ECOLOG-PRO Base

Operation Manual

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Symbols and Description Codes Used

	Information
ⓘ	

	IMPORTANT INFORMATION AND WARNINGS
⚠	

DELETE	Windows functions, for example Delete
<xxxxxxxxx>	Syntax for placeholders. Placeholders are written in < > brackets.
⇨	Reference to related chapter or document.
〰	Presentation only refers to part of the user interface.
🖧	Ethernet cable
🛜	WLAN / WiFi, radio connection between: Base, WLAN modules and customer network.
📶	Radio connection between radio modules

	In the interests of our customers, we reserve the right to make any changes resulting from technical advances. For this reason, diagrams, descriptions, and the scope of delivery are subject to change without notice. This manual is valid as from Version 2017.
ⓘ	

	CHANGES OR MODIFICATIONS MADE TO THIS EQUIPMENT MAY INVALIDATE THE ETSI / FCC AUTHORIZATION TO OPERATE THIS EQUIPMENT. **THIS DEVICE COMPLIES WITH PART 15 OF THE FCC: OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:** **(1) THIS DEVICE MAY NOT CAUSE ANY HARMFUL RADIO INTERFERENCE, AND** **(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.** **THIS CLASS B DIGITAL DEVICE COMPLIES WITH THE CANADIAN ICES-0003.**
⚠	

CE	- This device complies with the fundamental requirements the Radio Equipment Directive (RED) 2014/53 / EU. - This device complies with EU radiation exposure limits for an uncontrolled environment. - This device should be installed and operated at a minimum distance of 20 cm between the radiator and your body.
FC	- The device contains the FCC ID: TX2-RTL8821AE and - IC: 6317A-RTL8821AE
🗙	- This product must be disposed of in accordance with WEEE (Waste Electrical and Electronic Equipment, 2002/96/EC).

1 ECOLOG-PRO Base

Description

The ECOLOG-PRO Base is a simple, autonomous central monitoring unit for the network-capable ECOLOG-PRO and ECOLOG-NET data loggers. It is the kernel of the Plug&Play solution for the networked monitoring of rooms and equipment. All the required software is pre-installed on the PC designed for maximum reliability. It provides extensive compatibility with proven ECOLOG-NET data loggers and ECOLOG-PRO modules.

This manual is a quick and simple reference guide to initial startup of up the ECOLOG-PRO Base. However, it contains no basic principles on setting up or operating a network.

ECOLOG-PRO Base, 801417

Application:

Maximum number of measuring data points	50 measuring data points
Memory capacity	18 months, older data is automatically deleted month by month by the system.
Data security	- Internal non-volatile memory
	- External USB drive, drive letter G
Data logger compatibility	ECOLOG-NET, ECOLOG-PRO
Internal clock	- Drift ± 11 minutes / year
	- Backup battery
Antennas	The device may only be operated with the supplied antennas. IMPORTANT: Do not use an extension cable between the ECOLOG-PRO Base and the antenna connections.
WLAN	2.4 GHz and 5 GHz, WPA2 or no encryption

Power supply	External power supply unit Follow the safety and application instructions for the power supply unit. Only operate the device using the supplied power supply unit. Use of an incorrect power supply unit may cause damage to the device. Always replace defective or damaged power supply units.
UPS batteries	Material safety data sheets in compliance with EEC Directive 93/112/EC and shipment recommendations are available from ELPRO. Do not subject batteries to mechanical stress or damage them. Leaking battery fluid is highly corrosive and may generate severe heat or may cause a fire if it comes in contact with moisture.

Environmental conditions

Application: 0°C to 40°C
Temperatures above 100°C may damage the battery.

Application: 10% RH to 95% RH, non-condensing
Protection class: IP20, ingress of water / humidity may cause damage to the device.

IR radiation (heat) and superheated steam may damage the surface coating of the casing.

No guarantee can be given if functions exceed the specified threshold range.

MAKE SURE THE ECOLOG-PRO BASE IS AT ROOM TEMPERATURE BEFORE INITIAL STARTUP.

Casing	To clean the modules, use a slightly moist cloth. Never use thinner, gasoline, alcohol, or any other cleaning agents since they may damage the casing.

Installed applications

elproMONITOR

Configuring and monitoring data loggers.

⇨ SM3031Db

elproUSER

elproMONITOR user management.

⇨ SU6031D

elproEVENT

Audit trail which complies with the cGxP Environment requirements of elproMONITOR.

