

FR - Notice de fonctionnement
GB - User's manual
DE - Bedienungsanleitung
IT - Manuale d'uso
ES - Manual de instrucciones

ELOG

DATA LOGGER



You have just purchased an **ELOG DATA LOGGER**. Thank you for your choice. To get the best from your device:

- **Read** this user's manual before installing and using the device.
- **Follow** the precautions for use stated in this document.

Symbol	Meaning
	HAZARD WARNING! The operator must consult this manual whenever this danger symbol is encountered.
	Device fully protected by double insulation or reinforced insulation.
	This symbol indicates compliance with European directives, including LVD and EMC.
	This symbol means that in the European Union, the product is subject to separate collection in accordance with WEEE 2002/96/EC: this material should not be treated as household waste.
	Information.

- Make sure the device is intact and undamaged upon receipt. In the event of any problems, please contact the after-sales department for any repairs or replacements.
- The device described in this manual is intended to be used by trained staff only.
- Any maintenance operations must be carried out by qualified and authorized personnel only.
- For correct and safe use and for all maintenance operations, it is essential that staff follow standard safety procedures.
- This device is intended to be used in Category III installation and pollution degree 2 conditions in accordance with standard IEC 61010-1.
- Before installation, check that the supply voltage matches that of the mains supply network.

1. SAFETY PRECAUTIONS

Safety precautions

Before any intervention, check that the device is unplugged from all power sources.

Precautions against electrical noise

Although the ELOG DATA LOGGER is protected from electrical and electromagnetically induced interference, keep away from the immediate vicinity of equipment generating significant electrical noise (high-power switches, busbars, etc.). The quality of data communication on the data bus depends heavily on taking such precautions.

Precautions in the event of deterioration

When safe operation is no longer possible, the instrument must be switched off and isolated. This applies when:

- the device is visibly damaged during operation (whether the device still operates or not),
- the device does not work after prolonged storage in poor conditions,
- the device no longer works following severe damage during transport.

Cleaning instructions

When the device is disconnected from the mains, clean the outer surface using only a dry cloth. Do not use abrasives or solvents. Prevent the connector terminals getting wet.

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2. PHYSICAL DESCRIPTION

2.1 OVERVIEW

2.1.1 UNPACKING

<i>Designation</i>	<i>Quantity</i>
ELOG DATA LOGGER product	1
Getting Started Guide	1

2.1.2 OPTIONAL ACCESSORIES

<i>Designation</i>	<i>Comment</i>	<i>Code</i>
Mounting kit for electrical panel	For fitting to the backplane of an electrical cabinet	ACCT1007

2.1.3 INTRODUCTION

ELOG DATA LOGGER is a centralization, collection, automatic logging and supervision unit for data from multi-function and multi-brand communications equipment (energy meters, power monitors, converters, sensors, probes, PLCs, etc.).

ELOG DATA LOGGER is equipped with a number of communication tools for data acquisition and use.

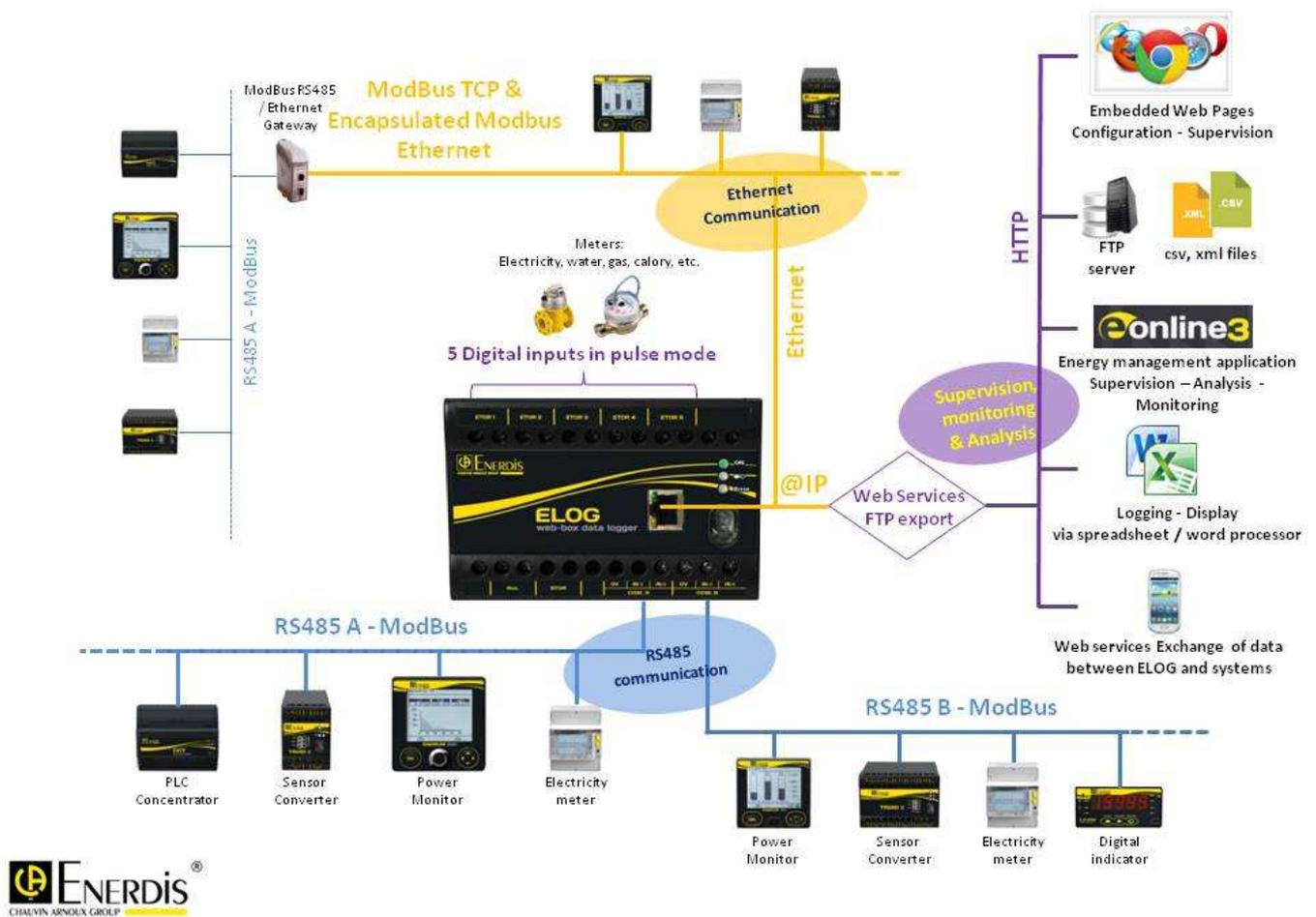
- **5 digital entries**  in pulse mode:
 - for the reading of pulse output meter indices (water, gas, electricity, etc.).
- **1 Ethernet communications port for several uses:**
 - Modbus in master mode: real-time reading and periodic logging of the values of variables from multi-function and multi-brand equipment communicating via Modbus/TCP , and Modbus over TCP/IP  protocols;
 - Web server: configuration of the ELOG DATA LOGGER product and real-time consultation of the values of the variables of Modbus/TCP equipment, from embedded web pages;
 - Ethernet network: integration in an overall Ethernet network for multi-product and remote use of ELOG DATA LOGGER via the HTTP protocol, using web services (supervision with E. Online, Remote logging and display by spreadsheet, etc.).
- **2 RS485 master digital communication ports:**
 - Modbus RTU master mode: real-time reading and periodic recording of the values of variables from multi-function and multi-brand equipment communicating via Modbus RTU protocol.
- **1 optical communications interface:**
 - connectivity reserved for manufacturer maintenance.

ELOG DATA LOGGER is aimed both at companies managing the monitoring and reduction of energy costs in an environmental and sustainable development context, and at industrial groups with complex multi-energy networks requiring precise management and monitoring.

All the information and data read and saved by ELOG DATA LOGGER can be used in several ways:

- **Embedded web pages:** for the configuration and initialization of ELOG DATA LOGGER and viewing the variables measured by Modbus and Modbus/TCP equipment.
- **Export of files to FTP server** : log files to csv  and xml  formats exported automatically and periodically by ELOG DATA LOGGER to a remote FTP server or to ELOG DATA LOGGER's local FTP server. The different formats offered are directly exploitable by standard analysis applications (Excel, etc.) or by specialized tools (E.online3 application or other). Specific formats can be integrated on request.
- **E.online3 software:** monitoring, analysis and surveillance software for energy performance which remotely carries out the periodic and automatic logging engine  of the data saved and archived in the ELOG DATA LOGGER via the Ethernet network (E.online3 is a software program published and distributed by ENERDIS).
- **Excel Spreadsheet:** provision of an Excel macro for the transfer and formatting of data in the form of tables and graphs. An input window enables the selection of equipment, variables and the period to analyze.
- **Third-party application:** the web services in JSON format available in ELOG DATA LOGGER enable the integration and use of information and data recorded on a number of applications (web browser, Android, iOS, etc.), in a wide variety of programming languages (Java, JavaScript, C, C++, Python, LabVIEW, etc.).

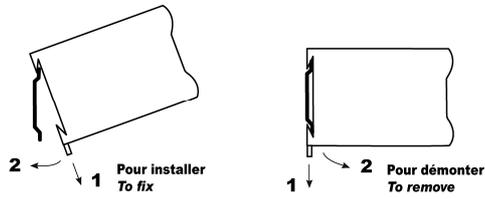
ELOG DATA LOGGER in an energy monitoring architecture:



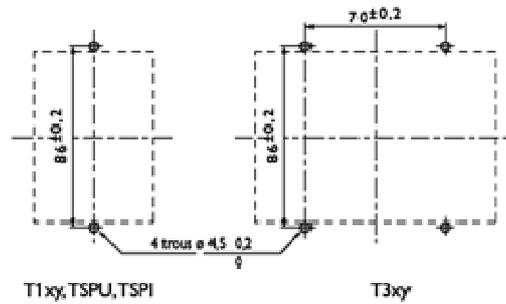
2.1.4 FASTENING

ELOG DATA LOGGER is mounted on a DIN 35 mm rail, either in standard form or with screws thanks to the optional panel mounting kit (ACCT1007). The normal operating position of ELOG DATA LOGGER is the horizontal position.

Assembly on DIN rail



Drilling diagram for fastening with screws



ELOG DATA LOGGER dimensions: 120.5 x 120 x 81 mm (D x W x H)

2.2 CONNECTION

PRELIMINARY REMARKS

Maximum applicable values



It should be noted that exceeding the maximum applicable values can cause permanent damage to the device.

Cables and terminal blocks



Connections are made on fixed-screw terminal blocks for cables of a maximum section of 6 mm² (multistrand) or 4 mm² (single-strand) for all circuits.

2.2.1 FRONT PANEL

The front panel of the ELOG DATA LOGGER is as follows:



No.	Function
1.	Auxiliary power supply
2.	Status indicators
3.	Ethernet Port (C)
4.	RS485 Ports (A & B)
5.	Digital inputs
6.	Digital output
7.	Optical interface port

2.2.2 POWER SUPPLY FOR THE ELOG DATA LOGGER

2.2.2.1 Connection

The power supply circuit must be protected by fuses or a thermal magnetic circuit breaker.

ELOG DATA LOGGER's power supply is connected to the ports marked as Aux.



2.2.2.2 Characteristics

Source	Characteristics
AC	80 Vac to 265 Vac. Frequency in the range of 42.5 Hz and 69 Hz on AC.
DC	80 Vdc to 375 Vdc. Polarity-insensitive
Consumption	< 10 VA – 5 W
Non-removable terminals	2 connection points. Screw terminals, with mobile cage. Connection of rigid or flexible wires of 4 to 6 mm². Maximum permitted torque on the terminal: 0.4 Nm.

