings for text messages (SMS). The test is ended by an OK or NOK confirmation.

THE TEXT MESSAGE WILL NOT REACH THE RECIPIENT IF THERE IS NO LINK TO THE MOBILE TELEPHONE NETWORK.

Digital Outputs

- Digital Output 1
- Digital Output 2

Selection list of configured digital outputs.

⇨ 7.3 *Digital Outputs*

⇨ 7.5 *ECOLOG-PRO series*

Plugin

- Plugin
- Paramter

This is a customer-specific software module. It is produced by Elpro-Buchs AG.

XXXXXXXX

XXXXXX/XXXXXX

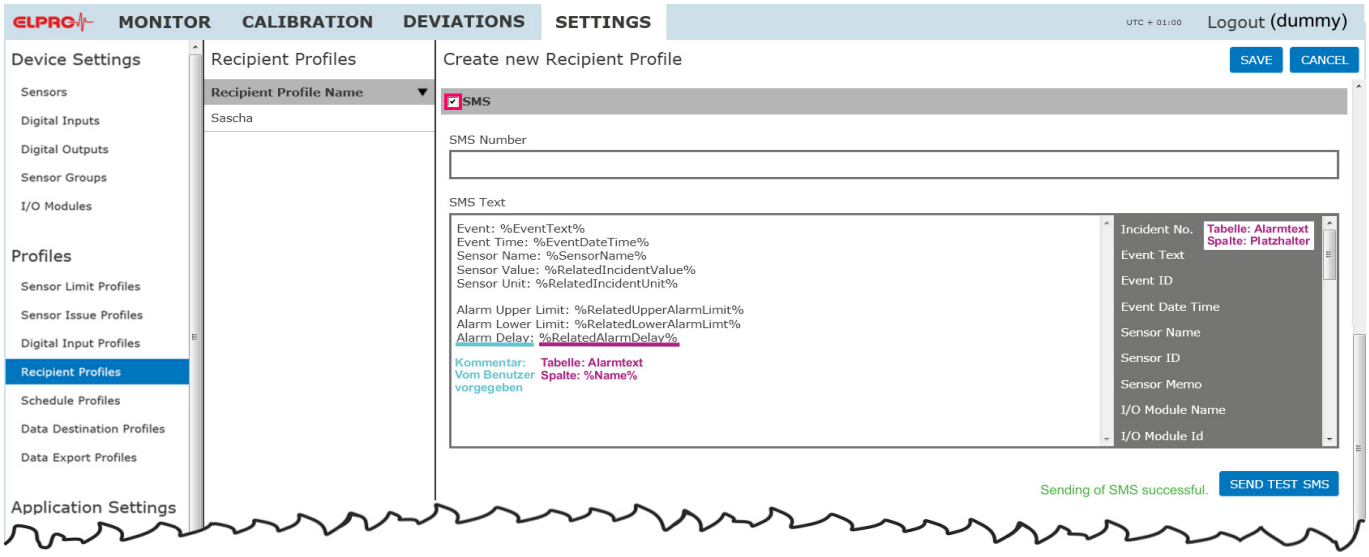
Function to test the plugin. The test is ended by an OK or NOK confirmation.

☑ Repeat Notification

The notification repeat function is activated by ticking the checkbox.

The alarm message is repeated at defined intervals if the alarm status is still active, and the alarm has not been acknowledged.

6.1.4.1 EXAMPLE - Alarm Text Placeholder



***34.** EXAMPLE - SMS*

List of placeholders:

⇨ 8 *Annex: Alarm Text Placeholders*

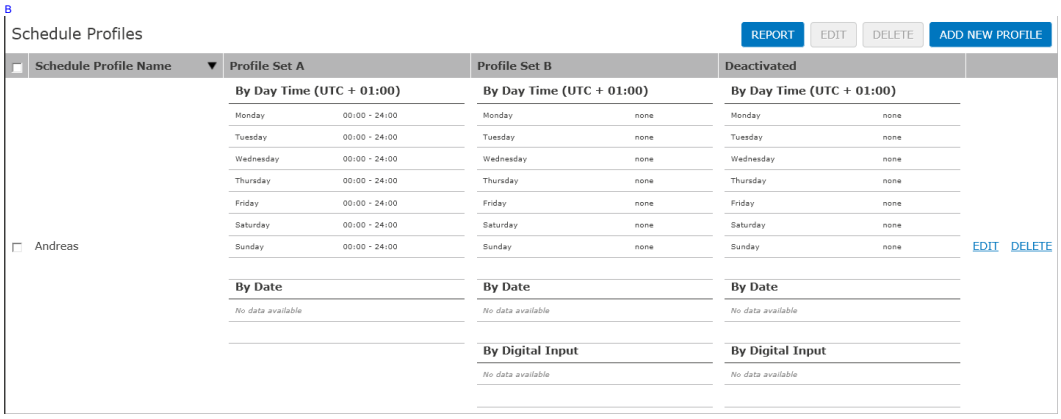
6.1.5 Schedule Profiles

The scheduler is used to provide a day time-dependent control over the warning and alarm functions of elproMONITOR. For each sensor or digital input it is possible to define a schedule which switches between several alarm profiles. There are 2 alarm profiles (SET A, SET B) and a deactivation option.

The defined profiles are assigned to the sensors and digital inputs with CREATE/EDIT NEW SENSOR or CREATE/EDIT NEW DIGITAL INPUT.

⇨ 7.1 *Sensors* - Logging

⇨ 7.2 *Digital Inputs* - Logging



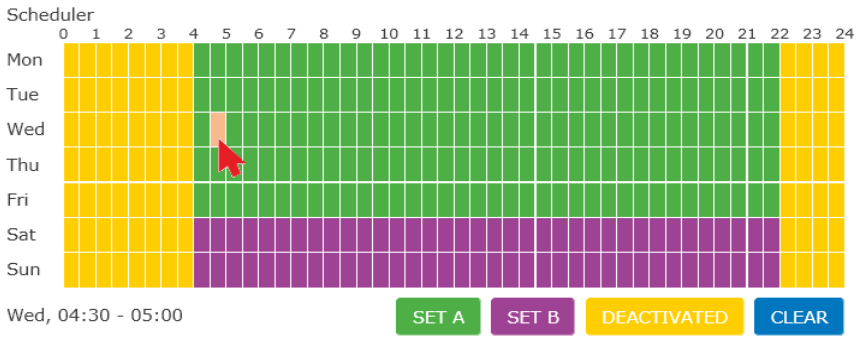
***35.** EXAMPLE - schedule*

General

The schedule profile must be given a unique name.

By Day Time (...)

To change the state of a particular field, highlight it with the mouse pointer and change the state by clicking on the corresponding button. It is not possible to change the time grid resolution.

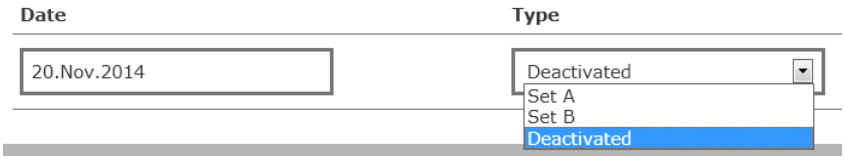


***36.** EXAMPLE - the schedule profile shows a weekly schedule*

SET A	Weekdays
SET B	Weekend
DEACTIVATED	Deactivated
CLEAR	The entire profile is overwritten by SET A.
	Selected: Wed. 04:30 - 05:00 am

By Date

Specify the alarm period by entering the calendar day and the alarm profile.



xxxxxxxx

ADD NEW Add a new calendar day and profile.

REMOVE The input is deleted.

By Digital Inputs

- Profile Set B by Digital Input
  The selected digital input switches between alarm profiles SET A and SET B.
- Deactivated by Digital Input
  The selected digital input deactivates all the alarm functions controlled by this profile.

6.1.6 Data Destination Profiles

The target directory for exporting data from elproMONITOR is defined in this profile.

General

- Data destination profile name
  The data destination profile must be given a unique name.

Data Destination

- Type

FTP	The exported data are saved on a FTP server.
	Only passive FTP is currently supported.
• Path	Directory on the server incl. server address (z.B.: ftp://meinserver.com/export)
• Login name, password	Login information for this server
NETDRIVE	The exported data are saved on a network drive.
• Path	Directory on a network drive (e.g.: \\192.168.100.20\Data-Export)
• Login name, password	Login information for this server
	The domain or IP address of the target computer must always be before the login name (e.g. DOMAIN\Username or 192.168.100.20\Username)
DRIVE	The exported data are saved locally.
• Path	Local drive and directory (e.g.: C:\export)

XXXXXXXX

6 *CONNECTION TEST*
XXXXXX/XXXXXX

Function to test the data export. The test is ended by an OK or NOK confirmation.

6.1.7 Data Export Profiles

The subfolder used for saving, the name and content of the exported file are defined in this profile.

General

Data Export Profile Name
The data export profile must be given a unique name.

Output-Format

By setting the tick, the corresponding output formats are activated.

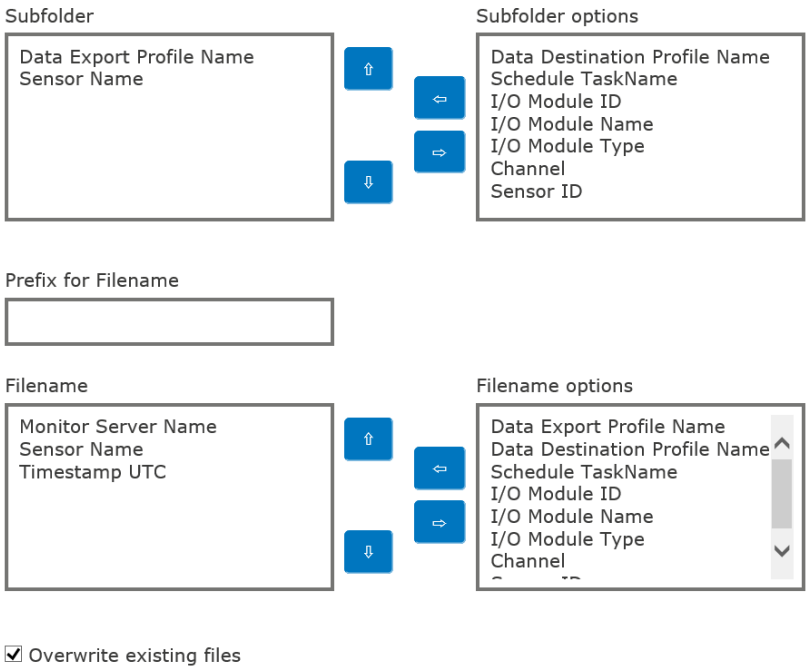
☐ ☑
- CSV
  The export takes place as a CSV file

☐ ☑
- PDF
  The export takes place as a PDF file

☐ ☑
- A PDF containing all sensors
  A PDF file with all sensors will be created. The first page of the PDF document contains the overlay of all sensors.

