

# ECOLOG-PRO

**Modules  
Operation Manual**

## ELPRO-BUCHS AG

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  - Brackets
  - Accessories excluding sensors and third-party products
- This guarantee is valid for material faults or production faults.
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  - All servicing and repair work
  - Pt100 sensors
  - Humidity sensors
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  - modified
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- In the event of a guarantee claim, customers receive a repair cost estimate from ELPRO-BUCHS AG to obtain the corresponding consent before starting work.
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- ELPRO-BUCHS AG reserves the right to invoice the customer for costs incurred for repair/part replacement.
- After repair work the product is returned to the purchaser, who will be charged with the return shipping costs (FOB shipping point).

#### Trademarks

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**Accessories**

**Version History**

## Symbols and Description Codes Used



Information



### IMPORTANT INFORMATION AND WARNINGS

#### *DELETE*

Windows functions, for example Delete.

<xxxxxxxx>

Syntax for placeholders.  
Placeholders are written in < > brackets.



Reference to related chapter or document.



Presentation only refers to part of the  
user interface.

elproMONITOR

Configures and monitors data loggers.

⇒ SM3031Eb

elproUSER

elproMONITOR user management.

⇒ SU6031Ea

elproEVENT

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

⇒ SV6031Eb



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 RENDER NULL AND VOID THE ETSI / FCC AUTHORIZATION TO OPERATE THIS EQUIPMENT. THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES AND WITH RSS-210 OF INDUSTRY CANADA. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:**  
**(1) THE PRODUCT MAY NOT CAUSE HARMFUL INTERFERENCE.**  
**(2) THE PRODUCT MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.**



- This product is subject to CE marking.
- The manufacturer guarantees that this product complies with the relevant guidelines: EN 61000-6-2 : 2001 and EN 61000-6-4 : 2001



- FCC ID: Z45-E11645398
- IC: 9954A-E11645398



- This product must be disposed of in accordance with WEEE (Waste Electrical and Electronic Equipment, 2002/96/EC).

# 1 System Description



This is a quick-start reference manual for installing the ECOLOG-PRO system. The manual also applies to the modules listed below.



ECOLOG-PRO LBR is the communication and power supply module. It has 1 Ethernet and 1 power supply unit connection. Its purpose is to communicate over the Ethernet network with remote modules with elproMONITOR, either installed on ECOLOG-PRO BASE or a server provided by the customer. Connected ECOLOG-PRO modules are powered over the system bus.



ECOLOG-PRO 4PT is the temperature measurement module. The module has 4 inputs for Pt100 temperature sensors. For operation, it is connected to a LAN bridge (LBR).



ECOLOG-PRO 4MA is the measurement module for analog signals. The module has 4 inputs for standard 4 to 20 mA signals. The monitored transmitters can be powered by the module or by an external power supply. For operation, it is connected to a LAN bridge (LBR).



ECOLOG-PRO 2TH is the measurement module for temperature and air humidity. 2 T/RH sensors can be connected to the module. For operation, it is connected to a LAN bridge (LBR).



ECOLOG-PRO 4DI is the module with 4 contact inputs (digital inputs) for the ECOLOG-PRO system. The monitored contacts are powered by the module. For operation, it is connected to a LAN bridge (LBR).



ECOLOG-PRO 4DO is the module with 4 alarm outputs (digital outputs) for the ECOLOG-PRO system. For operation, it is connected to an external power supply and to a LAN bridge (LBR).

## Installation and Operation

The minimum configuration of a ECOLOG-PRO system consists of an ECOLOG-PRO LBR, a power supply unit, and a measurement module, for example an ECOLOG-PRO 4PT.

## Housing, Module Ground

ABS, DIN rail housing, 140 x 70 x 60 mm, 200 grams.

## 1.1 Configuration and Evaluation

Configuration, calibration, and monitoring are carried out with the elproMONITOR software.

⇒ SM3031Eb, elproMONITOR operating instructions

## 1.2 Application Instructions

### Power supply unit

Follow the safety and application instructions of the power supply unit. Only operate the device using the delivered power supply unit. Use of an incorrect power supply unit may cause damage to the device. Always replace defective or damaged power supply units.

### Cleaning

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

### Environmental conditions

- Make sure the modules are at room temperature before initial startup.
- No guarantee can be given if functions exceed the specified threshold range. Environment 0 °C..40 °C, 10 %RH..90 %RH, non-condensing.
- Protection class IP20

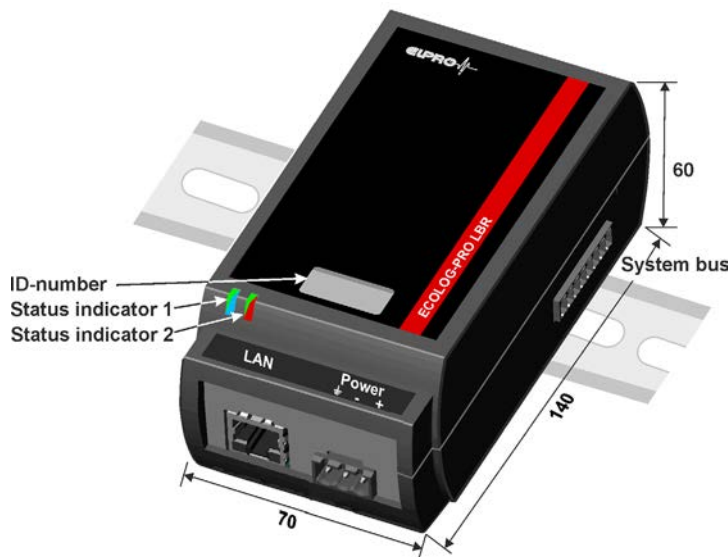
## 1.3 Changes to Measurement Module Chain during Operation

After installing and configuring the channels (sensors, DI, DO), the sequence of connected measurement modules to the ECOLOG-PRO LBR Communication Module is saved in elproMONITOR. The following changes can be made during operation:

- Swap the ECOLOG-PRO LBR Communication Module.
- Swap a measurement module of the same type at the same position in the measurement module chain.
- Remove a single measurement module.
- Add a measurement module at the end of the measurement module chain.