Following a power cut, data is stored according to the limits set out below.

Item	Characteristics
Information retention	10 years at 25°C (drivers and settings)
Date / time retention	30 days.
Power reserve	2.5 sec (under 230 Vac).

2.2.3 STATUS INDICATORS

Three status indicators (LEDs) provide information on the functioning of the ELOG DATA LOGGER.

ON	Unlit	Product off
	Fixed green light	Product on
	Unlit	No communication
	Flashing green light	Communication on RS485 or optical ports in progress
ERROR	Unlit	No error
	Flashing red light	Product error

2.2.4 THE ETHERNET PORT (PORT C)

2.2.4.1 Preamble

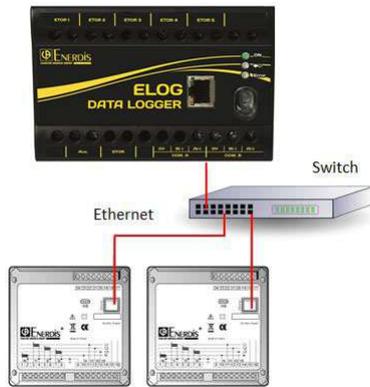
The Ethernet 10/100 Base T connector enables the ELOG DATA LOGGER to be connected to the Ethernet network, for several uses:

- Modbus in master mode: real-time reading and periodic logging of the values of variables from multi-function and multi-brand equipment communicating via Modbus/TCP  and Modbus over TCP/IP  protocols;
- web server: configuration of the ELOG DATA LOGGER product and real-time consultation of the values of the variables of Modbus/TCP equipment, from embedded web pages.
- Ethernet network: integration in an overall Ethernet network for remote, multi-product use of ELOG DATA LOGGER via the HTTP protocol, using web services (supervision with E. Online, Remote logging and display by spreadsheet, etc.), and the function for exporting .csv, .xml files to an FTP server.

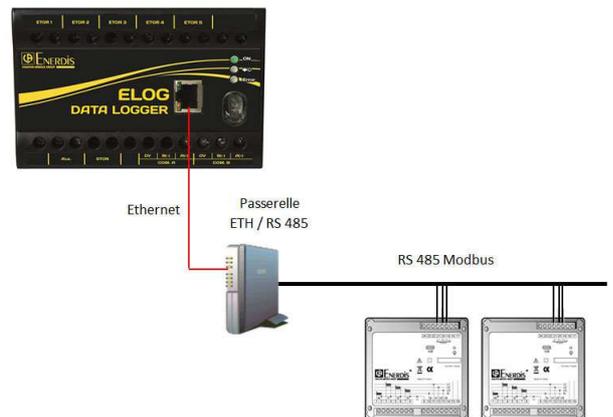
2.2.4.2 Connection

ELOG DATA LOGGER communicates with equipment according to two operating modes:

Remote equipment is directly connected to the Ethernet network → Connection through a switch or a hub.



Remote equipment is indirectly connected to the Ethernet network → Connection using an RS485 Modbus / Ethernet gateway.



Ethernet connector LEDs

LED 1		LED 2	
Colour	Meaning	Colour	Meaning
Unlit	No connection.	Unlit	No activity.
Amber	Connection at 10 Mb per second.	Amber	Half duplex.
Green	Connection at 100 Mb per second.	Green	Full duplex.



2.2.4.3 Ethernet port characteristics

Item	Characteristics
Protocol	Modbus/TCP  and Modbus over TCP/IP  RTU mode in master mode. HTTP in slave mode
Data logging frequency from network equipment	Analog type variable  : every 5, 6, 10, 12, 15, 20, 30, 60, 120, 180, 240, 300, 360, 600, 720, 900, 1,200, 1,800 or 3,600 seconds Index type variable  every 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 or 60 minutes
Speed	10/100 Base T
Default address	192.168.0.2
Default mask	255.255.0.0
Maximum length	Transmission up to 100 m max.
Connection	8-pin RJ45 plug.

2.2.5 THE RS485 PORTS (PORTS A AND B)

2.2.5.1 Preamble

ELOG DATA LOGGER is equipped with two RS485 (RS485 A and RS485 B) digital inputs using the Modbus/Jbus protocol which operate in master mode. This enables ELOG DATA LOGGER to communicate with multi-function and multi-brand equipment connected to Modbus networks. ELOG DATA LOGGER displays the values of variables from equipment in real-time on its embedded web pages, and can periodically save them to memory.



2.2.5.2 Layout

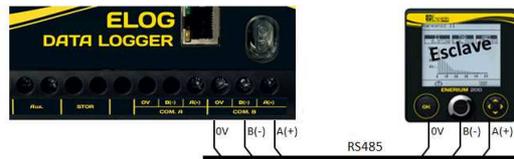
The RS485 communications ports are marked as COM A and COM B on the front panel.

The ELOG DATA LOGGER runs in master mode for these two ports, RS485 A and B.



2.2.5.3 Connection principle

Only tests on the real network can confirm the best combination (speed, network length, impedance matching, etc.).



2.2.5.4 Technical reminders and precautions for the 2-wire RS485 network

Type of cable to use:

Screened twisted-pair cable with a section of more than 0.2 mm² (UL2493 or UL2919 type with multiple screening for very noisy areas). The continuity of screening along the communications network must be ensured, and the screening must be connected to the 0 V of the RS485 output on a single equipment of the RS485 MODBUS/JBUS network, generally at the start or end of line.

Installation of the RS485 cable:

The multi-pair cable must not be severed. Make a cut in the protective sheath and remove a pair (the continuity of screening along the communications network is therefore ensured). If the cable has to be cut, re-establish the continuity of screening by connecting the screening of the two ends of both cables.

RS485 network structure:

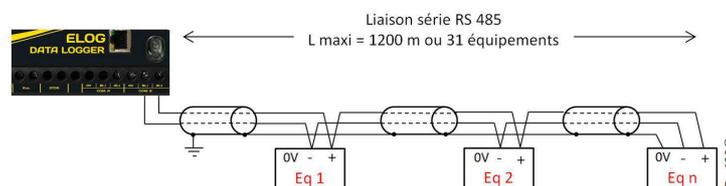
If the routing of the RS485 network forces the network to be split into two or more distinct branches, the route node must be equipped with an RS485 line amplifier or an nxRS485 line repeater HUB.

The maximum characteristics of an RS485 network are:

- maximum length: 1.2 km,
- Maximum 31 pieces of equipment connected to an RS485 segment.

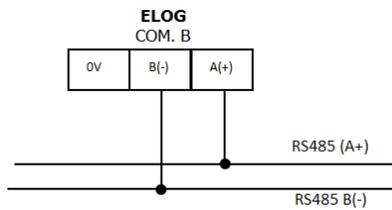
The RS485 network can be extended to more than 1.2 km and 31 pieces of equipment through the use of Modbus RS485 hubs / amplifiers.

Layout example:



2.2.5.5 Connection in a clean environment

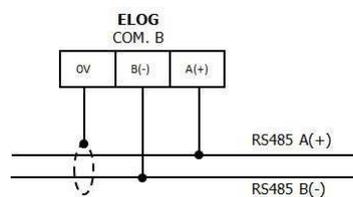
For a RS485 network in a clean electrical environment, use a twisted-pair cable. This cable should be connected to terminals A(+) and B(-). The convention adopted for terminals A and B corresponds to EIA 485, specifying logic level "1" on the line corresponds to $V_B > V_A$ and a logic level "0" corresponds to $V_A > V_B$.



2.2.5.6 Connection in a noisy environment

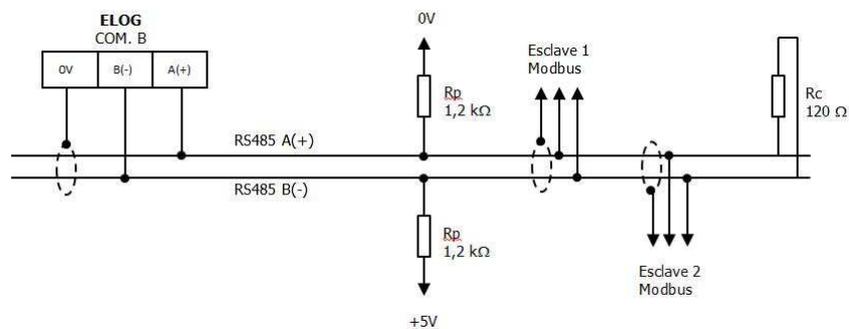
- With screening

In the case of particularly noisy electrical environment, a screened twisted pair should be used, and the screening should be connected to the 0 V terminal of the ELOG DATA LOGGER.



- With screening and resistors (bias and load)

To improve the quality of transmission in noisy environments, it is possible to bias the line at a single point. This bias sets the idle level in the absence of transmission by two $1.2\text{ k}\Omega$ resistors between the 0 V and 5 V lines. It is sometimes necessary to adapt the line by connecting a $120\ \Omega$ resistor across the two ends of the bus.



2.2.5.7 RS485 port characteristics

<i>Item</i>	<i>Characteristics</i>
Protocol	Modbus RTU 
Operating mode	Half duplex Master mode
Data logging frequency from network equipment	Analog type variable  : every 5, 6, 10, 12, 15, 20, 30, 60, 120, 180, 240, 300, 360, 600, 720, 900, 1,200, 1,800 or 3,600 seconds Index type variable  every 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 or 60 minutes
Speed	2,400, 4,800, 9,600, 19,200 and 115,200 Bauds.
Parity	no, even or odd.
Number of stop bits	1 or 2
Connection	Screened 2-wire, half duplex
Non-removable terminals	3 connection points. Screw terminals. Connection of rigid or flexible wires of 4 to 6 mm ² Maximum permitted torque on the terminal: 0.4 Nm.

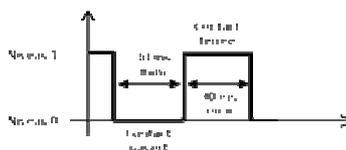
■ Communication is in half duplex mode.. The functions implemented are:

- Function 03: read N words
- Function 04: read N words
- Function 16: write N words (depending on model)

2.2.6 DIGITAL INPUTS

2.2.6.1 Preamble

ELOG DATA LOGGER has five independent digital inputs. They are marked ETOR1 to ETOR5. They work in pulse mode: to each of them the user can connect any type of equipment working on this principle (water, gas or electricity meter, sensor, etc.), complying with the following characteristics:

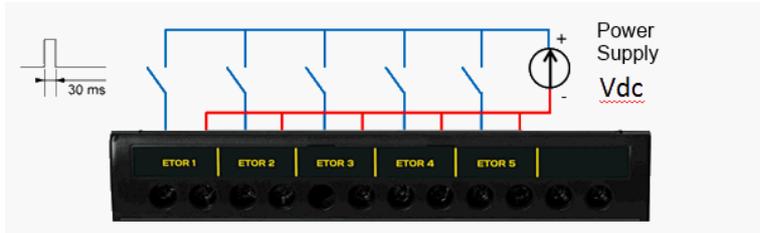


The received pulses are multiplied by the weightings of the pulses on this input and are then summed in an index type variable . The pulse weighting can be configured with a relation of 1/10000th, and each periodic reading of the index can be archived in the ELOG DATA LOGGER. The index start value can be set to that displayed on the connected meter.

2.2.6.2 Digital input connection.

The electrical connection of digital inputs to ELOG DATA LOGGER requires the presence of an external Vdc power source.

- Connect the input signal as follows:



Example of the connection of digital inputs in pulse mode.

The terminals are polarity-insensitive.