⇨ SV6031D

ECOLOG-PRO Base Maintenance

Software for initial startup, setting, and maintenance of the ECOLOG-PRO Base

⇨ 3 *ECOLOG-PRO Base Maintenance*

elproMONITOR-WebAccess

Service on the server for creating text files that are required for the web application elproLOG MONITOR-WebAccess. This optional web application must be installed on a separate web server.

2 Initial Startup

2.1 ECOLOG-PRO Base
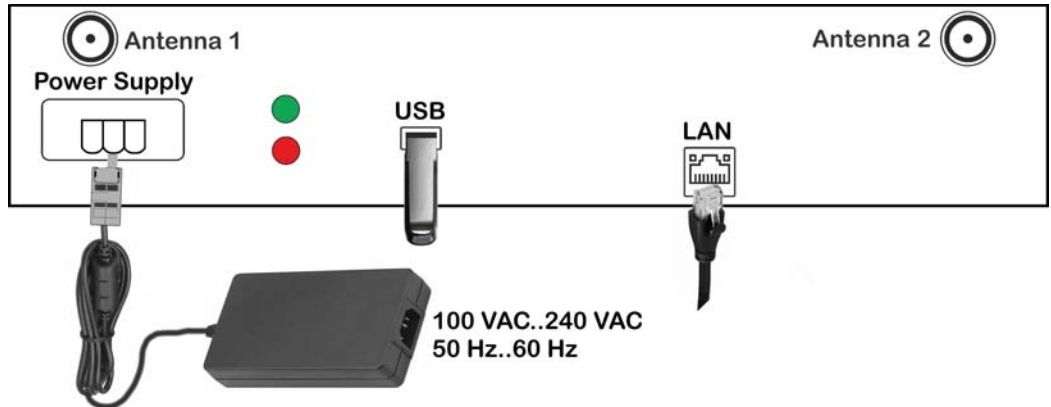
Casing underside, position of sockets, indicators, and antennas

LEDs and connections		Confirmation tone sequence	
LED, green	Power on	Start	1 long acoustic signal
LED, red	Hard disk active	Success	2 short acoustic signals
Power supply	Socket for external power supply unit	Error	2 long acoustic signals
Antenna 1, 2	WLAN antenna connection		
USB	USB port for data exchange and initialization. Drive letter G		
LAN	Gigabit Ethernet LAN port		

Connections   Depending on the operating mode, the ECOLOG-PRO Base is connected only to the power supply unit or additionally to a network cable.
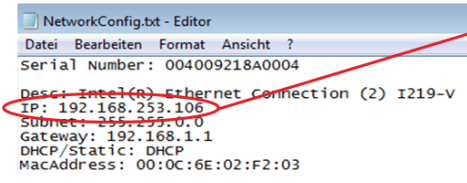
Optionally, an external data memory drive can be connected to the USB port provided (USB 3.0). This connection is also used for configuration, updates, and service work by ELPRO.

Note on initial startup   The sections: 2.1 *ECOLOG-PRO Base* to 2.3 *WLAN Connection* are also described in the document: EP6401A which is supplied along with the ECOLOG-PRO Base.
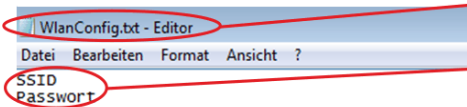
2.2 LAN Connection

> ℹ️ The PC used for configuration must be in the same network as the ECOLOG-PRO Base.

Step 1	Connect the cable and power supply unit.	ECOLOG-PRO Base starts.
Step 2	Start process.	Wait for the confirmation tone indicating ready (operating system started).
Step 3	Plug in the USB stick.	Wait for the confirmation tone (Success, Error).
Step 4	Remove the USB stick.	
Step 5	Plug the USB stick in the PC.	File: Open the file NetworkConfig.txt.

Use the IP address below the line "Desc: Intel(R) Ethernet Connection (2) I219-V" to log in to the ECOLOG-PRO Base.

Step 6	Open your web browser and run initialization. ⇨ *2.4 Initialization*	Path: http://192.168.253.106/Maintenance

2.3 WLAN Connection

Step 1		Create the file WlanConfig.txt on a USB stick. Enter the SSID name in the first line and the WLAN password in the second line. If a password is not required for the WLAN, leave this line blank. Encryption is set to WPA2.
Step 2	Connect the power supply unit.	ECOLOG-PRO Base starts.
Step 3	Plug in the USB stick.	Wait for the confirmation tone (Success, Error).