## 2 ECOLOG-PRO LBR Communication Module



ECOLOG-PRO LBR, Part.No. 801418

### Module

The communication module performs 2 functions:

- Supplies power to the measurement modules in use.
- Acts as a connecting link between the measurement modules and the configuration or evaluation software.

### ID number

The ID number corresponds to the module MAC address.

### Status indicator 1; module activity

- green; power supply OK
- blue; Ethernet activity

### Status indicator 2; Ethernet status

- green; Ethernet connection OK
- red; no Ethernet connection (inactive)

### Power supply

24 VDC, -10 %..+20 %

- By an external power unit
- Maximum connection cable length 30 m
- Functional ground is optional.

Power supply unit

⇒ 8 1250 mA Power Supply Unit



**TO AVOID DATA LOSS WHEN THERE IS A POWER FAILURE FROM THE EXTERNAL POWER SUPPLY UNIT, WE RECOMMEND CONNECTING AN UNINTERRUPTIBLE POWER SUPPLY (UPS).**

### Maximum number of measurement modules

The maximum number of measurement modules is defined by the specifications of the power supply unit or the limits of the ECOLOG-PRO LBR.

- Maximum 2500 mA, system bus
- 32 measurement modules

### Network connection

1xRJ45 Ethernet 10/100 Mbps

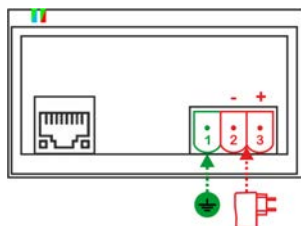
Supported standards

- IEEE 802.3i, 10BASE-T
- IEEE 802.3u, 100BASE-T

### Scope of supply

- Communication module
- Information leaflet
- The power supply unit and the Ethernet connection cable are not part of the scope of supply.

## 2.1 Power Supply Unit Circuit Diagram



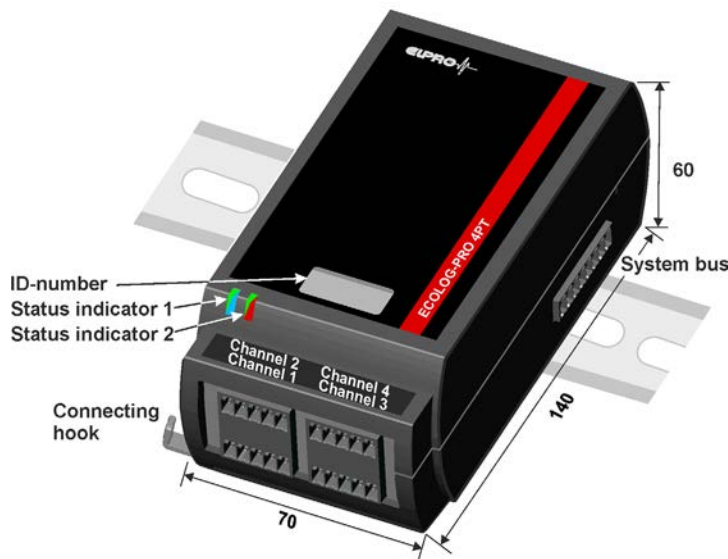
*Power supply unit*

⇒ 8 1250 mA Power Supply Unit, Accessories

*Functional ground*

Connect the functional ground when shielded sensor cables are used.

### 3 ECOLOG-PRO 4PT Pt100 Measurement Module



#### Module

Measurement module for 4 Pt100 sensors

- Circuit: 4/3-wire connection
- Sensor class: A, recommended
- Sensor details  
⇒ FP2005E.

#### Status indicator 1

- green; power supply OK
- blue; system bus activity

#### Status indicator 2

⇒ 3.3 Sensor Status

ECOLOG-PRO 4PT, 801420

|                                |                                                                                                                                                                                                                             |                                                                     |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| <b>Measurement range</b>       | <b>-200 °C..+200 °C</b>                                                                                                                                                                                                     |                                                                     |
| Measurement accuracy of module | ±0.2 °C                                                                                                                                                                                                                     | Sensor error and cable fault are not considered.                    |
| Measurement resolution         | ±0.1 °C                                                                                                                                                                                                                     |                                                                     |
| Cable fault                    | <ul style="list-style-type: none"> <li>- up to 30 m, 4x0.34 mm<sup>2</sup> without shield.</li> <li>- 30 m to 50 m 4x0.34 mm<sup>2</sup> with shield.</li> <li>- 50 m to 80 m 4x0.34 mm<sup>2</sup> with shield.</li> </ul> | ±0.06 °C<br>±0.07 °C<br>±0.2 °C                                     |
| Logging interval               | 1 minute..60 minutes                                                                                                                                                                                                        | Each channel is capable of logging at a separate interval.          |
| Date and time                  | Internal system clock                                                                                                                                                                                                       | The clock is synchronized permanently to elpro-MONITOR system time. |
| Module power supply            | Via internal system bus                                                                                                                                                                                                     |                                                                     |

|                    |                                                                                                                                                                                                                                         |                                                                                                             |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Data security      | <div><div>- Internal non-volatile memory</div><div>- 10,000 measurements</div></div>                                                                                                                                                    | In case the network connection fails, measurements continue to be logged and stored in the internal memory. |
| Content of package | <div><div>- Measurement module</div><div>- Connecting hook, see module rear</div><div>- Information leaflet</div><div>- Validation certificate</div><div>- The sensor connection plugs are not part of the scope of supply.</div></div> |                                                                                                             |

Connecting hook



Modules are fixed using a connecting hook on the rear to ensure a reliable connection.

