

# Transmitter Configuration Tool

## M300 TCT





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# 1 Introduction

## 1.1 Information Regarding the Quick Start Guide

This Quick Start Guide provides information on handling the M300 TCT software and is a supplement to the Operation Manual of the M300 transmitter.

This Quick Start Guide does not describe any work of the M300 transmitter e.g. installation, wiring or troubleshooting. The M300 transmitter must only be installed, connected, commissioned, and maintained by qualified specialists e.g. electrical technicians in full compliance with the instructions in the Operation Manual of the M300 transmitter, the applicable norms and legal regulations.

Before installing and wiring the M300 transmitter, read the Operation Manual of the M300 carefully! The Operation Manual is supplied with the transmitter on the CD-ROM.

The M300 TCT software and the M300 transmitter should be operated only by personnel familiar with the transmitter and who are qualified for such work.

When passing on the M300 TCT software to third parties, this Quick Start Guide and Operation Manual of the M300 transmitter must be passed on as well.

## 1.2 Intended Use

The M300 Transmitter Configuration Tool (M300 TCT) is a software and designed for parametrization of M300 transmitter.

Following functions are available:

- Online parametrization: See Chapter 4.1 “Loading Data from the Connected Transmitter” on Page 11 and Chapter 4.2 “Sending Data to the Connected Transmitter” on Page 11.
- Offline parametrization: See Chapter 4.3 “Saving Data of the M300 TCT Software” on Page 12 and Chapter 4.4 “Opens Data in the M300 TCT Software” on Page 13.
- Printing the current parametrization: See Chapter 4.5 “Printing Data” on Page 13.
- Data logging: See Chapter 4.6 “Logging Data” on Page 14.



**NOTE!**

It is not possible to calibrate the sensor or sensors connected to the transmitter. Sensor calibration must be performed via the local display of the transmitter or via iSense.

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## 2 User Interface

### 2.1 Start Screen

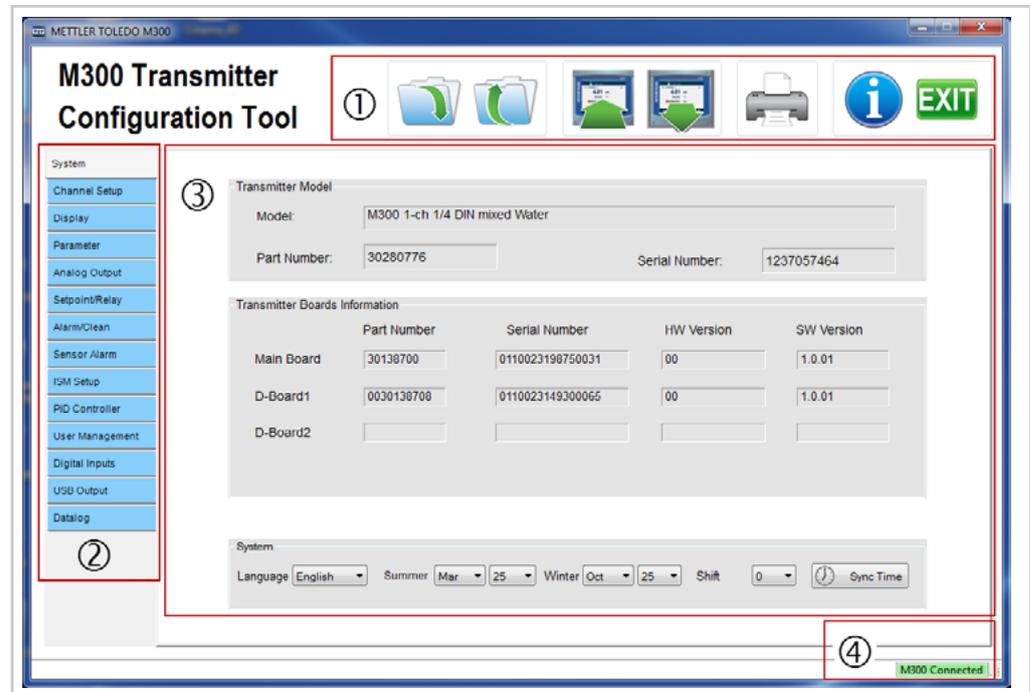


Fig. 1: Start screen, M300 transmitter connected

- 1 Buttons (Toolbar)
- 2 Menus
- 3 Field for displaying values and parameterizing
- 4 Status of the transmitter: M300 Connected (online), M300 Disconnected (offline)

### 2.2 Buttons (Toolbar)

Button	Description
	<b>Open All Transmitter Setup Files</b> Opens the selected transmitter setup files in the M300 TCT software. See Chapter 4.4 "Opens Data in the M300 TCT Software" on Page 13.
	<b>Save All Transmitter Setup Files</b> Saves the transmitter setup files of the current configuration externally e.g. in your network. See Chapter 4.3 "Saving Data of the M300 TCT Software" on Page 12.
	<b>Send All Transmitter Setup Files</b> Sends the current setup files of the M300 TCT software to the connected transmitter. See Chapter 4.2 "Sending Data to the Connected Transmitter" on Page 11.