Step 4	Remove the USB stick.	
Step 5	Plug the USB stick in the PC.	File: Open the file NetworkConfig.txt.

Use the IP address below the line "Desc: Realtek 8821AE Wireless LAN 802.11ac PCI-E NIC" to log in to the ECOLOG-PRO Base.

NetworkConfig.txt - Editor
Datei Bearbeiten Format Ansicht ?
Serial Number: 004009218A0004

Desc: Intel(R) Ethernet Connection (2) I219-V
IP: 192.168.253.106
Subnet: 255.255.0.0
Gateway: 192.168.1.1
DHCP/Static: DHCP
MacAddress: 00:0C:6E:02:F2:03

Desc: Realtek 8821AE Wireless LAN 802.11ac PCI
IP: 169.254.170.128
Subnet: 255.255.0.0
Gateway:
DHCP/Static: DHCP
MacAddress: 00:0D:F0:C8:C6:04

Step 6

Open the web browser and run initialization.

⇨ 2.4 *Initialization*

Path: http://192.168.253.106/Maintenance

2.4 Initialization

ℹ At initial startup, the ECOLOG-PRO Base is initialized by the configuration wizard on the ECOLOG-PRO Base. To carry out this configuration, make sure the LAN or WLAN is connected to the ECOLOG-PRO Base.

Login

ELPRO

Please enter the admin username and password

Username

Password

Login

Log in to the ECOLOG-PRO Base using the username and password set on delivery.

- Username: admin

- Password: elpro

Language

ELPRO Configure your ECOLOG-PRO Base

Select the initialization language by left-clicking the country flag of your choice.

Displays

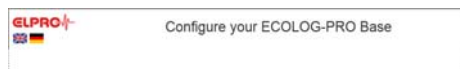Only the highlighted part of the configuration wizard is displayed in the following procedure.
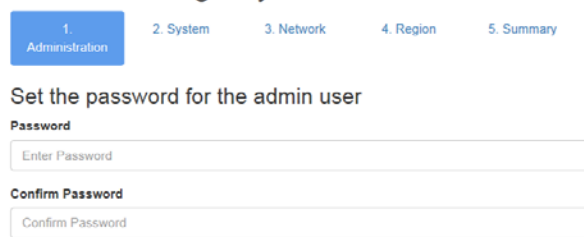

Next, Back

Skip forward or backward in the configuration wizard.

Carry out the five initialization steps in the order listed below. You can change all the configurations on the dashboard at a later date, including the administrator password and the computer name.

You can only change the administrator password after the initial setup in elproUSER.

Step 1

Administration

IMPORTANT: If you forget this password, ELPRO can reset it.

⇨ 6 *Recovery*

The password must consist of at least 8 characters and comprise 1 uppercase letter, 1 lowercase letter, and 1 numeral. Special characters are not permitted.

Step 2
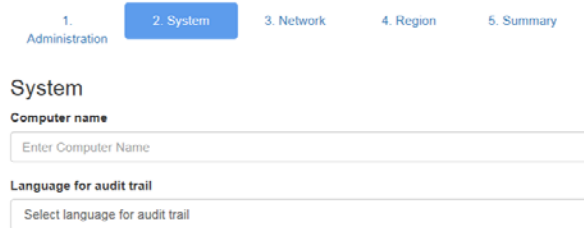
System

Define the computer name. Special characters are not permitted.

Select the language for events (audit trail entries). The only languages presently available are German and English.

Step 3

Network

Select the connection type to the network.

- DHCP

- Static

Step 4

Region

Select the national settings for date and time.
End your input for the current time with: DONE.

Step 5

Summary

Check your settings and end the initialization.

IMPORTANT: YOU CANNOT RESTART THE WIZARD AFTER YOU END THE INITIALIZATION.

Finish

Finish

The present configuration is saved on the ECOLOG-PRO Base.

Restart

ELPRO

Please enter the admin username and password

Username

Password

Login

- Log in to the ECOLOG-PRO Base using the username and password set on delivery.

- The application ECOLOG-PRO Base Maintenance in the dashboard view starts after login.

    ⇨ 3 *ECOLOG-PRO Base Maintenance*

3 ECOLOG-PRO Base Maintenance

> ℹ️ Carry out the following changes to the configuration using the ECOLOG-PRO Base Maintenance application.