File-Descriptors

File-Descriptores



37. Descriptors

- Subfolder
  Name of the subfolder used defined from the subfolder options and order of the subfolder options.
- Subfolder options
  List with all of the available options.

  - Data Export Profile Name
  - Data Destination Profile Name
  - Schedule Task Name
  - I/O Module ID
  - I/O Module Name
  - I/O Module Type
  - Channel
  - Sensor Name
  - Sensor ID

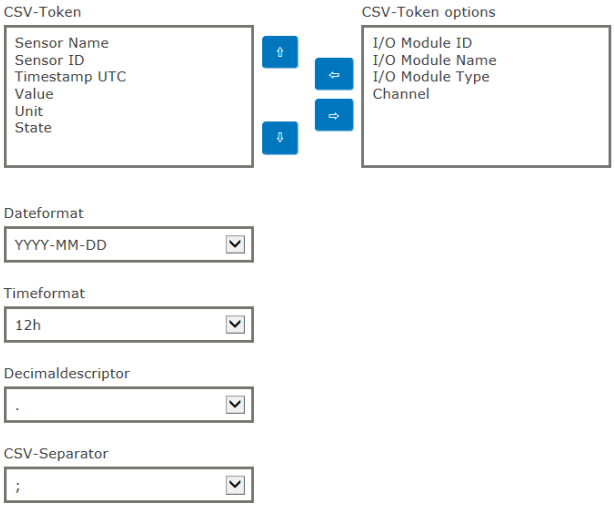
- Prefix for Filename
  Text field for entering the chosen prefix

- File Name
  File name defined from the file options and order of the file options.
- Filename Options
  List with all of the available options.

- Data Export Profile Name
- Data Destination Profile Name
- Schedule Task Name
- I/O Module ID
- I/O Module Name
- I/O Module Type
- Channel
- Sensor Name
- Sensor ID

☐ ☑ Overwrite existing files
Entering a tick in the checkbox means that an existing file is overwritten by a new file with the same designation.

CSV-Configuration



***38.** CSV-Configuration*

- CSV-Token
  Parameters contained in the exported file.
- CSV-Token options
  List of all available options.
  - I/O Module ID
  - I/O Modul Name
  - I/O ModuleType
  - Channel
- Date Format

DD.MM.YYYY DD/MM/YYYY MM/DD/YYYY YYYY-MM-DD	It is possible to select that the date be displayed in a purely numerical format.
DD.MMM.YYYY MMM/DD/YYYY	It is possible for the date to be displayed with the month abbreviated.

- Time format
  12 hours or 24 hours — It is possible to select that the time be displayed in either a 12 hour or 24 hour time format.
- Decimal separator
  . or , — The decimal can be shown as a point or comma.
- CSV-separators
  ; or , — It is possible to select either a semi-colon or comma. It a comma is selected as a decimal separator, the comma cannot be used as a CSV-separator.

Assign parameters

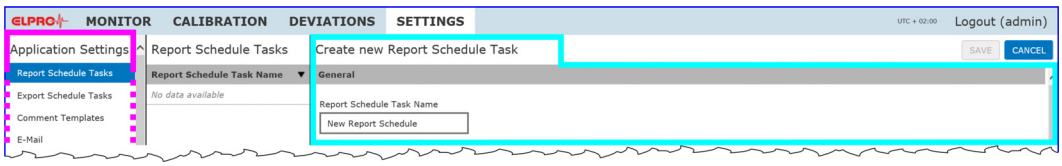
One position up in the parameter sequence

Add to parameter list

Remove from parameter list

One position down in the parameter sequence

6.2 Program



***39.** Menu: Application*

These menu items apply to all sensors monitored by this elproMONITOR instance.

- ⇨ 6.2.1 *Export Schedule Tasks*
- ⇨ 6.2.2 *Comment Templates*
- ⇨ 6.2.3 *E-mail*
- ⇨ 6.2.4 *SMS*
- ⇨ 6.2.5 *System Issues*
- ⇨ 6.2.6 *License*

Column relating to the selected menu item.

6.2.1 Export Schedule Tasks

- Export Schedule Task Name
  Each task must have a unique name.
- Data Export Profile
  Allocation of a data export profile
- Data Destination Profile
  Allocation of a data destination profile
- Recipient Profile
  Assignment of a recipient.

For the definition of the above profiles:

⇨ 6.1 *Profiles*

xxxxxxxx

Create Testfile
Send Testfile

Test function for the selected profiles.

Trigger

- Interval
  The time span between two exports can be selected: hourly, daily, weekly or monthly. At the beginning of the new interval plus a possible data safety clearance, the report is created over the last interval. The beginning and the end of the time window can not be changed. For example, for a monthly interval, it is not possible to choose the time window from mid-month 1 to mid-month 2; It is always from the beginning to the end of the month.
- Data Safety Clearance
  The time of data export is delayed by the Data Safety Clearance to allow reloading of non-directly transmitted values (e.g., due to a connection break to the measurement modules).

  For example, if a 3-day Data Safety Clearance is set for a scheduled monthly export, the automatic export does not start in the early morning of the first day of a month for the previous month, but 3 days later, this means in the early morning of the 4th day of the new month. Thus, missing values of the previous month can be reloaded during these three days and would thus also be included in the export.
- Unit
  Depending on the selected interval, the unit for the Data Safety Clearance is hours, days or months.

Sensors
Digital Inputs

Sensors and digital inputs are selected for the report.

xxxxxxxx

ADD

Add new sensor / digital input.

REMOVE Entry is deleted

6.2.2 Comment Templates

General

- Comment Template Name
  Every template must be given a unique name.
- Text
  Field to enter comment text.

☐ | ☑

- Allow Edit
  Adapt the template by ticking this checkbox.

6.2.3 E-mail

E-Mail Server (SMTP)

These are the settings for the e-mail server.

☑ Server requires .....

xxxxxxxx

TEST CONNECTION

Function for testing the e-mail connection between the elproMONITOR software and the e-mail server. The test is ended by an OK or NOK confirmation.

XXXXXX/XXXXXX

Sender

These are the settings that identify the e-mail sender.

☑ Send Queue

This function repeats e-mail transmission until the e-mail is sent successfully. The queue of pending messages is cleared by deactivating this function.

- Repeat Time Interval
  Delay time between repeated e-mails.
- Maximum Queue Time
  Maximum time to send the e-mail repeatedly.

☑ Keep Alive E-Mail

This function is used to send a check e-mail at regular intervals. This ensures that the notification works in case of alarm.

- Maximal Time between Messages
  Delay time between Keep Alive E-Mails.
- Message Send Time
  Time when the Keep Alive E-Mail is sent.
- Recipient Profiles

  ⇨ 6.1.4 *Recipient Profiles*

6.2.4 SMS

Modem Settings

Selection list for the type and properties of the modem in use.

- Modem Type:
  USB - COM port
  - Baud Rate (Standard 57600)
  - SIM Card PIN Code

  Ethernet: - IP Address
  - Port Number (Standard 10001)
  - SIM Card PIN Code

xxxxxxxx

TEST SIGNAL
XXXXXX/XXXXXX

Function for testing the SMS connection between the elproMONITOR software and the SMS server. The test is ended by an OK or NOK confirmation.

THE TEXT MESSAGE WILL NOT REACH THE RECIPIENT IF THERE IS NO LINK TO THE MOBILE TELEPHONE NETWORK.

6

☑ **Send Queue**

This function repeats SMS transmission until the SMS is sent successfully. The queue of pending messages is cleared by deactivating this function.

- Repeat Time Interval
  Delay time between the repeated SMS.
- Maximum Queue Time
  Maximum time to send the SMS repeatedly.

☑ **Keep Alive SMS**

This function is used to send a check SMS at regular intervals. This ensures that the notification works in case of alarm.

- Maximal Time between Messages
  Delay time between Keep Alive SMS Texts
- Message Send Time
  Time when the Keep Alive SMS is sent.
- Recipient Profile

  ⇨ 6.1.4 *Recipient Profiles*

6.2.5 System Issues

System Issues

Only the error message forwarding function is defined.

⇨ 6.1.4 *Recipient Profiles*

6.2.6 License

One license is used for each sensor and digital input. The license continues to be assigned for a sensor in Retired state, i.e. which only exists to display historical data. When a sensor is added, a check is made whether there is a free license.

Deleting a sensor will not result in a refund of fees. However, the assigned license is released and can be used for a new sensor.

System
Licenses

***40.** Overview of license information*

Basic License — 50 sensors

Add licenses

Step 1 The customer requires additional sensor licenses and reports this requirement to ELPRO-BUCHS AG (Sales), specifying the server license key.

Step 2 The sensor license key is sent to the customer by reply.

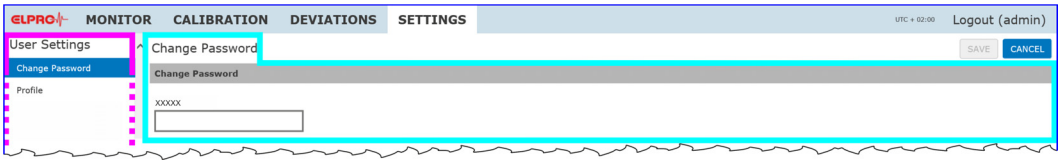
Step 3 The customer reads the sensor license key in elproMONITOR.

Step 4 elproMONITOR decodes the sensor license key and licenses the additional number of new sensors.

XXXXXXXX

REMOVE — Only active for sensor licenses which utilize less than the maximum number of licensed sensors. This function clears the sensor license in the memory and in the database, and updates the sensor license list.

6.3 User Settings



41. Menu: User Settings

6.3.1 Profile

The Profile function is used to edit user-specific defaults.

