ESCP-BMS1 Evaluation Software Manual

Title	ESCP-MIS1 Evaluation Software Manual
Doc Ref	ESS-242/091219/EXC-REV.04

www.esenssys.com 62, I. Metaxa str. / 19441 Koropi - Athens, Greece / T +30 216 2000500 / F +30 216 2000555 / info@esenssys.com

DOCUMENT TRACKING TABLE

Version	Date	Reason or change	Author
1	12/9/2019	Initial version	N.Valantassis
2	15/11/2022	Cosmetic & installation instructions corrected	C.Papazachariou
4	16/3/2023	Timestamp feature documented. Table of Contents and figures added.	C.Papazachariou

Contents

Table of Figures

1. Data Readout GUI

1.1 Software Installation

To install the Pressure Sensor Evaluation Software:

- Run setup.exe (as administrator if possible) and follow the installation wizard.
- Once the installation is complete run ESCP-MIS1_Evaluation_Software.exe

1.2 Application Description

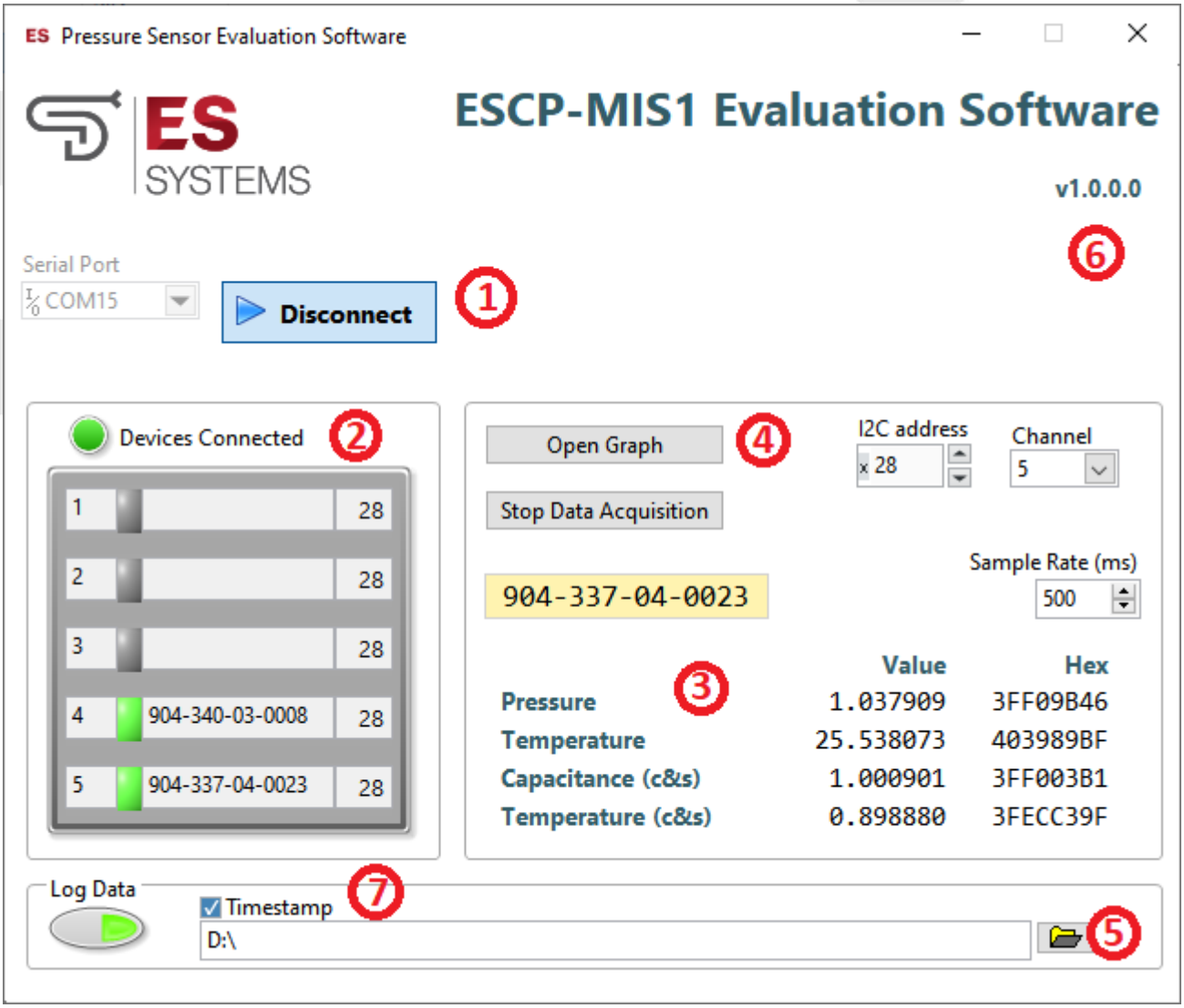

Figure 1: UI description

ES
SYSTEMS
Sensors • IoT

www.esenssys.com 62, I. Metaxa str. / 19441 Koropi - Athens, Greece / **T** +30 216 2000500 / **F** +30 216 2000555 / **info**@esenssys.com

#	Description
1	Connection row
2	Device scan
3	Data display
4	Open data graph window
5	Log file configuration
6	Evaluation Software version
7	Log Timestamp

1. Connection Row

Use the *Serial Port* dropdown box to select the COM port that corresponds to the Evaluation Kit and press the *Connect* button, which upon successful connection will change color and its text will now display *Disconnect*. Pressing *Disconnect* will stop communication with the Evaluation Kit. After connection with the kit is established, the software will automatically scan for connected devices (see Device Scan below). This can take a few seconds.

2. Device Scan

The software scans for connected devices and displays the results in a table. The table columns indicate the channel number, an LED that goes green when a device is connected to the channel, the device's serial number and the device's I2C slave address (in hex). Device scan is performed automatically after successfully establishing a connection with the Evaluation Kit or can be manually started by pressing the *Scan Devices* button. The scan progress is indicated by a progress bar below the button. If a device is found on any channel the *Devices Connected* LED lights green.

3. Data display

The received data values are displayed in this table, both the floating-point value for each measured quantity and the raw 16-bit hexadecimal value. The user can choose which device's data is displayed by selecting the appropriate channel. The user can also choose the sample rate of the data. The minimum sample rate is 1ms. The same sample rate applies to the graphs and the *Log File*. The user can pause data acquisition at any time by pressing the *Stop Data Acquisition* button.

