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These operating instructions describe the software version 01.48.00.

# 1 Applications

## Downloading the Software

The most up-to-date version of ETC report generating software can be downloaded free of charge from the **mygmc** page of our website as a ZIP file, if you have registered your test instrument: <http://www.gossenmetrawatt.com>

→ Products → Software → Software for Testers  
→ Report Software without Database → ETC → [myGMC](#)

## Supported test instruments:

- **PROFITEST MASTER series:**
  - PROFITEST MBASE\*, PROFITEST MTECH\*
  - PROFITEST INTRO, PROFITEST MBASE+, PROFITEST MTECH+, PROFITEST MPRO, PROFITEST MXTRA, PROFITEST EDITION\*
  - SECULIFE IP
- PROFITEST 204+
- METRISO G1000+\*, METRISO XTRA
- METRISO 5000D-PI\*, METRISO PRIME+
- SECULIFE SR
- SECUTEST BASE(10), SECUTEST PRO
- SECUTEST SIII+, SECUTEST S2N+(10), SECULIFE ST
- SECUTEST (P)SI, SECUTEST SI+
- MINITEST PRO, MINITEST (3P) MASTER
- SECUSTORE

\* discontinued

ETC offers a wide variety of support options for data acquisition and management, report generating and the control of test sequences (see overview in section 8.1).

## PROFITEST MASTER

- The software acquires all important data for reports in accordance with DIN VDE 0100, part 600.
- Test reports (ZVEH) can be generated automatically, and distribution structures with electrical circuit and RCD data can be individually defined.
- Structures can be created, saved to memory and loaded to the test instrument as required.
- The test instrument and the PC can exchange data bidirectionally via USB.
- Data can be exported to Excel, CSV and XML formats.
- Multilingual user interface
- Earth measurement report in preparation
- Report for DIN EN 60204-1 (VDE 0113-1) in preparation
- Test sequences can be created, saved and transferred to the test instrument, as well as downloaded from the test instrument and stored as a backup at a PC.

## PROFITEST 204+ / METRAMACHINE 204/439

- This software makes it possible to receive and transmit machine data along with measured values ...
- ... and allows subsequent report generation per DIN EN 60204-1 (VDE 0113-1).
- Created structures can be saved to memory and their machine data can be loaded to the test instrument.
- The test instrument and the PC can exchange data bidirectionally via a USB – RS 232 adapter, or via RS 232.
- Data can be exported to Excel, CSV and XML formats.

## MINITEST PRO/MASTER, SECULIFE SR and METRISO G1000+/XTRA

- The software copies measured values from the test instruments.
- Report data can be supplemented.
- Limit values can be set.
- Test reports can be saved as PDF files.
- Data can be exported to Excel, CSV and XML formats.
- Multilingual user interface

## SECUTEST Series

- The software copies current test results.
- The software copies test results from internal memory or from the (P) SI module.
- Report data can be supplemented.
- Test reports can be saved as PDF files.
- Data can be exported to Excel, CSV and XML formats.
- SECUTEST BASE(10)/PRO:** Structures set up in the test instrument can be imported to ETC report generating software.
- SECUTEST PRO** (or feature KB01): Structures created in the ETC can be transmitted to the test instrument.

## SECUSTORE Memory Adapter for the SECUTEST Series and the SECULIFE ST

The software copies test reports from the memory adapter and saves them automatically as PDF files.

**An overview of the respective performance features is available in section 8.**



### Attention!

ETC is not capable of simultaneously managing data from several different test instruments. Data read into ETC are deleted when the test instrument is switched. Be sure to save data which has been read in to a file before connecting another test instrument.

# 2 System Requirements

## Operating system, software:

- Microsoft Windows XP SP3, Vista SP1, 7 or 8
- Microsoft .NET Framework 4 Client Profile
- Microsoft Excel as of XP version for export function
- Microsoft Outlook as of XP version for transmission of reports or structures via e-mail
- Acrobat Reader as of version 10 for report previews

## PC hardware:

- See minimum requirements for the respective operating system with regard to processor and RAM.
- VGA monitor with a resolution of at least 1024 x 768 pixels
- Hard disk with at least 200 MB available memory capacity
- Input devices (mouse and keyboard)
- Printer if required
- USB port
- RS 232 port for **SECUTEST...** through S3 and **PROFITEST 204+**, or the Z501L RS 232 – USB adapter
- Internet access in the event that Microsoft components such as .NET have to be installed

# 3 Installing the USB Device Drivers

The USB device drivers have to be installed in order to operate test instruments or a memory adapter (with USB port) at a PC. Suitable IrDa-USB adapters must be used for devices with RS 232 port.

**GMC-I Driver Control** software for installing the USB device drivers can be downloaded from our website:

<http://www.gossenmetrawatt.com>  
→ Products → Software → Software for Testers  
→ Utilities → [Driver Control](#)

Alternatively, you can install the required drivers at the end of the ETC installation routine (see section 4).

## 4 Installing the Report Generating Software and the Device Drivers to the PC using Windows 7 as an Example



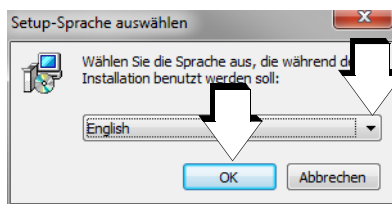
### Attention!

If another version of ETC software has already been installed to your PC, do not uninstall the predecessor version unless you no longer need any stored data, structures and sequences, or have saved them to a separate directory.

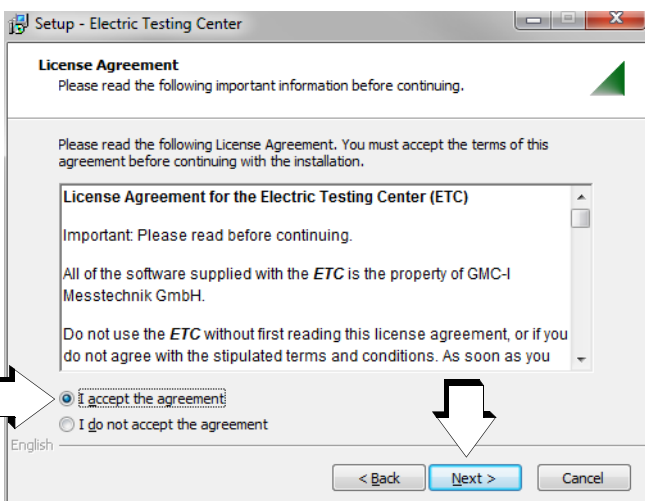
After downloading the ZIP file, it has to be decompressed to a directory (e.g. with WinZip). The setup file then appears in the selected directory.

A wizard guides you through the entire installation process, which is described here using Windows 7 as an example.

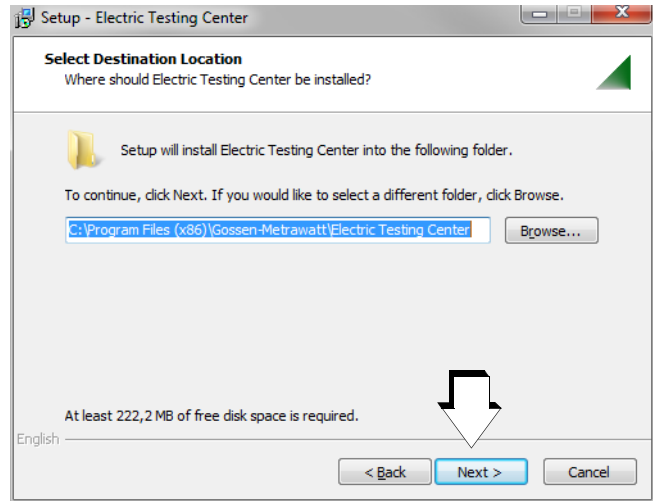
- Double click the **GMC-I\_ETC\_Setup\_Vxx.xx.xx.exe** file in order to start the installation routine.
- Select the desired language for the installation process.



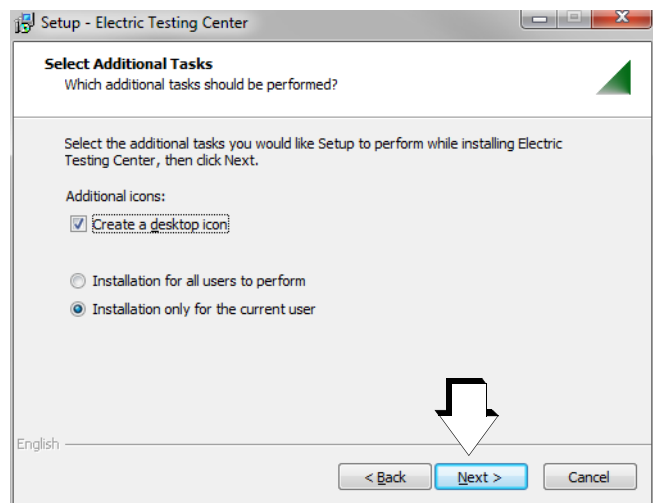
- Follow the instructions, which guide you through the installation process.