Start ECOLOG-PRO Base Maintenance

The ECOLOG-PRO Base Maintenance application can start as follows:

1. Enter the IP address of the ECOLOG-PRO Base with the extension: /Maintenance in a web browser.
   Example: http://xxxx.yyyy.zzzz/Maintenance → Login ECOLOG-PRO Base Maintenance

2. From the elproMONITOR application
   Menu: BASE → Login ECOLOG-PRO Base Maintenance

elproMONITOR

REPORT

Generates a report containing the present settings of the ECOLOG-PRO Base.

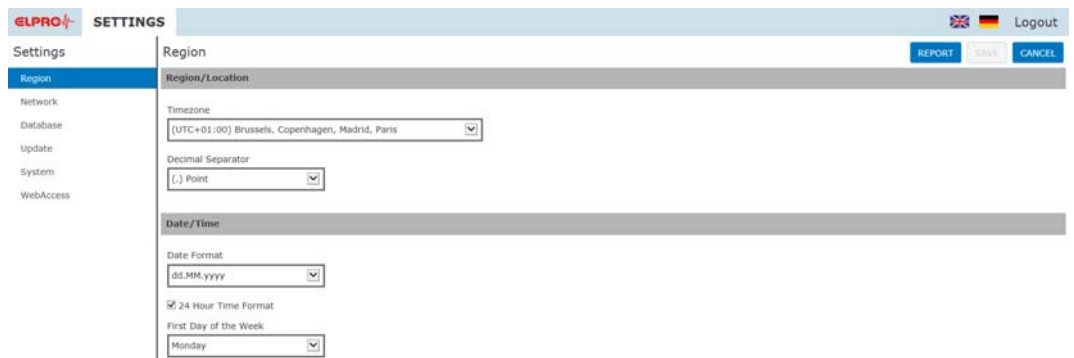� 3.7 *Example of a Configuration Report*

SAVE

Saves all settings and exits the configuration.

CANCEL

Cancels the configuration without saving the changes.

3.1 Region

SETTINGS - Region

Region/Location	

- Timezone
  Local timezone for the ECOLOG-PRO Base

- Decimal Separator
  . or ,   Select the option of either period or comma for display.

Date/Time	

- Date format
  DD.MM.YYYY   Select the option to display the date.
  DD/MM/YYYY
  MM/DD/YYYY
  YYYY-MM-DD
  DD.MMM.YYYY
  MMM/DD/YYYY

☐ ☑   24 Hour Time FormatSelect the time display option between 12 hours and 24 hours.

- First Day of the Week
  Sunday   Select the option for the start of the week.
  Monday

3.2   Network

SETTINGS - Network

LAN	

- Type
  DHCP   Select the option to assign the IP address.
  Static

WLAN	

- SSID, Password
  SSID and Password of the WLAN used.

Network Drive	

- Folder
  Path to the network drive used as backup drive, for example.
  Activate the selection box and enter the data required.

XXXXXXXX

TEST CONNECTION   Tests the connection to the network drive in the local network (LAN) of the ECOLOG-PRO Base.

☐ | ☑

Credentials Required   Activate if credentials are required for the network drive.

3.3   Database
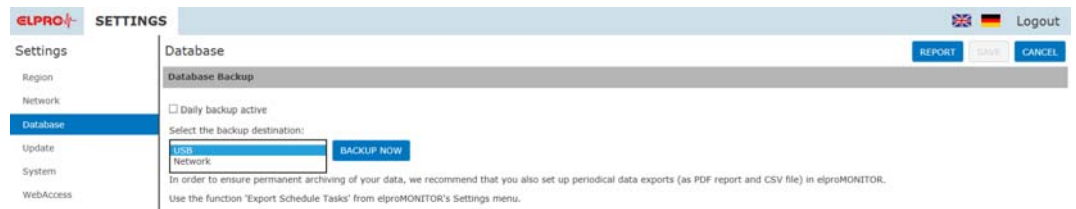
SETTINGS - Database

Database Backup

☐ | ☑

Daily backup active   Starts automatically a daily backup of the databases to the selected drive.

- Select the backup destination

  USB   A database backup can be sent to a medium (USB stick or hard disk)
  Network   connected to a local USB port (drive letter G) or to a drive in the local network (LAN).

XXXXXXXX

BACKUP NOW   The database backup is started manually to the drive specified.

A database can only be restored from a backup by ELPRO.