4. Open data graph window

Pressing the button will open the *Graph Window*

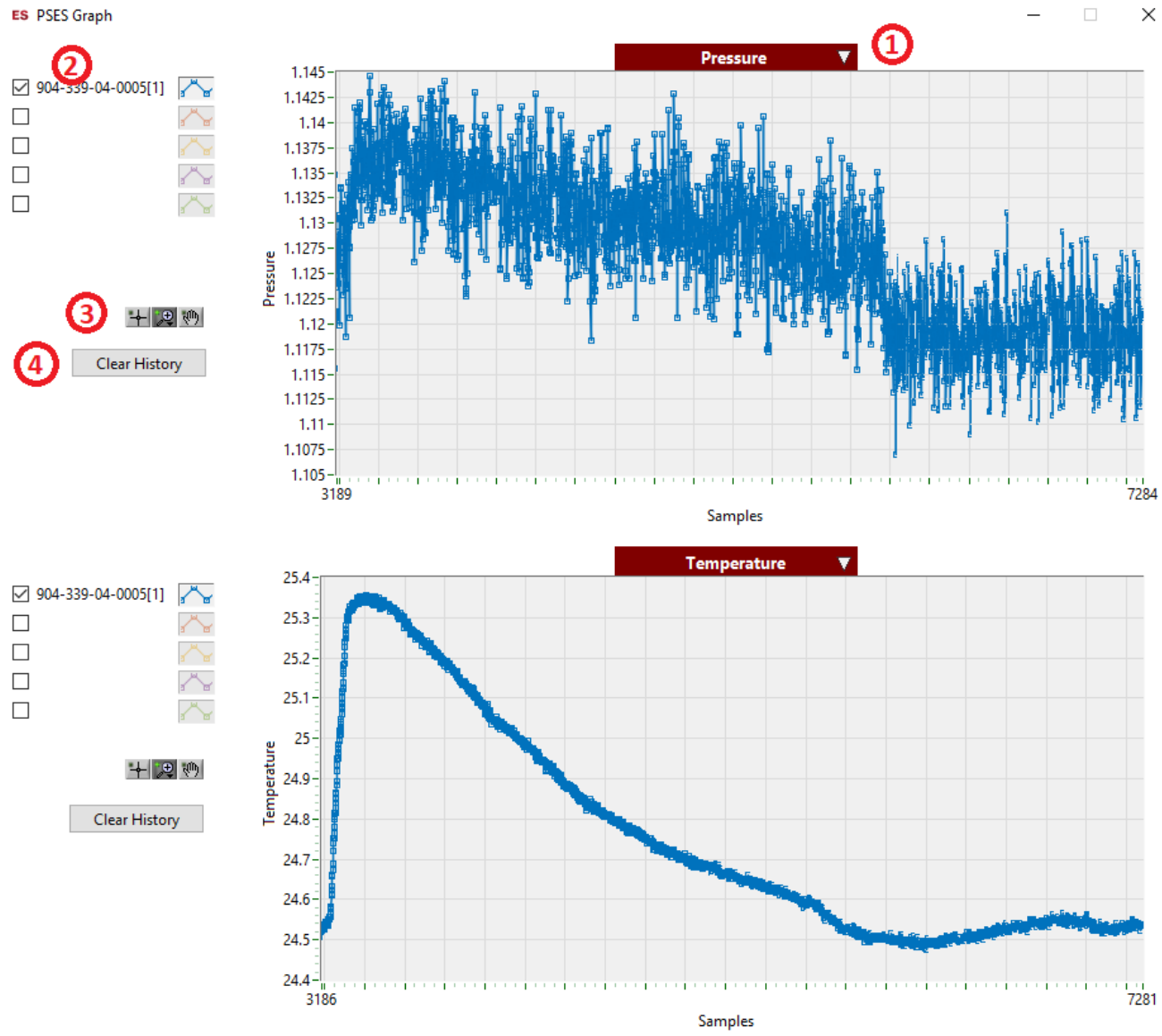

Figure 2: Plots

Using the drop-down menu (1) the user can select the quantity to display. By default, data for all connected sensors is displayed but the user can select/deselect any of them (2). The user can also zoom/pan the graph area using the respective buttons (3) and clear the graph area by pressing the *Clear History* button (4).

5. Log File Configuration

Optionally the user can log the received data to a file. Use the *Browse* button (folder icon) to select a directory and name for the log file and press the button to start logging. Pressing the button again

will stop logging. Data is logged to the file at the rate specified in the Sample Rate textbox as tab delimited values. Measured quantities are written in the following order

Pressure Temperature

For each measured quantity we log its floating-point value with 7 digits of precision. An example is shown below:

```
1.0364935   23.1924534
1.0364745   23.1876488
1.0364439   23.1864662
1.0364695   23.1840649
1.0364578   23.1935730
```

Figure 3: Measurement File

A log file for each serial number will be created storing the corresponding data.

6. Evaluation Software Version

Displays the current version of the application

7. Log Timestamp

This enables the saving of timestamp data in the data measurement file with the following format: *Year-month-date_hour-minute-second.millisecond*

```
1.0365336   23.2609386  2023-03-16_15-11-32.022
1.0365341   23.2627983  2023-03-16_15-11-32.602
1.0365081   23.2696133  2023-03-16_15-11-33.181
1.0365117   23.2732201  2023-03-16_15-11-33.761
1.0365396   23.2664375  2023-03-16_15-11-34.340
1.0365312   23.2794151  2023-03-16_15-11-34.921
1.0365198   23.2800140  2023-03-16_15-11-35.501
1.0365207   23.2881031  2023-03-16_15-11-36.082
1.0365117   23.2881031  2023-03-16_15-11-36.663
1.0364876   23.2906990  2023-03-16_15-11-37.242
1.0365105   23.2903748  2023-03-16_15-11-37.824
1.0365124   23.2901134  2023-03-16 15-11-38.403
```

Figure 4: Timestamps