



FM332Log – User Guide

Datalogger for electricity meters

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Product references:
FM332Log



Firmware versions

FM210em_V5.2

BPR07_V4.0.1

Revision history

Version	Notes	Date
1.0.1	Document creation	2021-12-15
1.0.2	Minor correction regarding how to navigate day by day	2022-01-13

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1. App installation

An App for PC is needed to configure the FM332Log and transfer the recorded data.

This App is called FM332Log_App and can be downloaded at the following locations:

Version for Windows:

<https://nextcloud.fludia.com/index.php/s/iRQt58TR6AdwiwE>

Version for MacOS:

<https://nextcloud.fludia.com/index.php/s/4mstbF2WqZrzNi8>

Version for Linux Debian

<https://nextcloud.fludia.com/index.php/s/W5Q34e8DGp8nA8p>

To install, first download the installer file FM332Log-setup.exe by clicking on the “Télécharger” button.

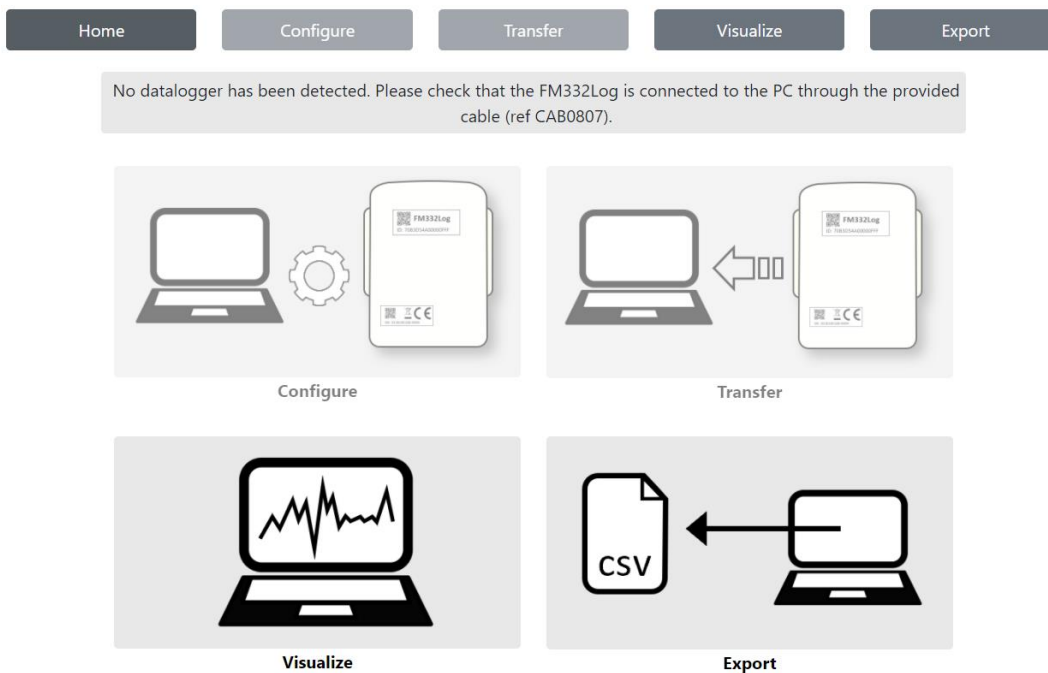


FM332Log-setup.exe (114.5 MB)

↓ Télécharger

Then run this installer file.

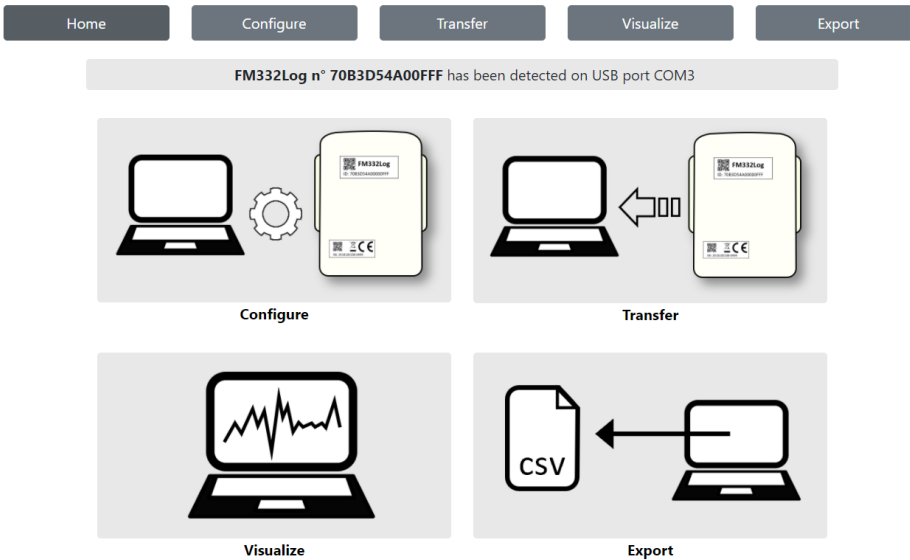
Once the software is installed, you can run it and see the following first page:



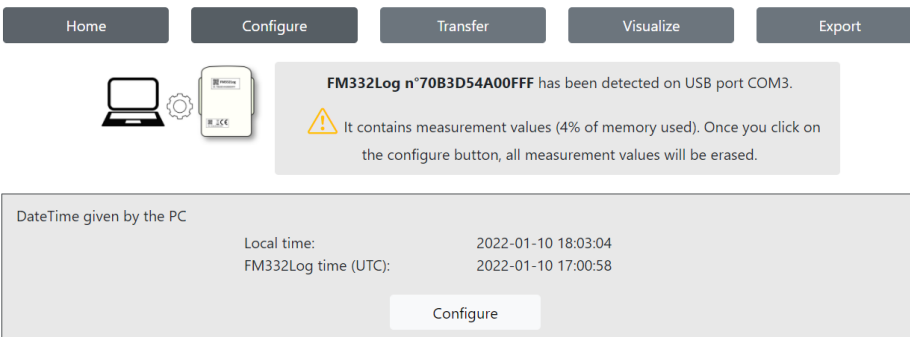
2. FM332Log configuration

Connect the FM332Log to the PC through the special black cable. In case the batteries have been removed, please think of inserting batteries in the FM332Log before configuring.

The display changes and indicates that the device has been detected:

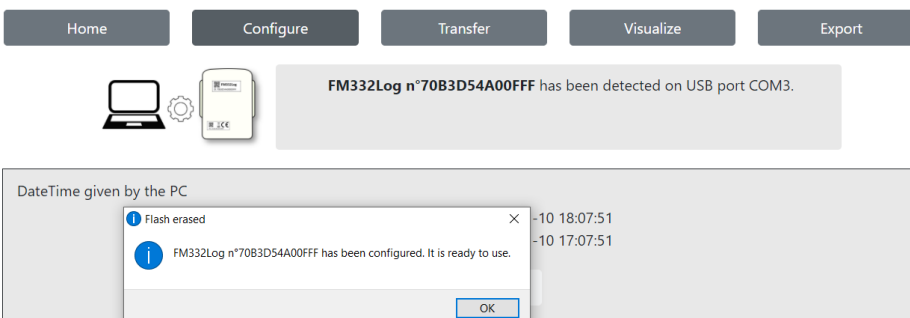


Click on “Configure” (either on the menu or the picto).The following display appears:



In case there is still data in the FM332Log that have not been previously saved and you don't want to lose, you should not click on “configure” but select the “Transfer” menu instead.

In case you have already saved this data (or if there is no data), you should proceed by clicking on the “configure” button. Once the configuration is completed, the following message appears:



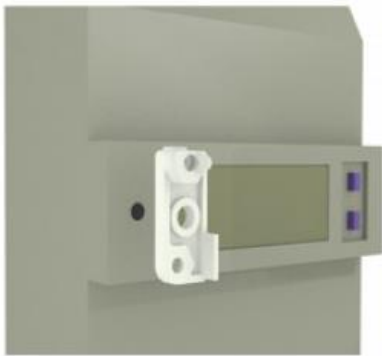
The FM332Log is now configured. You can disconnect it from the PC and use it.

3. Installation on a meter

3.1 Optical head positioning

First identify the type of meter you want to measure. It could be either an electronic electricity meter (with a blinking light) or an electromechanical electricity meter (with a rotating disk).

If it is an **electronic meter**, you must position the optical head **switch on B**, and if it is an **electromechanical meter**, you must position the **switch on A**:



If it is an **electronic meter**, stick the adhesive plastic mount on the meter in front of the meter blinking light (aim through the hole)

Then, position the optical head on top of the plastic mount and tight the black screw.