3.1

Sensor Connection Cable for M12 Plug

Sensors

Cable A

Cable B

Cable C

Part. No. 800508  
M12 plug to  
Pt100 sensor

This plug is used for sensors with M12 connection.

3.2

Circuit Diagram

CH1

Example: Pt100 4/3-wire connection

| Terminal | Cable A | Cable B | Cable C |
|----------|---------|---------|---------|
| 1        | red     | white   | white   |
| 2        | red     | brown   | brown   |
| 3        | white   | black   | green   |
| 4        | white   | blue    | yellow  |
| 5        |         |         | shield  |

As of a length of 30 m, use the shielded extension cable with stranded drain wire (connect to Terminal 5), Part No. 80225.

### 3.3

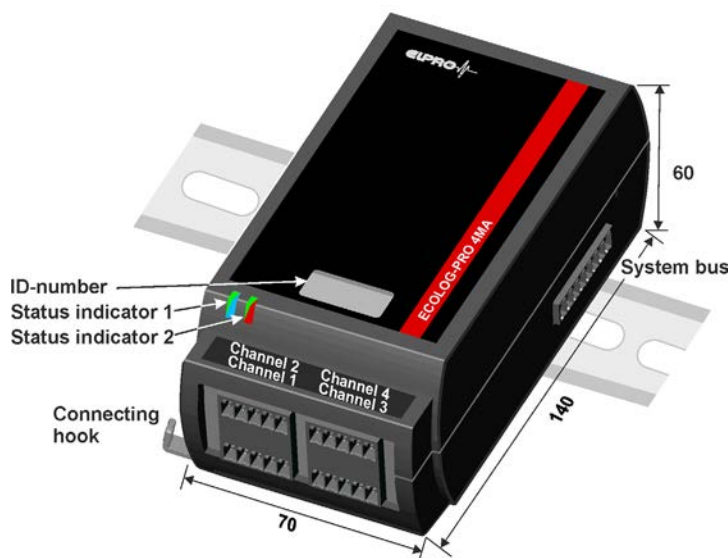
#### Sensor Status

| Status      |                                                   |
|-------------|---------------------------------------------------|
| dark        | No channel configured                             |
| green       | All configured sensors OK                         |
| red         | Sensor error at one or several configured sensors |
| short, dark | Measurement                                       |



The sensor status display is updated in the logging interval.

## 4 ECOLOG-PRO 4MA 4..20 mA Measurement Module



ECOLOG-PRO 4MA, 801421

### Module

Measurement module for max. four 4..20 mA transmitters

- Circuit: 2- or 3-wire connection
- Transmitter powered by measurement module or external power supply

### Status indicator 1

- green; power supply OK
- blue; system bus activity

### Status indicator 2

⇒ 5.2 Sensor Status

|                                |                                                                                                                 |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------|
| Measurement range              | 3.6 mA..20.4 mA                                                                                                 |
| Transmitter power supply       | 24 VDC $\pm$ 20%; Pmax 3 W per module                                                                           |
| Load                           | 50 Ohm..100 Ohm                                                                                                 |
| Measurement accuracy of module | $\pm$ 0.04 mA                                                                                                   |
| Measurement resolution         | $\pm$ 0.01 mA                                                                                                   |
| Connection cable length        | max. 200 m                                                                                                      |
| Logging interval               | 1 minute..60 minutes                                                                                            |
| Date and time                  | Internal system clock                                                                                           |
| Module power supply            | Via internal system bus                                                                                         |
| Data security                  | <ul style="list-style-type: none"> <li>- Internal non-volatile memory</li> <li>- 10,000 measurements</li> </ul> |

Each channel is capable of logging at a separate interval.

The clock is synchronized permanently to elpro-MONITOR system time.

In case the network connection fails, measurements continue to be logged and stored in the internal memory.

- Content of package
- Measurement module
  - Connecting hook, see module rear
  - Information leaflet
  - Validation certificate
  - The sensor connection plugs are not part of the scope of supply.

## Connecting hook



Modules are fixed using a connecting hook on the rear to ensure a reliable connection.

## 4.1

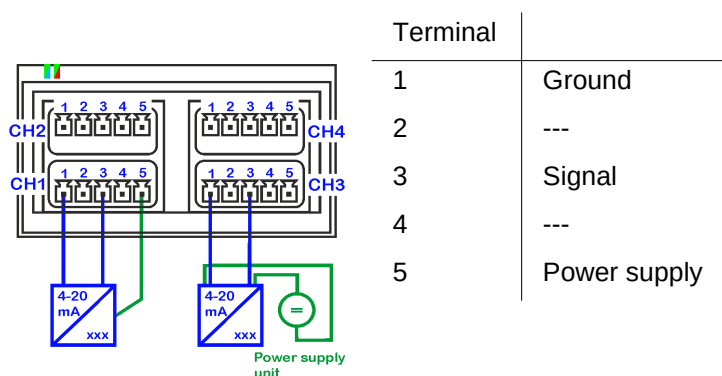
### Circuit Diagram

CH1

Example: 4..20 mA transmitter powered by the measurement module.

CH3

Example: 4..20 mA transmitter with external power supply (necessary if the total power consumption of all transmitters exceeds 3 W at the module or a single transmitter requires a current strength greater than 125 mA).