Button	Description
	<b>Get All Transmitter Setup Files</b> Loads the setup files from the connected transmitter to the M300 TCT software. See Chapter 4.1 "Loading Data from the Connected Transmitter" on Page 11.
	<b>Print</b> Prints the current setting of the M300 TCT software. See Chapter 4.5 "Printing Data" on Page 13.
	<b>Information</b> Shows the version of the M300 TCT software and Mettler-Toledo contact information.
	<b>Exit</b> Closes the M300 TCT software.

Table 1: Description of the buttons

## 2.3 Parametrization view

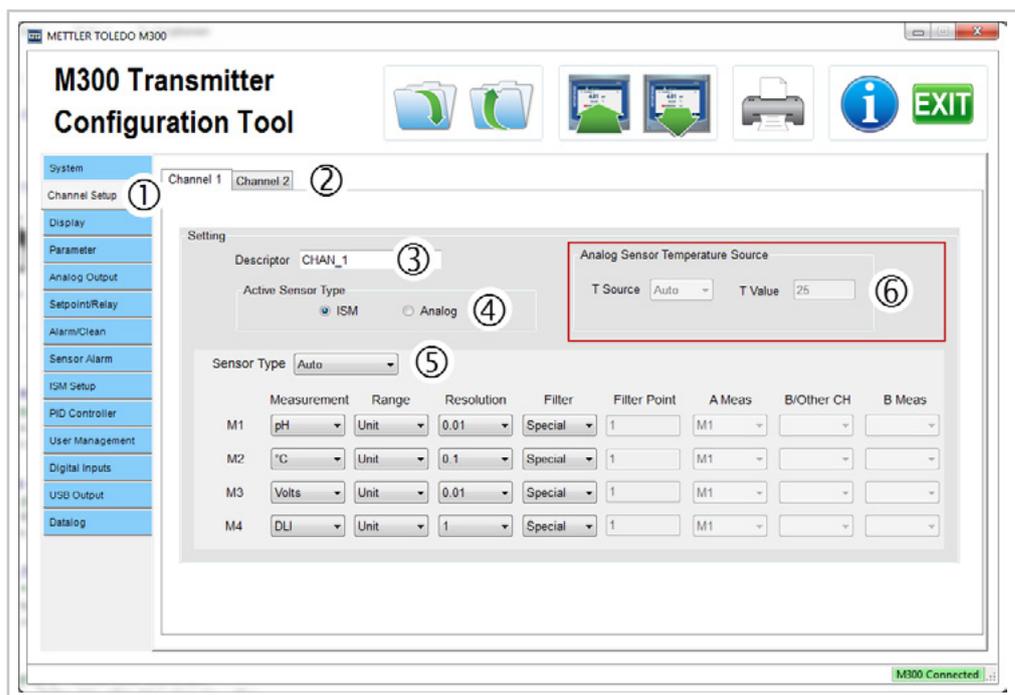


Fig. 2: Parametrization view

- 1 Selected Menu, marked in gray
- 2 Tabs, here tab "Channel 1" chosen
- 3 Entry field e.g. for entering text
- 4 Radio buttons for selecting options, here only one option is possible
- 5 Drop-down list  
The list items depend on the options set.
- 6 Deactivated elements e.g. drop-down lists or entry fields  
These elements cannot be parameterized for the selected options.

## 3 Installation

### 3.1 System Requirements

#### Operating system

- Windows 7 (32-bit and 64-bit)
- Windows 8 (32-bit and 64-bit)
- Windows 10 (32-bit and 64-bit)

#### Hardware requirements (minimum):

- Processor: 1.5 GHz or better
- RAM main memory: 2 GB (free memory)
- Hard disk space: 20 MB
- Screen resolution: 1024 x 768
- USB communications port

### 3.2 Installing M300 TCT Software

The CD that is supplied with the M300 transmitter contains the current version of the M300 TCT software. The current version of the M300 TCT software is also available via Internet ([www.mt.com/M300](http://www.mt.com/M300)).