User Profile

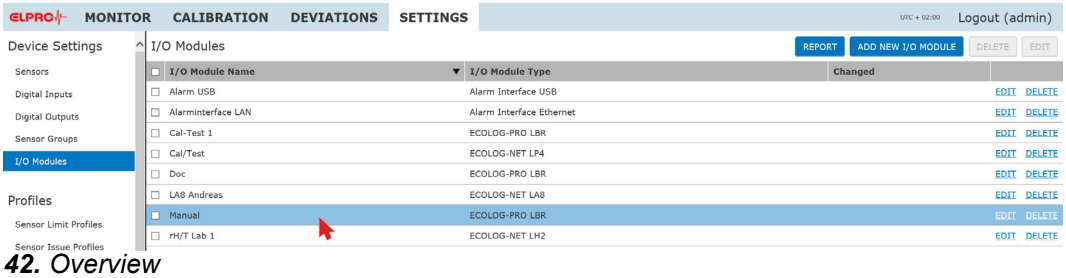
- Language
  At present the software is only available in German and English.
- Display Time Zone (only applies to current user)
  Defines the time zone used for the display.

☐ ☑ Adjust for Daylight Saving Time
Tick the checkbox to adjust between summer and winter time automatically.

☐ ☑ Show Retired Sensors
"Retired" sensors can only be shown for this user in all views by ticking this checkbox.

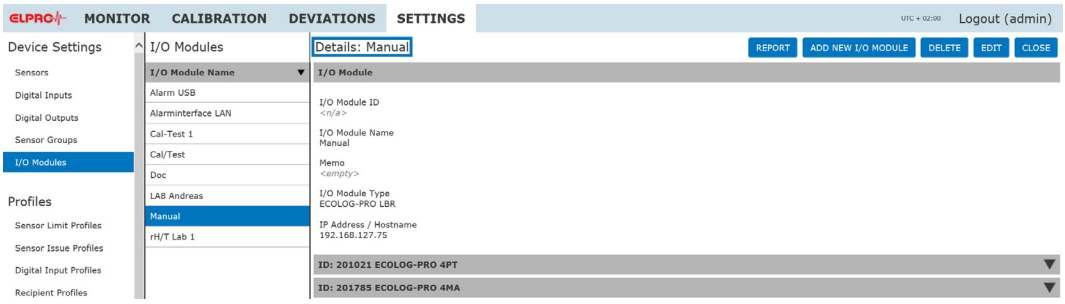
6

6.4 Example - Detail View



42. Overview

Left-click on the line in question to open up the detail view:



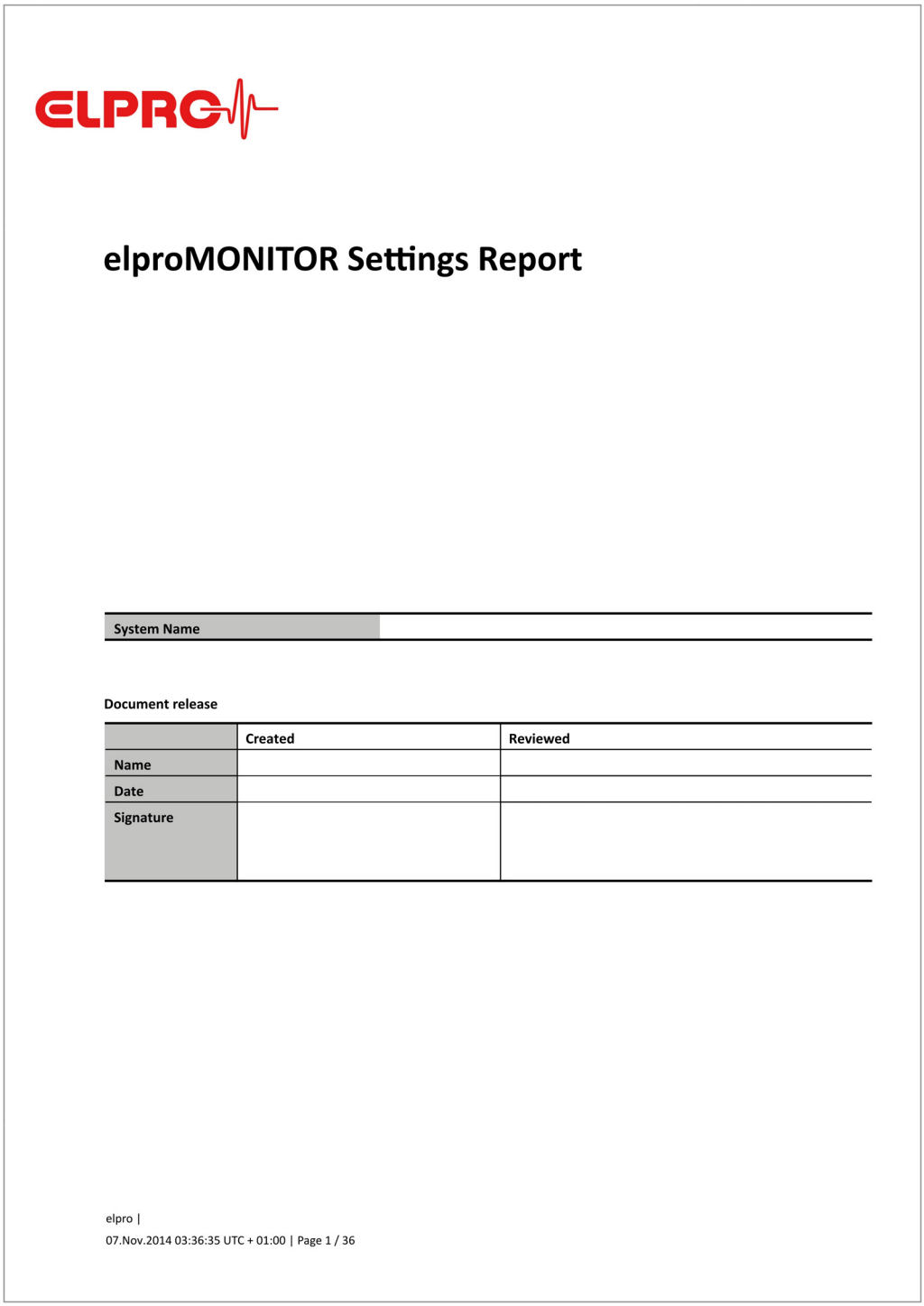
43. Details: I/O modules

This view shows all the information related to the selected element. Detail views are provided for all elements in SETTINGS except:

- 6.2 *Program*
  - E-mail
  - SMS
  - System issues
  - License
- 6.3 *User Settings*

6.5 Example: elproMONITOR Settings Report

The Settings Report contains all the parameters for the monitoring task to be executed. The number of sensors, digital inputs, I/O modules, and profiles determines the size (number of pages) of the Settings Report generated in the form of a *.pdf file.



elproMONITOR Settings Report

System Name	

Document release

	Created	Reviewed
Name		
Date		
Signature		

elpro |
07.Nov.2014 03:36:35 UTC + 01:00 | Page 1 / 36

44. *Cover page of elproMONITOR* Settings Report

Device Settings > Sensors

Sensor Name: Outdoor Temperature

Key	Value
General	
Sensor State	Activated
Logging	
Logging Interval	10 Minute(s)
Schedule Profile	<none>
Description	
Sensor Id	171900
Sensor Memo	Outdoor box
Connection	
I/O Module	ECOLOG-NET LR8
I/O Module Channel	3
Assigned Digital Output	<none>
Profile Set A	
Alarm Limit Profile	<none>
Alarm Recipients Profile	<none>
Warning Limit Profile	<none>
Warning Recipients Profile	<none>
Sensor Issues Settings Profile	No Connection Alarm
Sensor Issues Recipients Profile	Sascha
Profile Set B	
Alarm Limit Profile	<none>
Alarm Recipients Profile	<none>
Warning Limit Profile	<none>
Warning Recipients Profile	<none>
Sensor Issues Settings Profile	<none>
Sensor Issues Recipients Profile	<none>
Sensor Groups	
Sensor Groups	ECOLOG-NET LR8

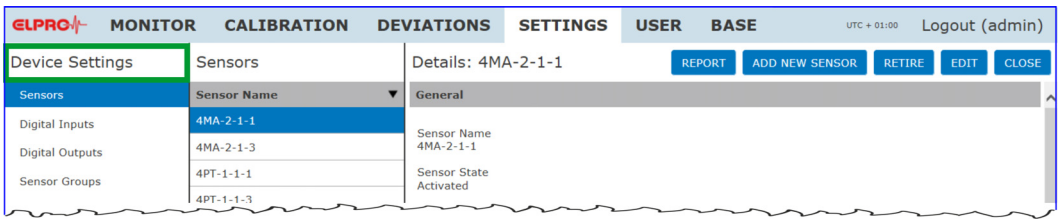
elpro |
07.Nov.2014 03:36:35 UTC + 01:00 | Page 2 / 36

45. *Page 2 of the elproMONITOR Settings Report*

6.6

7 Device Settings

AUnder the menu item: Devices, all ECOLOG-PRO modules, ECOLOG-NET I/O modules and the Alarm Interface LAN are parameterized.



***46.** Overview: Device Settings*

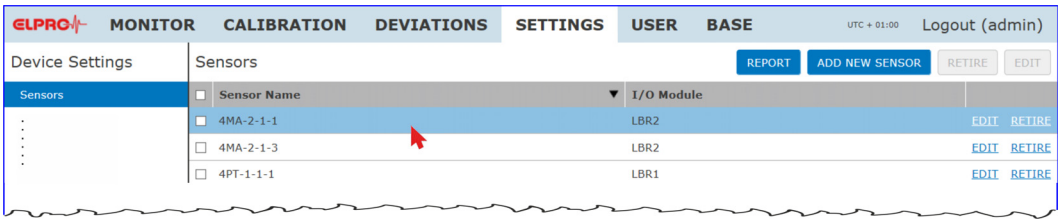
To add the sensors, digital inputs and digital outputs, you must first define the associated I/O modules and sensor groups.