3.4   Update

SETTINGS - Update

System Update	• Select the update file List containing the files to update the ECOLOG-PRO Base.
XXXXXXXX	
UPDATE	Starts the update of the ECOLOG-PRO Base.

3.5 System
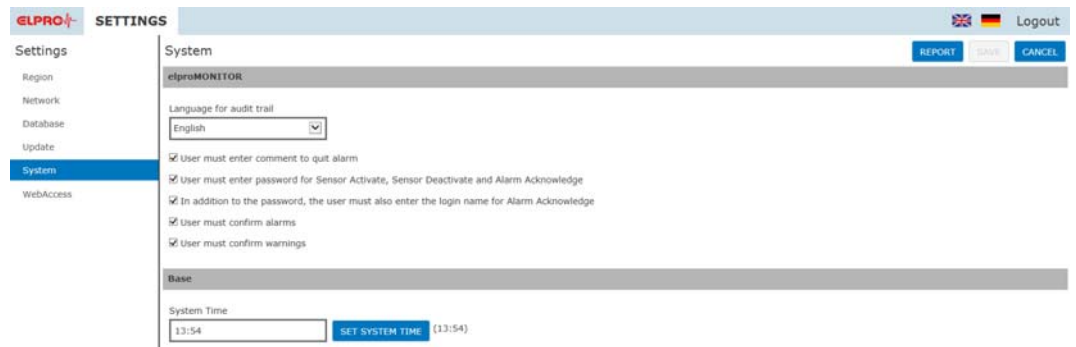
SETTINGS - System

elproMONITOR	• Language for audit trail The language selected is used for events (audit trail entries).
□ ☑	
XXXXXXX	Settings for comments and acknowledging warnings and alarms.
ECOLOG-PRO Base	• System Time Manual resetting of the time for the ECOLOG-PRO Base. • If the ECOLOG-PRO Base is in a network with web access, the time is synchronized automatically to the Windows time server.

3.6　　　WebAccess

Settings - WebAccess

Settings

- WebAccess Active
  Tick this checkbox to start or stop the elproMONITOR WebAccess service.

- Interval
  Interval Dropdown menu the select the interval for updating data entries.

- The selection options are 1, 5, or 10 minutes.
  Maximum 2000 entries corresponding to 2000 measured values per sensor can be written to the logger protocol.

- Number of entries for alarm protocol
  Maximum 500 entries corresponding to 500 measured values per sensor can be written to the alarm protocol.

Destination

- Alarm/Group/Logger Directory
  These three boxes define the names of the directories in each case. The 3 directories are created as subdirectories on the network drive specified.

- The alarm protocol is created in the alarm directory as a CSV file.

- A CSV file is created in the group directory for each sensor group created.

- A CSV file is created in the logger directory for every ECOLOG-NET logger and for every ECOLOG-PRO measurement module (4PT, 4MA, 2TH).
  A CVS file is created for each "Operation mode" (Standard, Time Monitor, and Edge Counter) for the ECOLOG-PRO 4DI measurement module. Please refer to the operation manual of the elproMONITOR software for details on the various modes.

  ⇨ SM3031E elproMONITOR operation manual

3.7 Example of a Configuration Report

Configuration report - pages 1 and 2

The configuration report is only available in English at present.

4 Operating Modes

4.1 Connection via SWITCH (operated autonomously)
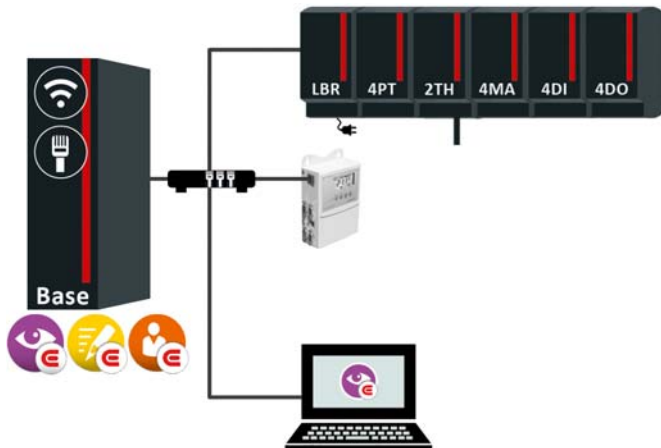
- Connection between the individual modules by an external switch

- ECOLOG-PRO Base is connected to the switch by LAN.

