

# MTLink



**Application software**

*Measure up* 

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# 1 Welcome to MTLINK Help

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Use the Bookmarks on the left side of the window to select or search for a topic. You can also select one of the following **Quick links** to start learning about MTLINK.

- [Getting started](#)
- [Online support information](#)
- [End-User Licence Agreement](#)

## 2 Introduction to MTLink

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### 2.1 What is MTLink?

**MTLink** is a PC software program for Chauvin Arnoux machine testers. Functionality of the PC software program depends on a licence purchased:

#### **BASIC** licence

- Download / upload data from / to the instrument (instrument data, appliance data, test results)
- Store data to a local database
- Edit stored data
- Print results
- Automatically fill reports (original certificates) with results (Printing of reports is disabled)

#### **PRO** licence

- All functionality of BASIC licence
- Print reports
- Export / import data to / from other databases

## 2.1.1 User Interface

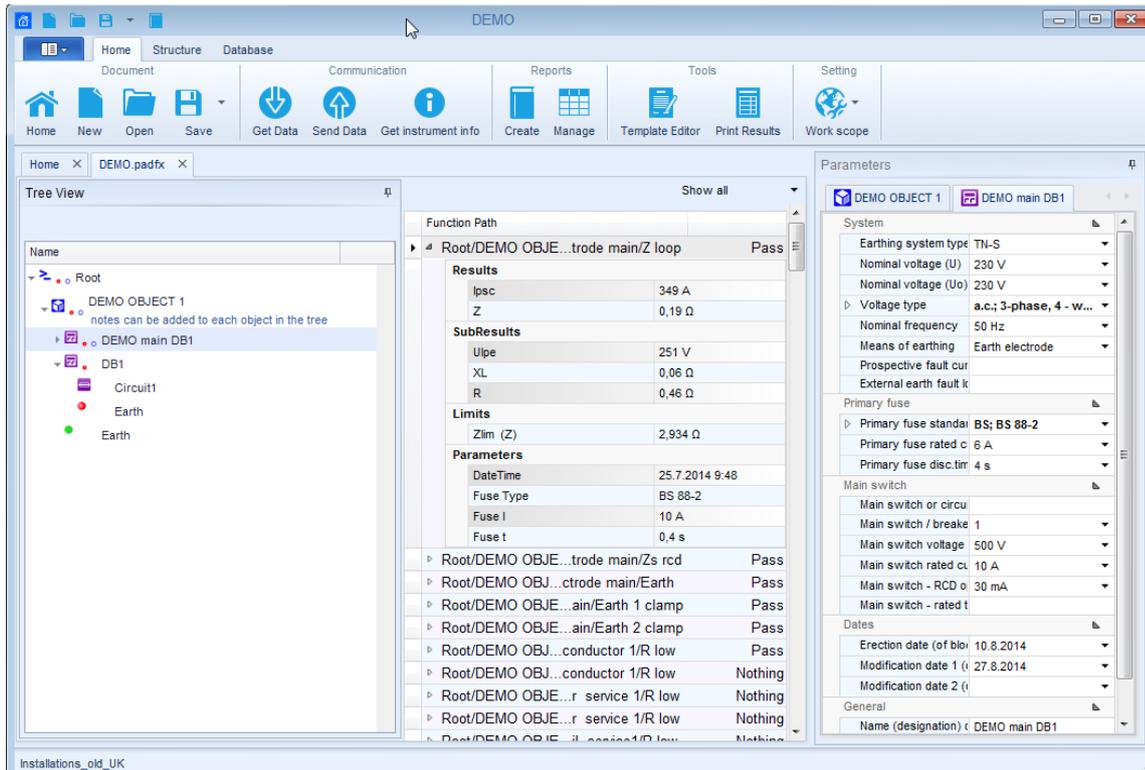


Figure 2.1: Main Window View

User interface main features:

- The interface has been organized to allow quick selection of data using a Windows Explorer-like tree view
- Properties of selected data are instantly displayed in multiple windows
- By dragging, docking and resizing the window tabs, the user can customize the environment in numerous ways

## 2.1.2 Connectivity

- Supports multiple instruments
- USB and RS-232 communication interfaces and Bluetooth communication supported



### Note

Please note that some parts of program can be changed without notice in new software versions, and therefore might differ from the information in this manual. If you encounter such differences, we will gladly accept your e-mail with your suggestions and include or change the necessary information in our next hotfix or update.

## 3 End-User Licence Agreement

### 3.1 Legal/Contact Information

This End User Licence Agreement (EULA), with the following terms and conditions concerning the use of the product and of our software, is an agreement between you (single physical or moral person) and company Chauvin Arnoux.

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**TERM:** Should Chauvin Arnoux terminate this Agreement because of your failure to comply, you agree to destroy or return the program and documentation and any copies, including partial copies, in any and all forms, received from Chauvin Arnoux or generated in connection with the Agreement.

**CANCELLATION:** The present contract remains in force until its cancellation. It will be cancelled without notice by Chauvin Arnoux if you do not comply with the terms of the present contract. In the event of cancellation, you must immediately return to Chauvin Arnoux all the copies of the software in your possession, along with the document.

If you have any question concerning this Agreement, please contact Chauvin Arnoux.

## 4 Software Installation

### 4.1 System Requirements

Before installation, you should check that your system meets the following requirements:

#### Supported Operating Systems:

- Windows 7, 32-bit & 64-bit
- Windows 8, and 8.1 32-bit & 64-bit
- Windows 10, 32-bit & 64-bit

#### Installed System Memory (RAM):

- Windows 7: min. 1 GB (4 GB recommended)
- Windows 8 and 8.1: min. 1 GB (4 GB recommended)
- Windows 10, 1 GB (4 GB recommended)

#### Hard Disk Space:

- At least 100 MB of free space for the installation files and documentation
- Additional 280 MB (x86) or 610 MB (x64) of free space if Microsoft.NET Framework (4.0 or higher) is not previously installed
- Additional disk space (20 GB recommended) is needed for downloading and saving MTLINK data files (A single MTLINK data file can be up to 8 GB). Additional disk space (20 GB recommended) is needed for downloading and saving MTLINK data

### 4.2 Installing the software

To install the software, run the installation application from the CD Setup.exe. The installation wizard will guide you through the language and instrument selection and installation of MTLINK.

### 4.3 Software updates

For automatic detection of the latest MTLINK update, internet connection is needed. If a new version of software is detected, MTLINK will display a message with a link in the bottom right corner of the screen during every start-up. By clicking on it a new version of MTLINK will be installed.

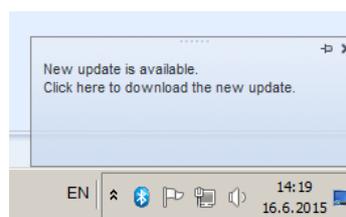
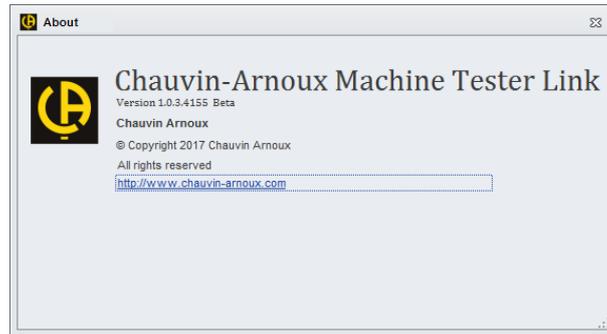


Figure 4.1: Update message and a link

Additional access to get new software update is from the About screen. For details regarding the new software version (new features, bugs fixed,...) see Release notes.



**Figure 4.2: About screen**

## 5 Getting started

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### 5.1 Quick guides and tutorials

#### 5.1.1 Introductory Guides

Before starting to use MTLINK, here is some information about the basic features. The following sections will explain the way data is organized in MTLINK, show you how to use advanced window management capabilities to arrange your workspace efficiently.

- [First contact with MTLINK user interface](#)
- [Measurements](#)
- [Communication with Instruments](#)
- [Creating Reports](#)
- [Troubleshooting](#)

# 6 User Interface Components

## 6.1 Introduction

### 6.1.1 First contact with MTLink user interface

MTLink utilizes a multiple document interface with docking support and auto hide capabilities. Getting familiar with the way windows and nodes are handled in MTLink may simplify your everyday tasks significantly.

The default MTLink workspace is organized as shown in the picture. Just below the menu strip and a toolbar, you can find the Document tab-strip ( ❶ ), which shows the names of all open databases. The highlighted tab ("DEMO.pdfxf" in the sample below) shows the name of the currently active file. Within this tabbed window, you can find the **Tree View** window ( ❷ ) (shown on the left side by default), which contains the hierarchical data structure of your document. Tree View window is docked and always shown by default, but can be undocked or hidden just as any other window.

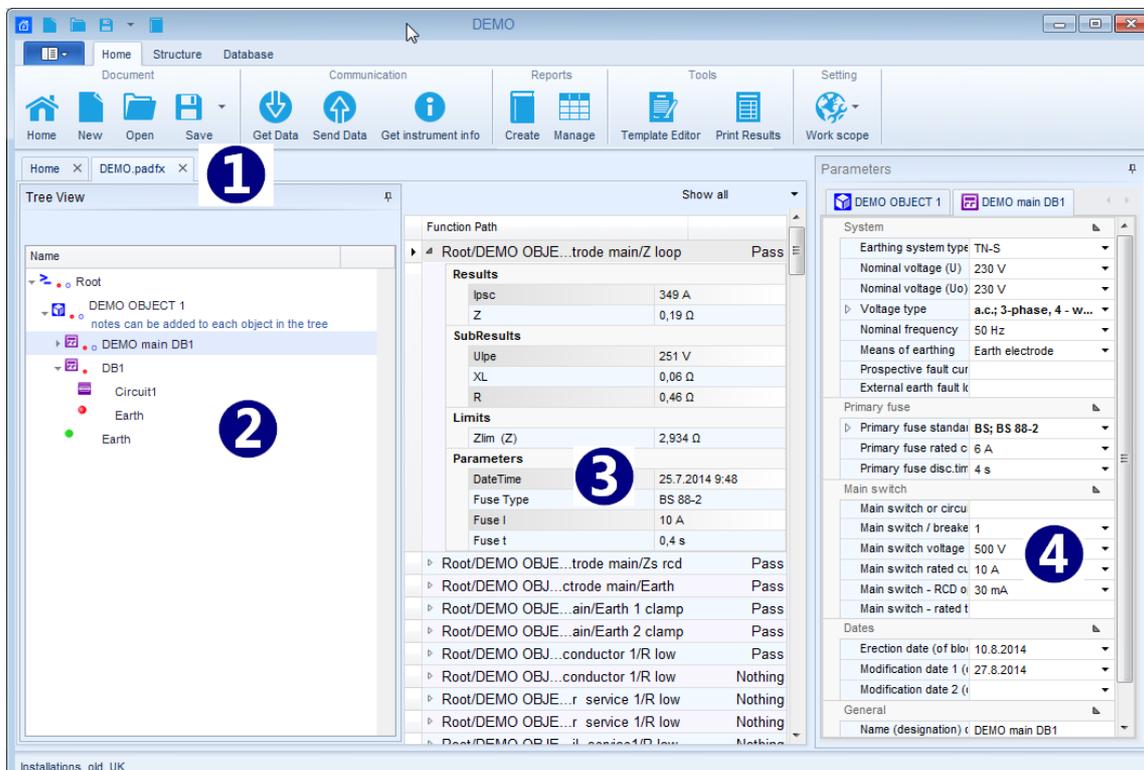


Figure 6.1: Main workspace with an open sample database

The center of the window is by default the **Result view** area (❸), which is used to display individual records. In one selected item in Tree View could be one or more records. When an item node is clicked in the Tree View window, the center area of the window will display a new record and on the right side of menu the properties of the clicked items appear. Click on + expands each individual record and shows the results of the record.

On the right side of the workspace is the **Parameters** window (❹), by default, docked to the right side. This window is bound to the selected node in the Tree View, and shows a list of parameters defined for that node. Using this window, you can edit those parameters. This window can also be undocked and hidden.

## 6.1.2 Window management in MTLink

MTLink environment provides various tools and options to help you position and move between document and tool windows. MTLink uses a Multiple Document Interface (MDI) to handle multiple documents, meaning that multiple documents can be opened and placed inside the main, parent container.

### 6.1.2.1 Window types

There are two basic Window types in MTLink, **Tool windows** and **Content windows**.

#### Tool Windows

Tool windows are listed as Tabs and can be shown or hidden as appropriate. Closing a tool window actually only hides it to increase your working area for other windows, but it can be easily reopened at any time. For example, Tree View and Parameters window are tool windows.