The I/O modules are ECOLOG-PRO LBR, all ECOLOG-NET data loggers and the Alarm Interface LAN. For the configuration of these I/O modules see:

- ⇨ 7.4 *Sensor Group*
- ⇨ 7.5 *ECOLOG-PRO series*
- ⇨ 7.6 *ECOLOG-NET series*
- ⇨ 7.7 *Alarm Interface LAN*

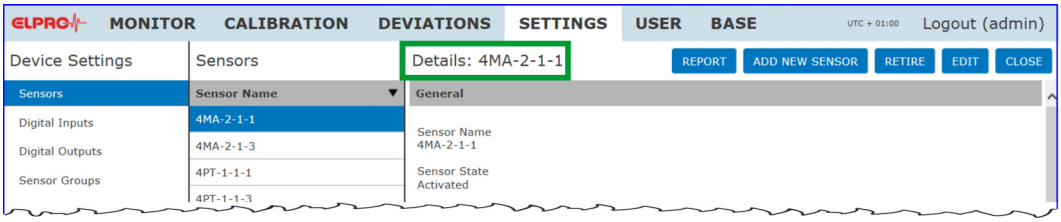
Details

Left-clicking on a specific line opens the detail view for that line.



***47.** Example: Line marked*

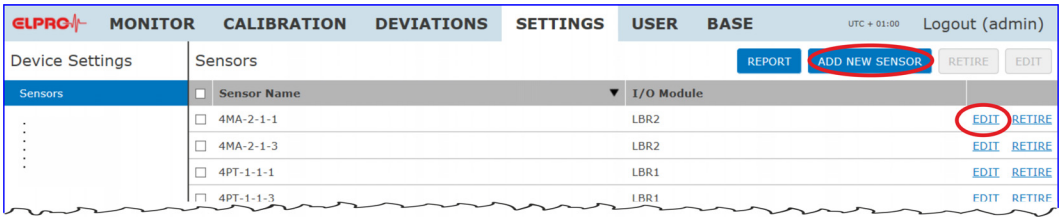
The detail view includes all information belonging to this line. But no changes can be made.



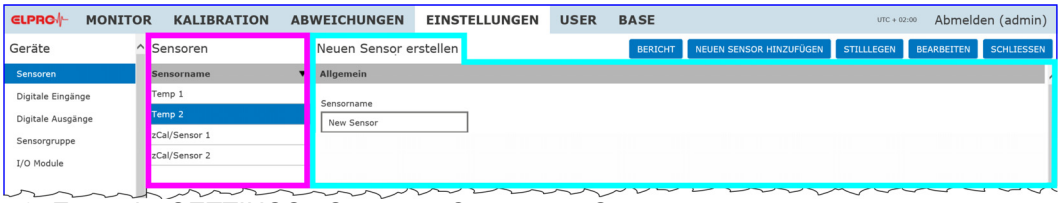
***48.** Example: Detail view - Sensors*

Add, Edit

By left-clicking on ADD .... or EDIT, the display changes to the detail view with input fields for the parameterization.



***49.** Example: ADD.... oder EDIT selected*

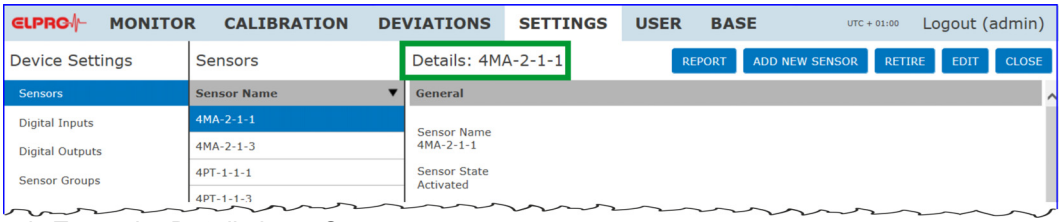


***50.** Example: SETTINGS - Sensors - Create new Sensor*

7.1 Sensors

7.1.1 Details

The details contain all information about the selected sensor. This information is: name, recording and alarm conditions.



***51.** Example: Detail view - Sensors*

7.1.2 Add / Edit

***52.** Example: SETTINGS - Sensors → CREATE NEW SENSOR*

List of existing sensors.

The information in this column defines a new sensor.

General

- Sensor Name
  Name of the sensor for monitoring with elproMONITOR and for simple identification in the reports. The sensor must be given a unique name.
- Sensor State
  This is an information field which indicates the current sensor state (activated/deactivated). This field cannot be changed. The sensor is activated/deactivated manually or automatically during calibration.

Connection with ECOLOG-PRO

Connection

- I/O Module
  Selection list with the available I/O modules. The sensor must be assigned to one of these modules.
- I/O Module Channel
  Selection list with all of the measuring module channels available at this I/O module. The sensor must be connected to one of these channels. Only unassigned channels are listed.
- Assigned Digital Output
  Selection list with the names of the digital outputs available. A digital output of a ECOLOG-PRO 4DO is assigned directly to the sensor.

  ⇨ 7.3 *Digital Outputs*

Connection with ECOLOG-NET

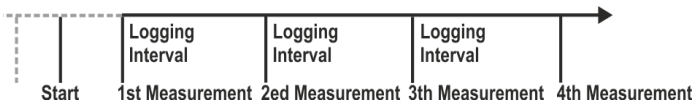
Connection

- I/O Module
  Datalogger type to which the sensor is connected. Only a previously configured datalogger from the ECOLOG-NET series can be used as I/O module.
- I/O Module Channel
  Measuring channel of the ECOLOG-NET logger used, to which the sensor is connected. Only unassigned channels are listed.
- Assigned Digital Output
  - ECOLOG-NET Logger, Internal; Alarm 1 and Alarm 2
    These contacts cannot be handled by elproMONITOR.

- ECOLOG-PRO 4DO
  Selection list with the names of the digital outputs available. The sensor of the ECOLOG-NET has a digital output of an ECOLOG-PRO 4DO assigned to it.

⇨ 7.3 *Digital Outputs*

Logging



- Logging Interval
  After a program restart, the first measurement value logged when reaching the first full interval.
  The data are logged synchronously. All of the measurement values and statuses are logged simultaneously. An interval can be specified separately for each sensor. Intervals can be set from 1 to 60 minutes.

  To correct the interval for a monitoring sequence in progress, delete or retire the sensor and then redefine it.

THE "LOGGING INTERVAL" CANNOT BE CHANGED LATER.

- Schedule Profile
  Use a schedule profile to control the sensor time-dependent for monitoring tasks with elproMONITOR. You can select an existing defined profile from the selection list.

⇨ 6.1.5 *Schedule Profiles*

Description

- Sensor ID
  Serves to identify a sensor as an additional parameter to the sensor name.
- Sensor Memo
  Text field for entering sensor-related information.

Profil Set A
Profil Set B

The profile sets comprise the combined information:

- Profiles for warnings and alarms caused by limit violations.
- Sensor failure profiles
- Profiles for recipients of failure, warning and alarm notifications.

⇨ 6.1 *Profiles*

Sensor Groups

List of existing sensor groups to which the sensor can be added. The sensor must be assigned to at least one sensor group.

Sensor Group Name

Current sensor group to which the sensor belongs.

xxxxxxxx

ADD

Assigns the sensor to a sensor group.

REMOVE

Removes an existing sensor from this sensor group.

READ SERIAL NUMBER Reads the sensor ID of the humidity-temperature sensor of an ECOLOG-PRO 2TH.

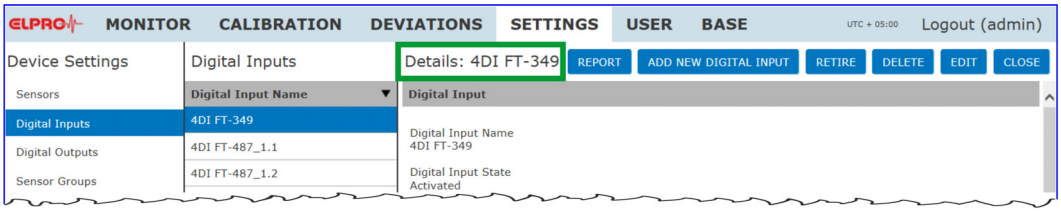
7.2 Digital Inputs

1) Digital input indicates a contact input in elproMONITOR.

2) The electrical connection at the measuring module is referred to as the contact input.

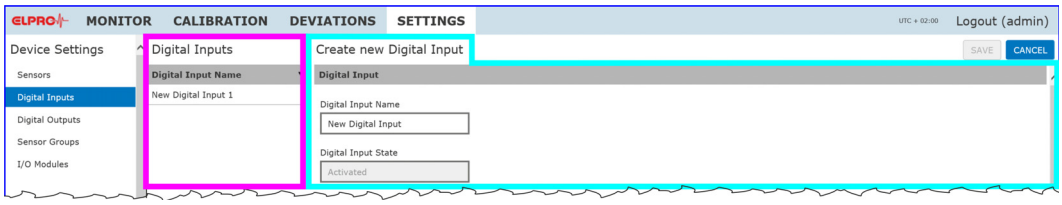
7.2.1 Details

The details contain all information about the selected digital input. This information is: name, recording and alarm conditions.



***53.** Example: Detail view - Digital Inputs*

7.2.2 Add / Edit



***54.** SETTINGS - Digital Inputs → CREATE NEW DIGITAL INPUT*

Digital Inputs

List of existing digital inputs.

Create New Digital Inputs

The information in this column defines a new digital input.

Digital Input

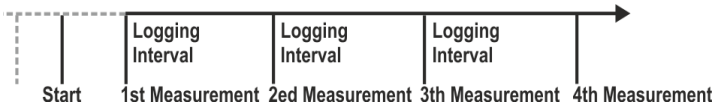
- Digital Input Name
  Name of the digital input for monitoring with elproMONITOR and for simple identification in the reports. The digital input must be given a unique name.
- Digital Input State
  This is an information field which indicates the current contact input state (activated/deactivated). This field cannot be changed. The contact input is activated/deactivated manually or automatically during calibration.

Connection

- Assignment of the used I/O module

  ⇨ 7.5 *ECOLOG-PRO series*
- Channel to which the monitored digital input is connected to the module.
- Digital output for alerting.

Logging



- Logging Interval
  After a program restart, the first measurement value logged when reaching the first full interval.
  The data is logged synchronously. All of the measurement values and statuses are logged simultaneously.
  An interval can be specified separately for each sensor. Intervals can be set from 1 to 60 minutes.

  To correct the interval for a monitoring sequence in progress, delete or retire the digital input and then redefine it.

THE "LOGGING INTERVAL" CANNOT BE CHANGED LATER.

- Schedule Profile
  Use a schedule profile to control the digital input time-dependent for monitoring tasks with elproMONITOR. You can select an existing defined profile from the selection list.