For software installation administrator are required.

Proceed as follows to install the software:

1. Copy the file "M300G2\_TCT\_Vx.x" to the hard disk of your computer.
2. Double-click on the file **M300G2\_TCT\_Vx.x**.  
⇒ A Setup Wizard starts.
3. Follow the installation procedure of the Wizard.
4. Click **Finish** to close the Wizard and complete the installation.  
⇒ The M300 TCT software is installed.

### 3.3 Connecting the M300 Transmitter to the Computer and Starting the M300 TCT Software

#### Prerequisites

- The M300 transmitter is connected to supply voltage.
- Depending on the transmitter version and measuring task one sensor is connected to the transmitter or two sensors are connected to the transmitter.

For connection of the transmitter and the sensor refer to the Operation Manual of the M300 transmitter. The Operation Manual is supplied with the transmitter on the CD-ROM.

**DANGER! Mortal danger by electric shock:** Power off instrument during electrical connection.

1. Connect transmitter to the computer with the installed M300 TCT software. Use a USB-A-plug / USB-B-plug cable.
  - Connect the USB-A-plug to the computer.
  - Connect the USB-B-plug to the transmitter. At 1/2 DIN versions the USB connection is placed inside the housing. At 1/4 DIN versions the USB connection is placed on the rear side of the housing. See the following figure, pos. 1.

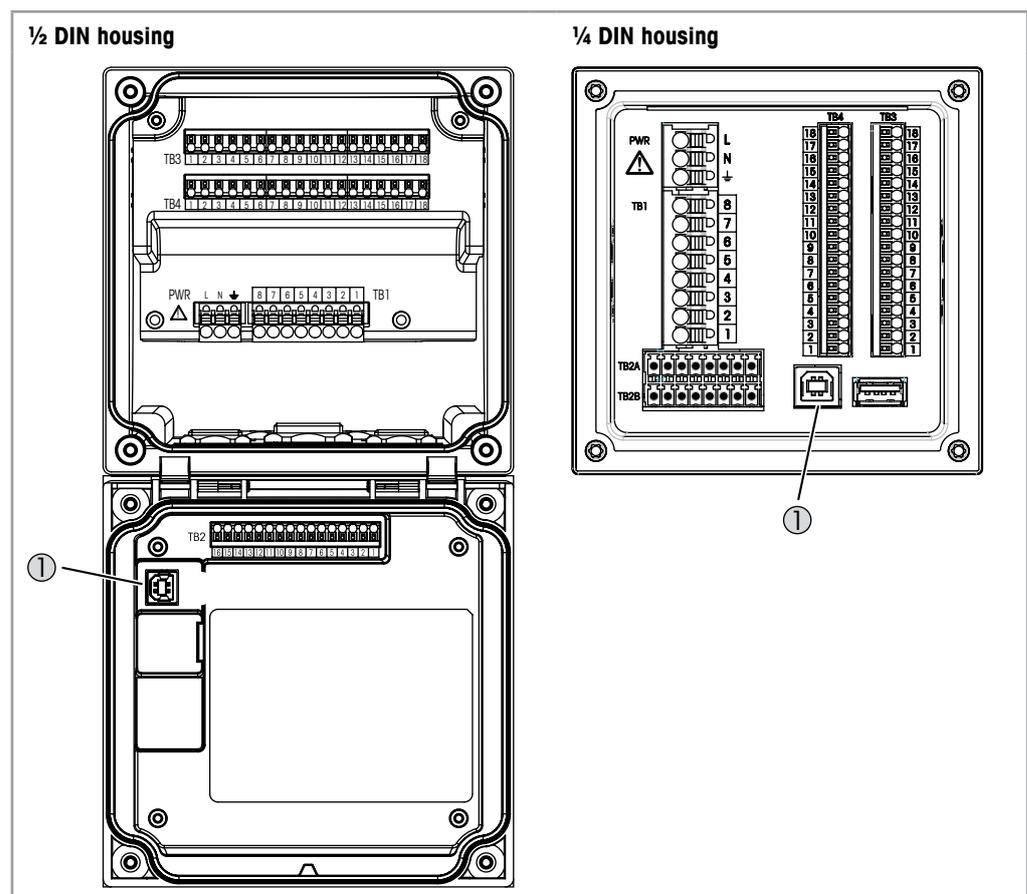


Fig. 3: Terminals of M300 transmitter 1/2 DIN housing and 1/4 DIN housing

- 1 USB Device – Software update interface

2. Switch on supply voltage.
3. Start M300 TCT software. Therefore double-click either on the M300 TCT button or on the "M3002G\_Configuration\_Tool" application.