Tool windows can be configured to:

- Auto-hide when you move your mouse away
- Dock against the edges of their parent windows

#### Auto Hide

Tool windows support a feature called **Auto Hide**. Auto Hide allows you to enlarge your Result view area by minimizing tool windows along the edges of the application environment when not in use.

The next figure shows the appearance of the **Tree view tool window** when it is visible (❶) and hidden using **Auto Hide** (❷).

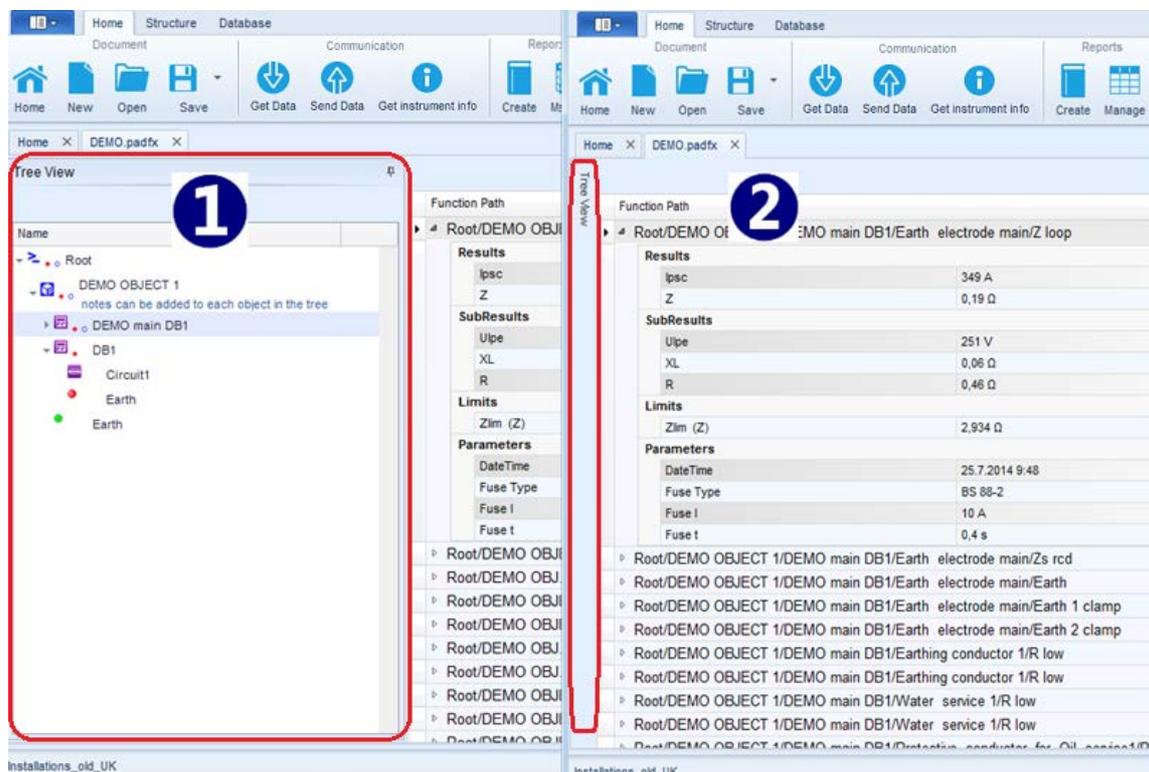


Figure 6.2: Auto Hide

The left picture shows the docked Tree view tool window. When docked, a tool window is fixed inside the container (parent) window.

By clicking on the pin button , user can turn on the Auto Hide feature. When an auto-hidden window loses focus, it automatically slides back to its tab on the edge of the parent window. While a window is auto-hidden, its name and icon are visible on a tab at the edge of the parent window. To display an auto-hidden window, move your cursor over the tab. The window slide back into view and is ready for use.

To turn off the **Auto Hide** feature, click on the pin button  again while the window is active.



### Tip

Tool windows in Auto Hide temporarily slide into view when the window has focus. To hide the window again, select an item outside of the focused tool window. Once the window loses focus, it will slide back out of view.

### Content Windows

Content windows are containers for actual data. In the MTLINK software the Result view area is a content window. Data is displayed in the middle of the screen and cannot be moved. Content is derived from the selected entry in tree view. Content windows include filters for filtering content data.

There are two options for setting filters:

- Show All (●)
- Show Results and Sub-results (⊗)

The figure shows two screenshots of the MTLINK software interface, illustrating filter options for content windows. Both screenshots show a table of test results for a 'DB1/Z loop'.

**Top Screenshot (1):** The filter is set to 'Show All'. The table displays the following data:

Results			
IpSc	347 A		
Z	1,58 Ω		Pass
SubResults			
U <sub>lpe</sub>	231 V		
XL	0,09 Ω		
R	0,25 Ω		
Limits			
Z <sub>lim</sub> (Z)	2,934 Ω		
Parameters			
DateTime	25.7.2014 11:45		
Fuse Type	BS 88-2		
Fuse I	10 A		
Fuse t	0,4 s		

**Bottom Screenshot (2):** The filter is set to 'Show Results and Subresults'. The table displays the following data:

Results			
IpSc	347 A		
Z	1,58 Ω		Pass
SubResults			
U <sub>lpe</sub>	231 V		
XL	0,09 Ω		
R	0,25 Ω		

Figure 6.3: Filter options

### 6.1.3 Tree View

Tree View (❶) displays database nodes in Parent-Child manner. Right clicking an entry in tree view gives you several possibilities (❷):

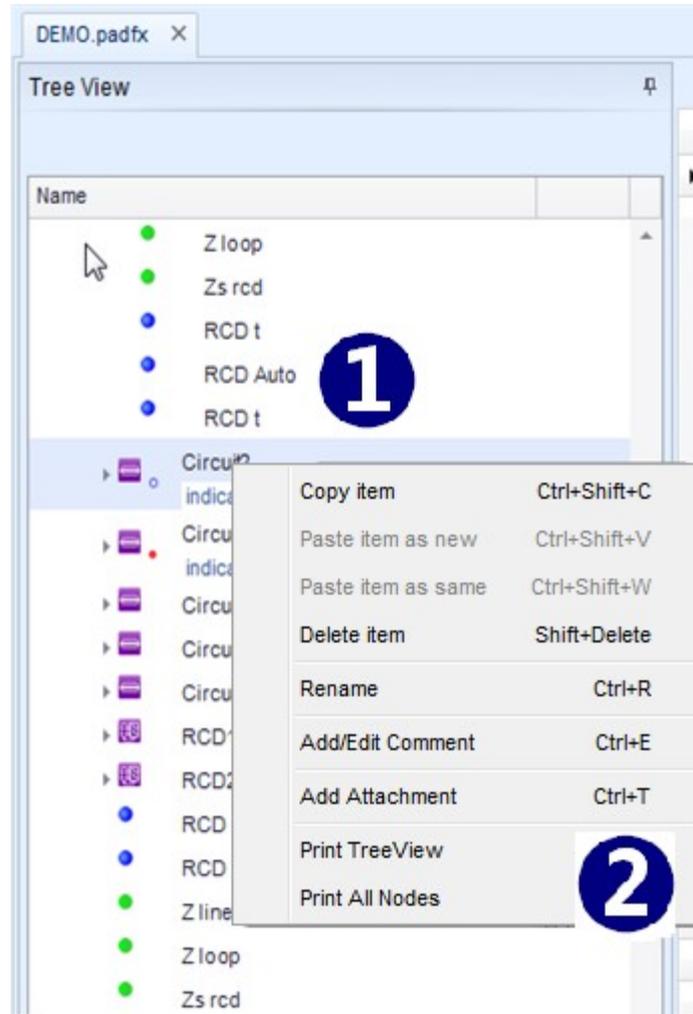


Figure 6.4: Tree View right click options

- **Copy, Paste as new, Paste as same, Delete, Rename** items are functions for manipulating nodes.
- **Add/ Edit Comment:** Write short comment (❸) which appears as a string below selected entry.
- **Instrument data:** Data from the instrument attached to every measurement.
- **Add Attachment:** Add attachment to the selected entry. Attachments can be any data (picture, text file, object, etc). When the attachment (❹) is added to an entry, the notification  appears beside the parent entry. Attachments can be opened, removed or edited. List of attachment (❺) is showed with clicking on .

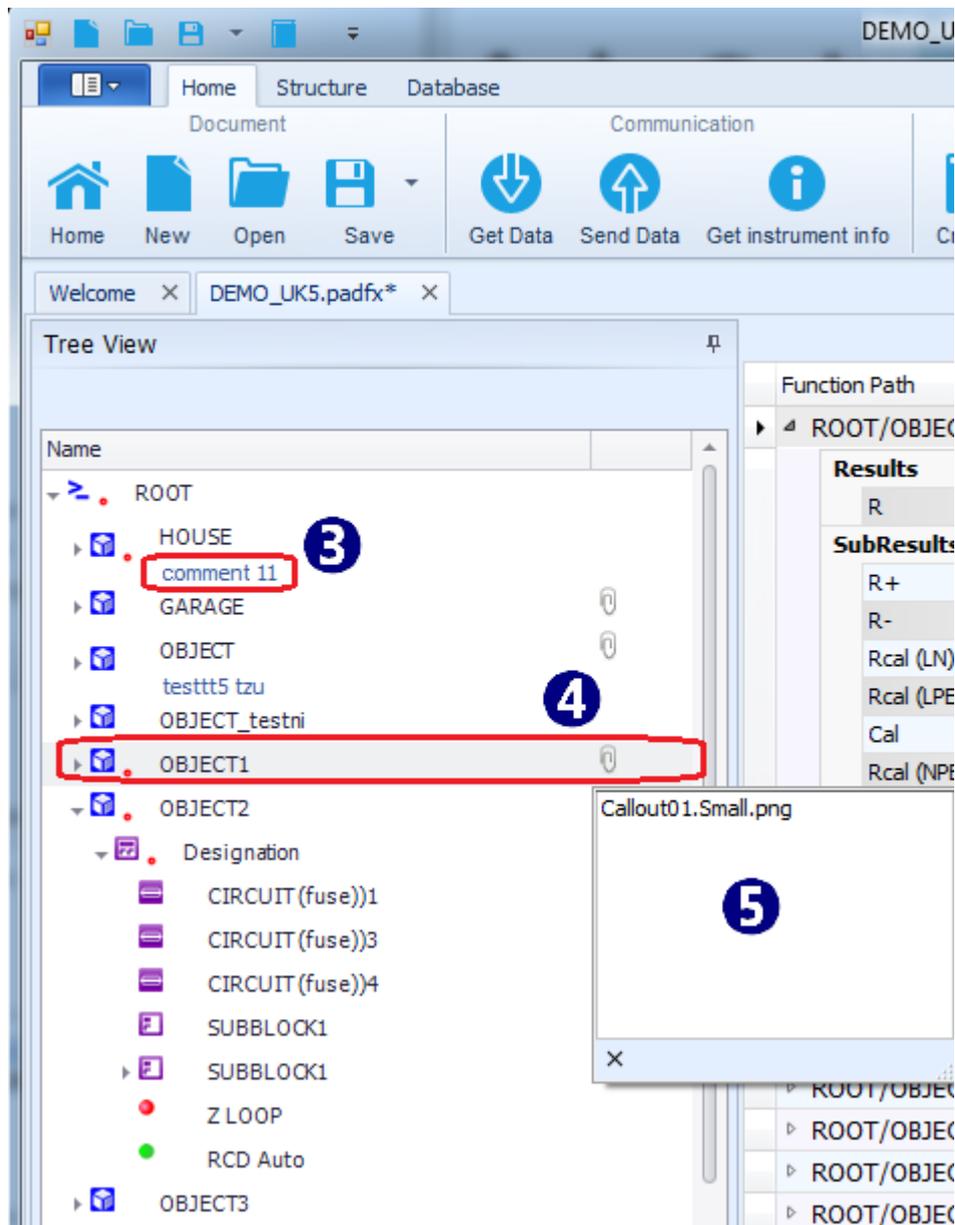


Figure 6.5: Attachment

- **Print TreeView and All Nodes** opens preview of selected nodes or all nodes. In preview (Ⓒ) it is possible to edit **Header and Footer**, set **Background** colour, insert **Watermark** text or image. Also you can **Export** edited document in .pdf format. Preview contains all standard functions for editing printable files.