  ⇨ 6.1.5 *Schedule Profiles*

Description

- Digital Input ID
  Serves as an additional parameter for identification besides the digital output name.
- Digital Input Memo
  Text field to enter comments.

Profil Set A
Profil Set B

The profile sets comprise the combined information of:

- Profiles for alarms triggered by a digital input.
- Profiles for recipients of failure, warning and alarm notifications.

⇨ 6.1 *Profiles*

Sensor Groups

List of existing sensor groups to which the digital input can be added. The digital input must belong to at least one sensor group.

Sensor Group Name

Current sensor group to which the digital input belongs.

xxxxxxxx

ADD

Assigns the digital input to a sensor group.

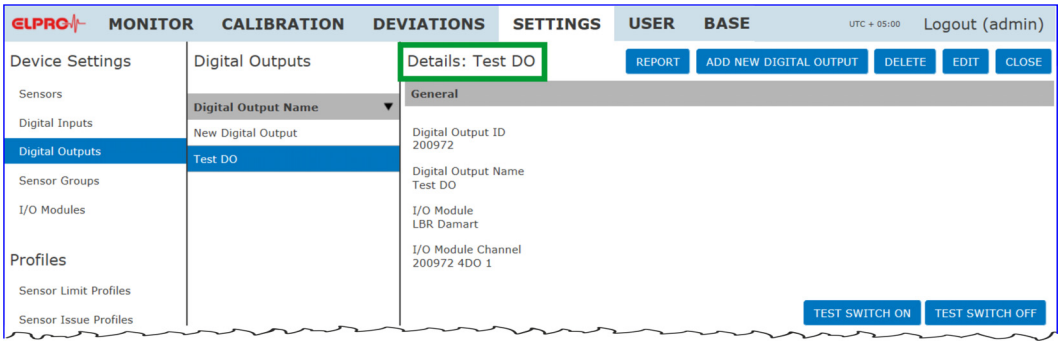
REMOVE

Removes an existing digital input from this sensor group.

7.3 Digital Outputs

The digital outputs of ECOLOG-NET loggers cannot be used with elproMONITOR software!

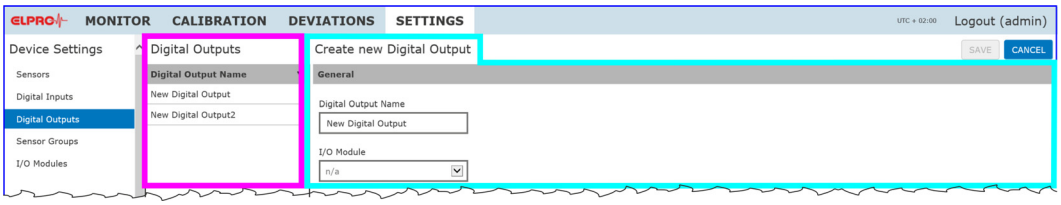
7.3.1 Details



***55.** Example: Detail View - Digital Outputs*

The details contain all information about the selected ECOLOG-PRO 4DO. This information is: ID, module name, associated I/O module and occupied channel of the ECOLOG-PRO 4DO.

7.3.2 Add / Edit



***56.** SETTINGS - Digital Outputs → CREATE NEW DIGITAL OUTPUT*

List of existing digital outputs.

The information in this column defines a new digital output.

General

- Digital Output Name
  Name of the digital output for control with elproMONITOR and for simple identification in the reports. The digital output must be given a unique name.
- I/O Module
  Selection list with the available I/O modules. The digital output must be assigned to one of these modules. It is possible to use ECOLOG-PRO 4DO or the Ethernet alarm interface as I/O modules.
- I/O Module Channel
  Selection list with the digital outputs which are still free.

- Digital Output ID
  Serves as an additional parameter for identification besides the digital output name.
  This ID is assigned by Elpro-Buchs AG during module production.

XXXXXXXX

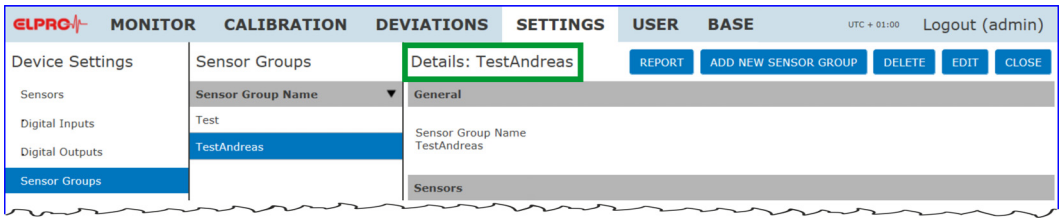
TEST SWITCH ON
TEST SWITCH OFF

Test functions for the digital output.

7.4 Sensor Group

Sensors and digital inputs can be compiled into virtual groups, referred to as "sensor groups".

7.4.1 Details



***57.** Example: Detail view - Sensor Groups*

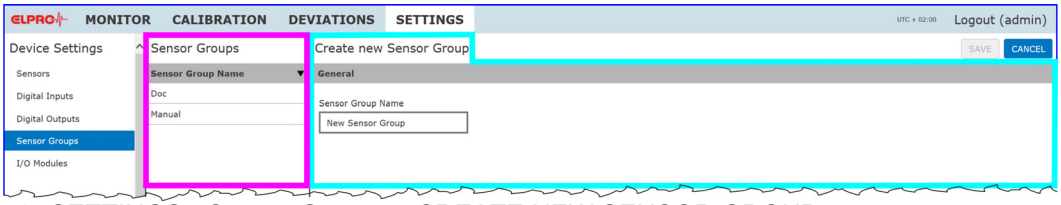
The details of a sensor group include general information and the names of the sensors and digital inputs.

Details

Left-clicking on a specific line opens the detail view for that line.

⇨ 7.1.1 *Details*

7.4.2 Add / Edit



58. SETTINGS - Sensor Group → CREATE NEW SENSOR GROUP

List of existing sensors.

The information in this column defines a new sensor group.

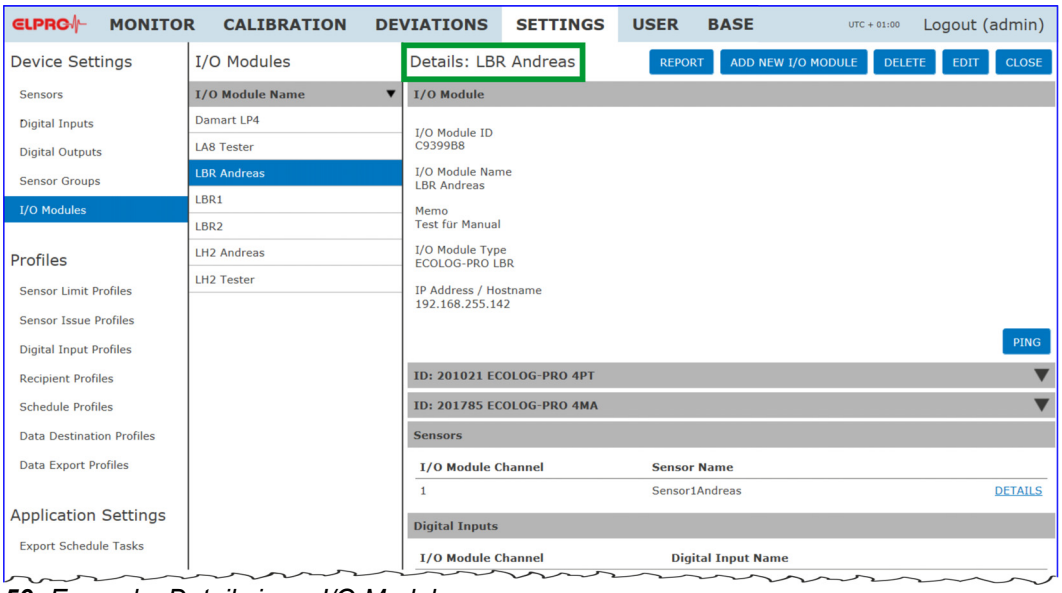
General

- Sensor Group Name
  This is the designation for a new sensor group.

7.5 ECOLOG-PRO series

7.5.1 I/O Module - ECOLOG-PRO LBR

7.5.1.1 Details



***59.** Example: Detail view - I/O Module*

This view lists all the modules available on the selected I/O module. In addition, the sensors and digital inputs assigned to the I/O module are listed with their parameters.

▲ ▼ Open / close the details of the sensor or digital input.

XXXXXXXX

PING

XXXXXX/XXXXXX

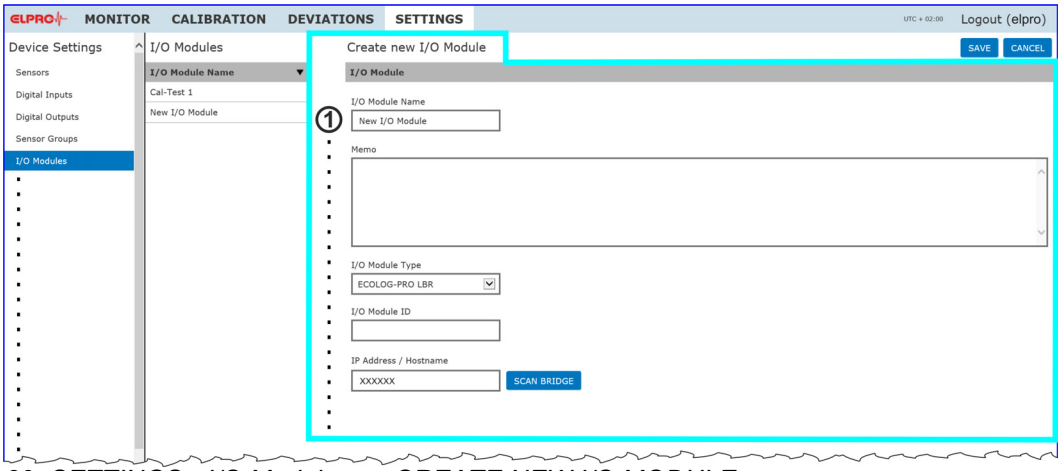
This command checks the network setting of the I/O module and tests the network connection. The test is concluded with a good or bad confirmation.

DETAILS

Wechselt in die Detailansicht der Sensoren

⇨ 7.1.1 *Details*

7.5.1.2 Add / Edit



***60.** SETTINGS - I/O Modules → CREATE NEW I/O MODULE*

List of existing I/O modules.