## 4.2

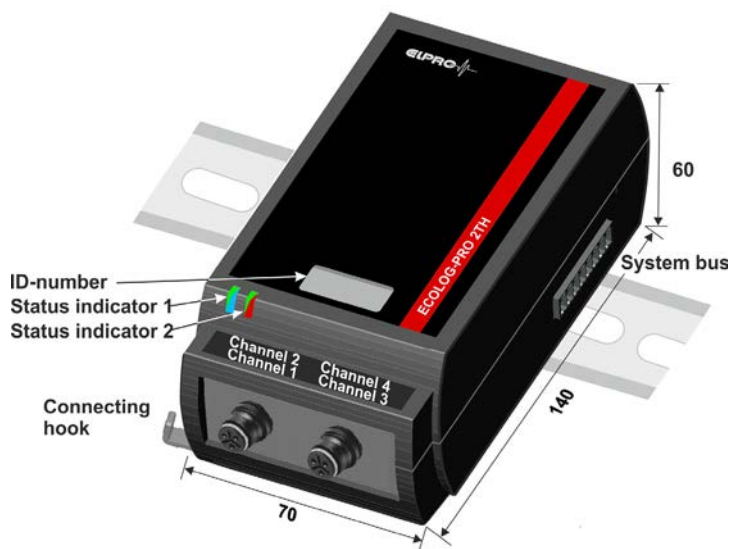
### Sensor Status

| Status      |                                                   |
|-------------|---------------------------------------------------|
| dark        | No channel configured                             |
| green       | All configured sensors OK                         |
| red         | Sensor error at one or several configured sensors |
| short, dark | Measurement                                       |



The sensor status display is updated in the logging interval.

## 5 ECOLOG-PRO 2TH T/RH Measurement Sensor



### Module

Measurement module for max. 2 Pt100 sensors

### Status indicator 1

- green; power supply OK
- blue; system bus activity

### Status indicator 2

⇒ 5.2 Sensor Status

ECOLOG-PRO 2TH, 801424

|                               |                                                                                                                                                   |                                                                                                                                                                 |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring ranges and accuracy | ⇒ 5.3 Sensor Data                                                                                                                                 | Depending on the application, a distinction is made between 2 sensor variants.                                                                                  |
| Connection cable lengths      | 5 m, 10 m, 30 m<br>⇒ Accessories                                                                                                                  |                                                                                                                                                                 |
| Logging interval              | 1 minute..60 minutes                                                                                                                              | The two measurements of temperature and air humidity are logged synchronously for each sensor. You can select a different interval for each of the two sensors. |
| Date and time                 | Internal system clock                                                                                                                             | The clock is synchronized permanently to elpro-MONITOR system time.                                                                                             |
| Module power supply           | Via internal system bus                                                                                                                           |                                                                                                                                                                 |
| Data security                 | <ul style="list-style-type: none"> <li>- Internal non-volatile memory</li> <li>- 10,000 measurements</li> </ul>                                   | In case the network connection fails, measurements continue to be logged and stored in the internal memory.                                                     |
| Content of package            | <ul style="list-style-type: none"> <li>- Measurement module</li> <li>- Connecting hook, see module rear</li> <li>- Information leaflet</li> </ul> |                                                                                                                                                                 |

### Connecting hook

Modules are fixed using a connecting hook on the rear to ensure a reliable connection.





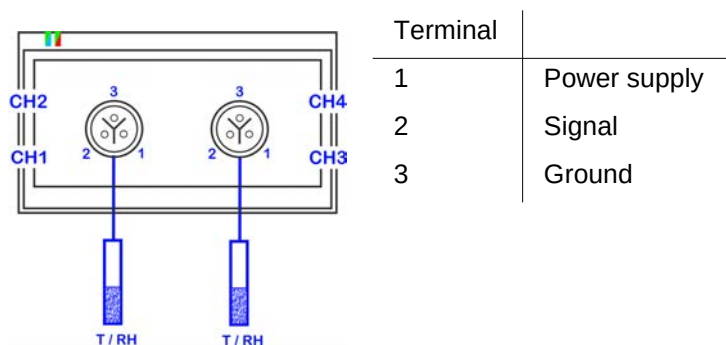
## 5.1 Circuit Diagram

**CH1** Temperature, Sensor 1

**CH2** Humidity, Sensor 1

**CH3** Temperature, Sensor 2

**CH4** Humidity, Sensor 2



## 5.2 Sensor Status

| Status      |                                                   |
|-------------|---------------------------------------------------|
| dark        | No channel configured                             |
| green       | All configured sensors OK                         |
| red         | Sensor error at one or several configured sensors |
| short, dark | Measurement                                       |



The sensor status display is updated in the logging interval.

### 5.3

### Sensor Data



*Dimensional view of the two variants: temperature / humidity sensor*

Part. No. 802209



#### Temperature / humidity sensor, capacitive

This sensor is designed to monitor store rooms, laboratories or for general room-climate monitoring.