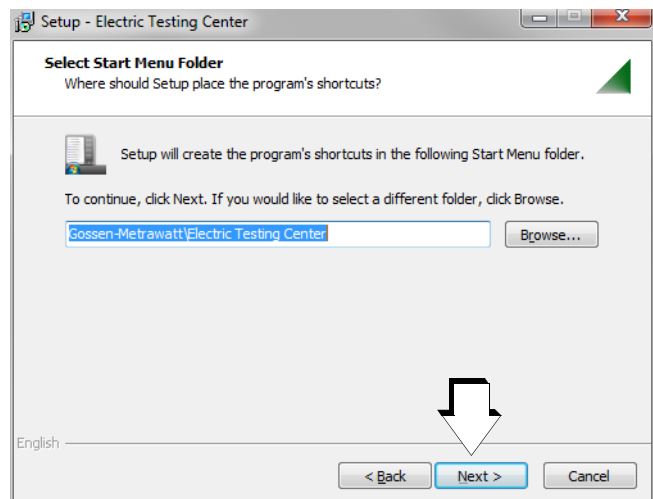
- Accept the license agreement.



- Accept the suggested target directory or select a new one, to which the program will be installed.



- Select additional options which are commonly offered during the installation of Windows programs.



- Accept the suggested start menu folder or select a new one.



### Note

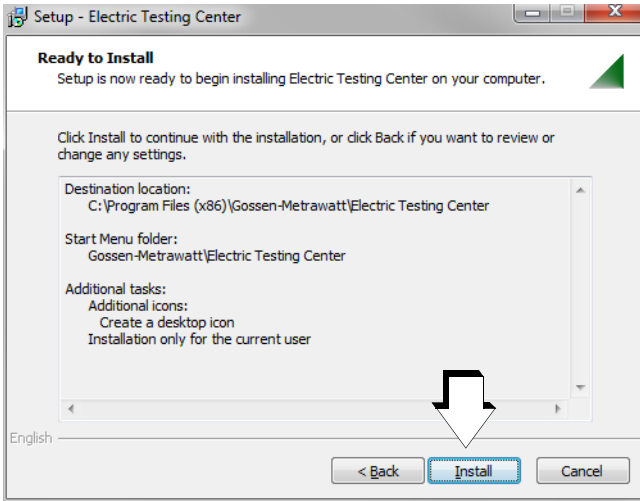
If .NET 4.0 has not yet been installed, a separate window for automatic download and installation of .NET appears before ETC is installed.

## 5 Installing the Report Generating Software and the Device Drivers to the PC using Windows 8 as an Example



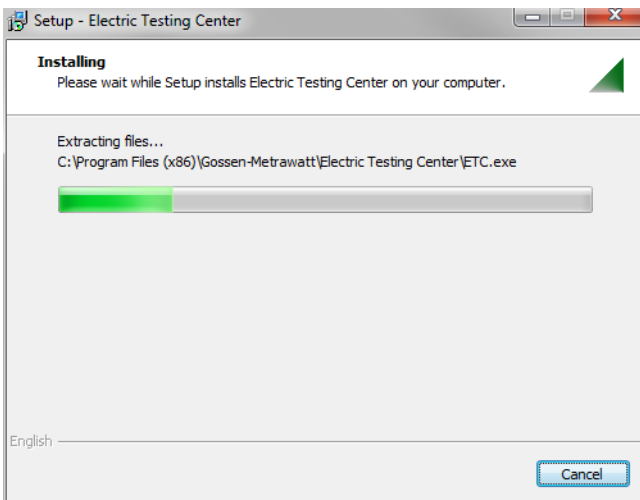
### Attention!

If another version of ETC software has already been installed to your PC, do not uninstall the predecessor version unless you no longer need any stored data, structures and sequences, or have saved them to a separate directory.



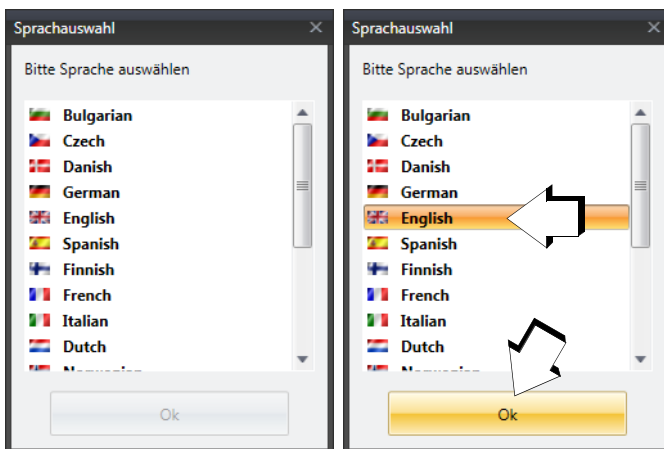
- The installation procedure is started by clicking the Install button.

A green progress bar graph appears while the program is being installed:

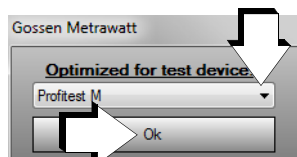


The drivers are then installed in the background.

- After starting ETC software for the first time, you're prompted to select the desired language for the user interface.



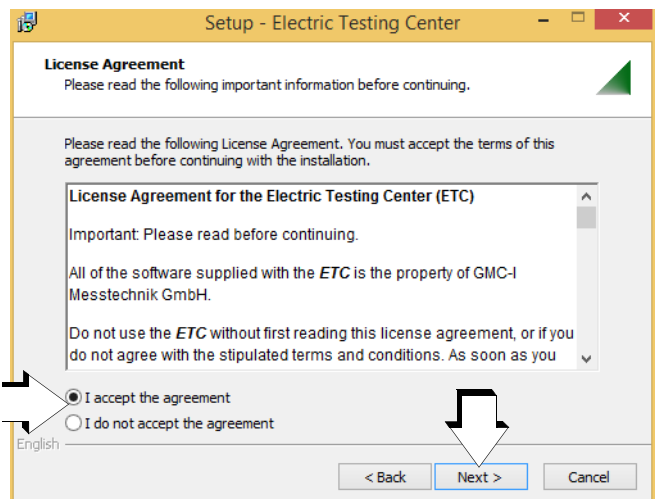
- Then you can select the test instrument which will communicate with ETC.



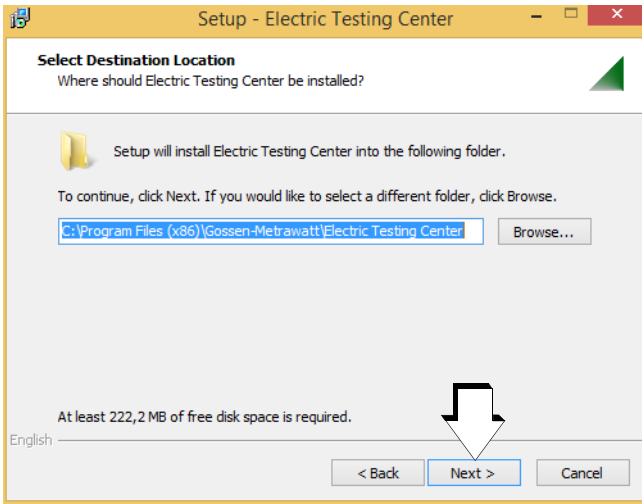
After downloading the ZIP file, it has to be decompressed to a directory (e.g. with WinZip). The setup file then appears in the selected directory.

A wizard guides you through the entire installation process, which is described here using Windows 8 as an example.

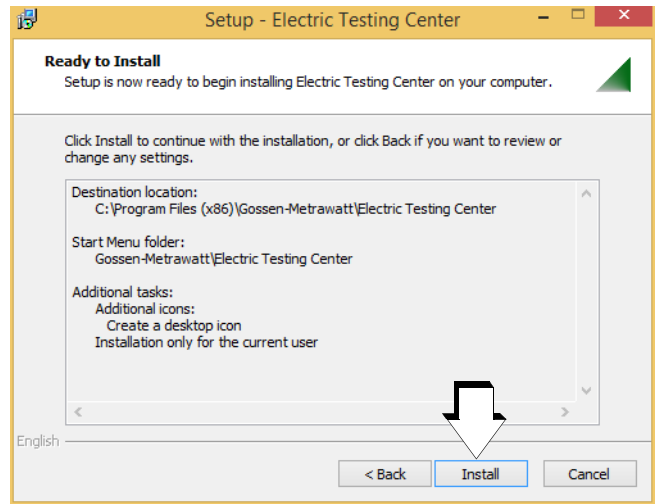
- Double click the **GMC-I\_ETC\_Setup\_Vxx.xx.xx.exe** file in order to start the installation routine.
- Select the desired language for the installation process.
- Follow the instructions, which guide you through the installation process.