The information in this column defines a new I/O module.

① A new I/O module is created with these entries.

- I/O Module Name — Name of the I/O module for monitoring with elproMONITOR.
- Memo — Text field to enter comments.
- I/O Module Type — Selection list containing the I/O modules available from ELPRO-BUCHS AG. In the ECOLOG-PRO range, only the ECOLOG-PRO LBR is currently available (July 2017).

  ECOLOG-PRO LBR ⇨ 1.2 *ECOLOG-PRO*
- I/O Module ID — Serial number of the I/O module which is indicated in the configuration report and used by elproEVENT as the identifier. It has no influence on the network configuration!

② IP Address/ Host Name — Network parameters for elproMONITOR

DHCP

When delivered, the I/O modules are configured as DHCP clients. The ID number applied to the front of the housing is used for identification in elproMONITOR.

IP Address

A fixed IP address is entered manually with the ECOLOG-PRO module configurator. The network administrator must assign the address to avoid network conflicts!

XXXXXXXX

PING

XXXXXX/XXXXXX

This command checks the network setting of the I/O module and tests the network connection. The test is concluded with a good or bad confirmation.

SCAN BRIDGE

This function updates the list of modules connected to the I/O module.

Add I/O module

Step 1
- SETTINGS → Device Settings → I/O Modules
- ADD NEW I/O MODULE
- Define unique I/O module name
- Select I/O Module Type → ECOLOG-PRO LBR

Step 2 Enter I/O Module IP or host name

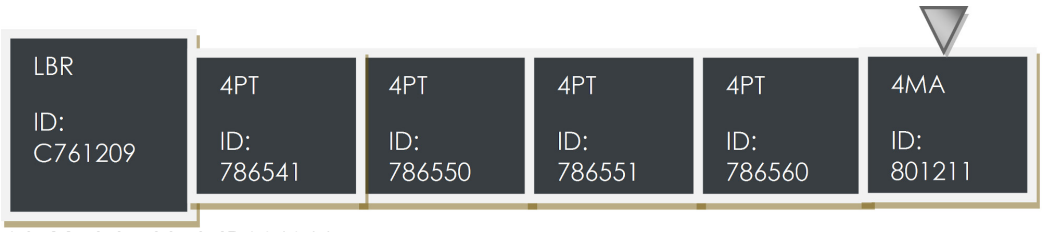
Step 3 Update the module list with SCAN BRIDGE

Step 4 Configure the modules connected to the I/O module with elproMONITOR:

- 7.5.2.2 *Parameterizing - ECOLOG-PRO 4MA*
- 7.5.2.3 *Parameterizing - ECOLOG-PRO 2TH*
- 7.5.2.4 *Parameterizing - ECOLOG-PRO 4DI*
- 7.5.2.5 *Parameterizing ECOLOG-PRO 4DO*

SCAN BRIDGE is only active if the IP address or host name has been entered.

7.5.1.3 Add Module



***61.** Modul added: ID801211*

A new module may only be added at the end of the module chain.

After adding, the module must be configured.

Step 1 A new module will be added at the end of the module chain

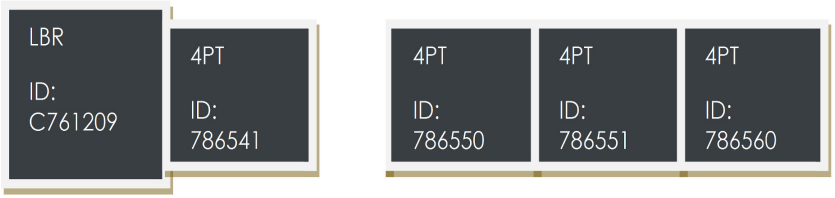
Step 2 Update the module list with SCAN BRIDGE

Step 3 Save the updated module list with SAVE

Step 4 Configure modules:
- 7.5.2.2 *Parameterizing - ECOLOG-PRO 4MA*
- 7.5.2.3 *Parameterizing - ECOLOG-PRO 2TH*
- 7.5.2.4 *Parameterizing - ECOLOG-PRO 4DI*
- 7.5.2.5 *Parameterizing ECOLOG-PRO 4DO*

elproMONITOR	Active measuring channels	ID 801211 "Connected"
	Reloading	---
elproEVENT	Audit trail	"Measurement module added" 4MA ID 801211

7.5.1.4 Temporarily disconnect modules



***62.** Module disconnected: ID786541 - ID786550*

Step 1 Disconnect module chain

Step 2 Perform service work

elproMONITOR	Active measuring channels	ID: 786541 keep the status
		ID: 786550 change to „No Connection“
		ID: 786551 change to „No Connection“
		ID: 786560 change to „No Connection“
	Reloading	--
elproEVENT	Audit trail	--

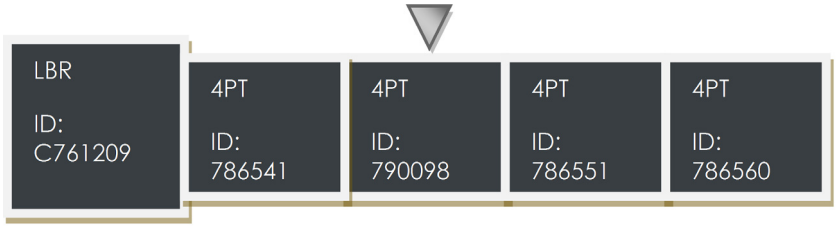
Step 3 Close the module chain

Step 4 Update the module list with SCAN BRIDGE

Step 5 Save the updated module list with SAVE

elproMONITOR	aActive measuring channels	ID: 786541 keep the status ID: 786550 change to „Connect“ ID: 786551 change to „Connect“ ID: 786560 change to „Connect“
	Reloading	The active measurement channels ID: 786550, ID: 786551 and ID: 786560 are being attempted to reload. ATTENTION, the power interruption leads to measured value gaps. After a failed reload attempt, the status of these readings is set to non-reloadable.
elproEVENT	Audit trail	--

7.5.1.5 Replace module



***63.** Modul replaced: ID786550 - ID790098*

Step 1 Disconnect module chain

Step 2 Replace old module with new module of the same type

Step 3 Close the module chain

Step 4 Update the module list with SCAN BRIDGE

Step 5 Save the updated module list with SAVE

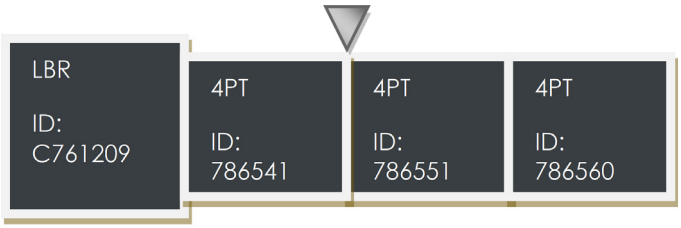
Step 6 Configure modules:
- 7.5.2.2 *Parameterizing - ECOLOG-PRO 4MA*
- 7.5.2.3 *Parameterizing - ECOLOG-PRO 2TH*
- 7.5.2.4 *Parameterizing - ECOLOG-PRO 4DI*
- 7.5.2.5 *Parameterizing ECOLOG-PRO 4DO*

The replacement is only possible under functionally identical modules.

elproMONITOR	Active measuring channels	ID: 790098, ID 786551 and ID: 786560 „Connect“

	Reloading	The active measurement channels ID: 790098, ID: 786551 and ID: 786560 are being attempted to reload. ATTENTION, the power interruption leads to measured value gaps. After a failed reload attempt, the status of these readings is set to non-reloadable.
elproEVENT	Audit trail	„Measurement module changed“ New Value: ID: 790098 ECOLOG-PRO 4PT Old Value: ID: 786550 ECOLOG-PRO 4PT

7.5.1.6 Remove module



***64.** Module removed: ID78650*

Step 1 Disconnect module chain

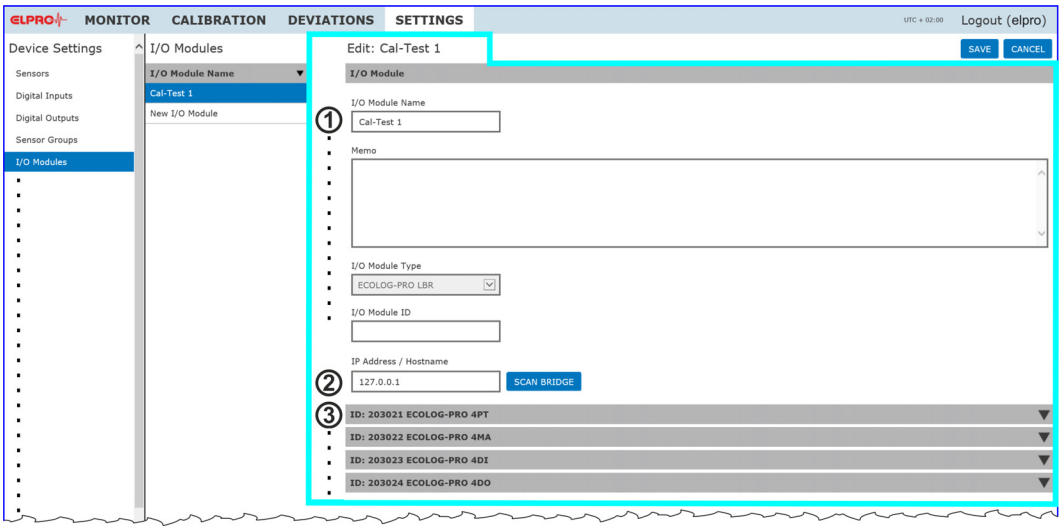
Step 2 Remove module

Step 3 Close the module chain

Step 4 Update the module list with SCAN BRIDGE

elproMONITOR	Active measuring channels	ID 786551 and ID: 786560 „Connect“
	Reloading	The active measurement channels ID: 786551 and ID: 786560 are trying to reload. ATTENTION, the power interruption leads to measured value gaps. After a failed reload attempt, the status of these readings is set to non-reloadable.
elproEVENT	Audit trail	Measurment module removed ID 786550 ECOLOG-PRO 4PT

7.5.2 Edit I/O Module



***65.** SETTINGS - I/O Modules → module list*

Edit: xxxxx

① *Details regarding points 1 and 2:*
② ⇨ *7.5 ECOLOG-PRO series*

③ List of the modules available on the selected I/O module.