2.2.6.3 Electrical characteristics of digital inputs

<i>Item</i>	<i>Characteristics</i>
Number of inputs	5.
Operating mode	Metering
Input signal	Direct.
Logic levels	Level "0": amplitude < 5 Vdc Level "1": amplitude > 7 Vdc and < 72 Vdc Minimum duration of pulse at level "0": 30 ms Minimum duration of pulse at level "1": 30 ms
Frequency of pulses	0 to 16.67 Hz
Power absorbed	< 0.5 W per digital input.
Isolation between inputs	2.2 kV – 1 min.
Type of protection	Optocoupler.
Logging frequency of the index values of digital inputs	Every 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 or 60 minutes

2.2.7 OUTPUT

Not available on this model.

2.2.8 OPTICAL INTERFACE PORT

This optical interface is exclusively reserved for manufacturer maintenance.

2.3 DATA LOGGING MODE

ELOG DATA LOGGER can periodically record the values of variables from equipment connected to:

- Digital entries : logging of index type variables
- RS485 A and RS485 B inputs in Modbus RTU : logging of analog and index type variables.
- The Ethernet connector in Modbus/TCP  and Modbus over TCP/IP : logging of analog and index type variables.

Value logging frequency can be adjusted for each type of variable, from the following values:

- Analog type variable : every 5, 6, 10, 12, 15, 20, 30, 60, 120, 180, 240, 300, 360, 600, 720, 900, 1200, 1800 or 3600 seconds.
- Index type variable : every 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 or 60 minutes.

2.3.1 ELOG DATA LOGGER MEMORY OPERATING MODE

- 3 months (month in progress, month-1, month-2) of data for logging frequencies of over 1 minute.
- 3 days (day in progress, day-1, day-2) of data for logging frequencies of less than 1 minute,

Warning: memory depth available to download is counted from the product's current date and time. Data below 1 minute will no longer be available for download if an ELOG DATA LOGGER is left unplugged for more than 3 days. Data above 1 minute will no longer be available for download if an ELOG DATA LOGGER is left unplugged for more than 3 months.

2.4 TECHNICAL AND FUNCTIONAL LIMITS OF THE ELOG DATA LOGGER

Driver :

- Max number of drivers: 100
- Max number of configurable simple variables  per driver: 30
- Max number of configurable composite variables  per driver: 10

Device :

- Max number of configurable devices: 100

Type of variables recorded:

- Index type variable 
- Analog type variable 

Logging frequency :

- Analog type variable: every 5, 6, 10, 12, 15, 20, 30, 60, 120, 180, 240, 300, 360, 600, 720, 900, 1,200, 1,800 or 3,600 seconds :
- Index type variable: every 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 or 60 minutes
- Adjustable independent frequency for each device.

Logging capacity:

- Max number of periodically logged variables: up to 100¹
- 3 months (month in progress, month-1, month-2) of data for logging frequencies of over 1 minute
- 3 days (day in progress, day-1, day-2) of data for logging frequencies of less than 1 minute
- Memory operating mode: FIFO  (First In First Out)
- 8 GB storage capacity

¹ Depending on the architecture and the performance of the communication network.

3. EMBEDDED WEB PAGES

3.1 QUICK PRESENTATION

3.1.1 PREREQUISITES

Communication ports revision 1.0:

Protocol	Port	Mode	Stream	ELOG DATA LOGGER service
http	8080, 80	input	TCP/IP	Access to embedded web pages
https	443	input	TCP/IP	Access to embedded web pages
FTP	21	output (1)	TCP/IP	Export of files to FTP server
SMTP	25	output	TCP/IP	Send emails
NTP	123	output	UDP/IP	Synchronize date and time on NTP server
Modbus TCP	502 (2)		TCP/IP/UDP	Remote logging of Modbus TCP equipment
Modbus RS485 port A	3001 (3)		TCP/IP/UDP	Remote logging of RS485 Modbus equipment via RS485 Modbus/Ethernet gateway
Modbus RS485 port B	3002 (3)		TCP/IP/UDP	

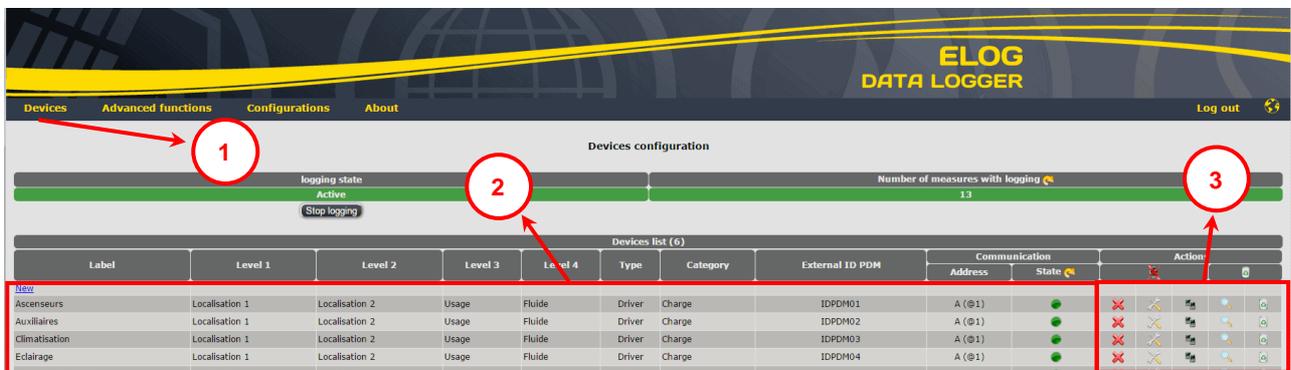
(1) to enable input mode if the ELOG DATA LOGGER's local FTP server is to be accessible from outside

(2) port 502 used on ENERDIS products. Port number configurable on the ELOG DATA LOGGER

(3) ports 3001 and 3002 used as standard. Port numbers configurable on the ELOG DATA LOGGER

3.1.2 TYPICAL WEB PAGE LAYOUT

The general web interface of the ELOG DATA LOGGER is constructed as follows:



It is made up of three main areas:

- ① A scrolling menu bar enables you to browse through ELOG DATA LOGGER's various embedded web pages.
- ② A list.
- ③ An actions area, containing all the actions which can be performed on the list.

Use the menu bar to browse the ELOG DATA LOGGER. You can access all the functionalities of your ELOG DATA LOGGER through its web pages.

The globe icon allow you to select the language in which the menus are displayed.

Notes

- Use the notation <@IP_ELOG DATA LOGGER> to specify the IP address of the configured ELOG DATA LOGGER.
- Use the notation http:// <@IP_ELOG DATA LOGGER> to specify the URL of the ELOG DATA LOGGER's embedded pages.

3.2 LOGIN TO THE ELOG DATA LOGGER

3.2.1 PREREQUISITES

- You have an internet browser and access to the network that the ELOG DATA LOGGER is connected to.

3.2.2 OPERATING MODE

The default IP address of your ELOG DATA LOGGER is 192.168.0.2 (mask: 255.255.0.0).

To login to the ELOG DATA LOGGER using the default IP address:

- Configure the network card of your computer to connect to the same subnet as the ELOG DATA LOGGER (for example, configure IP address 192.168.0.3 / 255.255.0.0).
- Open your internet browser and enter the following HTTP address in the URL bar: <http://192.168.0.2>
- Enter Login: "admin" (default login).
- Enter the password: "admin" (default password).
- Click on the  icon to validate.

3.3 LOG OUT FROM AN ELOG DATA LOGGER

3.3.1 PREREQUISITES

- You are connected to one of the pages of an ELOG DATA LOGGER (apart from the authentication page).

3.3.2 OPERATING MODE

- Click on "Log out" to return to the authentication page.
- Close your internet browser.

3.4 MANAGING PROFILES – LOGIN AND PASSWORD

3.4.1 PREREQUISITES

- You are connected to one of the pages of an ELOG DATA LOGGER (apart from the authentication page).

3.4.2 OPERATING MODE

- Click on "Configurations > Profiles".
- Enter your "Login" id.
- Enter your "Password".
- Confirm your password.
- Enter your email address in the "Mail" field. If resetting your password, this address will be used (via the "Forgot your password" link on the authentication page).

3.5 CONFIGURATION OF THE ETHERNET PORT

3.5.1 PREREQUISITES

- Your computer is connected to your ELOG DATA LOGGER and you have logged in.

3.5.2 OPERATING MODE

- Click on "Configurations > Ethernet port".
- You have to fill in:
 - The host name of your ELOG DATA LOGGER on the network.
 - The length of the Timeoutⁱ: (by default 500 ms).
 - The type of assignment of the IP address of your ELOG DATA LOGGER.
 - Select "Static" if you want to configure the IP address and network mask of your ELOG DATA LOGGER. Warning, if you change your subnet, ELOG DATA LOGGER will no longer be visible from your computer and you will need to reconfigure your own network settings. (Recommended).
 - Select "DHCP" (Dynamic Host Configuration Protocol) if your ELOG DATA LOGGER is connected to a network with a DHCP server. An IP address is then automatically assigned to your ELOG DATA LOGGER by the DHCP server of the network.
 - The new IP address.
 - The value of the subnet mask.
- Fill in the optional fields:
 - SMTP: must be configured if you wish to receive emails sent by ELOG DATA LOGGER.
 - DNS: must be configured if you use a domain name as destination address in the settings for an automatic file export task to an FTP server.
 - SMTP port: port of the mail server.
 - SMTP Mail: a valid email address on the mail server.
 - Read Ethernet settings: displays the product's Ethernet settings.

Communication setting	
Hostname	ELOG
SMTP (Optional)	
SMTP Port (Optional)	
SMTP Mail (Optional)	
Timeout (ms)	500
Type	Static

Static addressing	
IP address	14.6.200.240
Mask	255.255.0.0
Gateway (Optional)	14.6.10.1
DNS (Optional)	14.6.100.20

Buttons: Validate, Cancel, Read Ethernet settings

Status: Ethernet port settings successfully read

- Click on "Validate" for the new settings to be taken into account. The message "**Ethernet port modified successfully**" confirms that the operation has been successfully completed. Click "Cancel" to exit the section without making any changes.

3.6 DATE AND TIME CONFIGURATION

3.6.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- If you want to use NTP synchronization, make sure the NTP (Network Time Protocol) server in question is operational and accessible by ELOG DATA LOGGER.

3.6.2 OPERATING MODE

- Go to "Configurations > Date / Time".
- Select your time zone from the drop-down list.
- NTP: must be configured if you wish to synchronize timestamping of logs with a reference on one or more ELOG DATA LOGGER at the same time.
 - Example of ntp server: 0.fr.pool.ntp.org
- Test NTP: allows you to test the access to the NTP server. NTP server responses must be enabled on your network.
- Validate: allows you to synchronize the date and time on the product with the PC clock.
- Cancel: to exit the section without any modification.

3.7 IMPORT A CONFIGURATION INTO ELOG DATA LOGGER

3.7.1 PREREQUISITES

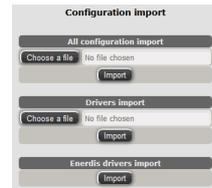
- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- You know the location of the configuration file to import (xxxx.tar.gz type file).

3.7.2 OPERATING MODE

- Go to "Configurations > Import a configuration".
- Two options are available:

Import a complete configuration:

- The entire list of Devices  and Drivers  contained in the xxxx.tar.gz file are imported into the ELOG DATA LOGGER.
- **Note:** the network configuration is not modified.



Driver import:

- The complete list of Drivers  contained in the xxxx.tar.gz file are imported into ELOG DATA LOGGER.

Import of Enerdis drivers:

- All Drivers in the list  contained in the ELOG DATA LOGGER library are downloaded.
-

Important:

Every Device, Driver or Variable contained in a Driver is identified by a unique key. The import of a list of Devices and/or Drivers (via the commands "Import complete configuration" - "Driver Import" - "Import Internal Driver Library") will have following consequences for all the elements (Device, Driver or Variable) with an identical key:

- replacement of this element by the one imported,
- addition of all the elements with a key that was not pre-existing in the ELOG DATA LOGGER.