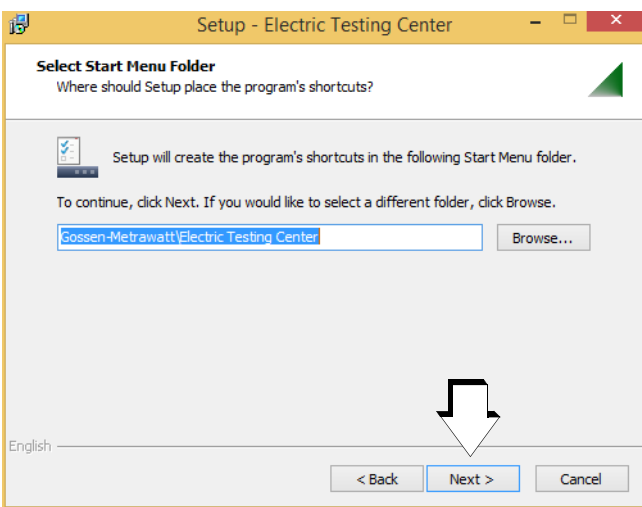
- Accept the license agreement.



- ⇒ Accept the suggested target directory or select a new one, to which the program will be installed.

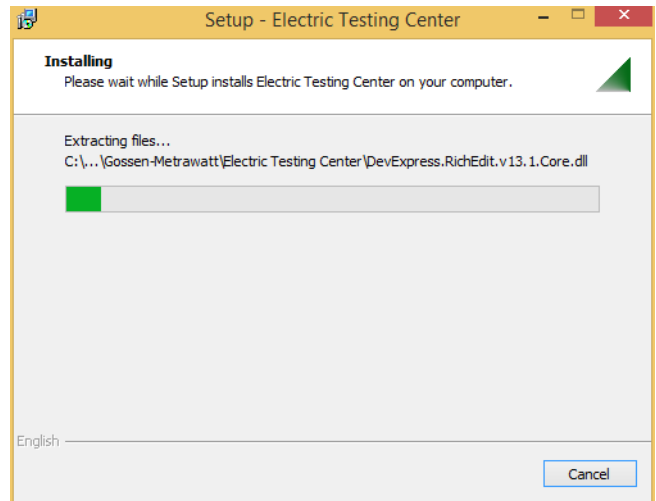


- ⇒ The installation procedure is started by clicking the Install button.



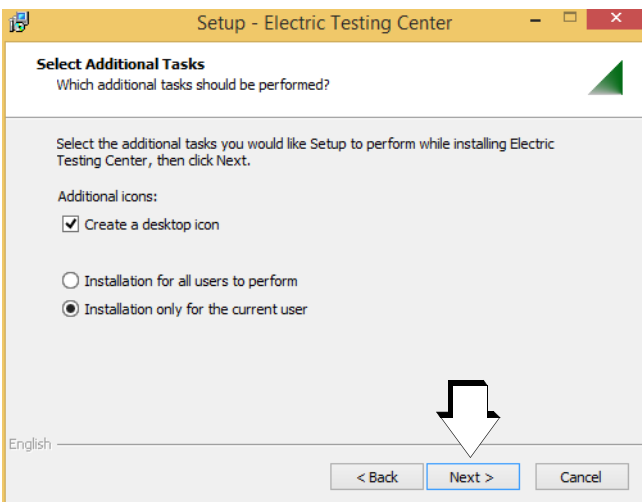
- ⇒ Accept the suggested start menu folder or select a new one.

A green progress bar graph appears while the program is being installed:

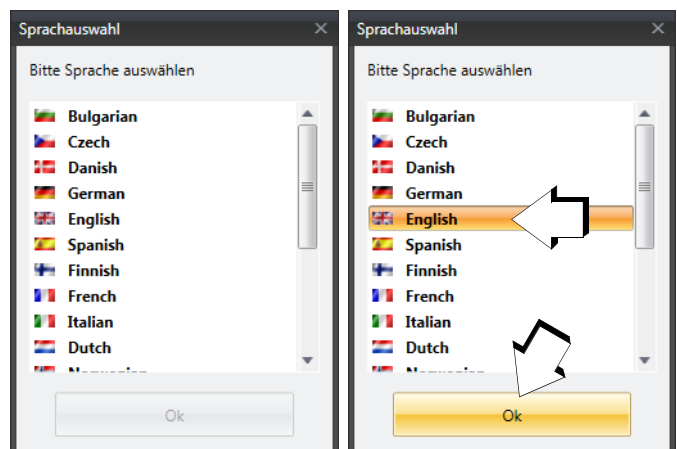


The drivers are then installed in the background.

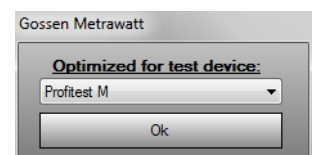
- ⇒ After starting ETC software for the first time, you're prompted to select the desired language for the user interface.



- ⇒ Select additional options which are commonly offered during the installation of Windows programs.



- ⇒ Then you can select the test instrument which will communicate with ETC.





## 6 Connecting Test Instruments to the PC

### 6.1 Test Instruments with RS 232 Port or RS 232 – USB Converter – Device Menu

### 6.2 Test Instruments with USB Port – Extras Menu

In the case of test instruments with USB port, the **Device** or **Device Info** menu is enabled (not displayed in gray), as long as the device is connected.

Whether or not your instrument can be read out via the USB port is shown in the overview in section 8.1.

### 6.3 Test Instruments with Bluetooth Interface – Extras Menu

You can log your instrument on via your PC's Bluetooth interface and assign a virtual COM port for ETC by clicking **Find Bluetooth Device** in the **Extras** menu.

Whether or not your instrument can be read out via the Bluetooth interface is shown in the overview in section 8.1.

### 6.4 Device Info – Help Menu

Current data for the connected test instrument are displayed after clicking **Device Info** in either the **Device** or the **Help** menu.

## 7 Description and Configuration of the Menu Functions

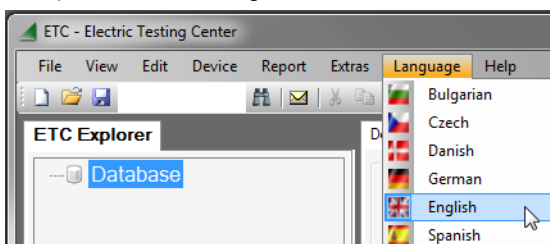
### 7.1 Viewing the Software Version – Help Menu

The installed software version number and a link to our website are displayed after clicking **Info** in the **Help** menu. The most up-to-date version can be found on our website (see section 1).

### 7.2 Selecting the User Language – Language Menu

☞ In order to change to a language other than the one which is currently selected, click **Language** in the menu bar.

All available languages appear in a dropdown menu along with their respective national flags.



☞ Click the desired language.



#### Attention!

**Save data, structures and test sequences before changing the user language.**

After changing the user language, the program should be restarted, but a security prompt warns that any structure which has already been set up in ETC (as well as any test sequence) will be deleted.

If you acknowledge this prompt by clicking yes, any structure which has already been set up in ETC (as well as any test sequence) will be deleted and the menus then appear in the newly selected language.



#### Note

In order to **exchange data between the test instrument and ETC**, both must be set to the same user language!

## 7.3 Accessing Help – Help Menu

In order to get started quickly, an operating overview with a sample sequence for use of the report generating software can be accessed by clicking **Getting Started (F1)** in the **Help** menu.

These comprehensive operating instructions can be accessed by clicking **Content** in the **Help** menu.

## 7.4 Toolbar Icons

Icon	Meaning
	Create a new file or structure.
	Open a file or load a structure.
	Save a structure to a file (using the current name and directory path).
	Search for an ID number or a designation in the ETC Explorer, depending on which view is currently selected (complete entry required).
	Send a structure via Outlook.
	Cut a selected structure element / object.
	Copy a selected structure element / object.
	Paste a copied or cut structure element / object.
	Transmit the structure to the test instrument.
	Receive the structure and the measurement data from the test instrument.
	Generate a test report.
	Open a small sample structure.
	Open a medium sized sample structure.
	Open a large sample structure.
	Select the sequence editor (SECULIFE SR only).
	Help (getting started)

## 7.5 Context Sensitive Menus in the Explorer

Various context sensitive menu options appear depending on the hierarchy of the selected objects, and whether the icon or the designation is selected.