This list is updated only after performing SCAN BRIDGE.

Functional measuring module

Parameterization mode

Unconfirmed changes in the configuration, a faulty or removed measuring module.

A left-click on the corresponding line opens / closes the parameterization window.

7.5.2.1 Parameterizing - ECOLOG-PRO 4PT

4PT parameters

ID: 203021 ECOLOG-PRO 4PT

Channel	Unit
1	°C
2	°C
3	°C
4	°C

***66.** Window: ECOLOG-PRO 4PT*

No parameters need to be set.

7.5.2.2 Parameterizing - ECOLOG-PRO 4MA

Scaling 4MA

ID: 203022 ECOLOG-PRO 4MA

Channel	Unit	4mA Measurement	20mA Measurement	Decimals	Boundary
1	ppm	200	1000	2	☑
2	ppm	200	1000	2	☑
3	ppm	200	1000	2	☑
4	ppm	200	1000	2	☑

***67.** Window: ECOLOG-PRO 4MA*

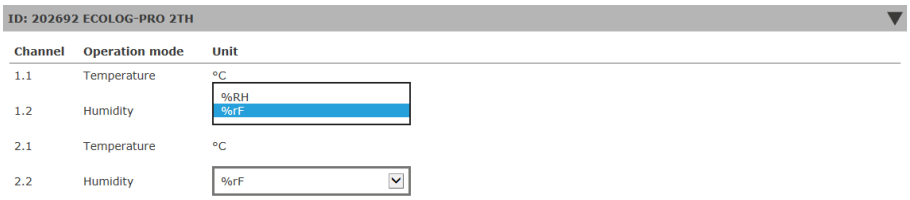
- Unit
  Measuring value unit used for scaling.
- 4mA Measurement
  The measurement is scaled in accordance with the information from the sensor for the lower end of the measuring range.
- 20mA Measurement
  The measurement is scaled in accordance with the information from the sensor for the upper end of the measuring range.
- Decimals
  Scaled measurement values are rounded off to the selected number of decimal places.
- Boundary
  Limitation of measurement values outside of the measuring span of 4 - 20mA on the defined area.

  - Values over 20.4 mA result in sensor faults

  - Values under 3.6mA result in sensor faults

7.5.2.3 Parameterizing - ECOLOG-PRO 2TH

2TH paramters

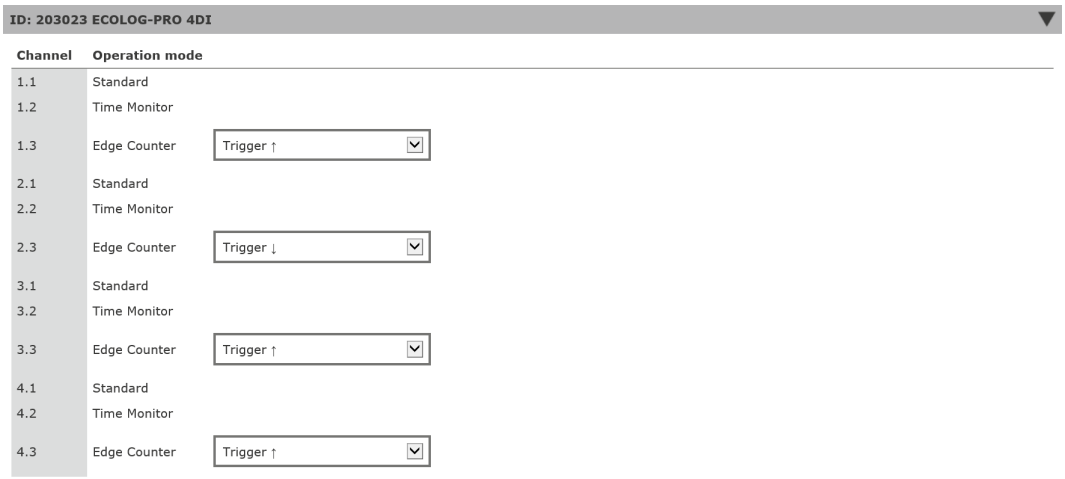


***68.** Window: ECOLOG-PRO 2TH*

- Unit
  Name can be selected between %RH and %rF.
- Measurement range
  No parameterization necessary.

7.5.2.4 Parameterizing - ECOLOG-PRO 4DI

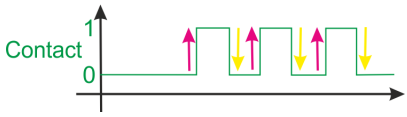
Operation mode, rising/falling edges, 4DI



***69.** Window: ECOLOG-PRO 4DI*

- Operation mode
  - Standard and time-based monitoring

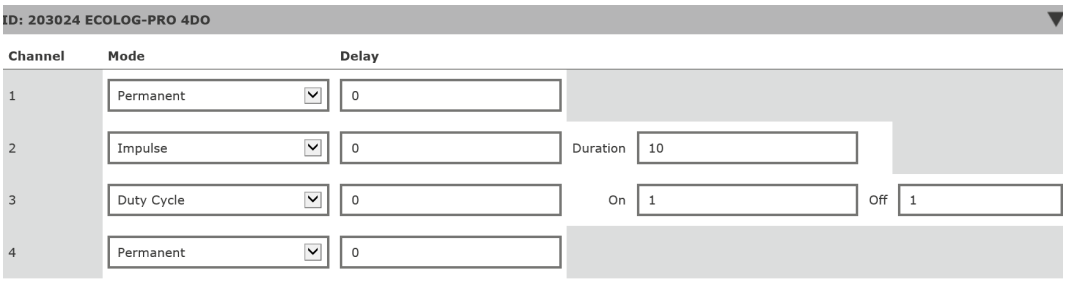
    ⇨ 6.1.3 *Digital Input Profiles*
  - Edge Counter
    If the status changes, the edge counter only records the rising or falling edge of the monitored contact.



- Rising
- Falling

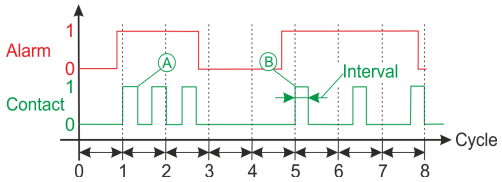
7.5.2.5 Parameterizing ECOLOG-PRO 4DO

4DO parameters



***70.** Window: ECOLOG-PRO 4DO*

- Operation mode
  - Permanent
    The output remains active until the alarm condition is no longer fulfilled.
  - Impulse
    When fulfilling an alarm condition, the output for an impulse is activated. The impulse duration is defined in seconds.
  - Cycle
    When fulfilling an alarm condition, the contact cyclically changes its status.
    The on and off duration are defined in seconds. The shortest interval is 1 second.



A) On=1 second; off=1 second
B) On=1 second; off=3 seconds

- Delay
  The delay is defined in the number for logging intervals.

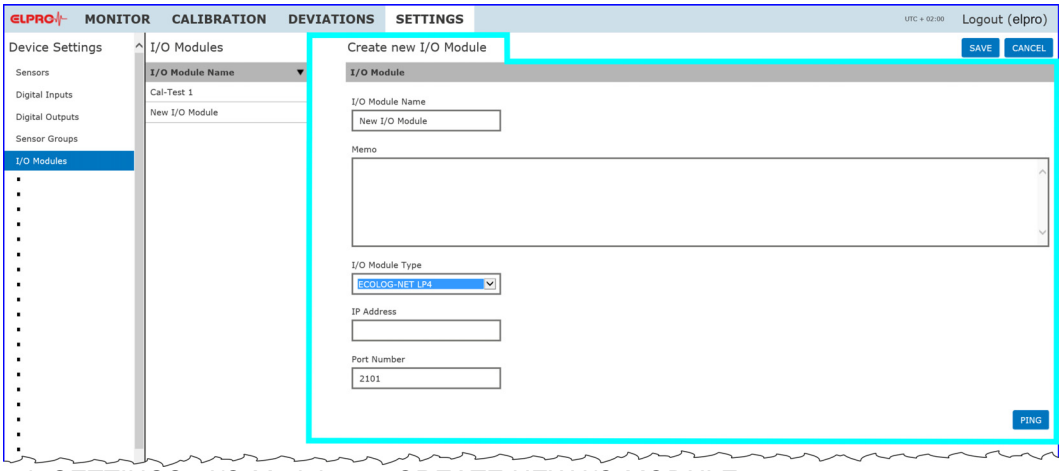
Status change

The status (alarm/no alarm) of the contacts is checked each time the monitor data are updated. Status changes between two updates are not logged.

7.6 ECOLOG-NET series

7.6.1 Add I/O Module

CREATE NEW I/O MODULE is used to define a new ECOLOG-NET as an I/O module for monitoring with elproMONITOR.



71. SETTINGS - I/O Modules → CREATE NEW I/O MODULE

7

Create new I/O Module

A new I/O module is created with these entries.

- I/O Module Name — Name of the I/O module for monitoring with elproMONITOR. It has no influence on the network configuration!
- Memo — Text field to enter comments.
- I/O Module Type — Selection list containing the ECOLOG-NET data loggers available from ELPRO-BUCHS AG.

  ⇨ 1.3 *ECOLOG-NET Loggers*

- IP Address — Fixed IP address
  The network administrator must assign the address to avoid network conflicts!

  ⇨ 7.7 *Alarm Interface LAN*

- Port Number — 2101

XXXXXXXX

PING
XXXXXX/XXXXXX

This command checks the network settings of the I/O module and the network connection. The test is ended by an OK or NOK confirmation.

Approach:
Step by step

Before installation

Step 1 Assign a fixed IP address to the I / O module. To avoid network conflicts, the network administrator must assign the address! The same procedure applies to changing the IP address.
For a detailed description of this step, see the corresponding ECOLOG-NET operating instructions.

After installation

Step 2
- SWETTINGS → Device Settings → I/O Modules
- ADD NEW I/O MODULE
- Define unique I/O module name
- Select I/O Module Type ECOLOG-NET xx
- Enter IP address

Step 3 PING checks the network setting of the I/O module and tests the network connection.