The modification of an element (Device, Driver or Variable) in ELOG DATA LOGGER does not entail a modification of its key. Only the addition of an element (Device, Driver or Variable) leads to the creation of a new key.

Import a complete configuration:

- Click on "Choose a file" and select the file to import (e.g.: config.tar.gz) in the tree structure of your computer, then click on "Open".
- Then click on "Import". The "**Configuration updated**" message confirms that the import has been successfully completed.

Driver import:

- Click on "Choose a file" and select the file to import (e.g.: config.tar.gz) in the tree structure of your computer, then click on "Open".
- Then click on "Import". The "**Configuration updated**" message confirms that the import has been successfully completed.

Import of Enerdis drivers:

- Then click on "Import". The "**Configuration updated**" message confirms that the import has been successfully completed.

Check the import by clicking on "Configurations > Devices" for a configuration import, or "Configurations > Drivers" for a driver import.

3.8 EXPORT A CONFIGURATION FROM THE ELOG DATA LOGGER

3.8.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.

3.8.2 OPERATING MODE

- Go to "Configurations > Export a configuration".

Two options are available:

Export the complete configuration:

- The entire list of Devices  and associated Drivers  are saved in a file.

Driver export:

- Only the list of drivers is saved in a file.

- Click on "Export".
- Check "Save file", then validate with "OK".

The **config.tar.gz** file is then saved into the folder which you have defined in Windows to store your downloads (by default: My Documents / Downloads).

You can then rename your file, maintaining the initial syntax.

E.g.: **config** ELOG1 192-168-0-11.**tar.gz**.

3.9 CONFIGURATION OF PORTS RS485 A AND RS485 B

3.9.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.

3.9.2 OPERATING MODE

- Click on "Configurations > RS485 A and B ports".
- Select the communication port to configure (Port A or Port B).
- In the "RS485 communication settings" section, you must fill in the following fields:
 - Port number (3001 by default on A and 3002 by default on B)
 - Mode (Master by default)
 - Speed (bauds - Default setting: 9600)
 - Stop bits (bits - Default setting: 1)
 - Parity (Default setting: No parity)
 - Timeout : (ms – Default setting: 500)
 - Delay between 2 requests : (ms – Default setting: 50)
- Click on "Modify" to save the settings or "Cancel" to exit the section without making any changes.

3.10 CONFIGURATION OF DIGITAL INPUTS

3.10.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.

3.10.2 OPERATING MODE

- Go to "Configurations > Digital Digitalⁱ".
 - Click on the  icon in the digital input line (1 to 5) to configure.
 - Fill in:
 - A "Label" for your digital input.
 - The "External Variable ID":
 - This is an identifier that can be associated with the digital input and which can then be used as id data in .csv and .xml files exported by the ELOG DATA LOGGER.
 - The digital input mode ("Metering" mode as default).
 - "Index unit" for measuring the Index type variable ⁱ on the meter.
 - Either enable or disable the possibility of creating periodic Logs ⁱ of the number of pulses generated by the meter on this digital input. Logs are validated upon creation of a Device.
 - The "Pulse weight (x 1/10,000)" of the pulse output of the meter which you want to assign to the digital input (x 1/10,000th - Default value: 10,000).

E.g.: meter output pulse weight 2.5 kWh/pulse,
→ value to fill in: $2.5 \times 10,000 = 25,000$.
 - Possibly the initial value of the index, if your meter displayed a non-zero value before connection to the ELOG DATA LOGGER's digital input.

E.g.: value displayed on the meter of 256,982.52 kWh,
→ value to fill in: $256,982.52 \times 10,000 = 2,569,825,200$.
- Click on "Validate" to save the digital input settings or "Cancel" to exit the section without making any changes.
- The maximum possible value of a digital input is 4,294,967,295 (x 1/10,000). The value restarts at 0 after reaching the maximum value.

E.g.: On an electricity meter with pulse output, the maximum value displayed will be 429,496 kWh. At the next kWh, the value restarts at 0 kWh.

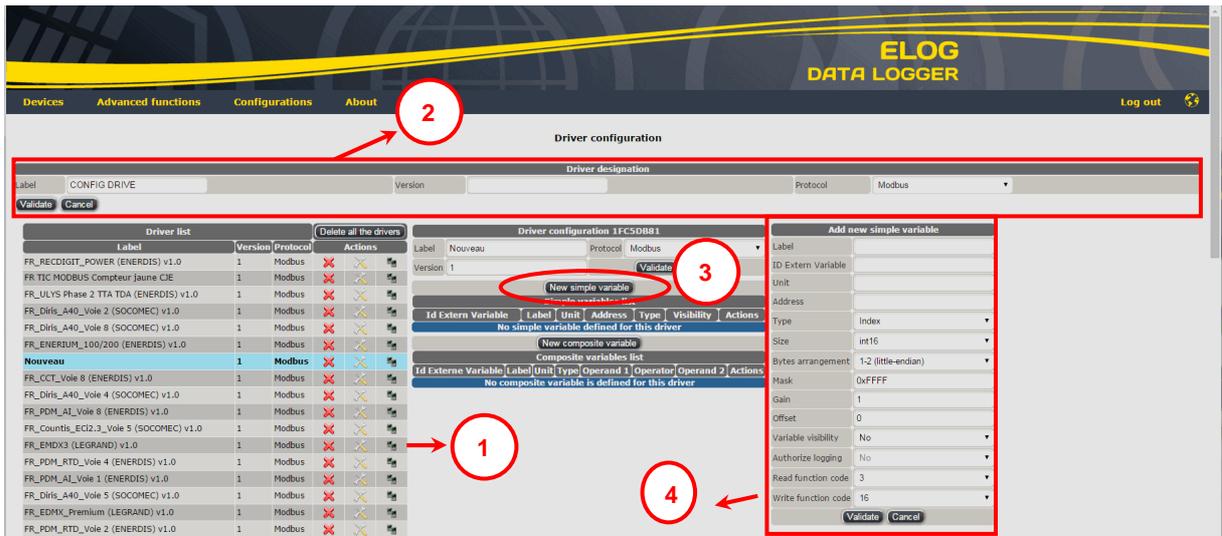
3.11 CREATION OF A MODBUS DRIVER

3.11.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- You know the brand and model of the device to be used.
- You have a memory map and the table of measurements for the equipment to be used.

3.11.2 OPERATING MODE TO CREATE A DRIVER

- Go to "Configurations > Drivers".
- ① On the left of the page, the list of drivers already created is visible. If the driver which you want to use is not on this list you must create it. The following procedure should be followed:



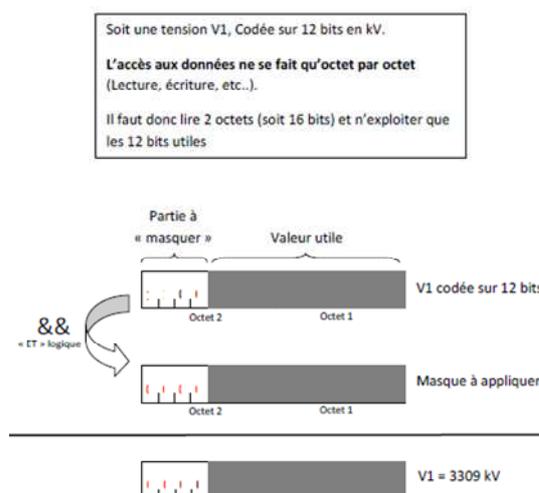
- ② Fill in:
 - A "Label" for your driver.
 - A "Version" reference for the driver.
 - Protocol: Modbus RTU ⓘ (default value).
- Click on "Validate" to create the driver or "Cancel" to exit the section without making any changes.
The created driver is highlighted in blue in the table of drivers.
- You can:
 - "Delete" a driver by clicking on the  icon,
 - "Modify" a driver by clicking on the  icon,
 - "Copy" a driver by clicking on the  icon.

IMPORTANT: it is not possible to delete a driver if it is associated with a Device ⓘ.

3.11.3 OPERATING MODE TO CREATE A SIMPLE VARIABLE

- Locate your driver in the list of drivers.
- Then click on the  icon to add variables to the driver.
- ③ Click on "New simple variable" .
- ④ Fill in:
 - The variable's "Label".
 - "External Variable ID" (optional field): this is an identifier that can be associated with the variable and which can then be used as id data in csv and xml files exported by the ELOG DATA LOGGER.
 - The "Unit" of the simple variable.
 - The "Address" in the mapping to read the variable.
 - The "Type" of variable:
 - Index type variable  : if it is a variable to measure an accumulated value over time (index of an energy meter, quantity of product units manufactured, etc.).
 - Analog type variable  : if it is a simple measurement variable (instant value, average, etc.).
 - The "Size" of the variable:
 - Uint: unsigned integer,
 - Int: signed integer,
 - Float: actual value,
 Followed by the number of bits of which this variable is made up (16, 32 or 64).
 E.g.: uint 32: unsigned integer encoded on 32 bits.
 - The "Bytes arrangement" which corresponds to the read order of the bytes of the variable:
 - 2-1-4-3,
 - 4-3-2-1 (big endian): High Byte at the lowest address,
 - 1-2-3-4 (little endian): Low Byte at the lowest address,
 - 3-4-1-2.
 - The "Mask" enables just part of the variable to be used (e.g.: the mask to use for the 8 first bits of a 32 bit big endian is 00000000-00000000-00000000-11111111 in binary so 000000 FF in hexadecimal).

Example:



- The "Gain": multiplying factor to apply to the variable (default value: 1).
- The "Offset" to add to the value of the variable (default value: 0).
- "Variable visibility": select "Yes" in the "Visibility" box if the variable needs to be displayed on the web pages of the ELOG DATA LOGGER.
- Either enable or disable the possibility of creating periodic Logs  of the value of the variable. Logs are validated upon creation of a Device.
- The "read function code": JBUS function enabling the reading of n words. (3 or 4, Default value: 3).
- The "write function code": JBUS function enabling the writing of n words. (16)
- Click on "Validate" to save the newly entered variable or "Cancel" to exit the section without making any changes.
-  Then use the "New simple variable" command to add to the list of simple variables.
- From the list of simple variables you can:
 - "Delete" a simple variable by clicking on the  icon,
 - "Modify" a simple variable by clicking on the  icon,
 - "Copy" a simple variable by clicking on the  icon,

3.11.4 OPERATING MODE TO CREATE A COMPOSITE VARIABLE

- Click on "New composite variable"  (this section enables variables to be created from the combination of simple variables defined in the "New simple variable" stage).
- Fill in the "New composite variable" section:
 - The "Label" for the composite variable to create,
 - "External Variable ID" (optional field): this is an identifier that can be associated with the variable and which can then be used as id data in csv and xml files exported by the ELOG DATA LOGGER.
 - The "Unit of the composite variable.
 - The "Type" of variable:
 - Index type variable  : if it is a variable to measure an accumulated value over time (index of an energy meter, quantity of product units manufactured, etc.).
 - Analog type variable  : if it is a simple measurement variable (instant value, average, etc.).
 - "Operand 1": select from the list of available simple variables.
 - Select an "Operation" (+, -, x, /).
 - "Operand 2": select from the list of available simple variables.
 - Either enable or disable the possibility of creating periodic Logs  of the value of the variable. Logs are validated upon creation of a Device.
- Click on "Validate" to save the newly filled-in variable or "Cancel" to exit the section without making any changes.
- Then use the "New composite variable" command to add to the list of composite variables.
- From the list of composite variables you can:
 - "Delete" a composite variable by clicking on the  icon,
 - "Modify" a composite variable by clicking on the  icon,
 - "Copy" a composite variable by clicking on the  icon.