Disabled menu options are displayed in gray.

### Accessing Editing Menus for the Structure Elements

Select an **object icon** with the left mouse key (click briefly), then click the right key briefly and select the desired menu option with the left key.

Object	Icon	Menu Option	Function
Cus-tomer 000XYZ		New	Add new object.
		Delete	Delete selected object.
		Rename	Rename selected object.
or		Cut	Cut selected object in order to paste it somewhere else.
Building 000XYZ		Copy	Copy selected object in order to paste it somewhere else.
or		Paste	Paste the cut or copied object to the selection location.
Device 000XYZ		Duplicate	Duplicate the selected object within the same menu level.
		Abort	
		Customer 000XYZ Building 000XYZ Device 000XYZ	→ Submenu 1, see table below.
		Structure nodes	Expand or collapse.
	↑	Change position (up)	Move the selected object up.
	↓	Change position (down)	Move the selected object down.

### Submenu 1: Customer, Building or Device 000XYZ

Icon	Menu Option	Function
	Receive	Receive measurement data for the selected object from the test instrument.
	Transmit	Transmit the structure of the selected object to the test instrument.
	Transmit structure + values	Transmit structure and measurement data of the selected object to the test instrument.
	Open	Import data to the selected object (see section 7.5.1).
	Save	Save the selected object (structure and data).
	Send as e-mail	Send the selected object (structure and data) via e-mail.
	Save as image	Create a hardcopy of the hierarchy level of the selected object.
	Generate a report	Report wizard (see section 11)
	Export	→ Submenu 2, see table below.
	Print barcode	Barcode wizard (see section 12.5)

### Submenu 2: Export

Icon	Menu Option	Function
	Master data	
	Documentation	
	Hand-over report	
	Measured values, operating equipment	
	Measured values, electrical circuit	
	Measured values, object	
	Measured values	

## Editing Object Designations

Click an object designation with the left mouse key (edit cursor appears), then click the right key briefly and select the desired menu option with the left key.

Object	Menu Option	Function
Cus-tomer 000XYZ	Undo	Text editing options
	Cut	
	Copy	
or	Paste	
Build-ing 000XYZ	Delete	Windows functionality, no significance in this case
	Select all	
	Right to left reading sequence	
or	Show Unicode control characters	
Device 000XYZ	Insert Unicode control characters	
	Start IME	
	Change back	

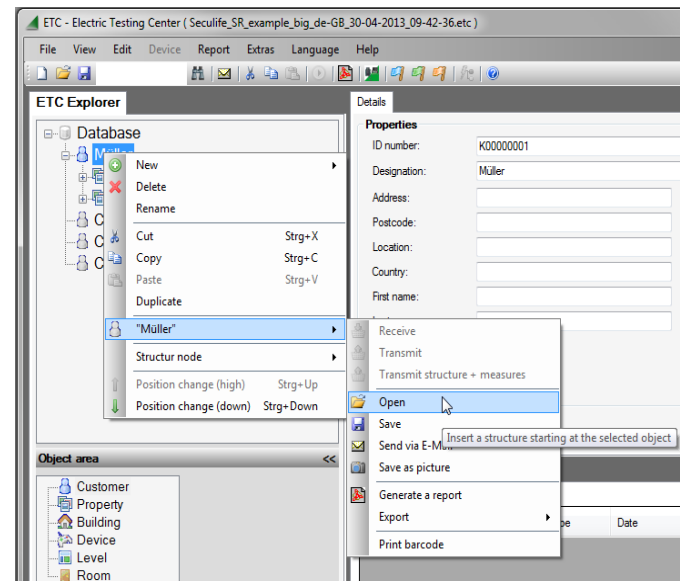
### 7.5.1 Importing Several Data Records to an Existing Structure for Reports

If, for example, several properties are assigned to a customer, and if the associated measurement data have been saved as separate data records, these can be imported to the currently loaded customer structure, one after the other, and read out as a full report.

This is advisable, for instance, if several inspectors perform measurements on different objects at the same time, or if a single inspector measures an object at different times, and the data need to be jointly assigned to a single customer or property.

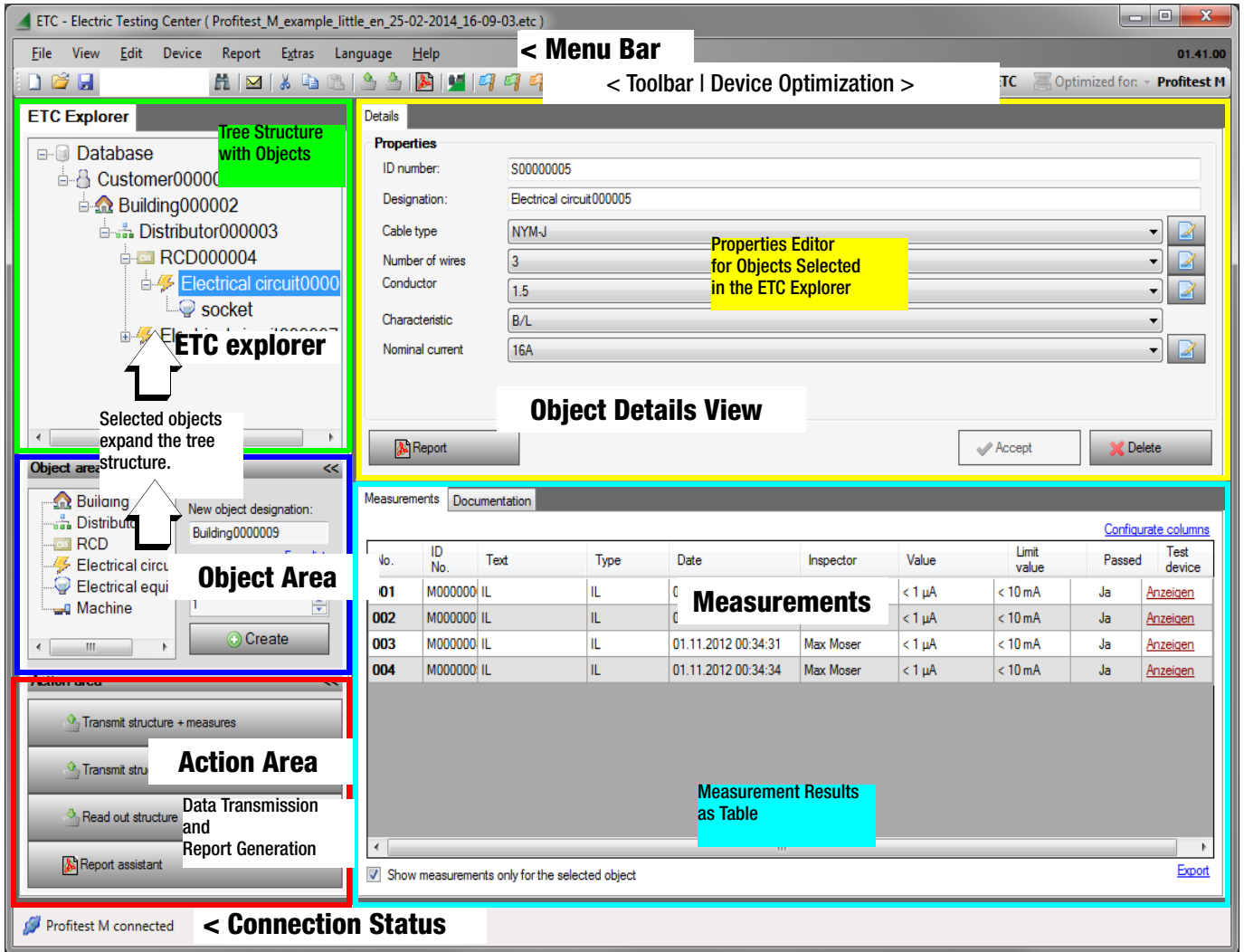
As a prerequisite for correct assignment of the data to the objects during data import, the structures must coincide. In each case, data are imported which are located on the same hierarchy level under the selected hierarchy.

### General Procedure



- ⇒ Open the desired structure.
- ⇒ Select the respective object from the ETC Explorer with the left mouse key (click briefly).
- ⇒ Briefly click the right key. A submenu appears.
- ⇒ Click "Open" with the left key.
- ⇒ Select the data file.
- ⇒ Repeat this procedure as often as necessary until all of the data for the object, customer or property are included in the currently open structure.
- ⇒ Save the structure together with the imported data and generate the report.