7

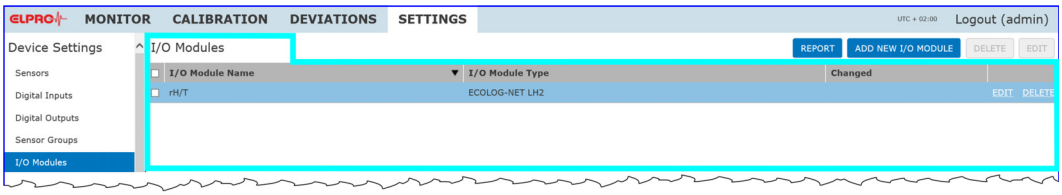
7.6.2 Edit I/O Module

The module name and IP address can be changed with EDIT.

XXXXXXXX

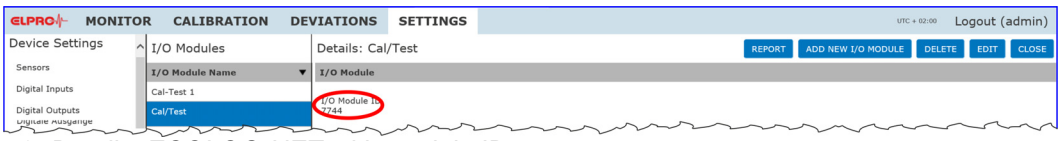
I/O Module

Left-clicking on the overview allows you to change to the detail view for the selected I/O module.



***72.** SETTINGS - I/O Modules → EDIT*

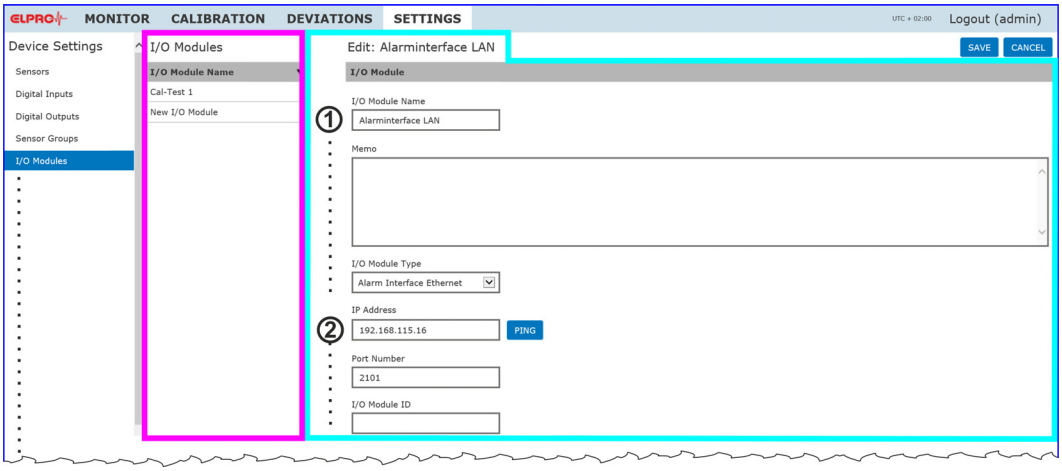
For the ECOLOG-NET logger, the I/O module ID is the device serial number. This information corresponds to the information on the product ID or the device status.



***73.** Details: ECOLOG-NET with module ID*

7.7 Alarm Interface LAN

Communication between the elproMONITOR software and the alarm interface is over the existing network.



74. SETTINGS - I/O Modules → CREATE NEW I/O MODULE

I/O Modules

List of existing I/O modules.

Create/Edit New I/O Module

① A new I/O module is created with these entries.

- I/O Module Name — Name of the I/O module for monitoring with elproMONITOR. It has no influence on the network configuration!
- Memo — Text field to enter comments.
- I/O Module Type — Selection list containing the I/O modules available from ELPRO-BUCHS AG. Only the Ethernet alarm interface is currently available (Juli 2017).

②

- IP Address — ⇨ elproMONITOR Alarm Interface LAN; AD2104D
- Port Number — 2101
- I/O Module ID — ID assigned by the user which is indicated in the configuration report and used by elproEVENT as the identifier. It has no influence on the network configuration!

Status change

The status (alarm/no alarm) of the contacts is checked each time the monitor data are updated. Status changes between two updates are not logged.

XXXXXXXX

PING

This command checks the network setting of the Alarm Interface LAN and tests the network connection. The test is concluded with a good or bad confirmation.

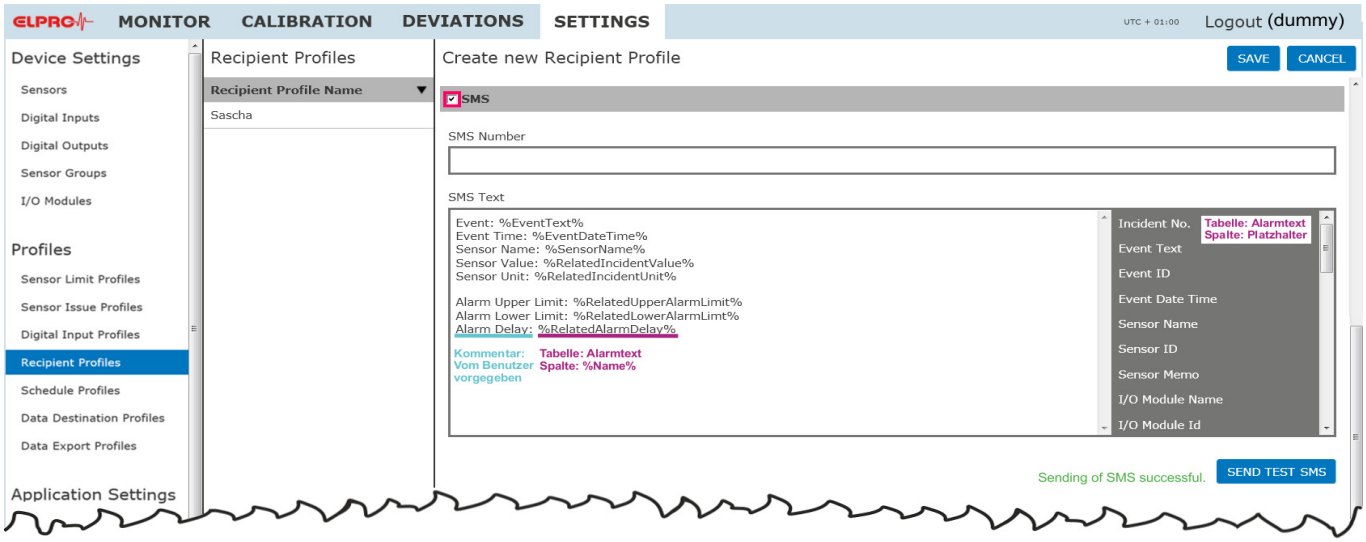
XXXXXX/XXXXXX

8 Annex: Alarm Text Placeholders

Placeholders	%Name%	Content or comment
Incident No.	%IncidentNo%	Unique consecutive number
Event Text	%EventText%	"Upper alarm limit exceeded", "Lower alarm limit exceeded", "Upper warning limit exceeded", "Lower warning limit exceeded", "No Connection", "Sensor Error", "System Error", "Alarm limit ok", "Warning limit ok", "Sensor ok", etc.
Event ID	%EventId%	Event Code
Event Date Time	%EventDateTime%	Every single occurrence of an event
Sensor Name	%SensorName%	Applies both to sensors and to digital inputs
Sensor ID	%SensorID%	Applies both to sensors and to digital inputs
Sensor Memo	%SensorMemo%	Applies both to sensors and to digital inputs
I/O Module Name	%IoModuleName%	I/O module name
I/O Module ID	%IoModuleId%	I/O module ID
I/O Module Memo	%IoModuleMemo%	I/O module note
Alarm State	%AlarmState%	"Active", "Inactive"
Alarm State ID	%AlarmStateId%	1, 0
Sensor State	%SensorState%	State from monitor side, e.g. "OK", "Alarm Upper", "Warning", "Low Battery" etc.
Sensor State ID	%SensorStateId%	1, 2, 3, 4, 5, 6
Acknowledge State	%AcknowledgeState%	Acknowledged, Unacknowledged, n/a (e.g. for present digital inputs)
Acknowledge ID	%AcknowledgeId%	1, 2, -1
Logger Interval	%LoggerInterval%	Numeric value only [min.]
Related Upper Alarm Limit	%RelatedUpperAlarmLimit%	Value from set active at the time of the incident
Related Upper Alarm Limit	%RelatedLowerAlarm Limit%	Value from set active at the time of the incident
Related Upper Alarm Delay	%RelatedUpperAlarmDelay%	Value from set active at the time of the incident
Related Lower Alarm Delay	%RelatedLowerAlarmDelay%	Value from set active at the time of the incident
Related Upper Warning Limit	%RelatedUpperWarningLimit%	Value from set active at the time of the incident
Related Lower Warning Limit	%RelatedLowerWarningLimit%	Value from set active at the time of the incident
Related Upper Warning Delay	%RelatedUpperWarningDelay%	Value from set active at the time of the incident
Related Lower Warning Delay	%RelatedLowerWarningDelay%	Value from set active at the time of the incident
Related Profile Set	%RelatedProfileSet%	Value from set active at the time of the incident
Related Schedule Profile	%RelatedScheduleProfile%	Value from set active at the time of the incident
Related Failure Setting	% RelatedFailureSetting%	Value from set active at the time of the incident

Related No Connection Setting	%RelatedNoConnectionSetting%	Value from set active at the time of the incident
Related Incident Value	%RelatedIncidentValue%	At the time of the incident. For digital inputs 1, 0
Related Incident Value	%RelatedIncidenUnit%	At the time of the incident. For digital inputs "Open doors", "Closed doors"
Related Incident Date Time	%RelatedIncidentDateTime%	At the time of the incident.
State Change Text	%StateChangeText%	"Come", "Go", "Repeat"
State Change ID	%StateChangeId%	1, 2, 3
Repeat Count	%RepeatCount%	nth occurrence
Current Value	%CurrentValue%	Current measurement value
Current Unit	%CurrentUnit%	Current unit For digital inputs: "Open doors" or "Closed doors"

Table: Alarm text



***75.** Profile with placegholders*

Revision History

Author	Date	Version	Description
AG	Feb. 2, 2015	SM3031D	First release
AG	June 28, 2016	SM3031Da	Reloading logger data after connection interruption
AG	Sept. 6th 2017	SM3031Db	Various functions and ECOLOG-PRO added
JOGAU	26.Jul.2018	SM3021Dc	Revision of the document

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Operation Manual
elproMONITOR
SM3031Ec - July 2018