3.12 ADD A DEVICE / ACTIVATE LOGGING

3.12.1 PREREQUISITES

- You have already thought out the geographic or functional organization of the various Devices ⓘ in your installation. (Location 1, Location 2, Usage, Fluid, Type of load).
- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- The Driver ⓘ for the device exists and/or the csv ⓘ is configured.

3.12.2 OPERATING MODE

- Go to "Devices > Devices".
- The following window is displayed:

- ① Click on "New".
- Fill in:
 - A "Label" for your Device
 - The "Type": "Driver" or "Digital Input"
 - Driver:
 - Location 1, Location 2, Usage, Fluid, Type of load.
 - "External Device ID" (optional field): this is an identifier that can be associated with the Device and which can then be used as id data in csv and xml files exported by the ELOG DATA LOGGER.
 - Choose the "driver label" from the scroll-down list.
 - Either enable or disable "Index logging ⓘ". If you choose "Active", the chronological logging of all values of the index type variable of the device is activated.
 - Define the "Index Logging frequency ⓘ" (possible values are: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60 minutes).
 - Either enable or disable "Analog measurement logs ⓘ". If you choose "Active", the chronological logging of all values of the analog type variable of the device is activated.
 - Define the "Logging frequency of analog measurements" (possible values are: 5, 6, 10, 12, 15, 20, 30, 60, 120, 180, 240, 300, 360, 600, 720, 900, 1,200, 1,800 or 3,600 seconds).
 - Choose the communications port which the "RS485 port A or RS485 port B or Ethernet Port" equipment is connected to.
 - RS485 port A or RS485 port B: Fill in the protocol (Modbus RTU ⓘ as default) and the Modbus slave address ⓘ of the Device equipment.

- Ethernet Port: choose Modbus/TCP ⓘ or Modbus over TCP/IP ⓘ
 - ✓ Modbus/TCP: fill in the IP address of the Device equipment, the port number (502 as default) and the Slave address ⓘ of the Device equipment (1 as default).
 - ✓ Modbus over TCP/IP: fill in the IP address of the gateway, the port number (502 as default) and the Modbus address of the Device (1 as default).
- Digital Input :
 - Location 1, Location 2, Usage, Fluid, Type of load.
 - "External Device ID" (optional field): this is an identifier that can be associated with the Device and which can then be used as id data in csv and xml files exported by the ELOG DATA LOGGER.
 - Select the "digital input number" (1 to 5) which the Device equipment has been connected to.
 - Either enable or disable "Index logging ⓘ". If you choose "Active", the chronological logging of all values of the index type variable of the digital input is activated.
 - Define the "Index Logging frequency ⓘ" (possible values are: 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60 minutes).
- Click on "Validate" to save the Device or "Cancel" to exit the section without making any changes. The created Device is highlighted in blue in the Device table.
- ② Refresh your browser display to show Device labels in alphabetical order.
- ③ From the list of Devices, you can:
 - "Delete" a Device by clicking on the ✖ icon,
 - "Modify" a Device by clicking on the ✂ icon,
 - "Copy" a Device by clicking on the 📄 icon.
- In area ④:
 - Check that the logging state is active.
 - Click on the "Restart logging" button if required.
 - Click on the "refresh" icon 🔄 to update the "Number of measures with logging".

The colour code used for the banner is:



Green: Logging is active.
Red: logging is off.

Green: The number of measures with active logging is between 1 and 44 inclusive
Amber: The number of measures with active logging is between 45 and 50 inclusive
Red: The number of measures with active logging is higher than 50

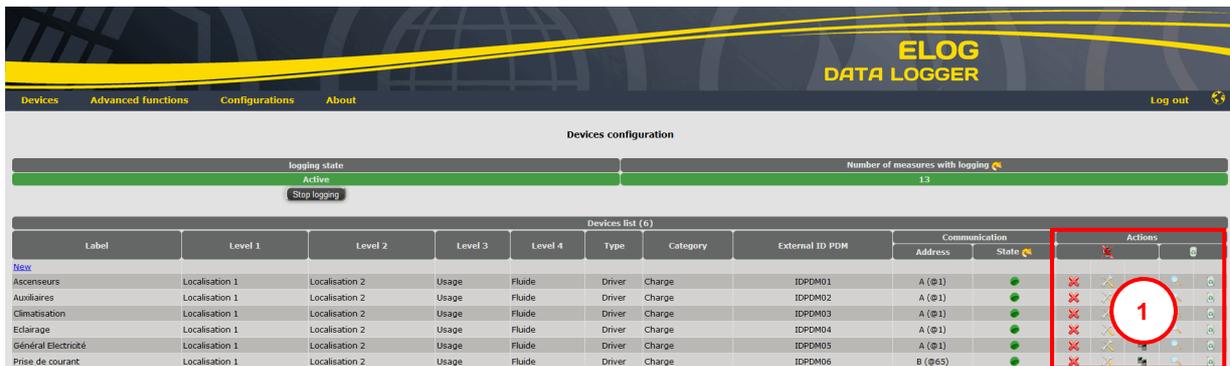
3.13 DELETING RECORDINGS

3.13.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- A Device  needs to have been created.

3.13.2 OPERATING MODE

- Go to "Devices > Devices".
- The following window is displayed:



- Deleting Recordings .

- For a single Device:

Deleting the logs (recordings) for a single Device: in area , use the  command located on the Device line.

On the last line of the list, the message "**Deletion of Device logs OK**" confirms that the operation has been successfully completed.

- For all Devices in the list:

Deleting all logs for all Devices: in area , use the  command located under the "Actions" cell. On the last line of the list, the message "**Deletion of all Device logs OK**" confirms that the operation has been successfully completed.

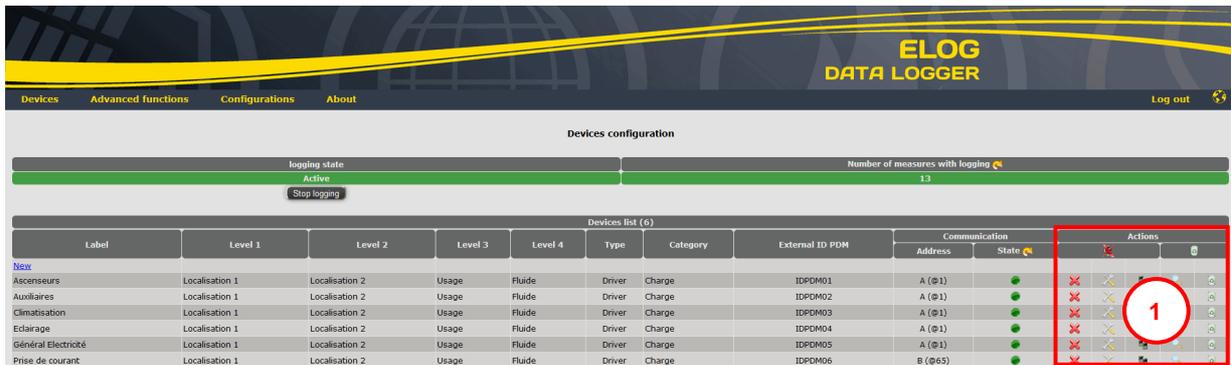
3.14 DELETING DEVICES

3.14.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- A Device  needs to have been created.

3.14.2 OPERATING MODE

- Go to "Devices > Devices".
- The following window is displayed:



- Deletion of Device(s):

- Deleting a single Device:

in area ①, use the  command located on the Device line. A message to confirm or cancel the action is displayed.

- For all Devices in the list:

In area ①, use the  command located under the "Actions" cell. A message to confirm or cancel the action is displayed. The message "No Device is defined in ELOG DATA LOGGER" validates the operation.

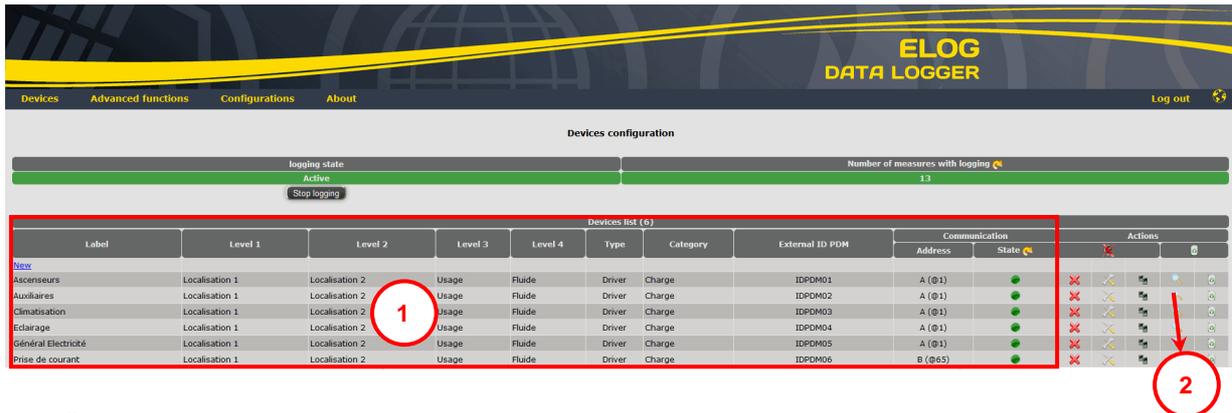
3.15 VIEW THE VALUES FOR A DEVICE IN REAL-TIME

3.15.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- Equipment must be operational.
- A Device  needs to have been created.

3.15.2 OPERATING MODE

- Click on "Devices > Devices".
- The following window is displayed:



Label	Level 1	Level 2	Level 3	Level 4	Type	Category	External ID PDM	Communication		Actions
								Address	State	
Accenseurs	Localisation 1	Localisation 2	Usage	Fluide	Driver	Charge	IDPDM01	A (@1)	●	✖ ✕ ⚙
Auxiliaires	Localisation 1	Localisation 2	Usage	Fluide	Driver	Charge	IDPDM02	A (@1)	●	✖ ✕ ⚙
Climatisation	Localisation 1	Localisation 2	Usage	Fluide	Driver	Charge	IDPDM03	A (@1)	●	✖ ✕ ⚙
Eclairage	Localisation 1	Localisation 2	Usage	Fluide	Driver	Charge	IDPDM04	A (@1)	●	✖ ✕ ⚙
Général Electricité	Localisation 1	Localisation 2	Usage	Fluide	Driver	Charge	IDPDM05	A (@1)	●	✖ ✕ ⚙
Prise de courant	Localisation 1	Localisation 2	Usage	Fluide	Driver	Charge	IDPDM06	B (@65)	●	✖ ✕ ⚙

In area ①:

- Check the addresses of Devices:

ETOR (1 to 5)	The Device  is connected to one of the five Digital Digitals  .
A (@i)	The Device is connected to the Modbus network to port A and its address is i.
B (@j)	The Device is connected to the Modbus network to port B and its address is j.
C (IP :k @k)	The Device is connected to the Ethernet network to port C. The following are displayed in the brackets, in this order: the IP address of the Device, the relevant port number and the Modbus address of the Device on the port.

- Click on the "refresh" icon  to update the communication status.

Three situations can then arise:

	Successful communication with the equipment.
	Status not determined by ELOG DATA LOGGER.
	Unsuccessful communication with the equipment.

In area :

This action enables a pop-up window to open, to see the measurements associated with the driver (or the digital input) of the Device.