**ETC Explorer (structure)**

The ETC Explorer is located in the upper left-hand pane of the main window. The structure which is currently in use is displayed here. Individual objects can be selected with the mouse.

A structure always consists of the "Database" root node (starting point). Each structure can have one or more sub-nodes, or it can be empty. Each node, except for the database node, represents an icon and a type designation such as customer, building, distributor, RCD, electrical circuit, earth electrode, machine, operating equipment, level, property, device, room, ESD element, measurement or documentation text.

You can switch back and forth between ID number and Designation within the tree structure after clicking ETC Explorer in the View menu (F5)

The tree structure is closed each time switching between the view options takes place, and must then be reopened.

The size of the ETC Explorer area can be changed as well (see "Adjusting Work Areas and Table Columns" on page 10).

The number of all objects which are used in the ETC Explorer can be queried in the help menu: Help > Number of objects.

**Connection Status (connection via USB)**

The type designation of the connected device is only displayed in the footer at the bottom right for devices with USB port. In the case of devices without USB port, "No connection" appears here, even if connection has been established via an RS 232 port.

**Object Area**

The icons which appear at the left can be selected in the object area in order to create structures in ETC.

The scope of possible objects and their icons depends on the respective test instrument or memory adapter ("Optimized for:"), as well as the selected profile of the respective report generating software.

Depending on the initial position within the tree structure, only hierarchically feasible object types are displayed.

The object area can be displayed or hidden after clicking Object Area in the View menu, or directly by clicking the >> and << symbols. The size of the object area can be changed as well (see "Adjusting Work Areas and Table Columns" on page 10).

**Action Area**

Newly created structures and test sequences can be transferred to the test instrument, and structures set up in the test instrument's flash memory can be loaded to the PC via the action area.

<b>Transmit structure + values</b>	Transmits a structure, including measured values and documentation texts, to the test instrument.
<b>Transmit structure</b>	Transmits a structure without measured values and documentation texts.
<b>Read out structure</b>	Starts a read-out of data from the measuring instrument (with measured values and documentation texts).

The report wizard can be started here as well, which assists you in preparing a report.

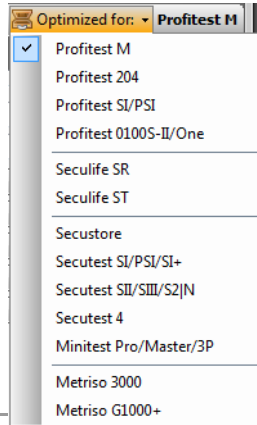
The scope of possible actions depends on the respective test instrument or memory adapter.

The action area can be displayed or hidden after clicking Action Area in the View menu, or directly by clicking the >> and << symbols. The size of the action area can be changed as well (see "Adjusting Work Areas and Table Columns" on page 10).

## Device Optimization

Device optimization is located at the top edge to the right of the toolbar and displays the currently selected device. After selecting a given instrument, device-specific adjustments are made to the ETC configuration, i.e. the object and action areas are correspondingly adapted.

This menu option is **not** used to switch back and forth between several different devices which may be simultaneously connected to the PC. After clicking "Optimized for:", a dropdown menu appears which contains a list of devices supported by ETC (see below).



### Note

Only **one** test instrument may be connected to the PC at any given time.

Nor is ETC capable of simultaneously managing data from several different test instruments.

Data read into ETC are deleted when the test instrument is switched. Be sure to save data which has been read in to a file before connecting another test instrument.

## Details/Properties Area

The display in the detail view changes depending on which object is selected in the ETC Explorer (left mouse click, see item 1 below).

The ID number and the designation are always displayed, and object-specific values (attributes) of the selected object appear below them if available.

Values for the ID number (item 2) and the designation (item 3) can be changed directly by entering text.

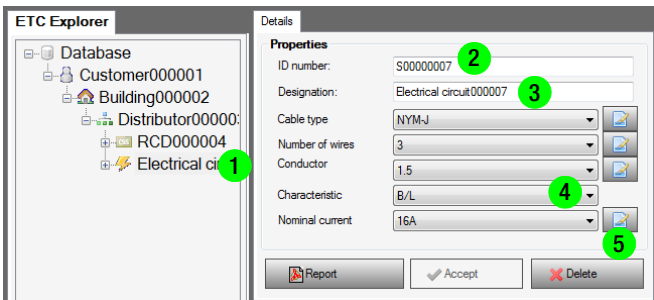
Object-specific values can be entered either directly, or they can be selected from a dropdown menu depending on the available entry window. For certain attributes such as nominal current, new values can be added and selected (5) with the help of the selection list wizard (see section 9).



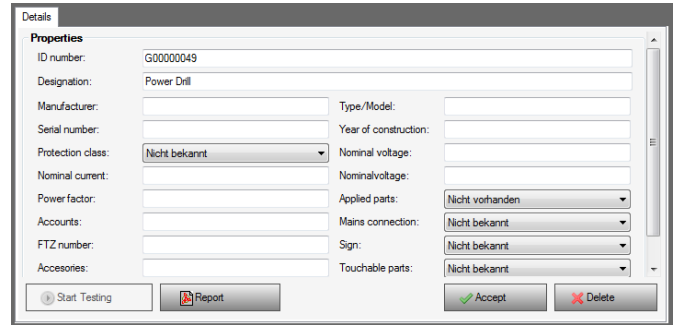
### Note

Changes must be completed by clicking the "Accept" button, otherwise they're discarded.

## Details of a Sample Circuit



## Details of a Sample Device (electrical operating equipment)



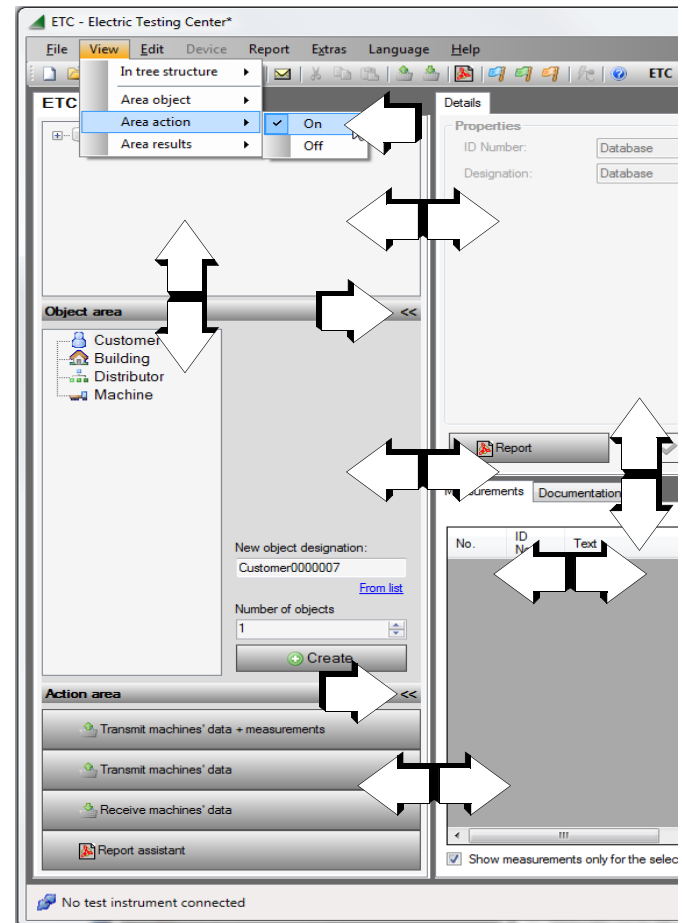
## Measurements / Documentation Texts Area

After the measurement results have been successfully read in from the test instrument or the memory adapter, they appear in this area as a list in the measurements tab.

The measurements area (including a measurements tab and a documentation texts tab – see below) can be placed at any desired position after clicking **Results Area > Top/Bottom/Right/Middle** in the **View** menu (the default setting is bottom).

The column width used in the measurement results list (in the measurements tab) can also be changed as desired. As is also the case with Microsoft Excel, click between any two table headings and then drag the borderline to the left or right.

## Adjusting Work Areas and Table Columns



When the cursor is moved to the borders between the work areas, or between adjoining cells in the top line of a table in the measurements area, the cursor is changes to a double arrow. When the double arrow appears, press and hold the left mouse key and drag the border to the left or right, or up or down. Optional text columns for measurements can also be shown or hidden and arranged in any desired order (see "Configure columns" in the header row).