⇒ The M300 TCT software has been started. The following view is displayed:

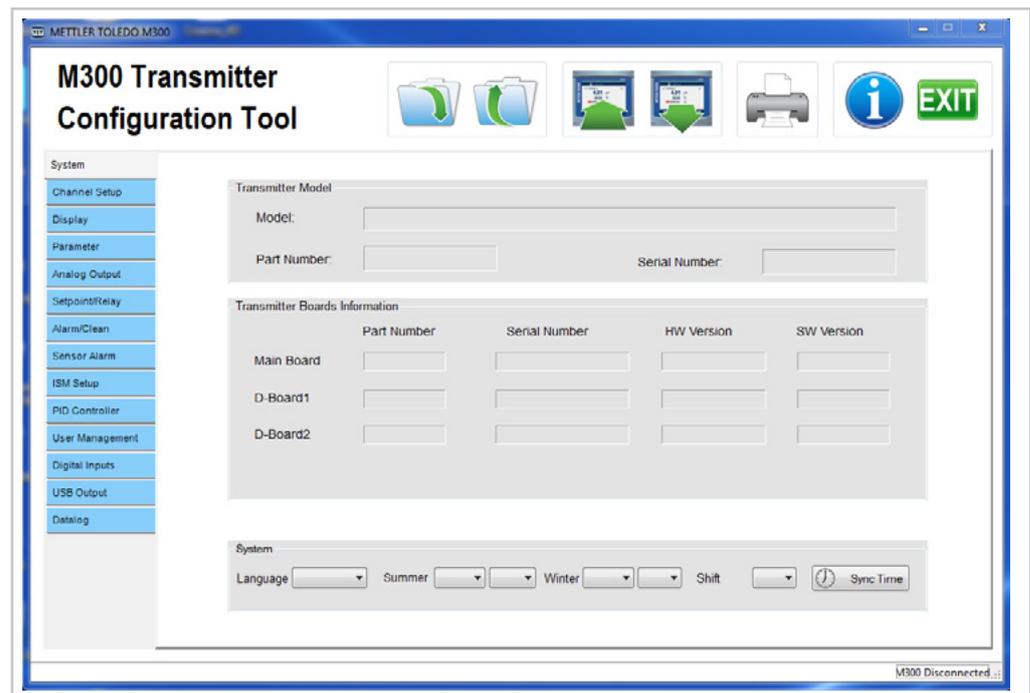


Fig. 4: Start screen, M300 transmitter not connected



**NOTE!**

Close cover properly after configuration and disconnection of USB communication.

## 4 Operation

### 4.1 Loading Data from the Connected Transmitter



Button:

#### Prerequisites

- The M300 transmitter is connected to the computer with the installed M300 TCT software.
- 1. Click on the button “Get All Transmitter Setup Files” in the M300 TCT software.
  - ⇒ The current progress is shown in the “Current progress” window.
  - ⇒ If all setup files have been loaded from the transmitter, the message “Get all transmitter setup files successfully” is shown.
- 2. Click “OK”, to confirm the message.
  - ⇒ The setup files have been loaded from the transmitter into the M300 TCT software.

### 4.2 Sending Data to the Connected Transmitter



Button:

#### Prerequisites

- The M300 transmitter is connected to the computer with the installed M300 TCT software.
- 1. Click on the button “Send All Transmitter Setup Files” in the M300 TCT software.
  - ⇒ The current progress is shown in the “Current progress” window.
  - ⇒ If all setup files have been sent to the transmitter, the message “Send all transmitter setup files successfully” is shown.
- 2. Click “OK”, to confirm the message.
  - ⇒ The setup files have been sent from the M300 TCT software to the connected transmitter.

## 4.3 Saving Data of the M300 TCT Software



**Button:**

1. Click on the button "Save All Transmitter Setup Files" in the M300 TCT software.  
⇒ The dialog "Search folder" is shown.
  2. You have the following options:
    - Click **OK**, to save the files in the suggested folder. The storage location of the software is suggested.
    - Click **Cancel**, to cancel the procedure.
    - Perform step 3 if you want to save the data in another folder.
  3. Proceed as follows, to save the data in another folder:
    - Choose the location for the folder in the directory view.
    - Click **Create a new folder**, to create a new folder.
    - Name the folder.
    - Click **OK**, to save the files in the created folder.
- ⇒ If all setup files have been saved successfully, the message "Save files successfully" is shown.