#### Specifications

|                       |                                                        |          |
|-----------------------|--------------------------------------------------------|----------|
| Measurement range     | Humidity: 20 %RH..80 %RH<br>Temperature: -20 °C..80 °C |          |
| Humidity accuracy     | 15.0 °C..30.0 °C                                       | ±2.0 %RH |
| Temperature accuracy: | 65.0 °C..80.0 °C                                       | ±0.5 K   |
|                       | 0.0 °C..64.9 °C                                        | ±0.3 K   |
|                       | -20.0 °C..-0.1 °C                                      | ±0.5 K   |
| Humidity drift        | Typically 3.0 %RH / year                               |          |

Part. No. 802071



#### Temperature / humidity sensor, electrolytic

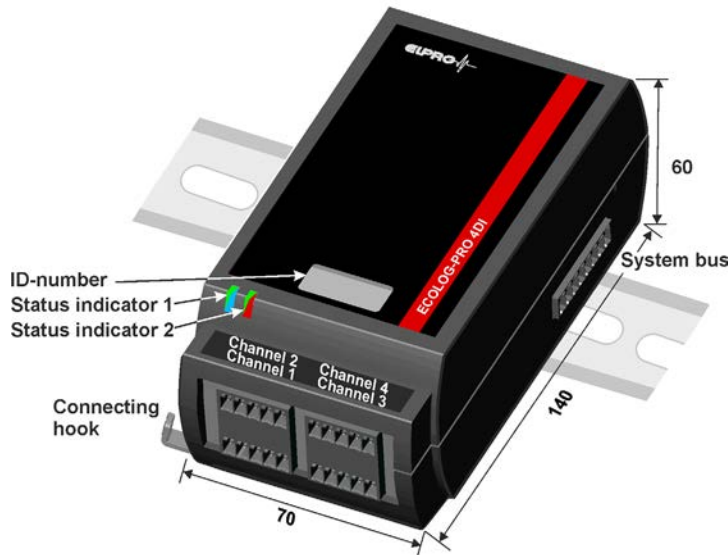
This sensor is designed for:

- Environments with aggressive gases at high temperature and air humidity (stability chambers, incubators)
- Low-temperature environments (refrigerator)
- High-precision measurements of +/- 0.5 %RH

#### Specifications

|                       |                                                       |          |
|-----------------------|-------------------------------------------------------|----------|
| Measurement range     | Humidity 0 %RH..100 %RH<br>Temperature: -20 °C..80 °C |          |
| Humidity accuracy     | 50.0 °C..80.0 °C                                      | ±2.5 %RH |
|                       | 30.0 °C..49.9 °C                                      | ±0.8 %RH |
|                       | 15.0 °C..29.9 °C                                      | ±0.5 %RH |
|                       | 0.0 °C..14.9 °C                                       | ±0.8 %RH |
|                       | -20.0 °C..-0.1 °C                                     | ±2.5 %RH |
| Temperature accuracy: | 70.0 °C..80.0 °C                                      | ±0.2 K   |
|                       | 0.0 °C..69.9 °C                                       | ±0.1 K   |
|                       | -20.0 °C..-0.1 °C                                     | ±0.2 K   |
| Humidity drift        | Typically 1.0 %RH / year                              |          |

## 6 Module with Contact Inputs ECOLOG-PRO 4DI



ECOLOG-PRO 4DI, 801423

### Module

Module with 4 contact inputs to log statuses. The internal power supply can power and monitor active sensors.

### Status indicator 1

- green; power supply OK
- blue; system bus activity

### Status indicator 2

⇒ 6.2 Contact Status

|                         |                                                                                                                                                                                                                                                             |                                                                                                                  |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Contact input           | <ul style="list-style-type: none"> <li>• Contact input for 2- or 3-wire switches to EN 61131, Types 1, 2, 3.</li> <li>• Switch operating voltage is 24 VDC <math>\pm 20\%</math>.</li> <li>• Total maximum current for all 4 switches is 120 mA.</li> </ul> |                                                                                                                  |
| Contact Status          | 0 or 1                                                                                                                                                                                                                                                      |                                                                                                                  |
| Connection cable length | max. 200 m                                                                                                                                                                                                                                                  |                                                                                                                  |
| Logging interval        | 1 minute..60 minutes                                                                                                                                                                                                                                        | Each channel is capable of logging at a separate interval.                                                       |
| Pulse length            | 200 ms                                                                                                                                                                                                                                                      | Minimum time interval to detect status change.                                                                   |
| Date and time           | Internal system clock                                                                                                                                                                                                                                       | The clock is synchronized permanently to elpro-MONITOR system time.                                              |
| Module power supply     | Via internal system bus                                                                                                                                                                                                                                     |                                                                                                                  |
| Data security           | <ul style="list-style-type: none"> <li>- Internal non-volatile memory</li> <li>- 10,000 measurements</li> </ul>                                                                                                                                             | In case the network connection fails, contact positions continue to be logged and stored in the internal memory. |
| Content of package      | <ul style="list-style-type: none"> <li>- Module</li> <li>- Connecting hook, see module rear</li> <li>- Information leaflet</li> <li>- The plugs for the contact inputs are not part of the scope of supply.</li> </ul>                                      |                                                                                                                  |

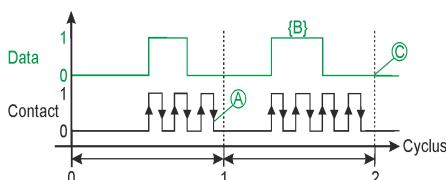
## Connecting hook



Modules are fixed using a connecting hook on the rear to ensure a reliable connection.

## 6.1

### Contact Status



The module detects the following data in each measurement sampling period:

- (A) Number of edge changes
- {B} Total duty cycle as percentage of measurement sampling period
- (C) Present contact status

*Example: Door monitoring*

- (A) Number of door openings per measurement sampling period.
- {B} Period when doors were open
- (C) Present door open status during measurement sampling period

## 6.2

### Contact Status

| Status      |                                                                        |
|-------------|------------------------------------------------------------------------|
| dark        | No contact configured                                                  |
| green       | All configured contacts OK                                             |
| red         | Error on minimum one configured channel (incorrect voltage or current) |
| short, dark | Measurement                                                            |



The sensor status display is updated in the logging interval.