Measurements for device Prise de courant

Device :Prise de courant 

Simple variables			
Key	Label	Instant values	Unit
1A299614	Adresse MODBUS	65	
74AE096B	Courant In	0.05	A
65572042	Energie Active (-)	0	kWh
DD21349A	Energie Active (-) T1	0	kWh
ADE9FFA7	Energie Active (-) T2	0	kWh
EB1213FE	Energie Active +	9.14	kWh
2B306C57	Energie Active + T1	9.14	kWh
E35348F8	Energie Active + T2	0	kWh
869D1C89	Energie Active Total	9.14	kWh
90448F8C	Energie Active Total T1	9.14	kWh
D9780922	Energie Active Total T2	0	kWh
ED3DB83D	Energie Réactive (-) T1	24.04	kvarh
0654C264	Energie Réactive (-) T2	0	kvarh
2A8DABC9	Energie Réactive + T1	0	kvarh
06858082	Energie Réactive + T2	0	kvarh
D87A12A5	Energie Réactive -	24.04	kvarh
A9E3F2AC	Energie Réactive Total	24.04	kvarh
0DE8475C	Energie Réactive Total T1	24.04	kvarh
985C22F4	Energie Réactive Total T2	0	kvarh
4083158C	Facteur de Puissance	0.28	
40C5B20C	Fréquence	49.97	Hz
CE8147AF	Puissance Active Total	0.002	kW
269DE10F	Puissance Apparente Total	0.007	kVA
830F1B6C	Puissance Réactive Total	0.007	kvar
12F131E4	Tarif	1	
3E49E21D	Temps de défilement LCD	5	s
24AFE8E2	Tension	238.2	V
811A42BC	Vitesse de communication	9600	Bds/s

Composite variables

Key	Label	Instant values	Unit
No composite variable is defined			

3.16 ADVANCED FUNCTIONS: AUTOMATIC TASK – FTP EXPORT

3.16.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- An FTP server is configured and operational. You have the following items:
 - FTP server hostname (domain name or IP address)
 - Authorized communication port number (generally port 21)
 - Make sure the FTP protocol is authorized
 - FTP server id
 - FTP server password
 - Folder or directory path to which the files will be written
 - Make sure the ELOG DATA LOGGER (domain name, IP address of the ELOG DATA LOGGER's private network or public IP address to exit private network) is authorized to write in the directories of the targeted FTP server(s)
- The DNS server address must be entered in the ELOG DATA LOGGER's Ethernet port settings if you use a domain name as the destination address in the settings for an automatic file export task to an FTP server.
- One or more Device(s) with one or more logging variables must be parametered and operational.

3.16.2 OPERATING MODE

- Go to "Advanced functions > Automatic Task". The list of automatic tasks created is displayed.

Automatic tasks Page						
Task	Active	Last Execution	Type	Status	Actions	
New						
CSV ENERDIS FTP LOCAL	<input checked="" type="checkbox"/>	06/03/2016 00:00:02	FTP local	Planned	<input type="checkbox"/>	<input type="checkbox"/>
ENERDIS CSV VM JPP	<input checked="" type="checkbox"/>	06/03/2016 00:00:02	FTP Distant	Planned	<input type="checkbox"/>	<input type="checkbox"/>
ENERDIS XML VM JPP	<input checked="" type="checkbox"/>	06/03/2016 00:00:02	FTP Distant	Planned	<input type="checkbox"/>	<input type="checkbox"/>
EONLINE XML	<input checked="" type="checkbox"/>	06/03/2016 00:00:13	FTP Distant	Planned	<input type="checkbox"/>	<input type="checkbox"/>
GREENFLEX CSV VM JPP	<input checked="" type="checkbox"/>	06/03/2016 00:00:14	FTP Distant	Planned	<input type="checkbox"/>	<input type="checkbox"/>
XML ENERDIS FTP LOCAL	<input checked="" type="checkbox"/>	06/03/2016 00:00:02	FTP local	Planned	<input type="checkbox"/>	<input type="checkbox"/>

- ① Label of automatic task.
- ② Status of automatic task. Box checked > task planned, box empty > task inactive.
- ③ Date of last execution of the automatic task.
- ④ Type of automatic task.
- ⑤ Status of automatic task (Planned or inactive).
- ⑥ Delete automatic task.
- ⑦ Edit automatic task.

- Click on "New".
- Fill in:
 - A "Label" for the automatic task
 - A frequency for the execution of the automatic task. Every 10, 15, 30 minutes or 1, 2, 3, 4, 6, 8, 10, 12 hours or Daily or Monthly
 - For "Daily" frequency, select:
 - the day: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday, or every day
 - the time: 00h00 to 23h00, in increments of 01h00
 - For "Monthly" frequency, select:
 - the day: from 1 to 31 or last day of month
 - the time: 00h00 to 23h00, in increments of 01h00
 - The file format to be exported is selected in the list of proposed formats. Two formats are available:
 - CSV ENERDIS (see appendix for the file description)
 - XML EONLINE (specific format reserved for E.online software)
 - CSV GREENFLEX (see appendix for the file description)
 - XML ENERDIS (see appendix for the file description)
 - The type of compression of the file to be exported (not mandatory)
 - The type of data to export:
 - Raw data: logs from equipment connected to ELOG DATA LOGGER's RS485 and Ethernet communication ports and Digital inputs
 - Type of FTP server:
 - Remote FTP (FTP Distant): FTP server deployed on a remote machine with respect to the ELOG DATA LOGGER. Make sure you have all the prerequisite items for filling in following fields:
 - Host, Port, Protocol, Id, Password and Directory path to write exported files to
 - If you use a host name instead of an IP address in the "Host" field, you must fill in the "DNS" field with the DATA ELOG LOGGER's Ethernet port settings (go to Configurations > Ethernet port menu)
 - Local FTP: FTP server integrated with the ELOG DATA LOGGER:
 - Path: name of directory to which the exported files will be written. If this is a new directory name, it will be created the first time the task is executed.
 - The login details to use to access this directory from an FTP client are as follows:
 - ✓ Host: ELOG DATA LOGGER's IP address or hostname
 - ✓ Id: anonymous
 - ✓ Password: anonymous
 - ✓ Port: 21
 - Click on "Validate" to proceed to the next step (selecting the variables to process) or "Cancel" to return to the "List of automatic tasks"
- Select the variables to be processed in the export file using the checkboxes. To view variables, at least one Device must have been created and at least one variable of this Device must be active in the logging.
- Click on "Validate" to save the configuration and return to the "list of automatic tasks" page, or on "Cancel" to quit the configuration without saving and return to the list of automatic tasks.

3.17 ADVANCED FUNCTIONS: TASK HISTORY

3.17.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- An automatic task must have been executed.

3.17.2 OPERATING MODE

- Go to "Advanced functions > Task History". The history of automatic tasks executed is displayed.

Execution date	Task	Type	Status	Error	File name
06/03/2016 00:00:14	GREENFLEX CSV VM JPP	FTP Distant	OK		ANT92_160602-000000_160603-000000.csv
06/03/2016 00:00:13	EDLINE.XML	FTP Distant	OK		170446LLH_2016_06_03_00_00_221.xml.gz
06/03/2016 00:00:02	ENERDIS CSV VM JPP	FTP Distant	OK		170446LLH_2016_06_02_00_00_599.csv
06/03/2016 00:00:02	CSV ENERDIS FTP LOCAL	FTP local	OK		170446LLH_2016_06_03_00_00_855.csv
06/03/2016 00:00:02	XML ENERDIS FTP LOCAL	FTP local	OK		170446LLH_2016_06_03_00_00_746.xml
06/03/2016 00:00:02	ENERDIS XML VM JPP	FTP Distant	OK		170446LLH_2016_06_03_00_00_792.xml.gz
06/02/2016 00:00:09	GREENFLEX CSV VM JPP	FTP Distant	OK		ANT92_160601-000000_160602-000000.csv
06/02/2016 00:00:08	EDLINE.XML	FTP Distant	OK		170446LLH_2016_06_02_00_00_803.xml.gz
06/02/2016 00:00:02	CSV ENERDIS FTP LOCAL	FTP local	OK		170446LLH_2016_06_02_00_00_226.csv
06/02/2016 00:00:02	ENERDIS CSV VM JPP	FTP Distant	OK		170446LLH_2016_06_02_00_00_179.csv
06/02/2016 00:00:02	ENERDIS XML VM JPP	FTP Distant	OK		170446LLH_2016_06_02_00_00_295.xml.gz

- ① Date of last execution of the automatic task.
- ② Label of automatic task.
- ③ Type of automatic task.
- ④ Status of the automatic task (OK task executed successfully or NOK task failed).
- ⑤ Reason for execution error on automatic task.
- ⑥ Exported filename.

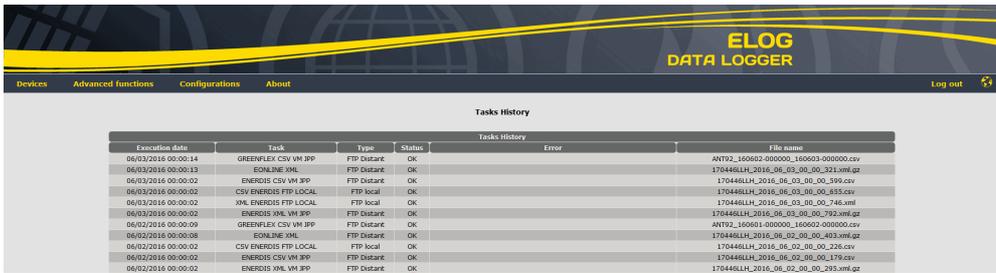
3.18 DOWNLOADING CSV, XML FILES

3.18.1 PRE-REQUISITES

- ELOG is accessible.
- csv, xml files have been exported to a remote FTP server or to the ELOG DATA LOGGER's local FTP server.

3.18.2 OPERATING MODE

- Go to "Advanced functions > Task History", to make sure that the .csv or .xml files have been successfully exported to a remote FTP server or to the ELOG DATA LOGGER's local FTP server.



The screenshot shows the ELOG DATA LOGGER web interface. The top navigation bar includes 'Devices', 'Advanced functions', 'Configurations', and 'About'. The 'Advanced functions' menu is selected, and the 'Task History' page is displayed. The table below shows a list of tasks with columns for Execution date, Task, Type, Status, Error, and File name. A red circle with the number 1 is drawn around the 'Status' column header.

Tasks History					
Execution date	Task	Type	Status	Error	File name
06/03/2016 00:00:14	GREENFLEX CSV VM 3PP	FTP Distant	OK		ANT92_160602-000000_160603-000000.csv
06/03/2016 00:00:13	ESKINE XML	FTP Distant	OK		170446LH_2016_06_03_00_00_30.xml.gz
06/03/2016 00:00:02	ENERGIS CSV VM 3PP	FTP Distant	OK		170446LH_2016_06_03_00_00_599.csv
06/03/2016 00:00:02	CSV ENERGIS FTP LOCAL	FTP local	OK		170446LH_2016_06_03_00_00_633.csv
06/03/2016 00:00:02	XML ENERGIS FTP LOCAL	FTP local	OK		170446LH_2016_06_03_00_00_746.xml
06/03/2016 00:00:02	ENERGIS XML VM 3PP	FTP Distant	OK		170446LH_2016_06_03_00_00_792.xml.gz
06/02/2016 00:00:09	GREENFLEX CSV VM 3PP	FTP Distant	OK		ANT92_160601-000000_160602-000000.csv
06/02/2016 00:00:08	ESKINE XML	FTP Distant	OK		170446LH_2016_06_02_00_00_883.xml.gz
06/02/2016 00:00:02	CSV ENERGIS FTP LOCAL	FTP local	OK		170446LH_2016_06_02_00_00_226.csv
06/02/2016 00:00:02	ENERGIS CSV VM 3PP	FTP Distant	OK		170446LH_2016_06_02_00_00_179.csv
06/02/2016 00:00:02	ENERGIS XML VM 3PP	FTP Distant	OK		170446LH_2016_06_02_00_00_293.xml.gz

- ① Status "ok": the task was completed successfully.
- To download the files posted on an FTP server, you can use:
 - An FTP client (e.g.: FileZilla)
 - A web browser where you specify in the URL field a command such as "ftp://14.6.200.240/". The IP address is that of the remote FTP server or of the ELOG DATA LOGGER to access the local FTP server.
 - For the ELOG DATA LOGGER's local FTP server, the identifiers to be used are:
 - Login: anonymous
 - Password: anonymous

3.19 ELOG DATA LOGGER FIRMWARE UPDATE

3.19.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.
- You know the location of the firmware version to import.