## 8 Condensed Instructions for Operations between ETC and the Test Instrument

### 8.1 Overview of ETC Performance Features Depending on the Connected Test Instrument or Memory Adapter

	PROFITEST INTRO PROFITEST MBASE PROFITEST MTECH PROFITEST MBASE+ PROFITEST MTECH+ PROFITEST MPRO PROFITEST MXTRA	PROFITEST 204+ METRAMA- CHINE 204/439 METRISO 5000D-PI METRISO PRIME+	METRISO G1000+ METRISO XTRA	SECULIFE SR	SECUTEST SII/SIII/S2IN/ S2N+w SECULIFE ST	SECUTEST BASE SECUTEST BASE10	SECUTEST PRO SECUTEST DB+ (Z853Rf)	MINITEST PRO MINITEST (3P) MA STER	SECUTEST (P)SI SECUTEST SI+ SECUSTORE <sup>1</sup>
Create structure in ETC	✓	✓	✓	✓	✓	✓	✓	✓	✓
Customer	✓	✓	✓	✓	✓	✓	✓	✓	✓
Property				✓	✓	✓	✓	✓	✓
Building	✓	✓	✓	✓	✓	✓	✓	✓	✓
Floor				✓	✓	✓	✓	✓	✓
Room				✓	✓	✓	✓	✓	✓
Device				✓	✓	✓	✓	✓	✓
Distributor	✓	✓	✓						
RCD	✓		✓						
Operating equipment	✓		✓						
Electrical circuit	✓		✓						
Earth electrode	✓								
Machine	✓	✓							
Transmit structure to the test instrument	✓	✓	✓				✓		
Create test sequences in ETC and transmit to test instrument <sup>2</sup>	PROFITEST MBASE+ PROFITEST MTECH+ PROFITEST MPRO PROFITEST MXTRA	Machine designation only					Sequence Designer		
Receive data from tester or memory module	✓	✓	✓	✓	✓	✓	✓	✓	✓
Transmit data to the test instrument.	✓	✓	✓				✓		
Generate a report, Excel export and PDF	✓	✓	✓	✓	✓	✓	✓	✓	✓
Create and restore test instrument backup	✓	✓	✓			✓	✓		
Reset the test instrument to default settings	✓	✓	✓	✓	✓			✓	
Read out device information	✓	✓	✓	✓	✓	✓	✓	✓	
Synchronize test instrument time to Windows time	✓	✓	✓	✓	✓			✓	
Change display settings	✓	✓	✓	✓	✓			✓	
Remote control				✓				✓	
USB port	✓		✓	✓		✓	✓	✓	SECUTEST SI+ SECUSTORE
RS 232 – USB adapter		✓			✓				SECUTEST (P)SI
Bluetooth adapter	PROFITEST MXTRA								

<sup>1</sup> Data are immediately converted to PDF format and cannot be further processed, Excel export is not possible.

<sup>2</sup> not valid for PROFITEST MBASE, PROFITEST MTECH and PROFITEST INTRO

### 8.2 Prerequisites for Communication Between the Test Instrument and ETC

- In order to **exchange data between the test instrument and ETC, both must be set to the same user language!**
- The connection between the test instrument or the memory adapter and the PC may not be interrupted during data transfer. If necessary, deactivate your screen saver or reconfigure your PC's power options accordingly.
- ETC is not able to communicate with more than one device at a time: select the connected device under "Optimized for:".



#### Note

Only one test instrument may be connected to the PC at any given time.

### 8.3 ETC and the PROFITEST MASTER

- The software acquires all important data for reports in accordance with DIN VDE 0100, part 600.
- Test reports (ZVEH) can be generated.
- Distribution structures with electrical circuit and RCD data can be individually defined.
- Structures can be created at the PC, saved to memory and transferred to the test instrument as required.
- The test instrument and the PC can exchange data bidirectionally via the USB port.
- Data can be exported to Excel, CSV and XML formats.

Information regarding setup and transfer of structures is included in the "Database" section of the operating instructions for the following test instruments:

**PROFITEST MBASE+/MTECH+/MPRO/MXTRA:** 3-349-647-01  
**PROFITEST MBASE/MTECH:** 3-349-470-01  
**PROFITEST INTRO:** 3-349-840-01

Information on working with test sequences is included in the operating instructions in the section entitled "Test Sequences":

**PROFITEST MBASE+/MTECH+/MPRO/MXTRA:** 3-349-647-03



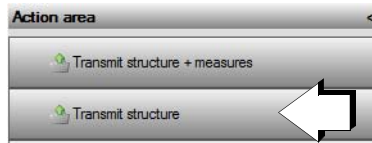
**Note**

**Inspector names** cannot be changed directly at **PROFITEST MBASE** and **PROFITEST MTECH** test instruments, but rather only via ETC.

**Procedure:**

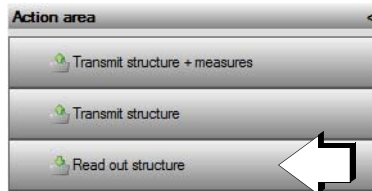
- 1 After ETC has been installed and **when the program is started for the first time**, select the desired language for the user interface and select **PROFITEST MASTER (Profitest M)** as the optimized test instrument.  
**When the program is started again**, the currently connected device has to be selected under "Optimized for:".
- 2 If the data will be transferred to other software later on, select the corresponding profile after clicking "Profiles" in the "Extras" menu (see section 12.3).
- 3 Create a new structure (see section 9) or load a previously saved structure by clicking **New** or **Open** in the **File** menu.
- 4 Connect the test instrument to the PC via the USB port.
- 5 Transmit the structure to the test instrument.

**Action Area: Transmit Structure**



- 6 Disconnect the test instrument from the PC and execute all of the measurements specified in the structure with the **PROFITEST MASTER**.
- 7 First of all, always select the electrical circuit you want to test via MEM at the **PROFITEST MASTER**. Then perform the measurements and save your data after each measurement. Save the measured values under electrical circuits or operating equipment only. The earth electrode and machine object types cannot (yet) be used.
- 8 After the measurements have been completed, connect the test instrument to the PC again and read out the measured values from the **PROFITEST MASTER**.

**Action Area: Receive Structure**



- 9 If necessary, save the structure along with the measurement data:  
**File > Save as.** The data are saved to files. ETC is not a database.
- 10 Select the desired object area in the ETC Explorer and generate the test report with the help of the report wizard (see section 11).  
**Action Area: Report Wizard**  
or  
**Details/Properties: Generate Report**

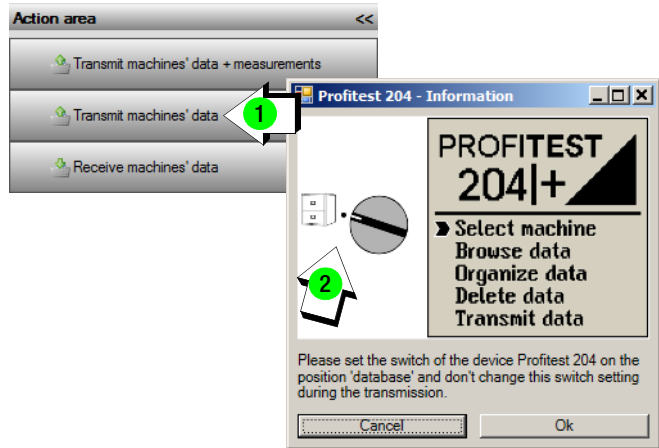
**8.4 ETC and PROFITEST 204+ (METRAMACHINE 204/439)**

- The software makes it possible to receive and transmit machine data with measured values, and allows subsequent report generation in accordance with DIN EN 60204-1 (VDE 0113-1).
- Created structures can be saved to memory and their machine data can be loaded to the test instrument.
- The test instrument and the PC can exchange data bidirectionally via a USB – RS 232 adapter, or via RS 232.
- Data can be exported to Excel, CSV and XML formats.
- **PROFITEST 204+ (+ version)** and current firmware version are required.

**Procedure:**

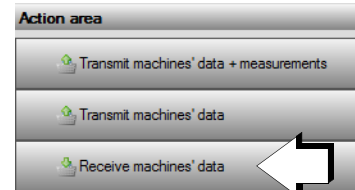
- 1 After ETC has been installed and **when the program is started for the first time**, select the desired language for the user interface and select **PROFITEST 204+** as the optimized test instrument. **When the program is started again**, the currently connected device has to be selected under "Optimized for:".
- 2 Create a new structure (see section 9) or load a previously saved structure by clicking **New** or **Open** in the **File** menu.
- 3 Connect the test instrument to the PC using an RS 232 – USB adapter.
- 4 Transmit the machine data to the test instrument.

**Action Area: Transmit Machine Data**



- 5 Disconnect the test instrument from the PC and execute all of the measurements specified for the machine data with the **PROFITEST 204+**.
- 6 After the measurements have been completed, connect the test instrument to the PC again and read out the measured values from the **PROFITEST 204+**.