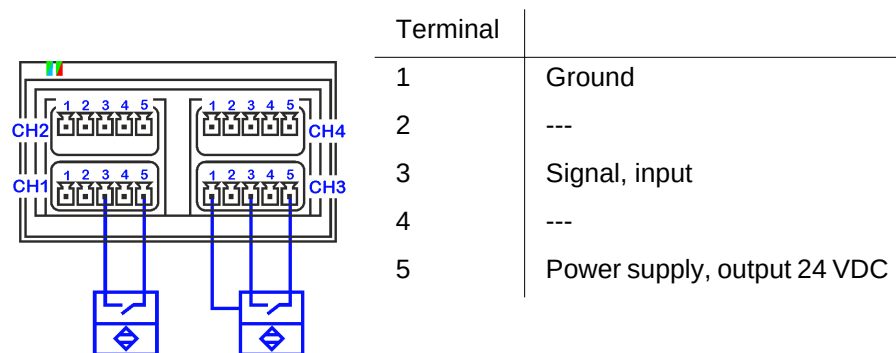
## 6.3 Circuit Diagram

CH1

Example: Switch or 2-wire sensor powered by the module.

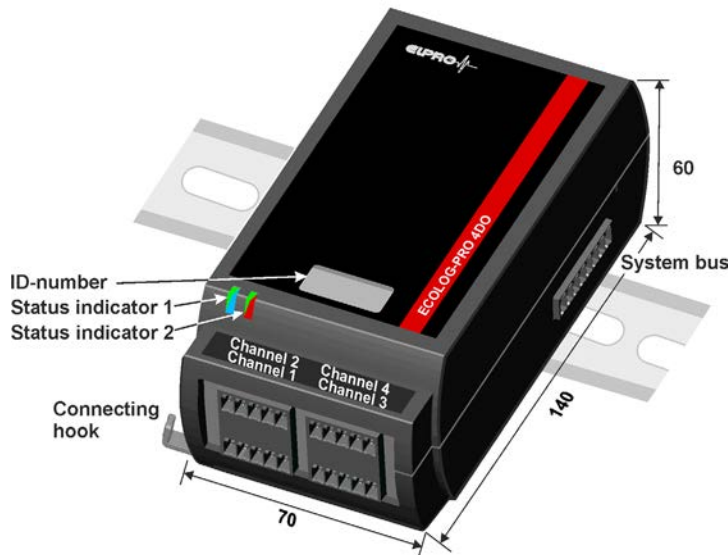
CH3

Example: 3-wire sensor powered by the module.



# 7

## Module with Contact Outputs ECOLOG-PRO 4DO



ECOLOG-PRO 4DO, 801422

### Module

Module with 4 contact outputs for alarm forwarding: The contact outputs are toggle switches (NO / NC).

### Status indicator 1

- green; power supply OK
- blue; system bus activity

### Status indicator 2

- green; contact OK
- red; failure of alarm indicator external power supply.

|                                                                                                           |                                                                                                                                                                                                                         |                                                                    |
|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
|  <b>Contact output</b> | <ul style="list-style-type: none"> <li>• The contact output is an electronic semiconductor contact.</li> <li>• Use only for DC voltage (DCV), see: <b>7.2 Alarm Indicator Power Supply and Ground!</b></li> </ul>       |                                                                    |
| <b>External power supply unit for alarm indicators</b>                                                    | <b>12 VDC..24 VDC</b>                                                                                                                                                                                                   |                                                                    |
| Max. switching current per contact                                                                        | 100 mA                                                                                                                                                                                                                  |                                                                    |
| Connection cable length                                                                                   | max. 200 m                                                                                                                                                                                                              |                                                                    |
| Threshold values and time response                                                                        | The contacts are parameterized (threshold values and alarm delay times) by the elproMONITOR.                                                                                                                            |                                                                    |
| Date and time for alarm delay times                                                                       | Internal system clock                                                                                                                                                                                                   | The clock is synchronized permanently to elproMONITOR system time. |
| Module power supply                                                                                       | Via internal system bus                                                                                                                                                                                                 |                                                                    |
| Security                                                                                                  | ⇒ 7.1 Contact Status                                                                                                                                                                                                    |                                                                    |
| Content of package                                                                                        | <ul style="list-style-type: none"> <li>- Module</li> <li>- Connecting hook, see module rear</li> <li>- Information leaflet</li> <li>- The plugs for the contact outputs are not part of the scope of supply.</li> </ul> |                                                                    |

## Connecting hook



Modules are fixed using a connecting hook on the rear to ensure a reliable connection.

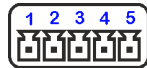
## 7.1

## Contact Status



**THE POWER SUPPLY UNIT MUST BE CONNECTED TO ENABLE ALARM SIGNALS.**

### Description of PIN assignment



Pin 1 GND contact

Pin 2 NC (Normally Closed) contact

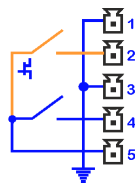
Pin 3 GND contact

Pin 4 NO (Normally Open) contact

Pin 5 Contact for external power supply  
Connected internally to all 4 module channels.

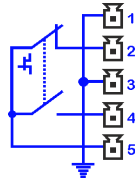
1) System start  
CH 1 - CH4

2) Module without  
power supply  
CH 2, 3, 4



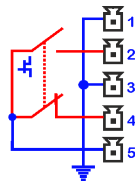
The NC and NO contacts are open in these operating states. No alarm signals are generated.

Normal operation - no  
alarm  
CH 1 - CH4



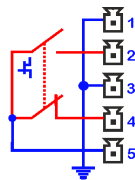
No alarm is present in this operating state.