3.19.2 OPERATING MODE

- Click on "About".
- Click on "Choose a file" in the "Firmware Update" window, and select the file to import (xxxx.tar.gz type file) in the tree structure of your computer, then click on "Update". A message confirms that the programme update has been successfully completed.

3.20 REBOOTING THE ELOG DATA LOGGER

3.20.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.

3.20.2 OPERATING MODE

- Click on "About".
- Click on "Reboot" in the "Elog reboot" window to reboot the ELOG DATA LOGGER remotely.

3.21 SYSTEM DATA INFORMATION

3.21.1 PREREQUISITES

- ELOG DATA LOGGER is accessible and you are logged into the embedded web pages.

3.21.2 OPERATING MODE

- Click on "About".
- The window displayed provides information on the "Release" version and "Build number" of your ELOG DATA LOGGER.



4. LEGAL NOTICE

- Modbus library
- MIT license for JSON & mongoose
- ATMEL license for the bootstrap
- GPL license for the drivers and management in linux of a 16GB disk

Modbus library:

```
/*
 * mbus.c - general purpose libmbus functions
 *
 * Copyright (c) 2003, Victor Antonovich (avmlink@vlink.ru)
 *
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 * SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.
 *
 * $Id: mbus.c,v 1.1 2009-05-07 12:33:33 xavier Exp $
 */
```

MIT license for JSON & mongoose

json-c under MIT license (see below)

- * Copyright (c) 2004, 2005 Metaparadigm Pte. Ltd.
- * Michael Clark <michael@metaparadigm.com>

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bootstrap for AT91SAM9260.

```
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* -----  
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u-boot version 2010.06 . **GPLv2** license ([see below](#))

```
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# Ask for file CREDITS for list of people who contributed to this  
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#  
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# Foundation, Inc., 59 Temple Place, Suite 330, Boston,  
# MA 02111-1307 USA  
#
```

linux kernel 2.6.30 GPLv2license

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Addition of elog board. Based on ATMEL evaluation kit board. Uses drivers from AT91SAM9260 supplied by ATMEL

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- * Copyright (C) 2006 Atmel

Addition of a driver for the RTC ds1343

Derived from a driver coded by David Brownell

Addition of a driver for PHY Ethernet DP83848

strongly inspired by a driver coded by Stuart Menefy <stuart.menefy@st.com>
maintained by Giuseppe Cavallaro <peppe.cavallaro@st.com>
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Addition of a LED driver Heartbeat Trigger with modified timings

- * Copyright (C) 2006 Atsushi Nemoto <anemo@mba.ocn.ne.jp>
- *
- * Based on Richard Purdie's ledtrig-timer.c and some arch's
- * CONFIG_HEARTBEAT code.

Modification of Buildroot

- * Modification to benefit from 16Mb of RAMdisk rather than 8

To Get Source Code, contact Enerdis

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ENERDIS

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5. APPENDICES

5.1 CSV ENERDIS – FILE FORMAT DESCRIPTION

5.1.1 PRE-REQUISITES

One or more Device(s) with one or more logging variables must be parametered and operational.

- Menu "*Advanced functions > Automatic Task > new/modify > Field: File format > CSV ENERDIS*"
- The naming of the generated file is of the type:
 - "serial number of the ELOG_date and time of edition of .csv file"
 - e.g.: 170446LLH_2016_05_02_00_20_537.csv
 170446LLH : serial number of ELOG
 2016_05_02_00_20_537 : date and time (yyyy_mm_dd_hh_min) of edition of file (here May 2, 2016 at 00h20) and an incremental identifier (537)
- The types of separator used are:
 - Column separator: semi-colon
 - Decimal separator: comma
- Data in the file is as follows:
 - **Line 1: Elog serial number; file name;**
 - **Line 2: First column empty; "Device label"** for each of the following columns;
 - menu "*Devices > new/modify > Field: Label*"
 - **Line 3: First column empty; "External Device ID"** for each of the following columns;
 - (unique Device ID key – not mandatory) menu "*Devices > new/modify > Field: External Device ID*"
 - **Line 4: First column empty; "Variable label"** for each of the following columns;
 - menu "*Configuration > Drivers > new/modify variable*"
 - **Line 5: First column empty; "External Variable ID"** for each of the following columns;
 - (unique Variable ID key – not mandatory) menu "*Configuration > Drivers > new/modify variable > Field: External Variable ID*"
 - **Line 6: "Date"; "unit"** of variables for each of the following columns;
 - menu "*Configuration > Drivers > new/modify variable > Field: Unit*"
 - **Line 7: "Timestamping of record"; "value"** for each of the following columns;
 - form dd/mm/yyyy hh:min:sec form dd/mm/yyyy hh:min:sec
 - value of the record
 - **Following lines:** identical to line 7 ...

5.1.2 EXAMPLE: FILE "170446LLH_2016_05_02_00_20_537.CSV"

170446LLH	170446LLH_2016_05_02_00_20_537.csv				
	Atelier 1	Atelier 1	Atelier 1	Atelier 2	Atelier 3
	9216001	9216001	9216001	9216002	9216003
	Energie Active Total	Energie Reactive Total	Temperature	Energie Active Total	Energie Active Total
	125636	125637	125638	125639	125640
Date	kWh	kvarh	degre	kWh	kWh
02/05/2016 00:10:00	25,32	13,79	24,72	30,36	36,35
02/05/2016 00:11:00	26,32	14,79	25,54	32,25	39,26
02/05/2016 00:12:00	27,32	15,79	23,69	34,14	42,17
02/05/2016 00:13:00	28,32	16,79	25,32	36,03	45,08
02/05/2016 00:14:00	29,32	17,79	21,24	37,92	47,99
02/05/2016 00:15:00	30,32	18,79	24,36	39,81	50,9
02/05/2016 00:16:00	31,32	19,79	23,25	41,7	53,81

5.2 CSV GREENFLEX – FILE FORMAT DESCRIPTION

5.2.1 PRE-REQUISITES

One or more Device(s) with one or more logging variables must be parametered and operational

- menu "*Advanced functions > Automatic Task > new/modify > Field: File format > CSV GREENFLEX*"
- The naming of the generated file is of the type:
 - "Code_Start date of file data_End date of data in .csv file"
 - e.g.: 5GN_160430-120000_160501-120000.csv
 - 5GN: ID code (e.g.: site code)
 - menu "*Advanced functions > Automatic Task > new/modify > Field File format: CSV GREENFLEX > Field: Site code*"
 - 160430-120000 : April 30 2016-12h00min00sec
- The types of separator used are:
 - Column separator: comma
 - Decimal separator: point
- Data in the file is as follows:
 - Data present in the file are presented in the following order:
Data1,Data2,Data3,...Data14
Data1: Date and time of recording
Data2: ID code_external Device ID
Data3: value1
Data4: value2
...
Data 14: value12
 - **Data1:** Date and time of recording (DD/MM/YYYY HH:MM:SS) from ELOG database
 - **Data2:**
 - ID Code (menu "*Advanced functions > Automatic Task > new/modify > Field File format: CSV GREENFLEX > Field: Site code*")
 - external Device ID (menu "*Devices > new/modify > Field: External Device ID*")
 - **Data3:** value1
 - position in value 1 is defined in the menu "*Advanced functions > Automatic Task > new/modify > Field File format: CSV GREENFLEX > Page: Variable configuration > select a position from 1 to 12 for the variables to be processed from a device - the figure 1 corresponds to the position of the value 1 in Data3*"
 - **Data4:** value2
 - position in value 2 is defined in the menu "*Advanced functions > Automatic Task > new/modify > Field File format: CSV GREENFLEX > Page: Variable configuration > select a position from 1 to 12 for the variables to be processed from a device - the figure 2 corresponds to the position of the value 2 in Data4*"
 - ...
 - **Data14:** value12
 - position in value 12 is defined in the menu "*Advanced functions > Automatic Task > new/modify > Field File format: CSV GREENFLEX > Page: Variable configuration > select a position from 1 to 12 for the variables to be processed from a device - the figure 12 corresponds to the position of the value 12 in Data14*"

5.2.2 EXAMPLE OF A LINE IN THE FILE FOR 1 DEVICE:

08/05/2016 14:50:00,5DJ_1,3.25,6.58,,,,,5.69,,,,,25.0,12.58

Data1: 08/05/2015 14 hours 50 minutes and 00 seconds

Data2: ID code > 5DJ and external Device ID > 1

Data3: value1 > 3.25

Data4: value2 > 6.58

Data5: value3 > no variable selected for this position

Data6: value4 > no variable selected for this position

Data7: value5 > no variable selected for this position

Data8: value6 > no variable selected for this position

Data9: value7 > 5.69

Data10: value3 > no variable selected for this position

Data11: value3 > no variable selected for this position

Data12: value3 > no variable selected for this position

Data13: value3 > 25.0)

Data14: value1 > 12.58

5.3 XML ENERDIS 1.0 – FILE FORMAT DESCRIPTION

5.3.1 PRE-REQUISITES

One or more Device(s) with one or more logging variables must be parametered and operational.

- Menu "*Advanced functions > Automatic Task > new/modify > Field: File format > XML ENERDIS 1.0*"
- The naming of the generated file is of the type:
 - "serial number of the ELOG_date and time of edition of .csv file"
 - e.g.: 170446LLH_2016_05_02_00_20_527.xml
 - 170446LLH : serial number of ELOG
 - 2016_05_02_00_20_527 : date and time (yyyy_mm_dd_hh_min) of edition of file (here May 2, 2016 at 00h20) and an incremental identifier (527)
- The tree of elements has the following tags:
 - **<devices>** : an ELOG device
 - **< device key = >** : "serial number of an ELOG I Device ID key"
 - The ID key is generated automatically when a device is created (menu "*Devices > new/modify*")
 - **< name = >** : name of Device defined in ELOG
 - menu "*Devices > new/modify > Field: Label*"
 - **< location1 = >** : geotagging 1 of Device
 - menu "*Devices > new/modify > Field: Location1*"
 - **< location2 = >** : geotagging 2 of Device
 - menu "*Devices > new/modify > Field: Location2*"
 - **< use = >** : energy use of device
 - menu "*Devices > new/modify > Field: Use*"
 - **< fluid = >** : energy fluid of device
 - menu "*Devices > new/modify > Field: Fluid*"
 - **< type_of_load = >** : type of load on device
 - menu "*Devices > new/modify > Field: type of load*"
 - **< idpdm = >** : unique ID key for device, defined by the user
 - menu "*Devices > new/modify > Field: External Device ID*"
 - **<variables>** : Variable
 - **< variable key = >** : "Generic Driver I ELOG serial number I type of variable"
 - Type of variable = "1" for a simple variable
 - Type of variable = "2" for a composite variable
 - **< name = >** : name of the variable
 - menu "*Configuration > Drivers > new/modify variable > > Field: Label*"
 - **< idvar = >** : unique ID key for variable, defined by the user
 - menu "*Configuration > Drivers > new/modify variable > Field: External Variable ID*"
 - **< type = >** : type of variable
 - Type of variable = "4" for an index type variable
 - Type of variable = "5" for an analogue type variable
 - Type of variable = "6" for a consumption type variable
 - **< unit = >** : unit of the logged variable
 - menu "*Configuration > Drivers > new/modify variable > Field: Unit*"

- < **coeff** = > : multiplying factor to apply to the logged variable
 - menu "*Configuration > Drivers > new/modify variable > Field: Gain*"
- < **offset** = > : offset applied to the logged variable
 - menu "*Configuration > Drivers > new/modify variable > Field: Offset*"
- < **time_recording** = > : logging frequency
 - menu "*Configuration > Devices > new/modify > Section: Device settings > Field: Index logging frequency (minutes) or Analogue value logging frequency (seconds)*" (the field "Enable logging of indexes" or "Enable logging of analogue values" must be set to the value "Enabled")
- < **dataLogging** = > : logging frequency unit
 - Value = "0" frequency in seconds
 - Value = "1" frequency in minutes
 - Value = "2" frequency in hours
 - Value = "3" frequency in days
 - Value = "4" frequency in months
 - Value = "5" frequency in years
- < **values** = > : time-stamps and values of logs
- < **value date** = > : logging time-stamps
- 1234... < **/value**> : value (1234...) of the record

5.3.2 EXAMPLE:

XML ENERDIS