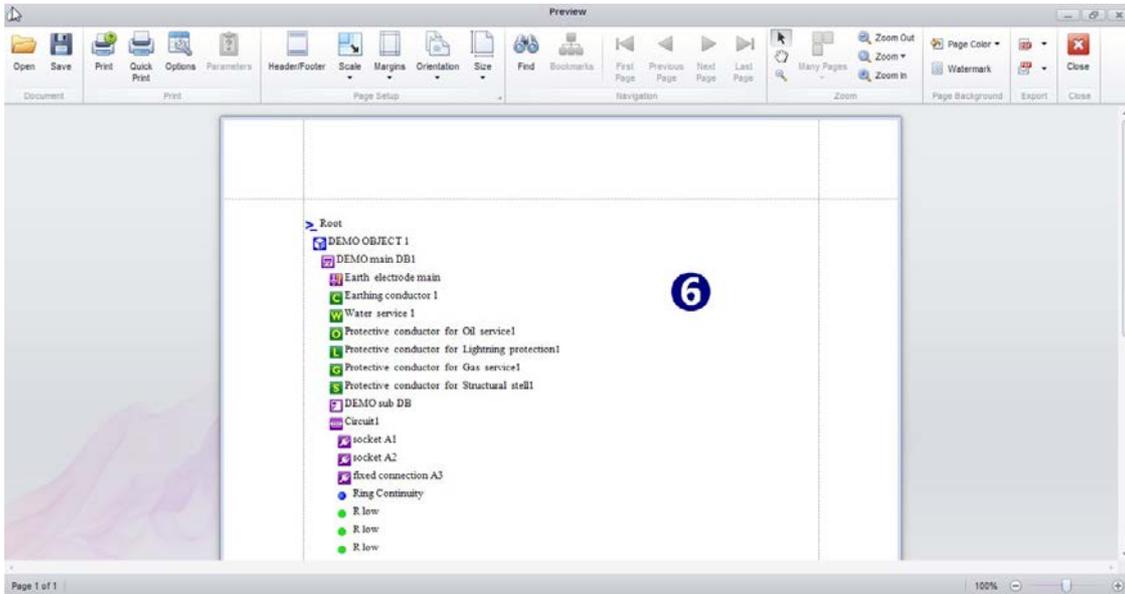


Figure 6.6: Preview editor

## 6.2 Menu Tabs

Menus are organized in tab style. Each menu tab opens a subset of functions.

### 6.2.1 Main and Home Tabs

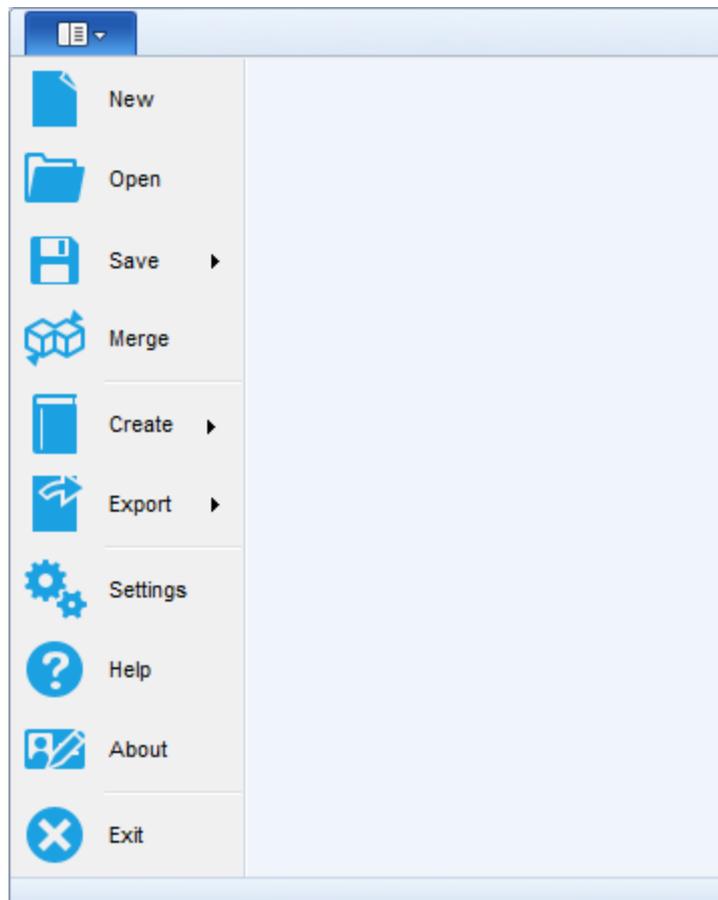


Figure 6.7: Main tab

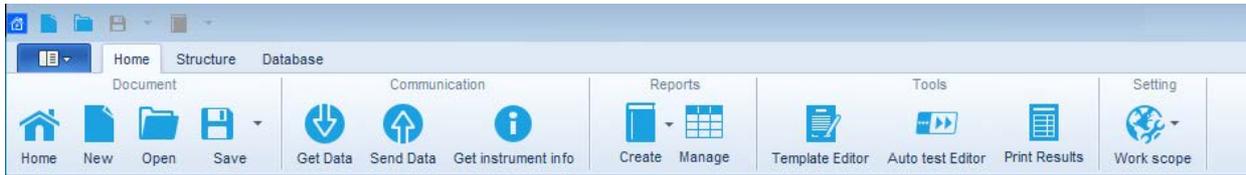


Figure 6.8: Home tab

## Document menu

- 
 Home : Navigates to welcome screen.
- 
 New : Creates a new, empty MTLINK document/database.
- 
 Open : Opens an existing MTLINK document for analysing and editing.
- 
 Save :

**Save** - Saves the currently focused MTLINK document file to the disk. If the file has not been saved yet (data was downloaded from the instrument, or user created a new file), the user will be prompted to define a location and name for the file.

**Save as** - File will be saved under different name. The user is prompted to define a new location and name for the file.

## Communication menu

Communication menu contains commands related to importing data from / exporting data to instruments.

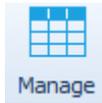
- 
 Get Data : Gets data from instrument.
- 
 Send Data : Sends data to instrument.
- 
 Get instrument info : Basic information of the instrument (Name, Manufacturer, Type of instrument, Serial number, HW version, FW version, Calibration date, etc.)

## Reports menu

- 
 Create :

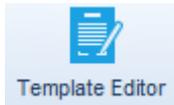
**Create Report** - Opens wizard for creating new report.

**Create from Template** - Opens a Report template file (\*.rtmpl).



- **Manage** : Manages existing reports.

## Tools menu



- **Template Editor** : Manages templates of reports.



- **Print Results** : Print results.



- **Auto test Editor** : Tool for programming Auto tests. Refer to document *Programming Auto tests on MTLINK* or Instruction Manuals of instruments for more information.

## Other



- **Merge** : Combines two MTLINK document files into single file with combined structure items and measurements.



- **Export** :



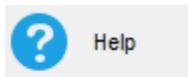
- **Export to Excel** - Exports data to Excel file.



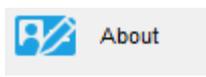
- **Export to XML** - Exports data to XML file.



- **Settings** : Opens menu for setting some general settings and managing licences.



- **Help** : Opens MTLINK Help menu.



- **About** : MTLINK version information and Check for software updates option.



- **Exit** : Exits application.



- **Work scope** : Selection regarding the type of work (particular test settings, structure elements, measurements and other parameters).

## 6.2.2 Structure Tab



Figure 6.9: Structure tab

### Edit menu

The Edit menu contains commands related to data editing, copy/paste operations (similar to other Windows applications), and other common data operations. These commands are also available in the Tree view explorer's context menu, which is displayed using a mouse right-click. Depending on the node selected, different menu items which apply to that type of node will be displayed.

-  **Copy** : Copies the selected data.
-  **Paste as new** : Pastes the selected data - structure (and empty measurements) into the currently live view. This item will be disabled if no data was copied, or if the current selection does not allow pasting. For example, if a node is copied using the Copy command, then this menu item will be available only when the user selects a destination site or location node.
-  **Paste as same** : Pastes the selected data - structure (and measurements) into the currently live view. This item will be disabled if no data was copied, or if the current selection does not allow pasting. For example, if a node is copied using the Copy command, then this menu item will be available only when the user selects a destination site or location node.
-  **Delete** : Deletes the currently selected data.

### Structure items menu

The Structure tab contains sets of entries which are dependent on chosen Work scope. The Desired entry will appear in tree view as a child node of the selected parent when clicking on it. Which items are currently available (❶) depends on the node selected in tree view (❷). Active items are highlighted and passive items are shadowed. (❸) shows a different node selected in Tree View and consequently a different set of items is highlighted (❹). Also items in structure depend on the selected **Work scope**. The selection between different scopes of work is not supported in all software versions.

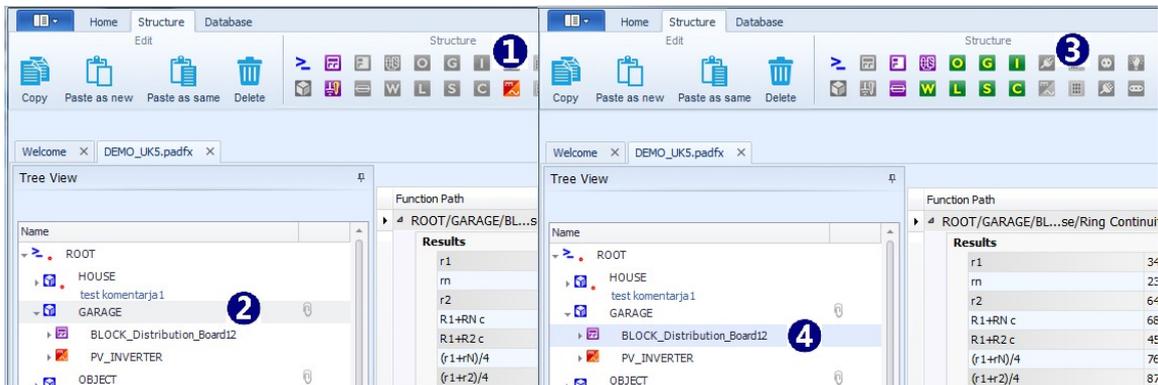


Figure 6.10: Available structure items

## Measurement menu



- : Function button offers list of functions which can be added to a node in Tree View.

### 6.2.3 Database Tab

**Contacts Organizer** enables you to add a list of addresses (Name, Organization, Telephone Number, e-mail address, etc.) for clients, location and responsible person. This list helps you automatically complete addresses in reports while creating reports. MTLINK creates links to the list and with one click MTLINK will fill all address fields in a report.

#### Edit menu



- **Clear** : Clear selected database list.

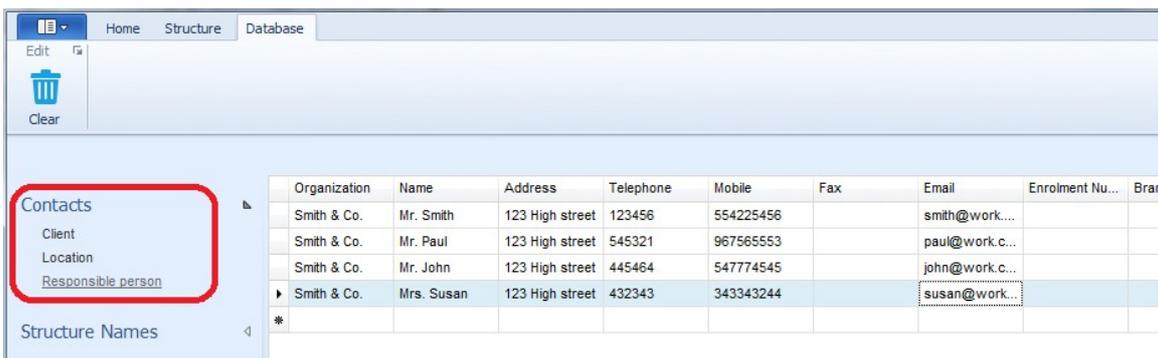


Figure 6.11: Contacts Organizer

**Structure Names** enables editing custom names of structure names.

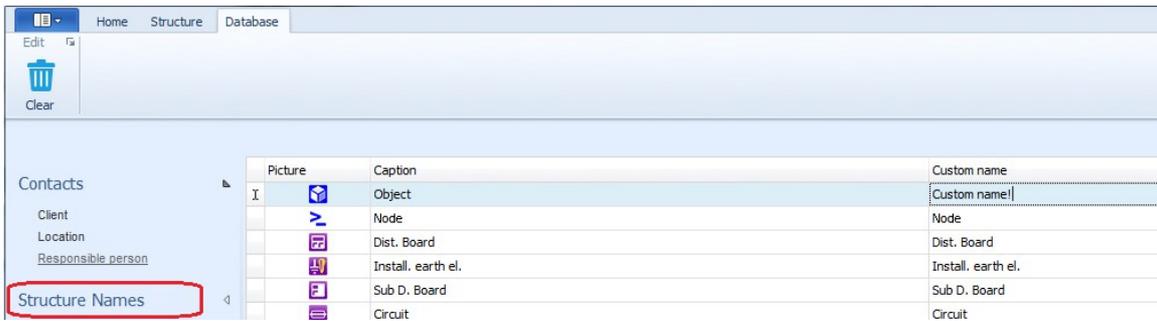


Figure 6.12: Structure Names

## 6.2.4 Settings Menu

The **Settings** menu can be selected in the upper left corner of the window. In Settings it is possible to:

- Set a default path for a project file (❶)
- View and set global settings (general settings, valid for all or a group of measurements) (❷)
- Manage licences (❸)
- Set Printout header
- Select language

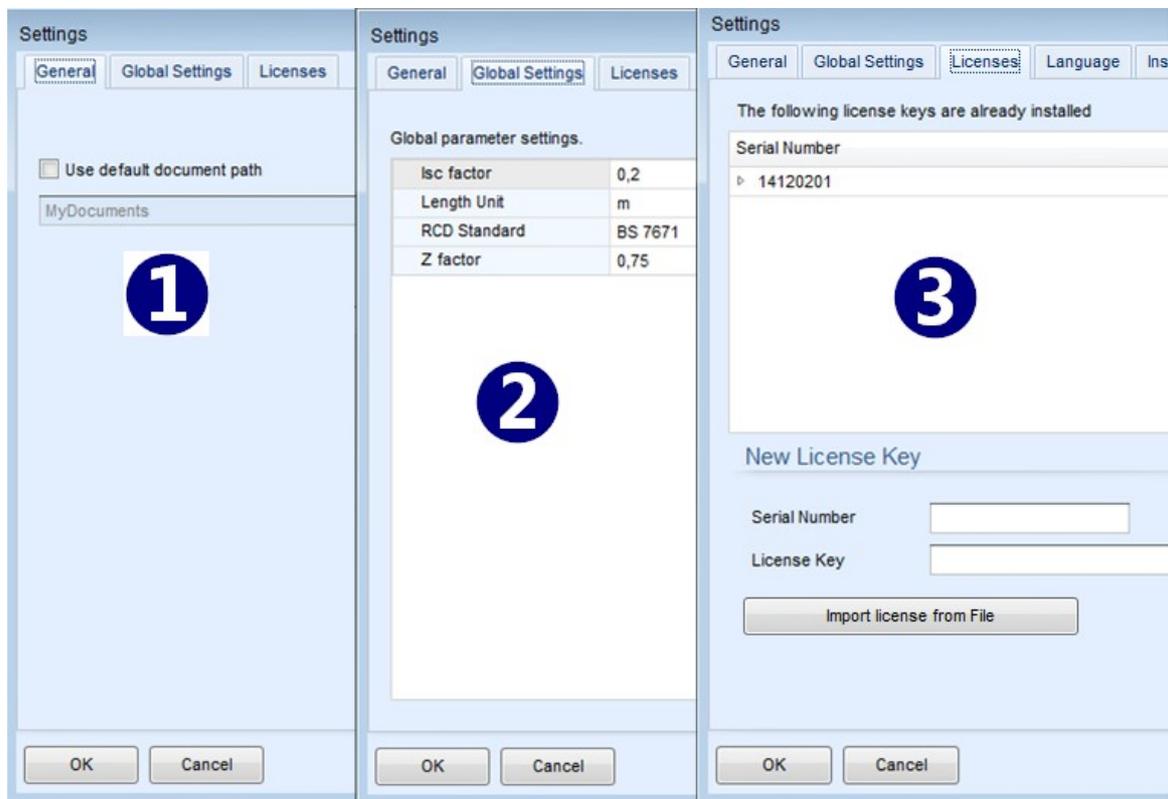


Figure 6.13: Settings Tab

### 6.2.4.1 Licences

Appropriate licences must be entered to activate different functionalities of the software for individual measuring instruments. To activate additional functionalities the instrument serial number and licence key must be imported or manually entered into New Licence Key field. After a valid licence key is entered the instrument will be added to the list of supported measuring instruments with PRO licence.

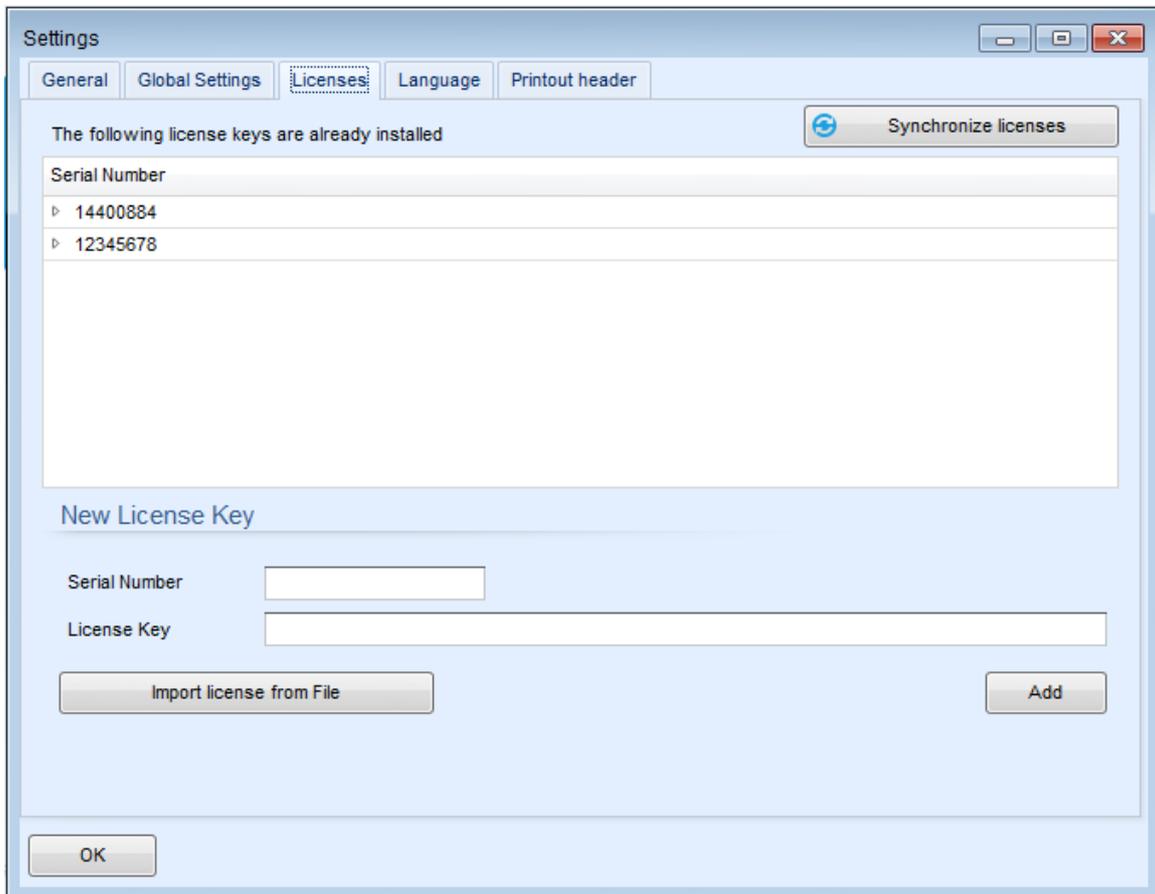


Figure 6.14: Menu for setting licences

### 6.2.4.2 Printout header settings

In this menu **Operator** and **Test site** can be set (selected from the database). These settings will be included in the Results printout header.

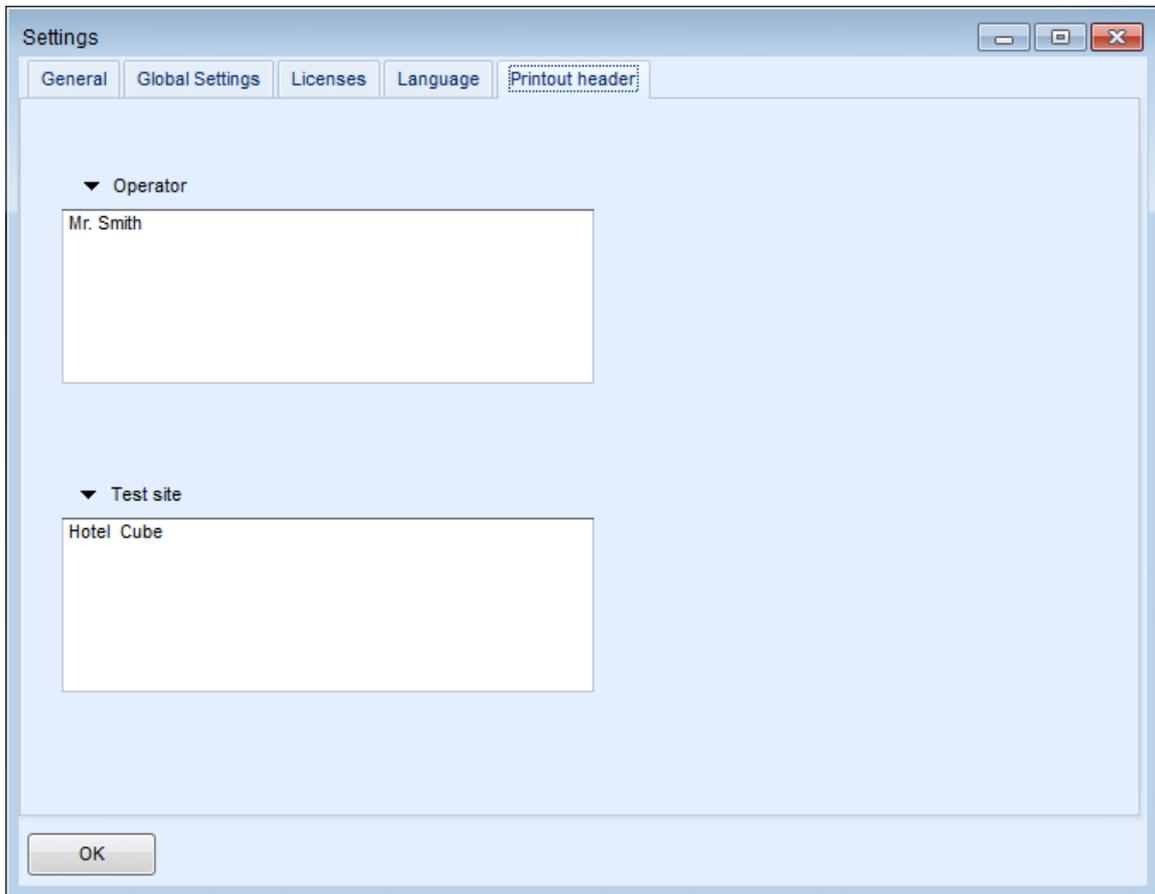


Figure 6.15: Printout header menu

# 7 Creating Structures

## 7.1 Creating Structures

MtLink supports creating a tree structure. When you start a New Document, the default node **NODE** appears in tree view. **NODE** is a parent element in a new tree structure. After **NODE**, currently available elements in the Structure menu can be added.

### 7.1.1 Creating a New Document

To create a new structure click **Home** menu and then **New**. A new structure with name **NODE** will appear. To add a new element in project, navigate to the Structure menu. For example, after **NODE** an **OBJECT** (❶) can be added. After the new element is added its parameters appear on the right side of main window (❷). Parameters are editable and can be fulfilled from database. Also parameters can be added by drop down menus. All elements can be edited with a right click.