**Action Area: Receive Machine Data**



- 7 If necessary, save the structure along with the measurement data:  
**File > Save as.**
- 8 Select the desired object area in the ETC Explorer and generate the test report with the help of the report wizard (see section 11).  
**Action Area: Report Wizard**  
or  
**Details/Properties: Generate Report**

## 8.5 ETC and the METRISO G1000+/XTRA

- The software copies measured values from the test instrument.
- Distribution structures with electrical circuit and RCD data can be individually defined.
- Created structures can be saved to memory and loaded to the test instrument as required.
- Report data can be supplemented.
- Limit values can be set.
- Test reports can be saved as PDF files.
- Data can be exported to Excel, CSV and XML formats.

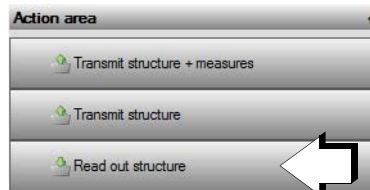


### Note

Information regarding setup and transfer of structures is also included in the "Database" section of the operating instructions for the **METRISO G1000+/METRISO XTRA** test instrument.  
3-349-636-03.

### Procedure:

- 1 After ETC has been installed and **when the program is started for the first time**, select the desired language for the user interface and select **METRISO G1000+/METRISO XTRA** as the optimized test instrument.  
**When the program is started again**, the currently connected device has to be selected under "Optimized for:".
- 2 Create a new structure (see section 9) or load a previously saved structure by clicking **New** or **Open** in the **File** menu.
- 3 Connect the test instrument to the PC via the USB port.
- 4 Transmit the structure to the test instrument.  
**Action Area:** Transmit Structure
- 5 Disconnect the test instrument from the PC and execute all of the measurements specified in the structure with the **METRISO G1000+/METRISO XTRA**.
- 6 After the measurements have been completed, connect the test instrument to the PC again and read out the measured values from the **METRISO G1000+/METRISO XTRA**.  
**Action Area:** Receive Structure



- 7 If necessary, save the structure along with the measurement data:  
**File > Save as.**
- 8 Select the desired object area in the ETC Explorer and generate the test report with the help of the report wizard (see section 11).  
**Action Area:** Report Wizard  
or  
**Details/Properties:** Generate Report

## 8.6 ETC and the SECULIFE SR

- The software copies measured values from the test instrument.
- Report data can be supplemented.
- Limit values can be set.
- Test reports can be saved as PDF files.
- Data can be exported to Excel, CSV and XML formats.

### Procedure:

- 1 After ETC has been installed and **when the program is started for the first time**, select the desired language for the user interface and select **SECULIFE SR** as the optimized test instrument.  
**When the program is started again**, the currently connected device has to be selected under "Optimized for:".
- 2 Create a new structure (see section 9) or load a previously saved structure by clicking **New** or **Open** in the **File** menu.
- 3 Connect the test instrument to the PC via the USB port.
- 4 Execute all measurements with the **SECULIFE SR**.

**Action Area:** Start Testing



or via **Details > Start Testing**

or start from the **sequence editor** (see section 12.8.2).

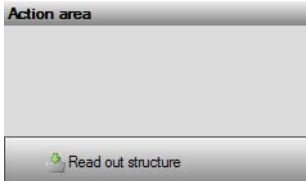
- 5 If necessary, save the structure along with the measurement data:  
**File > Save as.**
- 6 Select the desired object area in the ETC Explorer and generate the test report with the help of the report wizard (see section 11).  
**Action Area:** Report Wizard  
or  
**Details/Properties:** Generate Report



## 8.7 ETC and SECUTEST SII+, S2N+..., SIII, SIII+ / SECULIFE ST, SECUTEST (P)SI, SECUSTORE

- The software copies measured values from the test instrument or the memory adapter.
- Data for report generation can be supplemented with all devices (exception: SECUSTORE).
- Test reports can be saved as PDF files.
- Data can be exported to Excel, CSV and XML formats.

### Procedure:

- 1 After ETC has been installed and **when the program is started for the first time**, select the desired language for the user interface and select **SECUTEST... (Secutest SII/SIII/S2N)** or **SECULIFE ST (Seculife ST)** as the optimized test instrument.  
**When the program is started again**, the currently connected device has to be selected under "Optimized for:".
  - 2 Create a new structure (see section 9) or load a previously saved structure by clicking **New** or **Open** in the **File** menu.
  - 3 Execute all measurements with the **SECUTEST...**
  - 4 Connect the test instrument to the PC using an RS 232 – USB adapter.
  - 5 Read out the measured values from the **SECUTEST...**  
**Action Area:** Receive Data
- 
- 6 If necessary, save the structure along with the measurement data:  
**File > Save as.**
  - 7 Select the desired object area in the ETC Explorer and generate the test report with the help of the report wizard (see section 11).  
**Action Area:** Report Wizard  
or  
**Details/Properties:** Generate Report



### Note

Reports can only be generated one after the other (data cannot be merged).

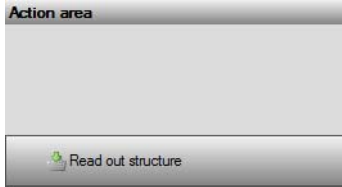
## 8.8 ETC and the SECUTEST BASE(10)/PRO

- The software copies the database structure and the measured values from the test instrument.
- Imported structures and measured values can be stored at the PC.
- Test reports can be generated and saved as PDF files.
- Data can be exported to Excel, CSV and XML formats.

Information regarding setting up, saving and transferring structures is included in the "Database" section of the operating instructions (3-349-752-03) for the **SECUTEST BASE(10)/SECUTEST PRO** test instrument.

Information on working with test sequences is included in the operating instructions (3-349-752-03) in the section entitled "Test Sequences".

### Procedure:

- 1 After ETC has been installed and **when the program is started for the first time**, select the desired language for the user interface and select **SECUTEST 4 (SECUTEST BASE(10)/SECUTEST PRO)** as the optimized test instrument.  
**When the program is started again**, the currently connected device or device generation has to be selected under "Optimized for:", in this case **SECUTEST 4**.
  - 2 Execute all measurements with the **SECUTEST BASE(10)/SECUTEST PRO**.
  - 3 Connect the USB slave port at the test instrument to the PC.
  - 4 Read out the structures and the measured values from the **SECUTEST...** **Action Area:** Receive Data
- 
- 5 If necessary, save the structure along with the measurement data:  
**File > Save as.**
  - 6 Select the desired test object in the ETC Explorer.
  - 7 Generate the test report by clicking **Generate Test Report** in the **Details/Properties** window (see section 10).



### Note

Data merging is possible.  
Clicking the Report Wizard button has the same effect as clicking the Generate Report button.  
The report wizard (section 11) has no function in this case.

## 8.9 SECUTEST PRO and SECUTEST DB+ (Z853R)

- 1 After ETC has been installed and **when the program is start for the first time**, select the desired language for the user interface and select **SECUTEST 4** as the optimized test instrument.  
**When the program is started again**, the currently connected device has to be selected under "Optimized for:".
- 2 If the data will be transferred to other software later on, select the corresponding profile after clicking "Profiles" in the "Extras" menu (see section 12.3).
- 3 Create a new structure (see section 9) or load a previously saved structure by clicking **New** or **Open** in the **File** menu.
- 4 Connect the test instrument to the PC via the USB port.
- 5 Transmit the structure to the test instrument.  
**Action Area:** Transmit Structure



## 8.10 ETC and the MINITEST PRO / MINITEST (3P) MASTER

- The software copies measured values from the test instrument.
- Report data can be supplemented.
- Limit values can be set.
- Test reports can be saved as PDF files.
- Data can be exported to Excel, CSV and XML formats.

- 8 Select the desired object area in the ETC Explorer and generate the test report with the help of the report wizard (see section 11).

**Action Area:** Report Wizard

or

**Details/Properties:** Generate Report

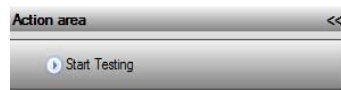
### Procedure for MINITEST PRO and (3P) MASTER Test Instruments

- 1 After ETC has been installed and **when the program is started for the first time**, select the desired language for the user interface and select **Minitest Pro/Master/3P** as the optimized test instrument.

**When the program is started again**, the currently connected device has to be selected under “Optimized for:”.

- 2 Create a new structure (see section 9) or load a previously saved structure by clicking **New** or **Open** in the **File** menu.
- 3 Connect the test instrument to the PC via the USB port.
- 4 Execute all measurements with the **MINITEST....**

**Action Area:** Start Testing



- 5 If necessary, save the structure along with the measurement data:

**File > Save as**

- 6 Select the desired object area in the ETC Explorer and generate the test report with the help of the report wizard (see section 11).