If it is an electromechanical meter, make sure the optical head is properly attached to the adhesive plastic mount with the help of the black screw:



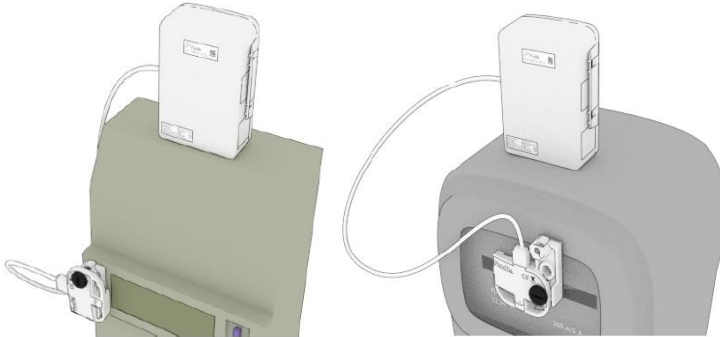
Stick the system on the meter glass panel, making sure the two arrows are perfectly aligned with the meter disk (face the meter and keep your eyes at disc level for better result):

If the arrows are not completely lined up with the disc, loosen the screw, adjust position and tight the screw



3.2 System startup

Connect the white cable between the optical head and the FM332Log.



The FM332Log starts recording automatically.

The optical head LEDs (lights) are blinking this way:

1. Calibration: red LED blinks during 20 seconds.
2. Validation: green LED blinks every time the meter light blinks (electronic meter) or every time the disk mark (black or red) comes in front of the sensor (electromechanical meter).
3. After five minutes, the green light stops completely in order to save battery.

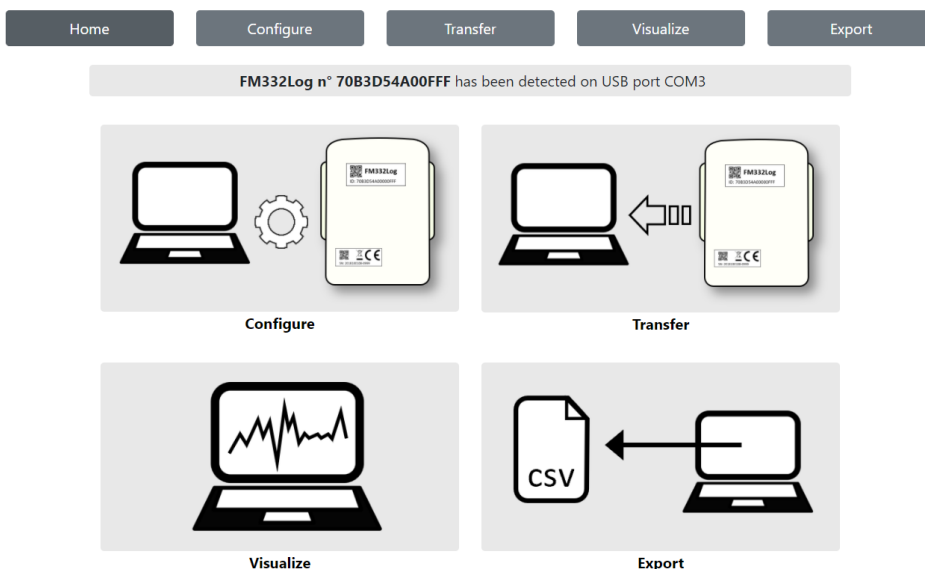
The FM332Log green LED (light) is blinking slowly to confirm it is active.