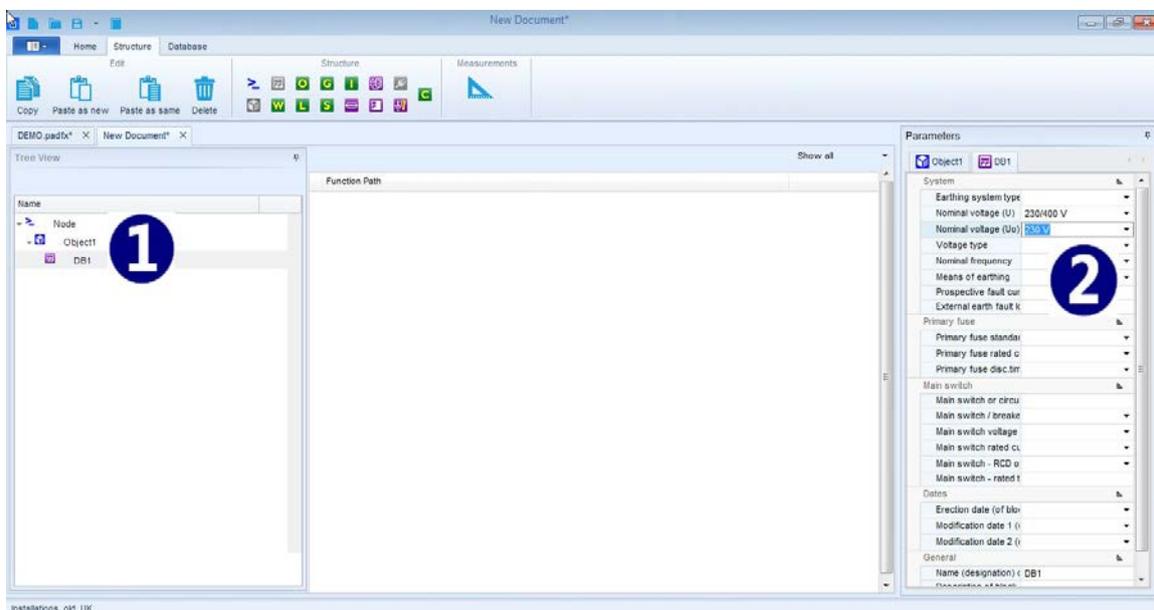


Figure 7.1: Creating Document

### 7.1.2 Building a structure with measurements using Copy&Paste as new and Copy&Paste as same

With help of Copy&Paste commands it is possible to create large structures with measurements in a fast and simple way. The following rules are to be considered:

#### 7.1.2.1 Operations within one file

**Copy&Paste as new** a structure item with sub-items and measurements:

- **Yes** - Paste structure and measurements without results:

The copied structure items will be stored as new structure items with the same parameters. As it is not permitted to have the same measurements inside one document in two or

more places, the copied measurements will be stored as new empty measurements (with same parameters and limits but without results).

- **No** - Paste structure only:

Paste only the structure without measurements: The copied structure items will be stored as new structure items with the same parameters. Measurements will not be copied.

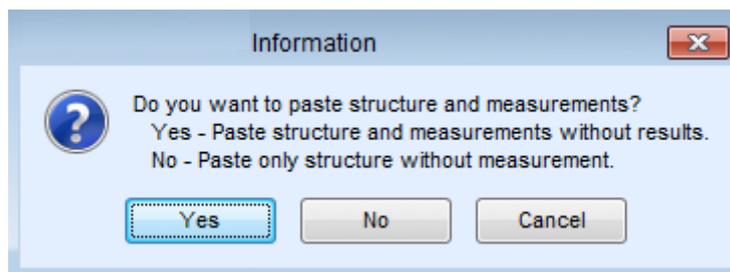
**Copy&Paste as same** a structure item with sub-items and measurements:

- **Yes** - Paste structure and measurements without results:

The copied structure items will be stored as new structure items with the same parameters. As it is not permitted to have the same measurements inside one document in two or more places, the copied measurements will be stored as new empty measurements (with same parameters and limits but without results).

- **No** - Paste structure only:

Paste only structure without measurements: The copied structure items will be stored as a new structure items with the same parameters. Measurements will not be copied.



**Figure 7.2: Example of Paste options**

#### 7.1.2.2 Operations on two files

**Copy&Paste as new** a structure item with sub-items and measurements from one file to another:

- **Yes** - Paste structure and measurements:

The copied structure items will be stored in the target file as new structure items with the same parameters. The copied measurements will be stored as new empty measurements (with same parameters and limits but without results).

- **No** - Paste only structure without measurements:

Paste only structure without measurements: The copied structure items will be stored in the target file as new structure items with the same parameters. Measurements will not be copied.

**Copy&Paste as same** a structure item with sub-items, measurements with results from one file to another:

- Paste structure and measurements with results:

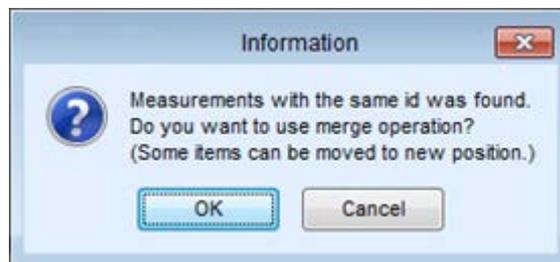
The copied structure items and measurements with different id-s will be stored in the target file as new structure items with the same parameters and results. Functionality is equal to **Copy&Paste as new with Yes selected**.

- **Merge**

If the structure items or measurements with the same id-s already exist in the target file, data will be pasted on the same location in the document file. Measurements with different id-s will be pasted as normally.

Case study: Example of Merge functionality: Hotel with multiple rooms and floors – Test report for a hotel is needed.

Complete structure and measurements of a hotel is loaded on multiple instruments. Each tester measures one floor only. Data from all instruments is downloaded to the MTLINK. Test report, if created now, will include complete structure but only single floor measurements, which is not what is needed. Using Merge function, data from all instruments can be merged into a single document file. Complete test report can now be created.



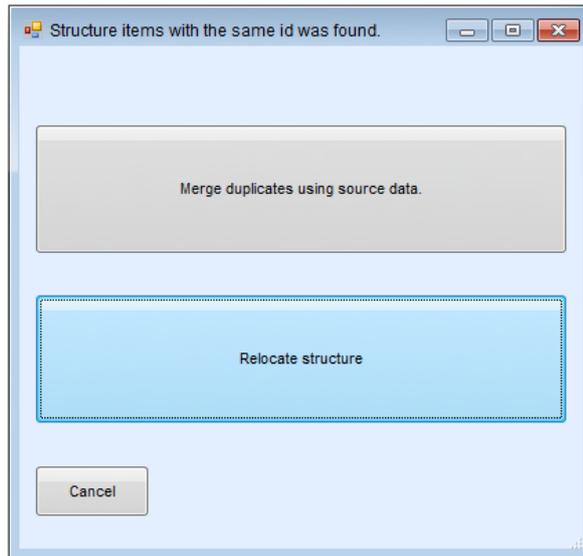
- **Figure 7.3: Merge confirmation window**

- **Relocate**

If one or more structure items with the same id-s exist in the target file, regarding to the source file, source data will be pasted to the target document file as added complete structure.

Case study: Example of Relocate functionality: Hotel with multiple rooms in multiple equal floors – Test report for a hotel is needed.

Same structure covering only a single hotel floor is loaded on multiple instruments. Each tester measures one floor only. Data from all instruments is downloaded to the MTLINK. Test report, if created now, will include only single floor measurements, which is not what is needed. Using Relocate function, data from all floors can be combined into a single document file. Complete test report can now be created.



- **Figure 7.4: Relocate confirmation window**

# 8 Measurements

## 8.1 Measurements

MtLink is capable of capturing measurements from different Chauvin Arnoux machine testers or new measurements can be created with help of the **Measurements** menu (window).

### 8.1.1 Creating a new measurement

When the Measurements command is selected a list with measurements is opened (❶).

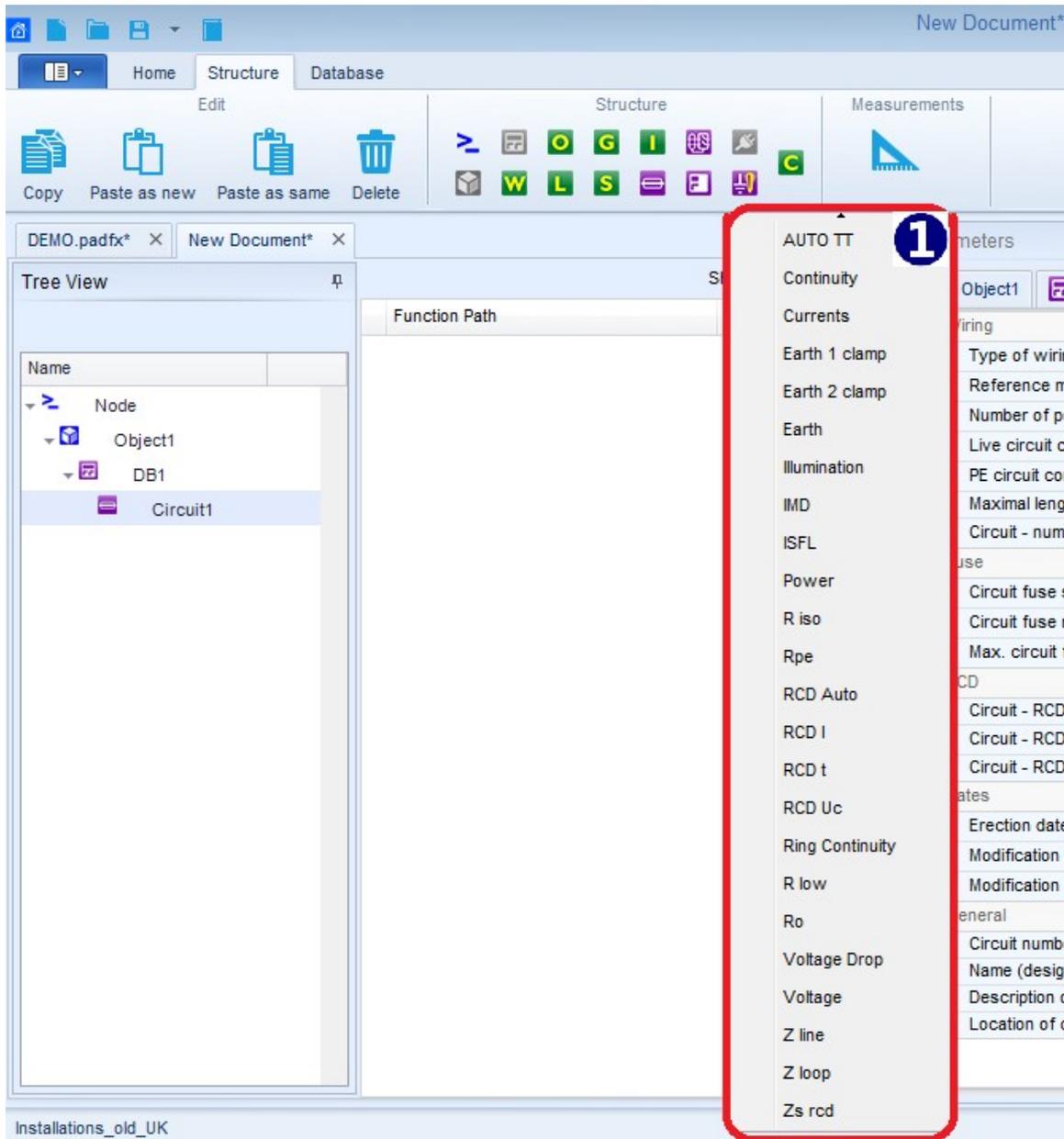
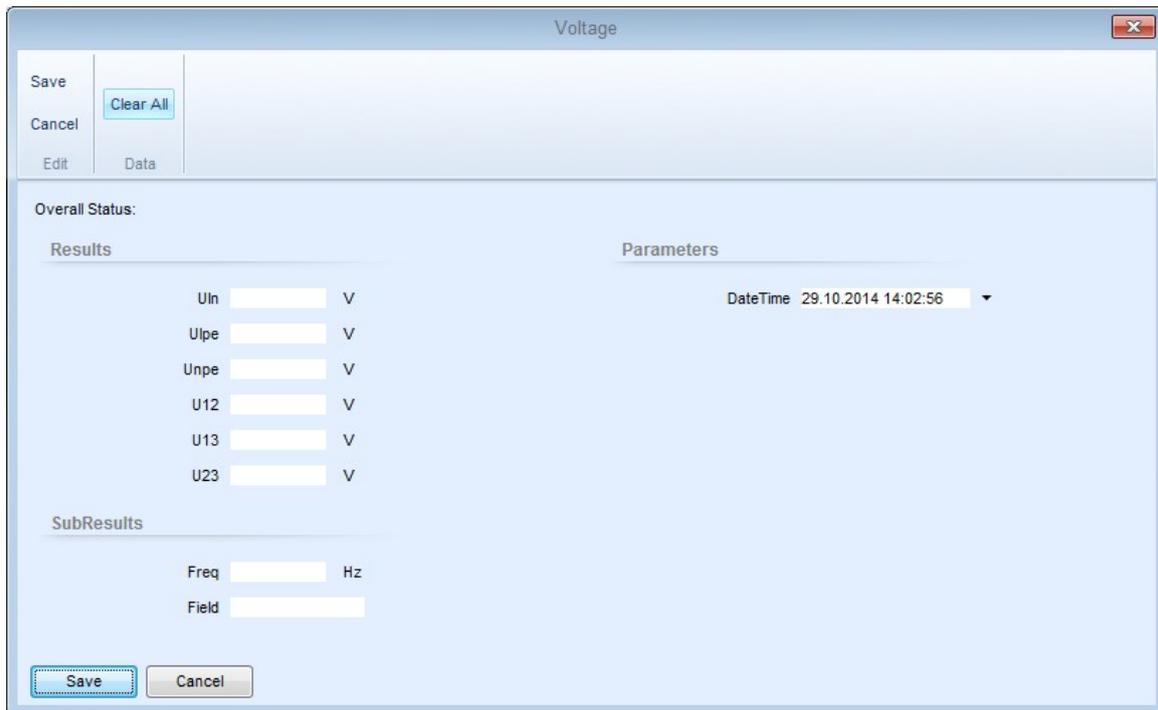


Figure 8.1: Measurements

When measurement is selected, the window with parameters and measurements is opened. Parameters can be set before measurements are carried out. With click on save, all parameters are added to the currently selected structure.