**NOTE!**

For 1-channel versions two binary files (MAIN.bin, SLAVE1.bin) are stored in the folder. For 2-channel versions three binary files (MAIN.bin, SLAVE1.bin, SLAVE2.bin) are stored in the folder.



**NOTE!**

The binary files (\*.bin) and the file names must not be changed. If the files are changed, you cannot open the files in M300 TCT software.

## 4.4 Opens Data in the M300 TCT Software



**Button:**

### Prerequisites

- The setup files must be in one folder.
- For 1-Channel versions the file names must be as follows: MAIN.bin and SLAVE1 .bin.
- For 2-Channel versions the file names must be as follows: MAIN.bin, SLAVE1 .bin and SLAVE2.bin.

1. Click on the button "Opens All Transmitter Setup Files" in the M300 TCT software.
    - ⇒ The dialog "Search folder" is shown.
  2. You have the following options:
    - Choose the location of the folder in the directory view. Click **OK**, to open the files in the M300 TCT software.
    - Click **Cancel**, to cancel the procedure.
- ⇒ If all setup files have been opened successfully, the message "Open files successfully" is shown.

## 4.5 Printing Data



**Button:**

1. Click on the button "Print".
  - ⇒ A print preview is shown.
2. Configure the print preview. You have the following possibilities:
  - Selecting the printer.
  - Selecting page orientation (landscape or portrait).
  - Set page: Size, orientation, margins, header and footer, data format, font
  - Switching on or off the header and footer
  - Changing the view of the print preview
  - Scaling the print-out

## 4.6 Logging Data

You have the possibility to log the measured values of the sensor or sensors connected to the transmitter. For 1-channel versions only option "Channel 1" is possible.

The following data are logged:

- Date and Time
- Measured values of the chosen parameters M1 to M4 for channel 1 and / or channel 2.



NOTE!

For ISM sensors: Beside the parameters pH, O2, T, etc. also the ISM diagnostics values DLI, TTM and ACT can be linked to the measurements.

### Starting and finishing the logging process

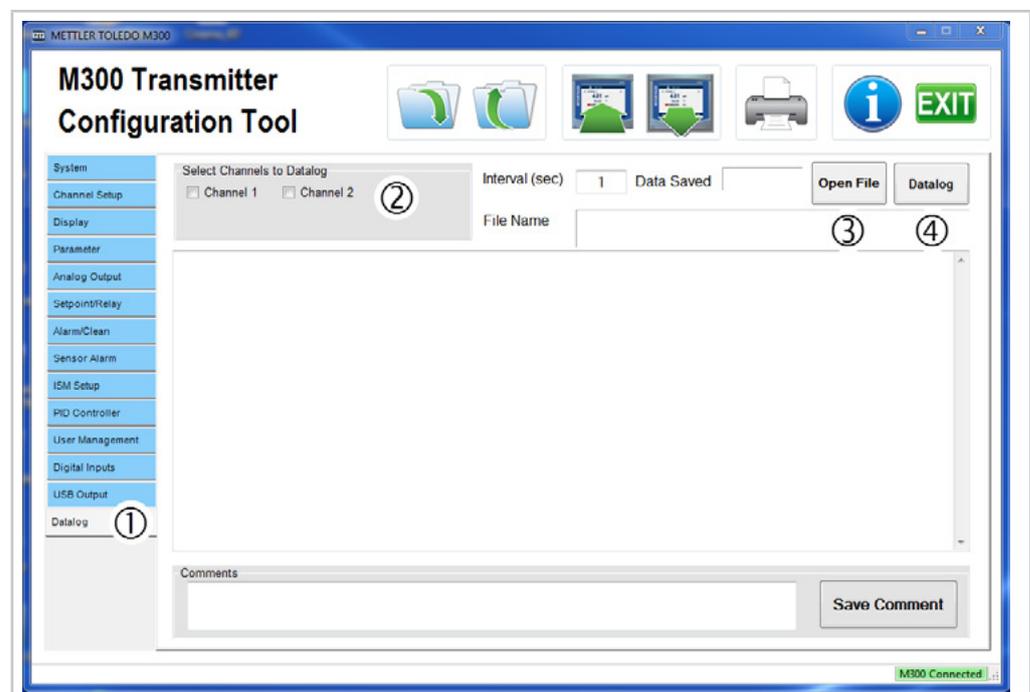


Fig. 5: Menu "Datalog" – start view

- 1 Menu "Datalog" selected
- 2 Channel selection
- 3 "Open File" button
- 4 "Datalog" button

1. Select the **Datalog** menu.
2. Select channel or channels. For 1-channel versions only option "Channel 1" is possible.
3. Set the logging interval.