- The following I/O modules can be connected by LAN:

  - ECOLOG-PRO LBR

  - ECOLOG-NET LR8

  - ECOLOG-NET LP4

  - ECOLOG-NET LA8

Ethernet cable

Application example	- Using the system in an autonomous network
	- All components are connected to a switch.
	- No connection to the web
Conditions	Autonomous as stand-alone solution.
Security	No security against malware transferred directly when the USB port to the ECOLOG-PRO Base is used. The ECOLOG-PRO Base has no WINDOWS Defender and carries out no automatic WINDOWS updates.

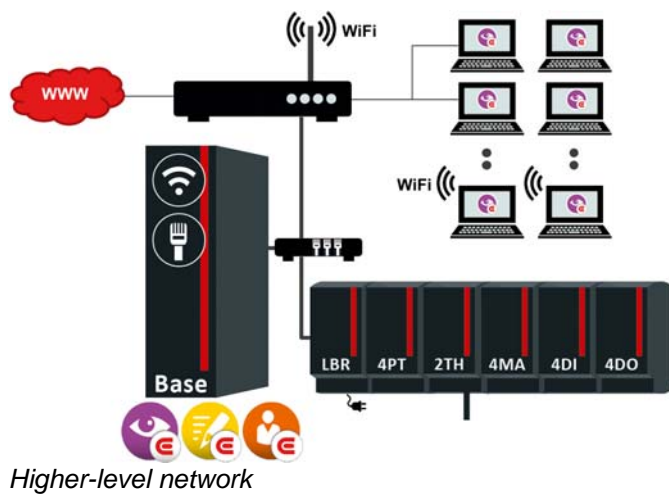## 4.2   Integration in Customer Network

Higher-level network

- ECOLOG-PRO Base is integrated in the customer network by LAN (or WLAN).

- The following I/O modules can be connected by LAN:

  - ECOLOG-PRO LBR

  - ECOLOG-NET LR8

  - ECOLOG-NET LP4

  - ECOLOG-NET LA8

Application example	- Using the system in the customer network
	- All components are connected over the customer LAN (Local Area Network) or WAN (Wide Area Network).
	- A connection to the web is possible (required for remote support from ELPRO using TeamViewer).
Conditions	The network is the responsibility of the customer.
	Requirements:
	- Permanent accessibility of components in the network
	- Response time: <100 ms
Security	The ECOLOG-PRO Base has no firewall of its own and must therefore receive its external protection from the customer network.

5   Power Supply Unit

Power supply unit

The power supply unit is delivered without a country-specific power cord for the AC input.

A power failure of the ECOLOG-PRO Base is bridged by the UPS integrated in the ECOLOG-PRO Base. The UPS bridges for 10 seconds and ensures a controlled switch-off of the ECOLOG-PRO Base without data loss.

Power supply unit contained in the scope of supply of the ECOLOG-PRO Base

Input voltage	100 VAC to 240 VAC, 50 Hz to 60 Hz
Output voltage	19 VDC ±5%
Output current	max. 6320 mA
Dimensions	90 x 55 x 34 mm
Connection cable length	1500 mm
Content of package	Power supply unit with connection cable and plug for connection to the ECOLOG-PRO Base.

6 Recovery

Reset to default values:

- Reset the password for the admin user
- Network settings
- WLAN settings

The data must be saved on a USB stick and is valid for 84 hours.

Procedure:

- USER reports a data reset (by email or by phone to ELPRO).
- customer data required: Customer name, ECOLOG-PRO Base serial number, email address
- Reset data is generated by ELPRO.
- Data is sent to the customer by email.
- Customer saves the data on a USB stick.
- Customer plugs the USB stick in the ECOLOG-PRO Base.
- The USB monitoring tool recognizes the file on the USB stick plugged in.
- A validation check takes place.
- If the file on the USB stick is valid, recovery takes place.

Validation test parameters

- Validation data
- Serial number
- CRC

7   Scope of Supply

- 1 ECOLOG-PRO Base, Part Number 801417

- 1 control cabinet fitting materials (support rail fitted to the rear)

- 2 antennas (2.4 GHz and 5 GHz)

- 4 rubber feet, self-adhesive

- 1 spare filter

- 1 power supply unit without country-specific power cord

8   Revision History

Author	Date	Version	Description
JOGAU	June 29, 2018	EP6002Ea	Document author
JOGAU	July 3, 2018	EP6002Eb	No special characters are permitted for the admin password or the computer name.

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