**Figure 8.2: Edit measurement parameters**

Once the parameters and measurements are in a structure they can be sent to an instrument, connected with MTLINK. Parameters can be saved in instrument memory and can be recalled at any time. This feature of MTLINK enables you to make quick and efficient measurements in the field.

### 8.1.2 Status of measurements

Measurements can have four different states. The status icon is shown in Tree view before the name of measurement.

#### Status of measurements

-  : Passed finished measurement with test results.
-  : Failed finished measurement with test results.
-  : Finished measurement with test results and no status.
-  : Empty measurement without test results.

### 8.1.3 Viewing measurements

All measurements appear in a middle window (❶). Beside the name of the measurement is a parameter which designates the status of measurements (❶). Measurements can have status **Pass**, **Fail** or **Nothing** (no status). Statuses of measurements can also be seen beside the element in Tree View (❷) as green dot for Pass, red dot for Fail and blue dot for no status.

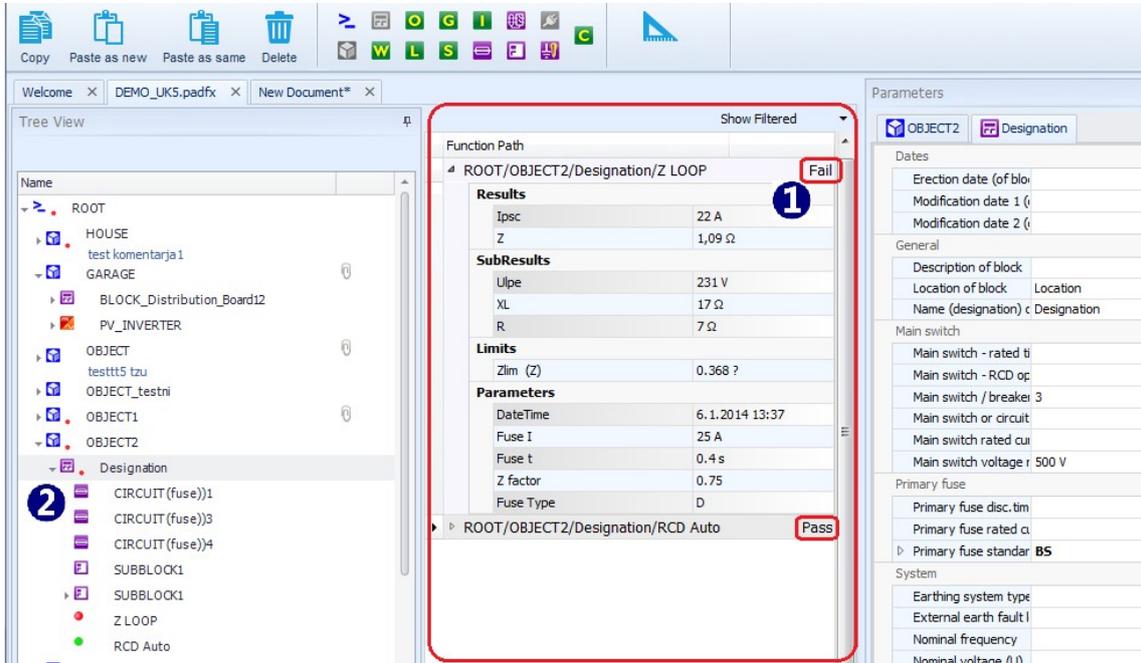
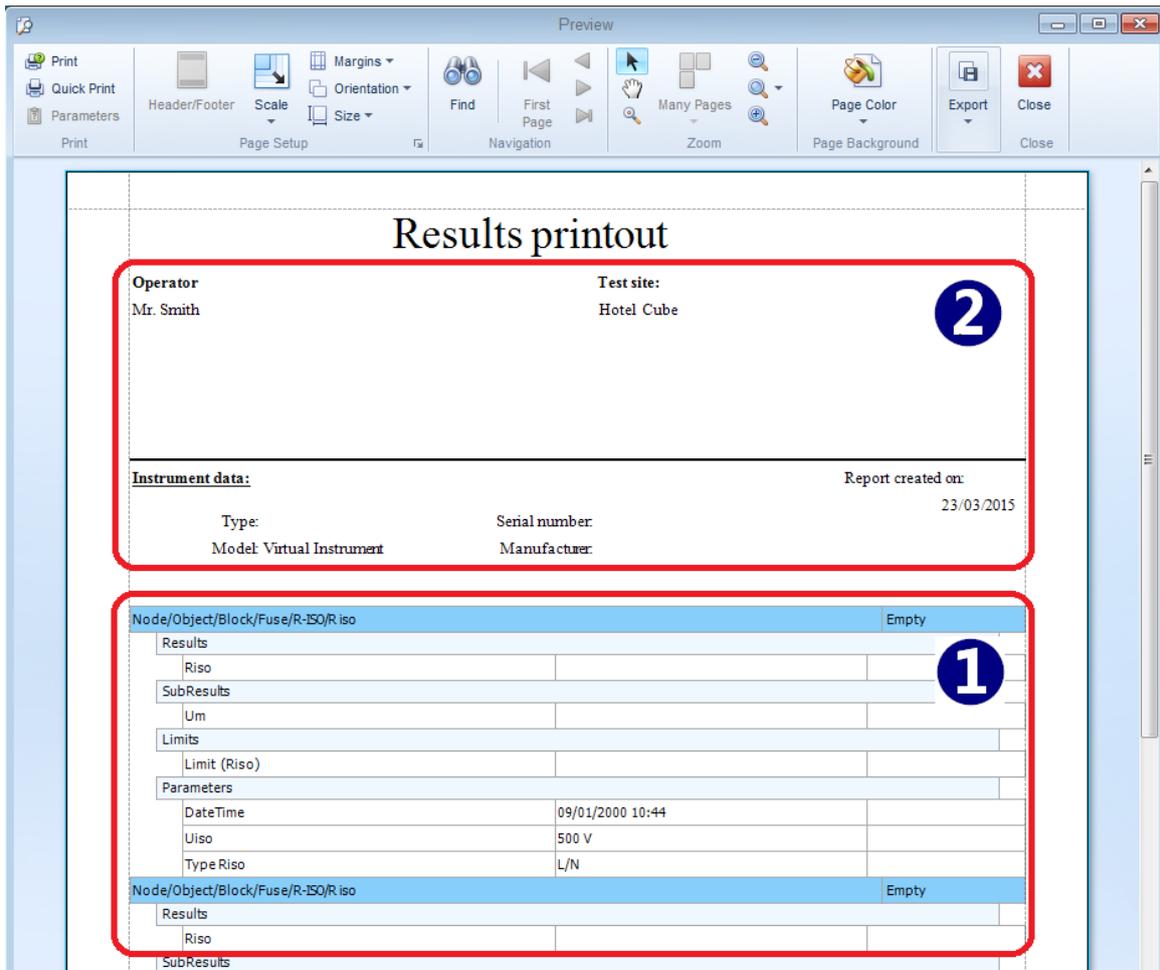


Figure 8.3: Viewing measurements

### 8.1.4 Printing results

Measurement results and parameters (❶) including the header data (Operator, Test site and Instrument data) (❷), can be printed using the  button. All data under the selected structure will be included in the Results printout. If a measurement is selected then only results and parameters of a selected measurement will be printed. Instrument data is automatically set when downloading results while Operator and Test site data should be set manually from the Settings menu.



**Figure 8.4: Printing results**

## 9 Communication with Instruments

### 9.1 Establishing communication with instruments

Communication with instruments is established via RS-232 port, USB or Bluetooth (virtual COM port).

Click on  **Get Data**,  **Send Data** or  **Get instrument info** opens dialog box for setting parameters of communication.

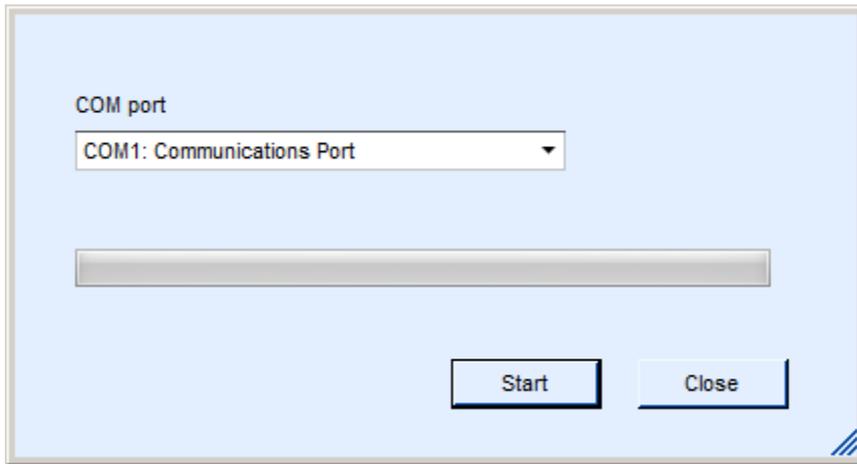


Figure 9.1: Setting communication

#### 9.1.1 Instrument info

Basic information of the instrument (Name, Manufacturer, Type of instrument, Serial number, HW version, FW version, Calibration date, etc.) can be obtained. If no data is displayed, see chapter [Troubleshooting](#).

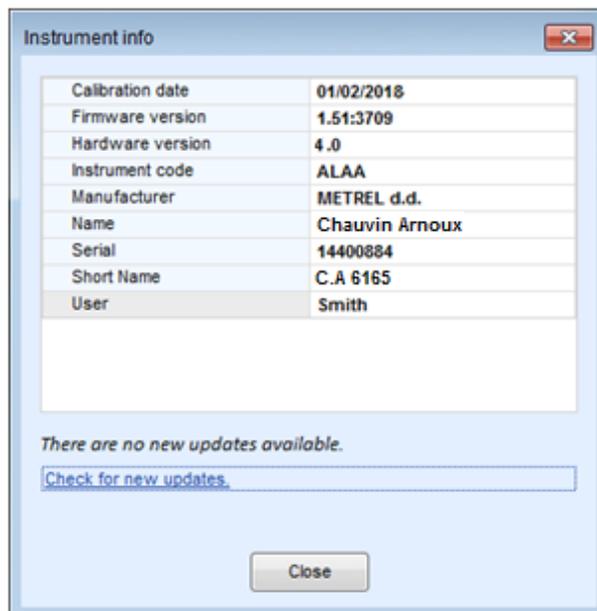


Figure 9.2: Instrument info screen

## 9.1.2 Upgrading the Firmware

With new type of instruments there is a possibility within MTLink to upgrade firmware of your instrument with the latest version. Internet connection is needed. On the Instrument info screen click on **Download** and follow the instructions. Program (FlashMe) will start, which will guide you through the upgrade procedure. For more information if this feature is supported for your instrument see instrument Instruction manual or contact your dealer.