4. Data transfer and export

4.1 Data transfer to the PC

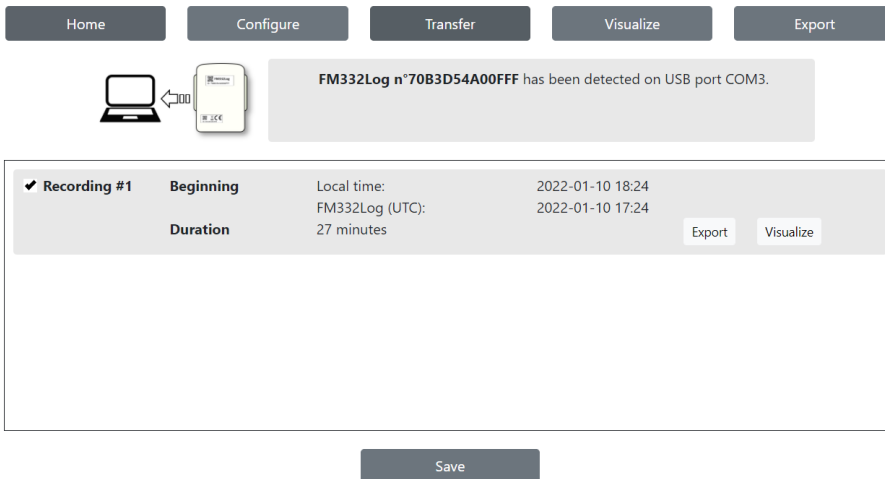
For transferring data from the FM332Log, connect it to the PC with the special black cable.

Run the App (FM332Log_App) and choose "Transfer" (menu or logo).

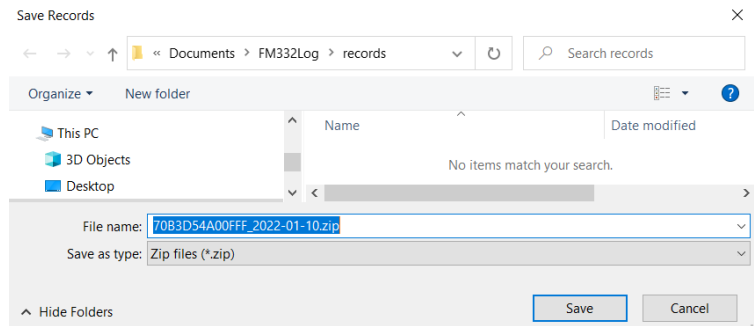


The display changes and shows the recording(s) that are contained in the FM332Log.

There can be several recordings if the optical head has been disconnected from the FM332Log and reconnected.



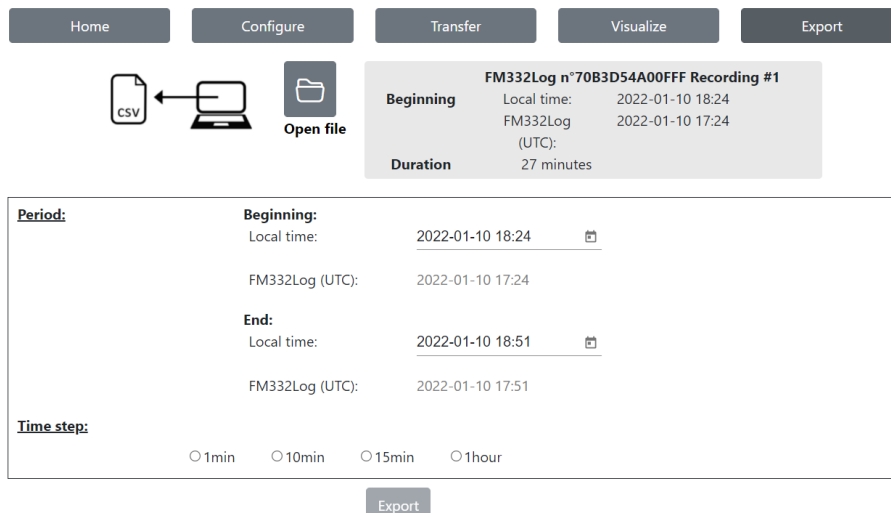
Clicking on the “save” button makes a Windows window appear, allowing to save the zipped file in the desired location:



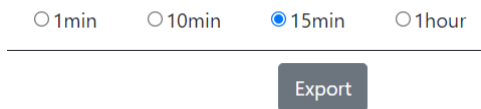
This file is in a special format that can only be read by this App. For obtaining a readable file, refer to the next chapter.