4. Create the file for saving the logged data. The data are saved in csv-format. Proceed as follows:
  - Click **Open File**.
  - Select storage location for the file.
  - Set a name for the file (\*.csv).
  - Click **Save**.
  - ⇒ The **File Name** field shows the file name.

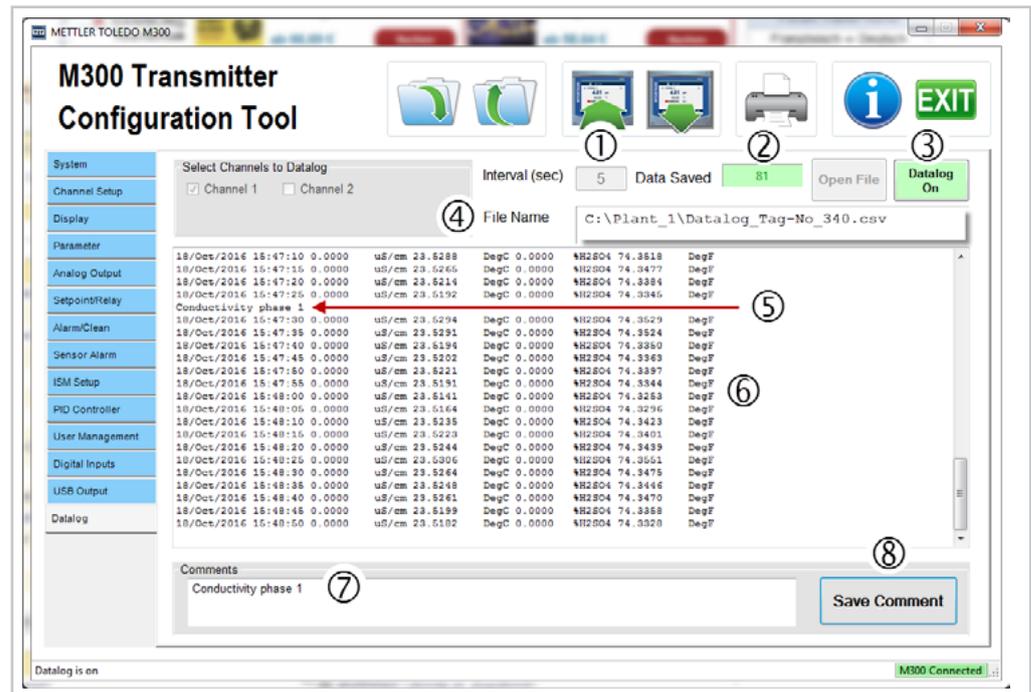


Fig. 6: Menu "Datalog" – logging process started

- 1 Logging interval
  - 2 Saved data sets
  - 3 "Datalog On" button
  - 4 "File Name" field
  - 5 Saved comment
  - 6 Datalog
  - 7 Entered comment
  - 8 "Save Comment" button
9. Click **Datalog**, to start the logging process.
    - ⇒ The gray button **Datalog** changes to the green button **Datalog On**. The **Data Saved** field shows the current number of measured values. The logged measured values are shown.
  10. Click **Datalog On**, to finish the logging process.
    - ⇒ The green button **Datalog On** changes to the gray button **Datalog**. The logging data are saved in csv-file.

### Continuing the logging process

1. Click **Open File**.
  2. Select the file where the data should be stored.
  3. Click **Datalog**, to continue the logging process.
- ⇒ The former logged measured values are cleared. The counter for the **Data Saved** field is reset.
- ⇒ The gray button **Datalog** changes to the green button **Datalog On**. The **Data Saved** field shows the current number of measured values. The logged measured values are shown.



#### NOTE!

The new logging data are saved at the end of the csv-file. Former data are not overwritten. Data blocks are marked with "M300 Data Collection".

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### Entering comments

1. Enter a comment in the **Comment** field.
  2. Click **Save Comment**, to save the comment.
- ⇒ The comment is displayed in the logging field. The comment is also saved in the logging file (\*.csv).
- ⇒ The comment is displayed until a new comment is saved or the M300 TCT software is closed.



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