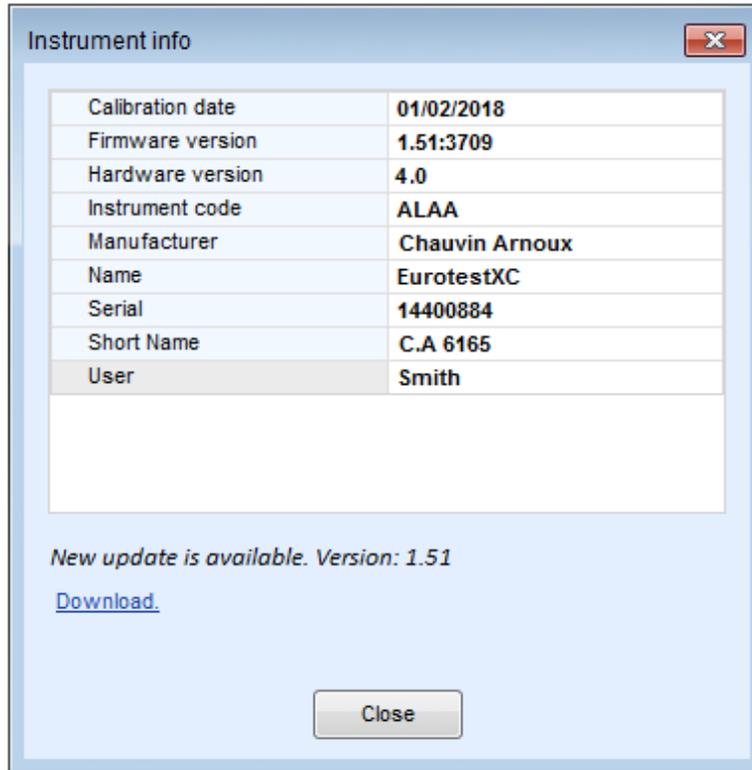


Figure 9.3: Uploading Firmware



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### Note

For detailed set up procedure please see the user manual of the attached instrument on your computer! User manuals can be downloaded from our website [www.chauvin-arnoux.com](http://www.chauvin-arnoux.com)

# 10 Creating Reports

## 10.1 Creating Reports

MTLink supports comprehensive test reports that consist of inspection pages and test result pages. Reports can be created with the report wizard in the Reports menu. Report wizard is step-by-step tool for completing final report in a "what you see is what you get" manner. Each page of the report is shown with click on Next button to navigate. On pages some fields are filled in advance with measurements and other fields are filled manually. Fields which must contain addresses and dates have drop down menus with pre-stored addresses in the Database Tab or calendar for dates.

### 10.1.1 Creating Reports Step by Step

#### 10.1.1.1 Select Report Format

Select the element in TreeView for which you want to create a report. After clicking on Create Report button, MTLINK opens the report selector dialog box, shown in the Figure below. User can select pre-prepared reports.

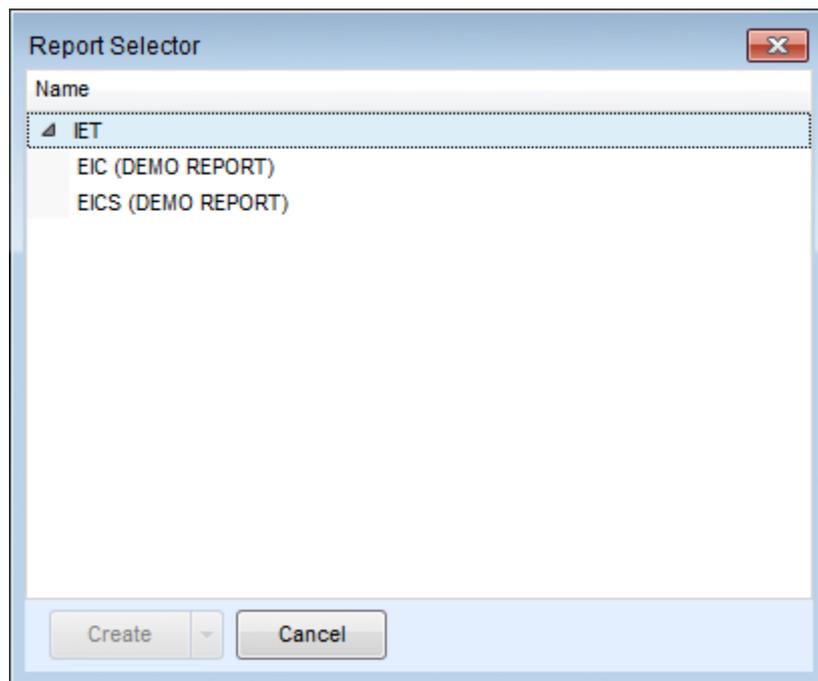


Figure 10.1: Report selector box

#### 10.1.1.2 Report Wizard Welcome Screen

When the user clicks on **Create** button the report wizard screen is displayed. On top of the window are standard menus for navigating to pages, saving and exporting reports. When you click the Page tab, you can navigate directly to any desired page of a report.

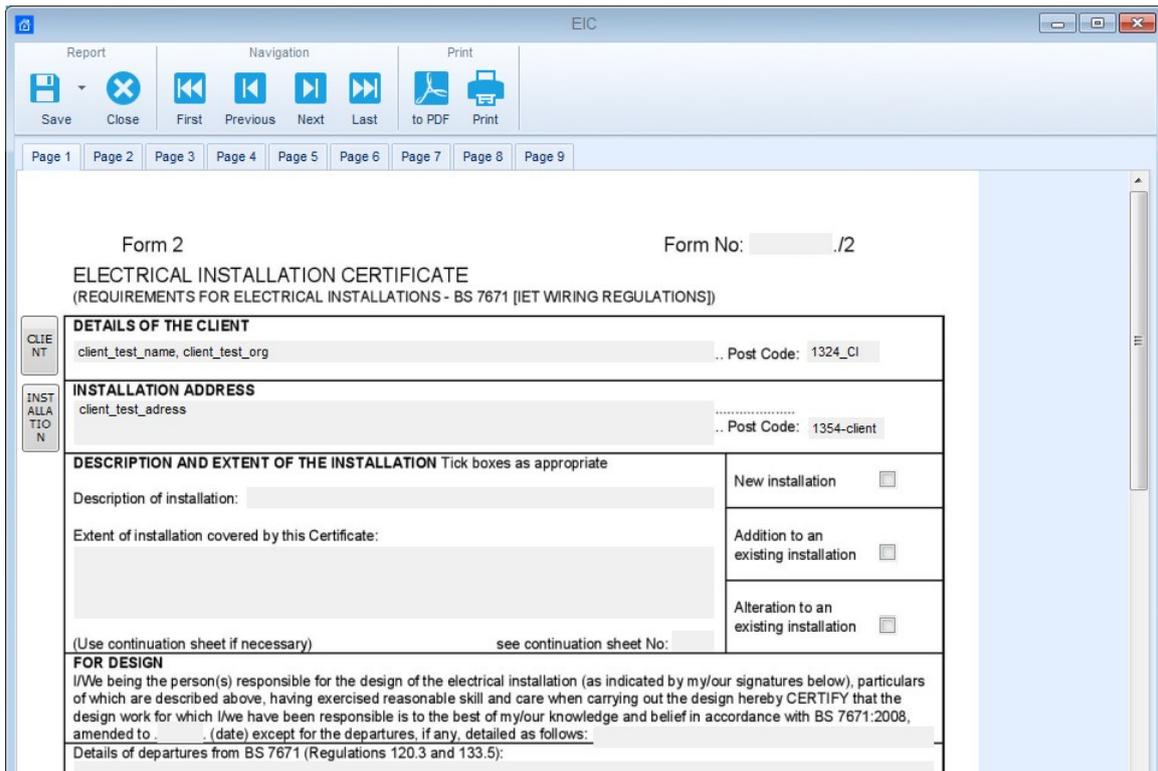


Figure 10.2: Report Wizard Lookout

### 10.1.1.3 Check and Fill Report Pages

All pages are like an original report and they are shown in "what you see is what you get" style. The user can click on every field on the page and modify it. At every step you can go one page back or one page forward. The following figure shows how to pick a date from calendar (❶) and select address from database (❷).

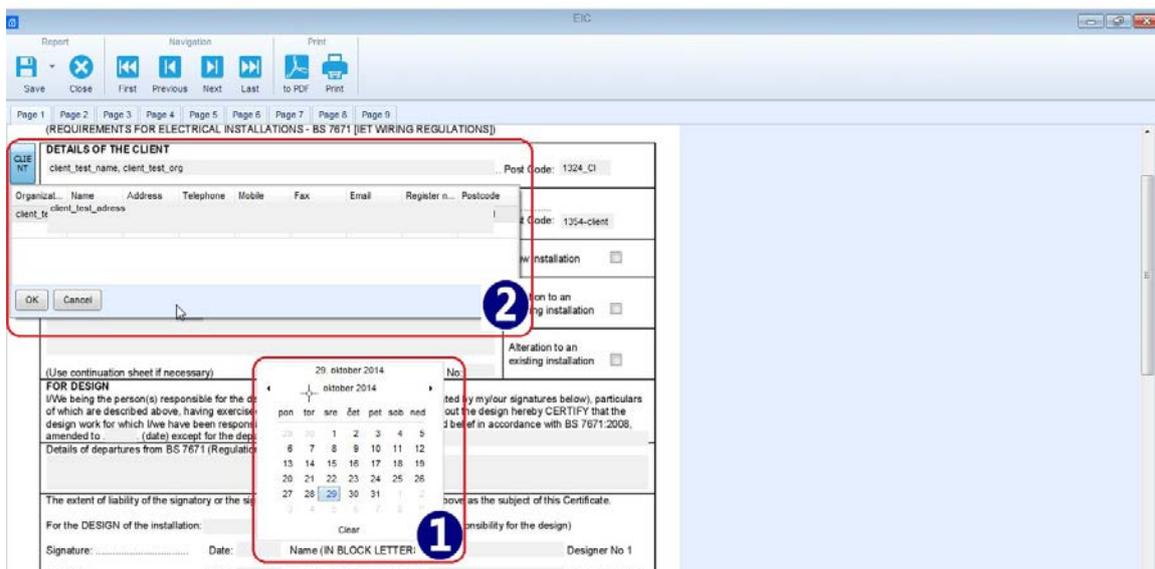


Figure 10.3: Pick a date from calendar and select address from database example

Measurements downloaded from Chauvin Arnoux machine testers (❸) and ticks (❹) are automatically filled in the table.