```
<?xml version="1.0" encoding="UTF-8"?>
<devices>
<device key="144101NH|4684d22" name="pdm1" location1="Loc1" location2="Loc2" use="Usage1" fluid="Fluide1" type_of_load="Charge1" idpdm="idpdm1">
  <variables>
    <variable key="Driver Generique|50e1821b|1" name="Courant 1" type="5" unit="A" coeff="1.0000" offset="0.0000" time_recording="60" dataLogging="1" idvar="undefined">
      <values>
        <value date="20/05/2016 23:30:00">49.4622</value>
        <value date="20/05/2016 23:31:00">48.7646</value>
        <value date="20/05/2016 23:32:00">48.5927</value>
        <value date="20/05/2016 23:33:00">49.0950</value>
        <value date="20/05/2016 23:34:00">47.9412</value>
        <value date="20/05/2016 23:35:00">48.3730</value>
        <value date="20/05/2016 23:36:00">48.2192</value>
        <value date="20/05/2016 23:37:00">48.8736</value>
        <value date="20/05/2016 23:38:00">48.7488</value>
        <value date="20/05/2016 23:39:00">48.1560</value>
      </values>
    </variable>
    <variable key="Driver Generique|fb1484ea|1" name="Courant 2" type="5" unit="A" coeff="1.0000" offset="0.0000" time_recording="60" dataLogging="1" idvar="undefined">
      <values>
        <value date="20/05/2016 23:30:00">49.4693</value>
        <value date="20/05/2016 23:31:00">48.7708</value>
        <value date="20/05/2016 23:32:00">48.5974</value>
        <value date="20/05/2016 23:33:00">49.1234</value>
        <value date="20/05/2016 23:34:00">47.9602</value>
        <value date="20/05/2016 23:35:00">48.4000</value>
        <value date="20/05/2016 23:36:00">48.2493</value>
        <value date="20/05/2016 23:37:00">48.8856</value>
        <value date="20/05/2016 23:38:00">47.8242</value>
        <value date="20/05/2016 23:39:00">48.1763</value>
      </values>
    </variable>
  </variables>
</device>
</devices>
```

6. CHARACTERISTICS

AUXILIARY POWER SUPPLY

AC network:	80 to 265 Vac - 10 VA - 42.5 to 69 Hz
DC network:	80 to 375 Vdc - 7W

STATUS LED

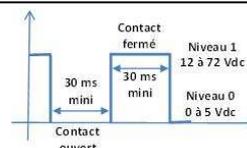
Connection to power supply:	Green light on (equipment connected to power supply and processor activity)
Communication:	Continuous green light for 10 seconds, then 2 quick flashes
Error:	Flashes green every 500 ms if communications in progress.

COMMUNICATIONS INTERFACES

RS485 A and RS485 B:	Type: RS485 Protocol: Modbus in RTU mode Operating mode: master mode - half duplex Speed: 300 to 115,200 bauds Parity: no, even or odd Jbus address: 1 to 255 Stop bit: 1 or 2 Standard reference: EIA485
Ethernet:	Type: RJ45 - 8 points Operating mode: HTTP in slave mode - Modbus/TCP, Modbus over TCP/IP in master mode Protocol: http, smtp, JSON/REST, tftp, ntp, ssh Speed: 10-100 baseT Indication: 2 leds (activity on the line and type of network 10 or 100 BaseT) Maximum length: 100 m max

INPUTS

Number of inputs:	5
Operating mode	Meter pulse input
Operating mode	Logic level 1: from 12 to 72 Vdc Logic level 0: from 0 to 5 Vdc Pulse duration: 30 ms min at level 1 then 30 ms min at level 0 Frequency: 0 to 16.67 Hz
Power absorbed:	<500 mW
Type of protection:	Optocoupler
Connection:	No polarity
Channel isolation:	500 Vac for 1 minute.



MEMORY – LOGGING

Logging frequency:	For index type variables: every 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30 and 60 minutes For analog type variables: every 5, 6, 10, 12, 15, 20, 30, 60, 120, 180, 240, 300, 360, 600, 720, 900, 1,200, 1,800 or 3,600 seconds
History depth:	3 months (month in progress, m-1, m-2) of data for frequencies of over 1 minute 3 days (day in progress, d-1, d-2) of data for frequencies under 1 minute Saving mode: FIFO (First In First Out)
Read / write number:	10,000 cycles maximum
Power reserve:	2.5 sec (under 230 Vac)

FTP EXPORT

File format:	cvs, xml
Send frequency:	Every 10, 15 and 30 minutes / 1, 2, 3, 4, 6, 8, 12 h / daily, weekly, monthly
Number of automatic tasks:	Type: PUSH FTP - max = 15 – independent – FTP multiservers
Local FTP server	Capacity = 500 MB max – FIFO memory (for local file backup)
Max number of variables:	Up to 100 variables

CLOCK

Type:	RTC with external quartz
Precision:	±20ppm (±20 sec every 11.5 days)
Synchronization with NTP:	yes
Saving	30 days max without an auxiliary power source

PROCESSOR

Type:	ARM9
Frequency:	180 MHz

FUNCTIONAL LIMITS

Max number of configurable drivers:	100
Max number of simple variables per driver:	30
Max number of composite variables per driver:	10
Max number of devices:	100
Max number of variables with logs:	Up to 100 variables ²

MECHANICAL CHARACTERISTICS

Size:	120.5 x 120 x 81 mm (DxLxH)
Weight:	560 gr
Number of terminals:	10
Connection:	screw terminal
Cable diameter:	6 mm ² single-strand - 4 mm ² multi-strand
Torque:	0.4 Nm maximum permitted torque on the terminal

² Depending on the architecture and the performance of the communication network.

ENVIRONMENTAL CONSTRAINTS

Climatic constraints:	Nominal operating temperature +10 to 45°C Storage temperature -25 to 70°C Humidity in compliance with IEC 62052-11 (standard applied to electricity metering applications) - <75%., annual average - 95%, over 30 days naturally spread out over the course of the year - 85%, occasionally other days Compliant with IEC 66068-2-1 for cold testing Compliant with IEC 66068-2-2 for dry heat testing Compliant with IEC 66068-2-30 for damp heat cyclic testing
Safety constraints:	Compliant with IEC 61010-1 Installation category: III Level of pollution: 2 Fire resistance: Conforms to UL94 for safety level V1
Mechanical constraints:	Protection level conforming to IEC 60529 for the following safety level: - IP 51 (on the front panel) - IP 20 (on the rear panel) Mechanical shock, compliant with IEC 66068-2-27 Vibrations according to 60068-2-6 Spring impact hammer resistance according to IEC 60068-2-75 Freefall in packaging from a height of 1m, in accordance with NF H 0042-1
Electromagnetic constraints:	Compliance with IEC 62052-11 (standard applied to electricity metering applications) Compliance with IEC 61000-4-2 with regards to electrostatic discharge Compliance with IEC 61000-4-3 with regards to electromagnetic fields Compliance with IEC 61000-4-4 with regards to bursts Compliance with IEC 61000-4-5 with regards to shockwaves Compliance with IEC 61000-4-6 with regards to disturbances caused by radioelectric fields Compliance with IEC 61000-4-8 with regards to magnetic fields at network frequency Compliance with IEC 61000-4-11 with regards to voltage dips, short interruptions and voltage fluctuations Compliance with CISPR22 with regards to conducted and radiated radioelectric interference

7. GLOSSARY

Analog measurement logs: *all data recorded chronologically for an analog-type variable.*

Analog type variable: *variable which represents the result of an instantaneous or average value (e.g.: temperature, pressure, voltage, current, power, etc.).*

Composite variable: *variable resulting from an operation (+, -, :, x) between two simple variables to obtain a useable final result which is representative of the measurement.*

csv file format: *open text file format containing tabular data in the form of comma-separated values.*

Delay between 2 requests: *minimum time between 2 consecutive requests on the RS485 bus.*

Device: *refers to the object (technical or functional) or location (physical or digital) of one or more measured or calculated variables. It is always associated with a driver or pulse input (e.g.: consumption of building 6, outside temperature, furnace power supply, etc.).*

Digital input: *digital input operating in counting mode for the connection and use of the pulse outputs of multi-fluid meters (electricity, water, gas, etc.) or number loggers (units produced, number of people, etc.).*

Driver: *set of variable(s) to use in a device connected to the RS485 or Ethernet network (meters, power monitor, hub, sensor, PLC, etc.)*

FIFO: *operating mode of ELOG memory (First In First Out).*

FTP server: *an FTP (File Transfer Protocol) server allows you transfer files via the Internet or via a LAN.*

Index logging: *all data recorded chronologically for an index-type variable.*

Index type variable: *variable which represents the result of an cumulated value over time (e.g.: meter index, units produced, etc.).*

Logging engine: *ELOG DATA LOGGER feature in charge of querying the equipment connected to the RS485A, RS485B, Ethernet and digital input communications networks, and periodic logging of data.*

Logging frequency: *frequency at which data from equipment connected to RS485 A and RS485 B ports, the Ethernet port and pulse inputs is chronologically recorded.*

Modbus over TCP/IP: *non-proprietary communications protocol used for the exchange of information and data on an Ethernet communications network. Encapsulation of RS485 wired network ModBus frames in Ethernet frames.*

Modbus RTU: *non-proprietary communications protocol used for the exchange of information and data on a wired RS485 communications network. Frames are RTU (Remote Terminal Unit) type, with 8-bit data.*

Modbus slave address: *address of equipment fitted with a Modbus RS485 digital output.*

Modbus/TCP: *non-proprietary communications protocol used for the exchange of information and data on an Ethernet communications network.*

Simple variable: *measurement read in a Modbus map embedded in a meter, power monitor, sensor, automaton, etc., equipped with a Modbus communications output. This variable can be an energy index value, temperature, pressure, number, etc. It is generally binary-coded on bytes (8 bits), words (16 bits), long words (32 bits), etc.*

Slave address: *address associated with the IP address of equipment fitted with a ModbusTCP Ethernet output.*

Timeout: *Maximum time waiting for a response after sending a request through ELOG DATA LOGGER (3 attempts are made).*

xml file format : *structured file format with formatted data that facilitates the automated exchange of complex content with heterogeneous information and analytics systems.*

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9. WARRANTY, RESPONSIBILITY AND INTELLECTUAL PROPERTY

9.1 WARRANTY

Unless expressly stipulated, the warranty runs for twelve months after the date of supply of the monitor (extract from our General Conditions of Sale, available on request).

9.2 INTELLECTUAL PROPERTY RIGHTS

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ELOG DATA LOGGER is a trademark registered by ENERDIS.

9.5 EQUIPMENT END-OF-LIFE

The products which we sell do not fall within the scope of Decree No. 2005-829 relating to the construction of electrical and electronic equipment and the disposal of waste arising from this equipment.

In accordance with Article L541-2 of the Environmental Code, it is the responsibility of the holder of the waste to dispose of it, or to make sure it is disposed of, appropriately.



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