Normal operation -  
alarm  
CH 1 - CH4



An alarm is present in this operating state.

System alarm  
- module without  
power supply  
- Watchdog  
CH 1



Channel 1 is in alarm status when:

- the module power supply fails.
- the link to the elproMONITOR software is interrupted.
- These two monitoring functions cannot be deactivated.
- Configured as alarm contact in the elproMONITOR software.

ECOLOG-PRO 4DO Terminal assignment of Contacts 1 - 4

## 7.2

### Alarm Indicator Power Supply and Ground



Alarm indicator power supply  
Terminal 5 of all 4 contacts is connected internally.



Alarm indicator ground  
Terminals 1 and 3 of all 4 contacts are connected internally.



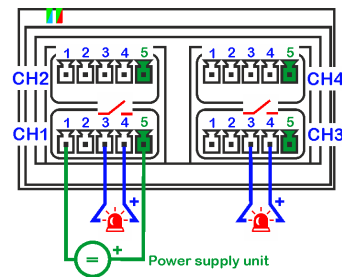
Alarm indicator grounds are electrically isolated from the system bus ground.

## 7.3

### Local Alarm

*Example: 2 local alarm indicators at contacts CH1 and Ch3*

An alarm is triggered when the contact closes.



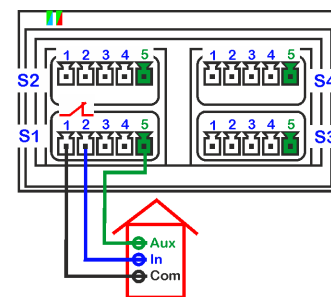
| Terminal |                                                                                               |
|----------|-----------------------------------------------------------------------------------------------|
| 1        | Ground                                                                                        |
| 2        | ---                                                                                           |
| 3        | Ground                                                                                        |
| 4        | Closes in event of an alarm / NO                                                              |
| 5        | Alarm indicator power supply<br>Only one power supply unit is possible for all alarm outputs. |

## 7.4

### Alarm Forwarding

*Example: Contact CH1 monitored by central plant system*

An alarm is triggered when the contact opens. This circuit layout allows wire break monitoring.



| Terminal |                                                                                     |
|----------|-------------------------------------------------------------------------------------|
| 1        | Ground                                                                              |
| 2        | Opens in event of an alarm / NC<br>Only 1 channel can be used for alarm forwarding. |
| 3        | ---                                                                                 |
| 4        | ---                                                                                 |
| 5        | Power supply from alarm control panel.                                              |



## 8 1250 mA Power Supply Unit



### Plug-in power supply unit

In order to power ECOLOG-PRO modules, the power supply unit is connected to the ECOLOG-PRO LBR communication module.

A plug-in power supply unit is used as the standard power supply unit. Other power supply units and uninterruptible power supply units (UPS) are available for systems comprising a large number of modules and to install modules in a control cabinet.

Depending on the design, plug-in power supply units are delivered with replaceable, country-specific plugs for AC input.

*Power supply unit, see Accessories for Part No.*

|                         |                                                                                                                                                                                                        |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Input voltage           | 100 VAC..264 VAC, 50 Hz..60 Hz                                                                                                                                                                         |
| Country versions        | Europe, U.K., U.S.A.                                                                                                                                                                                   |
| Output voltage          | 24 VDC $\pm$ 5%                                                                                                                                                                                        |
| Output current          | max. 1250 mA                                                                                                                                                                                           |
| Dimensions              | 90 x 55 x 34 mm                                                                                                                                                                                        |
| Connection cable length | 1830 mm                                                                                                                                                                                                |
| Content of package      | <ul style="list-style-type: none"> <li>- Power supply unit with connection cable and plug for connection to module: ECOLOG-PRO LBR.</li> <li>- AC input plug</li> <li>- Information leaflet</li> </ul> |



No ground connection possible, therefore a connected ECOLOG-PRO 4PT module can only be used with unshielded sensor cables up to a length of 30 m. With shielded sensor cables, the power supply unit Part No. 802155 or 802149 must be used.

## 8.1 Configuration Matrix

| Module         | Maximum power supply current at 24 VDC |
|----------------|----------------------------------------|
| ECOLOG-PRO LBR | 65 mA                                  |
| ECOLOG-PRO 4PT | 25 mA                                  |
| ECOLOG-PRO 4MA | 175 mA                                 |
| ECOLOG-PRO 2TH | 20 mA                                  |
| ECOLOG-PRO 4DI | 175 mA                                 |
| ECOLOG-PRO 4DO | 25 mA                                  |



**THE SUM OF ALL MODULE CURRENTS MAY NOT EXCEED THE MAXIMUM POWER SUPPLY UNIT VALUE OR 2500 MA.**

# 9

## ECOLOG-PRO Module Configurator

The ECOLOG-PRO Module Configurator is used to assign parameters to the ECOLOG-PRO LBR. The parameters are required for operation in the network. The assignment procedure is described by the following 3 steps.

### Preparing the configuration

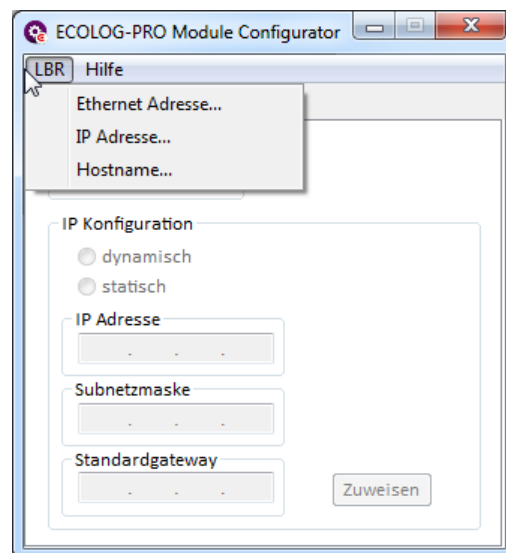
The ECOLOG-PRO LBR module must be connected to the power supply unit and to the network.