4.2 Export in a csv file

Use the “Export” menu (or the “Export” button on the “Transfer” page) to export a recording to a csv file, for easy manipulation by any software (for example Excel):

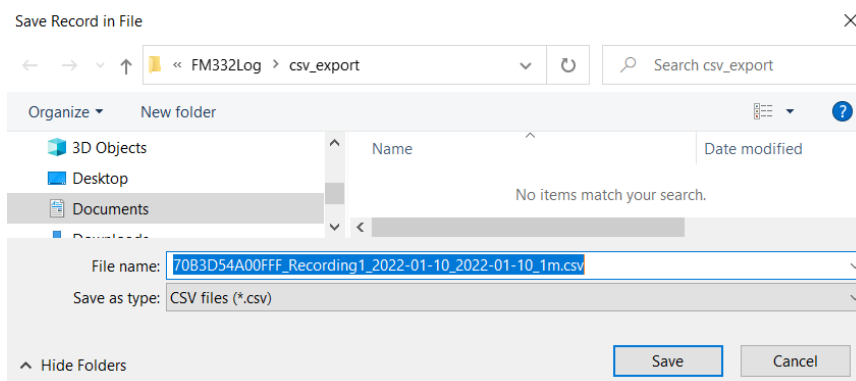


In case export has to be performed from a previous recording stored on the PC, use the “open file” button.
The desired time step must be selected before clicking on the “Export” button:



The recording is always saved with the 1-minute time step, but you can choose to export with a different time step.

Clicking on the “export” button makes a Windows window appear, allowing to save the csv file in the desired location:



The data format in the csv file is illustrated by this example:

```
TS;DateTime;P
1641835444;2022-01-10 18:24:04;13143
1641835504;2022-01-10 18:25:04;4736
1641835564;2022-01-10 18:26:04;9346
1641835624;2022-01-10 18:27:04;6532
1641835684;2022-01-10 18:28:04;3922
```

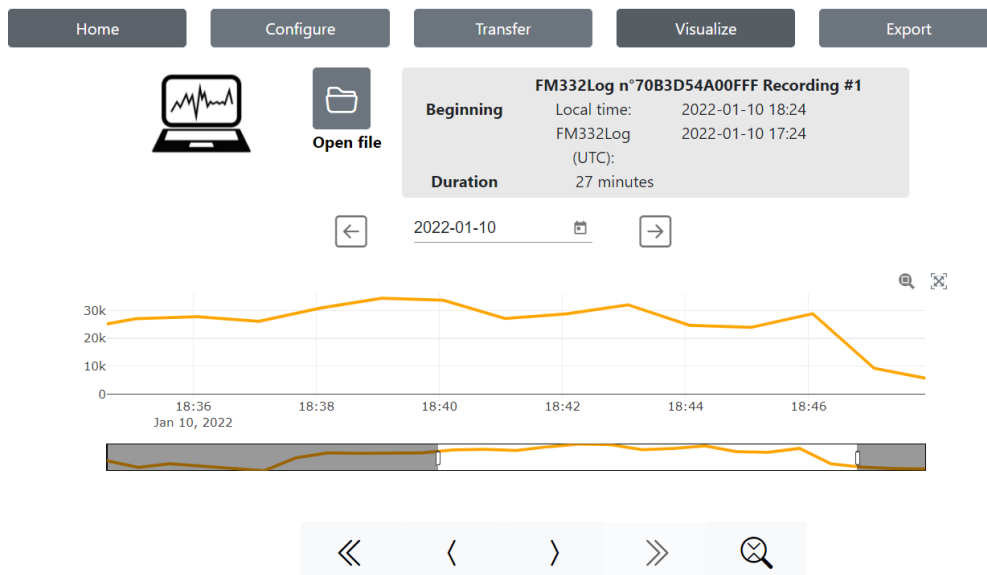
- TS is the timestamp
- Datetime is the local time (of the computer)
- P is the power in Watt. This is really in Watt with the assumption that the weight of each light flash (electronic meter) or disk rotation (electromechanical meter).is 1 Wh (Watt-hour).

In reality, a multiplying factor must sometimes be applied:

- o Due to the value of Current Transformers if there are any
- o Due to the meter constant in the case of electromechanical meters. This constant is usually written on the front of the meter and is expressed in U/kWh or r/kWh (number of disk revolutions per kilo Watt hour) or Wh/tr (number of Wh par disk revolution).

5. Visualization

Use the “Visualize” menu (or the “Visualize” button on the “Transfer” page) to visualize a graph of the recorded load curve.



The complete recording is displayed on the bottom graph and zoom in can be performed either by selecting an area in the top graph with the mouse or by moving the handles in the bottom graph. The buttons below the graph are useful to navigate left and right.

A neat way to explore the recording day by day is to select a specific day with the calendar and then navigate with the “←” and “→” buttons positioned on each side of the date.

6. Contact

For further information or advice please contact us:

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