EIC

Report      Navigation      Print

Save   Close   First   Previous   Next   Last   to PDF   Print

Page 1   Page 2   Page 3   Page 4   Page 5   Page 6   Page 7   Page 8   Page 9

DB reference no Location First floor Zs at DB (Ω) Ipr at DB (kA) Correct supply polarity confirmed <input type="checkbox"/> Phase sequence confirmed (where appropriate) <input type="checkbox"/>		Details of circuits and/or installed equipment vulnerable to damage when testing										Details of test instruments used (state serial and/or asset numbers) Continuity Insulation resistance Earth fault loop impedance RCD Earth electrode resistance																																																																																																																																																																																								
Tested by: Name (Capitals) _____ Signature _____ Date _____		<table border="1"> <thead> <tr> <th colspan="2">Circuit details</th> <th colspan="10">Test results</th> <th rowspan="2">Remarks (continue on a separate sheet if necessary)</th> </tr> <tr> <th rowspan="2">Circuit number</th> <th rowspan="2">Circuit Description</th> <th colspan="4">Overcurrent device</th> <th colspan="4">Conductor details</th> <th>Ring final circuit continuity (Ω)</th> <th>Continuity (Ω) (R1+R2) or R2</th> <th>Insulation Resistance (MΩ)</th> <th>Polarity</th> <th>Zs (Ω)</th> <th>RCD (ms)</th> </tr> <tr> <th>BS (EN)</th> <th>type</th> <th>rating (A)</th> <th>breaking capacity (kA)</th> <th>Reference Method</th> <th>Live (mm²)</th> <th>cpc (mm²)</th> <th>r1 (line)</th> <th>r2 (neutral)</th> <th>r2 (cpc)</th> <th>(R1 + R2)*</th> <th>R2</th> <th>Live-Live</th> <th>Live-E</th> <th></th> <th>Zs @ 1.0s</th> <th>@ 50ms</th> <th>Test button / functionality</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Circuit1 socket A1 socket A2 fixed connection A3</td> <td>BS 88-2</td> <td>10</td> <td>C</td> <td>2.5</td> <td>2.5</td> <td>1.59</td> <td>1.57</td> <td>1.49</td> <td>0.45</td> <td>0.15</td> <td>761</td> <td>625</td> <td><input checked="" type="checkbox"/></td> <td>0.46</td> <td>36</td> <td>39</td> <td></td> </tr> <tr> <td>2</td> <td>Circuit2</td> <td>BS 88-2</td> <td>10</td> <td>C</td> <td>2.5</td> <td>4</td> <td>1.59</td> <td>1.57</td> <td>1.49</td> <td>0.45</td> <td>0.15</td> <td>761</td> <td>1.5</td> <td><input checked="" type="checkbox"/></td> <td>0.46</td> <td>36</td> <td>39</td> <td></td> </tr> <tr> <td>3</td> <td>Circuit3</td> <td>BS 88-2</td> <td>10</td> <td>C</td> <td>2.5</td> <td>4</td> <td>1.59</td> <td>1.57</td> <td>1.49</td> <td>0.45</td> <td>0.15</td> <td>761</td> <td>625</td> <td><input type="checkbox"/></td> <td>0.46</td> <td>36</td> <td>39</td> <td></td> </tr> <tr> <td>4</td> <td>Circuit4</td> <td>BS 88-2</td> <td>10</td> <td>C</td> <td>2.5</td> <td>4</td> <td>1.59</td> <td>1.57</td> <td>1.49</td> <td>0.45</td> <td>0.15</td> <td>761</td> <td>625</td> <td><input type="checkbox"/></td> <td>0.46</td> <td>36</td> <td>39</td> <td></td> </tr> <tr> <td>5</td> <td>Circuit5</td> <td>BS 88-2</td> <td>10</td> <td>C</td> <td>2.5</td> <td>4</td> <td>1.59</td> <td>1.57</td> <td>1.49</td> <td>0.45</td> <td>0.15</td> <td>761</td> <td>625</td> <td><input type="checkbox"/></td> <td>0.46</td> <td>36</td> <td>39</td> <td></td> </tr> <tr> <td>6</td> <td>Circuit6</td> <td>BS 88-2</td> <td>10</td> <td>C</td> <td>2.5</td> <td>4</td> <td>1.59</td> <td>1.57</td> <td>1.49</td> <td>0.45</td> <td>0.15</td> <td>761</td> <td>625</td> <td><input type="checkbox"/></td> <td>0.46</td> <td>36</td> <td>39</td> <td></td> </tr> <tr> <td>7</td> <td>Circuit7</td> <td>BS 88-2</td> <td>10</td> <td>C</td> <td>2.5</td> <td>4</td> <td>1.59</td> <td>1.57</td> <td>1.49</td> <td>0.45</td> <td>0.15</td> <td>761</td> <td>625</td> <td><input type="checkbox"/></td> <td>0.46</td> <td>36</td> <td>39</td> <td></td> </tr> </tbody> </table>															Circuit details		Test results										Remarks (continue on a separate sheet if necessary)	Circuit number	Circuit Description	Overcurrent device				Conductor details				Ring final circuit continuity (Ω)	Continuity (Ω) (R1+R2) or R2	Insulation Resistance (MΩ)	Polarity	Zs (Ω)	RCD (ms)	BS (EN)	type	rating (A)	breaking capacity (kA)	Reference Method	Live (mm²)	cpc (mm²)	r1 (line)	r2 (neutral)	r2 (cpc)	(R1 + R2)*	R2	Live-Live	Live-E		Zs @ 1.0s	@ 50ms	Test button / functionality	1	Circuit1 socket A1 socket A2 fixed connection A3	BS 88-2	10	C	2.5	2.5	1.59	1.57	1.49	0.45	0.15	761	625	<input checked="" type="checkbox"/>	0.46	36	39		2	Circuit2	BS 88-2	10	C	2.5	4	1.59	1.57	1.49	0.45	0.15	761	1.5	<input checked="" type="checkbox"/>	0.46	36	39		3	Circuit3	BS 88-2	10	C	2.5	4	1.59	1.57	1.49	0.45	0.15	761	625	<input type="checkbox"/>	0.46	36	39		4	Circuit4	BS 88-2	10	C	2.5	4	1.59	1.57	1.49	0.45	0.15	761	625	<input type="checkbox"/>	0.46	36	39		5	Circuit5	BS 88-2	10	C	2.5	4	1.59	1.57	1.49	0.45	0.15	761	625	<input type="checkbox"/>	0.46	36	39		6	Circuit6	BS 88-2	10	C	2.5	4	1.59	1.57	1.49	0.45	0.15	761	625	<input type="checkbox"/>	0.46	36	39		7	Circuit7	BS 88-2	10	C	2.5	4	1.59	1.57	1.49	0.45	0.15	761	625	<input type="checkbox"/>	0.46	36	39	
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7	Circuit7	BS 88-2	10	C	2.5	4	1.59	1.57	1.49	0.45	0.15	761	625	<input type="checkbox"/>	0.46	36	39																																																																																																																																																																																			

Figure 10.4: Measurements with results are automatically filled in the report

### 10.1.1.4 Exporting or printing final report

After completing all pages the user can chose the preferred output format of the final report. These options are available:

-  **Print** : Printing the report
-  **to PDF** : Saving the report as "\*.pdf" file
-  **Save** : **Save, Save as** - Saving the report into a project file under the same or a new name
-  **Save** : **Save as Template** - Saving the report as a template form



#### Note

Printing the report directly to a printer may not work for some older models of printer. In which case choose print to pdf. A pdf version will be created and can be printed using Adobe® Acrobat reader®, available from <http://get.adobe.com/uk/reader>.

# 11 Manage Reports

## 11.1 Manage Reports

All previously created and saved reports can be managed via Manage Reports menu which opens a list of existing reports in the Project file. Each report can be opened for editing, deleted or re-created (1).

-  : Delete Report
-  : Open Report
-  : Re-create Report (Update with new data from a file)
-  : Refresh list of existing Reports

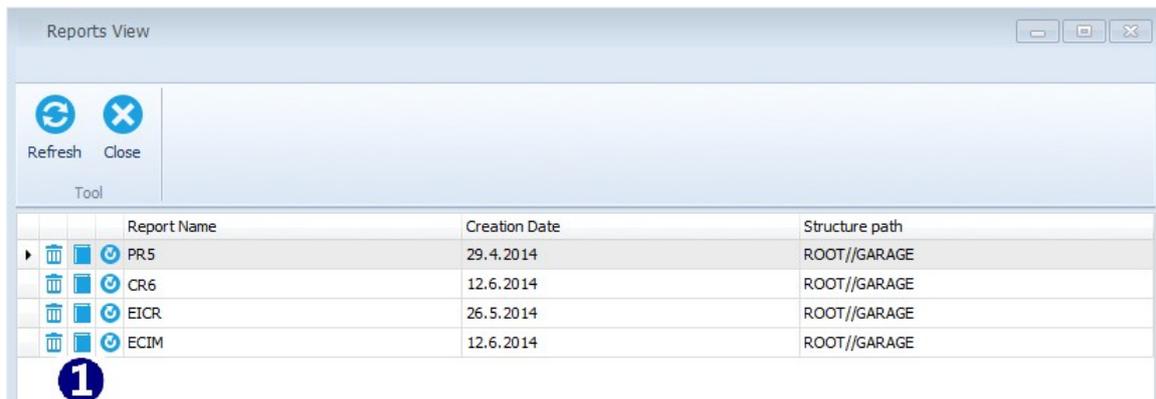
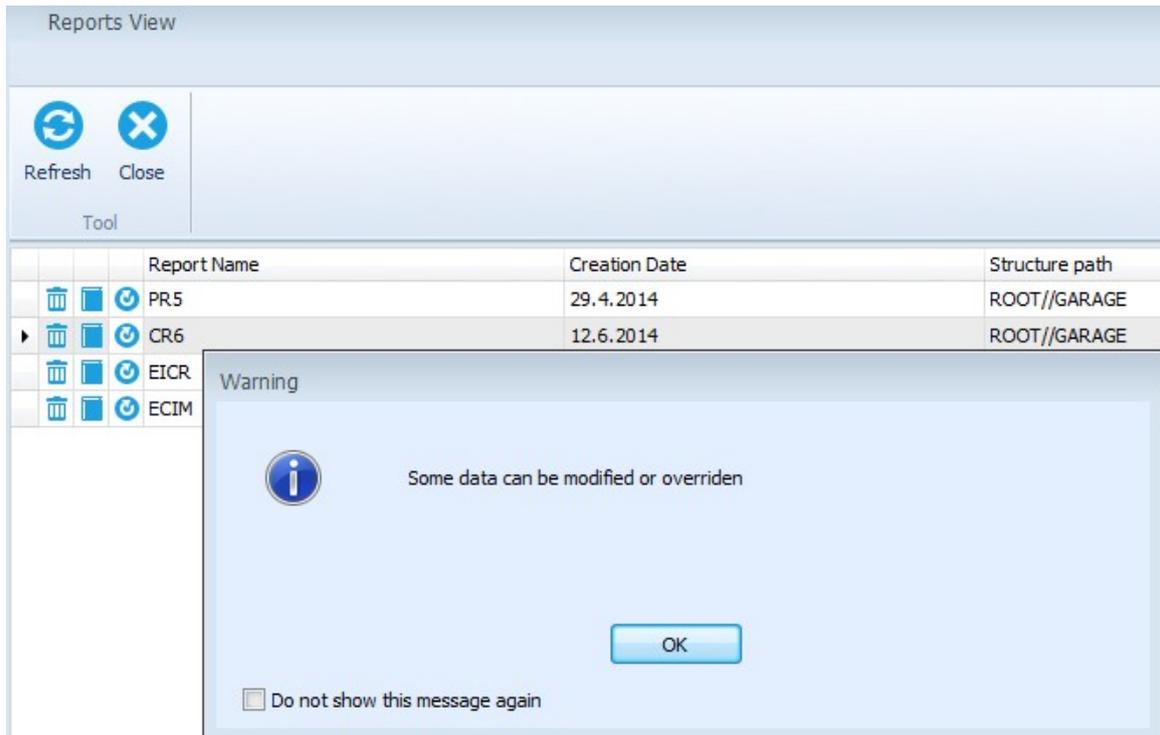


Figure 11.1: Manage reports

## 11.2 Re-create Reports

All existing or saved reports can be re-created via Re-create button  . Re-creation of report updates the selected report with new data from a file. All earlier data in the report that were not updated remain unchanged.



**Figure 11.2: Re-create reports**

# 12 Report Templates

## 12.1 Editing Report Templates

Reports can be saved as templates (".rtmpl" file). Report templates can be used in combination with different files (Projects). Template Editor command opens a list of existing template files. Opened template file can be edited and saved or saved as new templates.

The screenshot shows a software window titled 'EIC' with a 'Report' tab. The window contains a form for 'Form 2 ELECTRICAL INSTALLATION CERTIFICATE (REQUIREMENTS FOR ELECTRICAL INSTALLATIONS - BS 7671 [IET WIRING REGULATIONS])'. The form includes sections for 'DETAILS OF THE CLIENT', 'INSTALLATION ADDRESS', 'DESCRIPTION AND EXTENT OF THE INSTALLATION', and 'FOR DESIGN'. The 'DESCRIPTION AND EXTENT OF THE INSTALLATION' section has three checkboxes: 'New installation', 'Addition to an existing installation', and 'Alteration to an existing installation'. The 'FOR DESIGN' section contains a paragraph of text and a field for 'Details of departures from BS 7671 (Regulations 120.3 and 133.5)'. The window also features a navigation bar with 'Save', 'Close', 'First', 'Previous', 'Next', and 'Last' buttons, and a page indicator showing 'Page 1' through 'Page 5'.

Figure 12.1: Template Editor

## 12.2 Using Report Templates

Saved templates can be used with the **Create from template** option in Create Reports (Main tab). Selected report from templates will be updated with new data from a file. All previous data in the template that were not updated remain unchanged.

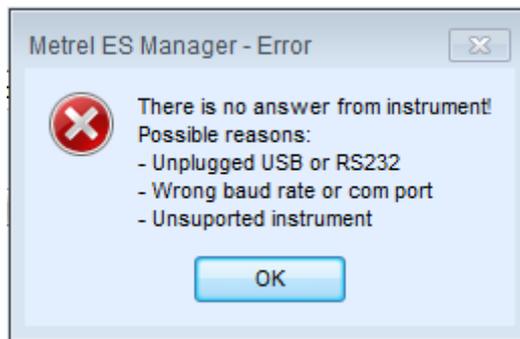
# 13 Troubleshooting

## 13.1 Introduction to troubleshooting

This chapter contains information that might be helpful if you encounter problems while working with MTLINK. If you don't find the help required to troubleshoot your problems, you can contact us directly..

Your comments will help us improve our product and update the manuals with any necessary information.

## 13.2 Instrument connection troubleshooting



**Figure 13.1: Instrument connection error message**

If the instrument settings are configured correctly, and the communication still does not work, please check the following:

- Make sure that the cable is not broken and that the connectors are inserted properly. If you have another device which can be connected using the same cable, consider testing the cable using that device to make sure that it works.
- Make sure that you close all other applications that might be using the port. You can also try restarting Windows to make sure that all such applications are closed.
- If none of this helps, there might be a problem with the device driver for the port you are using. You could try to reinstall or repair MTLINK to make sure that your USB drivers are up to date.
- If using Bluetooth communication make sure that Bluetooth is paired and correct virtual COM port is selected. If communication cannot be established, initialize Bluetooth module on the instrument (see Instruction manual of instrument for details). Also consider limitations regarding communication range.



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