For configuration, the ECOLOG-PRO LBR must be in the same logical network as the PC which is used for the configuration.

### Start Module Configurator as administrator

#### Step 1

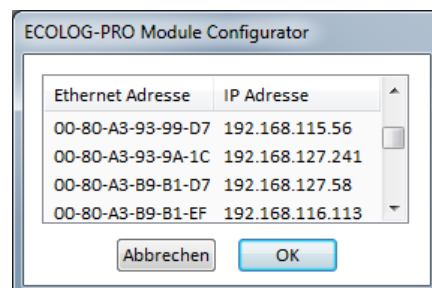
In the Module Configuration start window, left-click on the field LBR. A window opens for you to select the search function. Search for the ECOLOG-PRO LBR using one of the 3 methods below.



Start window

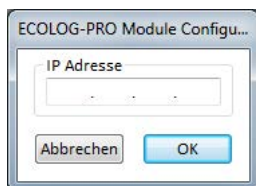
#### Step 2

##### 1. Ethernet address...



- A list is produced of all the ECOLOG-PRO LBR devices in the network.
- Select the ECOLOG-PRO LBR you want to configure from the list.

## 2. IP address...



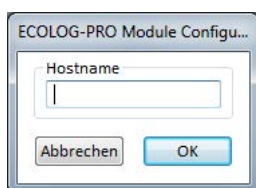
ECOLOG-PRO Module Configu...

IP Adresse

Abbrechen OK

Enter the IP address of the ECOLOG-PRO LBR you want to configure.

## 3. Host name...



ECOLOG-PRO Module Configu...

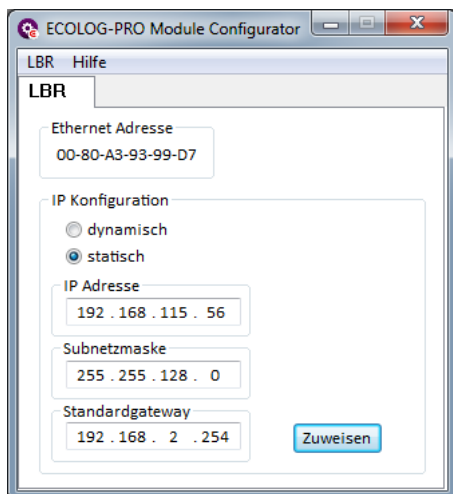
Hostname

Abbrechen OK

Enter the host name of the ECOLOG-PRO LBR you want to configure.  
Default: host name = serial number

### Step 3

When a search is successful, the input fields are filled with the updated settings of the selected module and activated for editing.



ECOLOG-PRO Module Configurator

LBR Hilfe

LBR

Ethernet Adresse  
00-80-A3-93-99-D7

IP Konfiguration

☐ dynamisch  
☒ statisch

IP Adresse  
192 . 168 . 115 . 56

Subnetzmaske  
255 . 255 . 128 . 0

Standardgateway  
192 . 168 . 2 . 254

Zuweisen

Enter, modify, and assign the network parameters in this window.

## Accessories

| Part number | Designation                         | Description                                                        |
|-------------|-------------------------------------|--------------------------------------------------------------------|
| 802096      | PSU_ECOLOG-PRO_EU                   | Power supply unit with EU plug                                     |
| 802097      | PSU_ECOLOG-PRO_GB                   | Power supply unit with U.K. plug                                   |
| 802098      | PSU_ECOLOG-PRO_US                   | Power supply unit with U.S. plug                                   |
| 802100      | CTR_ECOLOG-PRO channel              | Plug to connect a sensor                                           |
| 802101      | CTR_ECOLOG-PRO LBR                  | Plug to connect a power supply unit                                |
| 800508      | CTR_M12F_IDC                        | M12 (F) cable coupling to connect sensor                           |
| 800513      | CTR_M12M_IDC                        | M12 (M) cable coupling to connect sensor                           |
| 802071      | PRO_TRH_nSens-HT-ENS                | Temperature / humidity sensor, electrolytic                        |
| 802209      | PRO_TRH_nSens-HT-CSS                | Temperature / humidity sensor, capacitive                          |
| 802072      | ECA_nSens-cable_05                  | Connection cable terminated for temperature / humidity sensor 5 m  |
| 802073      | ECA_nSens-cable_10                  | Connection cable terminated for temperature / humidity sensor 10 m |
| 802074      | ECA_nSens-cable_30                  | Connection cable terminated for temperature / humidity sensor 30 m |
| 802149      | PSU_UPS_AKKUTEC<br>2402_24VDC_1.2Ah | DC-USV (uninterruptible power supply unit)                         |
| 802155      | PSU_24VDC_24W_DIN RAIL              | Power supply unit for the ECOLOG-PRO DIN-rail housing              |
| 802205      |                                     | Shielded extension cable with stranded drain wire                  |

## Version History

| Author | Date           | Version  | Description                          |
|--------|----------------|----------|--------------------------------------|
| ANGUB  | March 21, 2017 | EP6001E  | First edition                        |
| ANGUB  | June 16, 2017  | EP6001Ea | Power supply designation changed     |
| ANGUB  | Aug. 24, 2017  | EP6001Eb | ECOLOG-PRO Module Configurator added |
| ANGUB  | Feb. 23, 2018  | EP6001Ec | ECOLOG-PRO 2TH added                 |



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