**Action Area:** Report Wizard

or

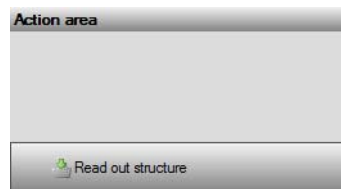
**Details/Properties:** Generate Report

### Reading Out Memory from the MINITEST (3P) MASTER

In the case of the **MINITEST (3P) MASTER**, stored measured values can be read out as an alternative to the above described data transmission procedure.

- 4 Read out the measured values from the **MINITEST (3P) MASTER**.

**Action Area:** Receive Data



- 5 A preview of the measurement results is displayed after data transmission has been completed.

Nr.	Identnummer	Bezeichnung	RISLD	RISLF	RISD	ID	
0001	TAS54 NWAE	TAS54 NWAE			> 5.99 MOhen		
0002	PC	PC					
0003	10012094	10012094			> 5.99 MOhen	0.89 mA	0.17 mA
0004	10014357 0-L	10014357 0-L	0.20 Ohm	0.20 Ohm	> 5.99 MOhen	2.23 mA	0.95 mA
0005	19004251241	19004251241	0.1 Ohm	0.14 Ohm	2 MOhen	0 mA	0.95 mA
0006	10012094	10012094					0.95 mA
0007	001000245F G	001000245F G					4.05 mA
0008	C00E 39	C00E 39	0.05 Ohm	0.05 Ohm	> 5.99 MOhen	0.39 mA	0.02 mA
0009			0.05 Ohm	0.05 Ohm		0.14 mA	
0010	12345ABC	12345ABC				0.25 mA	
0011	1234456789	1234456789			> 5.99 MOhen	0 mA	
0012	0010002CDD	0010002CDD					
0013	1234g	1234g					
0014	99999	99999					0.7 mA

- 6 The preview is exited by clicking the “Close” button and the received structure is displayed in the ETC Explorer.

- 7 If necessary, save the structure along with the measurement data: **File > Save as**.

## 9 Creating Structures with ETC

### Devices with Integrated Database for Structures

A complete distributor structure with data for electrical circuits and RCDs can be created in test instruments from the **PROFITEST MASTER** and **METRISO G1000+/METRISO XTRA** series. This structure makes it possible to assign measurements to the electrical circuits of various distributors, buildings and customers. Structures which have already been set up in the test instrument can be loaded to ETC and saved along with the measured values at the PC, as well as supplemented and documented if applicable.

Alternatively, the same structures can be more conveniently set up in ETC first, and then transferred to the test instrument for future measurements.

### Devices without Integrated Database

For all other devices which are not equipped with their own database, structures can only be set up in ETC. This assures sensible allocation of the read out measured values, which makes post-processing, annotation and report generation possible.

### Creating a Structure and Setting Up Object Parameters

- 1 Create a new structure: click the "New Structure" icon.
- 2 Alternatively, a sample structure included as a default feature can be opened and modified:
  - Small structure (1 customer, 1 building, 1 distributor)
  - Medium sized structure (1 customer, 2 buildings, 2 distributors)
  - Large structure (2 customers, 2 buildings each, 1 or 2 distributors)

- 3 In order to create new object or add objects, first select the initial position within the tree structure in the ETC Explorer.
- 4 Select a new object type in the object area: customer, building, distributor, RCD, electrical circuit, earth electrode or machine. Depending on the initial position within the tree structure, only hierarchically feasible object types are displayed.



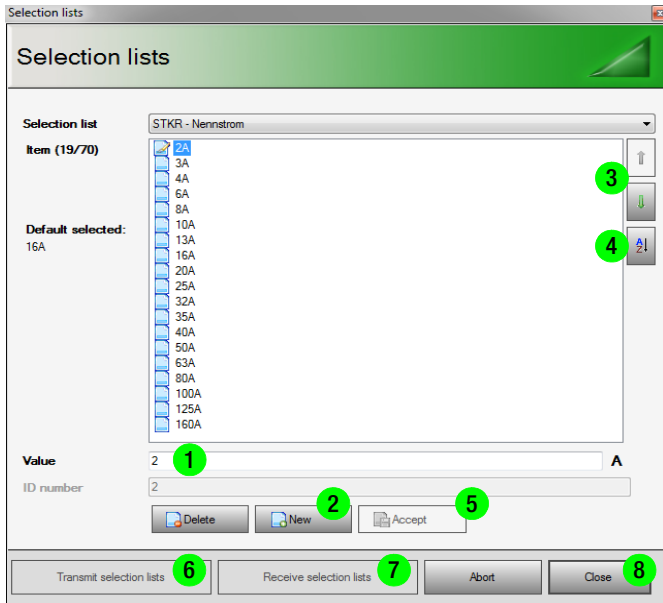
#### Note

The earth electrode object type can only be used with the PROFITEST MPRO and MXTRA, and the machine object type can only be used with the PROFITEST MXTRA. Test report generation for these objects is not (yet) possible.

- 5 Check the suggested object designation or select one from the list (see [From List](#)):
  - a) Keep the same name or rename.
  - b) Specify the number of objects to be added.
  - c) Click "+Create" in order to accept the new designation.
- 6 Specify RCD and circuit characteristics:
  - a) Select the respective RCD or electrical circuit object from the structure.
  - b) The ID number or the designation can be changed again in the properties field.
  - c) Configure the parameter setting by opening the respective dropdown menu with the predefined values.
  - d) Alternatively, the **selection list wizard** can be started in order to specify and accept individualized values (see following page).
  - e) Save the settings for all of the parameters for a given object by clicking the "Accept" button.

- Save the structure by clicking “Save as” in the “File” menu and entering a logical filename.

### Accessing the Selection List Wizard in the Details Field



The selection list wizard makes it possible to supplement pre-defined values with new ones, delete any existing values and transmit new ones to the test instrument as required.

- Enter a new value to the **Value** line.
- After clicking the **New** button, the value is added to the end of the list.
- Numeric values can be set as desired with the **up and down scroll keys**.
- The list can be sorted alphabetically by clicking the **AZ** button.
- The new value is permanently added to the predefined list after clicking the **Accept** button.
- Click the “Transmit selection lists” button in order to transmit the new values to the test instrument.
- Click the “Receive selection lists” button in order to import selections lists from the test instrument.
- The **selection list wizard** is exited by clicking the Close button. The newly created values are available in the dropdown menu.



#### Note

Selection lists can also be edited and supplemented at any time after clicking **Selection lists > ...** in the **Extras** menu (see section 12.4), which are then available for the creation of all future structures.



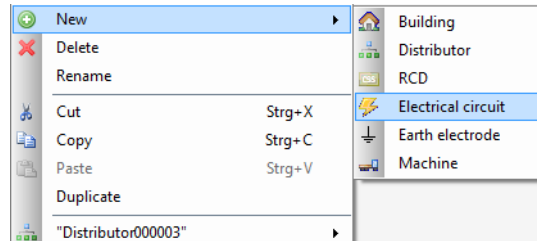
#### Attention!

Up to 70 entries can be made.  
More than 70 entries cannot be processed.

### Editing Structures in the ETC Explorer Field

The following operations can be executed for distributor structures after first selecting the respective structure element with the left mouse key.

- ⇒ Then click the corresponding icon in the context menu.
- or
- ⇒ Click briefly with the right mouse key in order to open the context menu (see below):



## 10 Report Generation – Print Preview (SECUTEST BASE(10)/PRO only)

**Report VDE0701-0702**

Master data			
Customer no.	C0008987	Report no.	20140226114119
Customer name	Company GMC	Company	Gossen Metrawatt Südwestpark 15 90449 Nürnberg
Representative		Inspector	not defined

Testdevice			
Testdevice ident	123	Designation	Fan
Manufacturer		Serial number	
Type		Notice	

Reporting	
Next reporting	9/3/2014
Utilized measuring	

Classifications	
Name	Value
Protection class	Class I
Connection	test socket
Meas. Mode	Active

Measurements		9/4/2013 1:17 PM		✓
Measurement step name	Measurement name	Measured value	Limit value	Passed
Sight check				✓
RPE	RPE	10 mΩ	≤300 mΩ	✓
RISO SK1	RINS	300 MΩ	≥1.00 MΩ	✓
IPE LN	IPE≈	5 μA	≤3.50 mA	✓
IB LN	IT≈	4 μA	≤500 μA	✓
IPE NL	IPE≈	5 μA	≤3.50 mA	✓
IB NL	IT≈	4 μA	≤500 μA	✓
Funktionspr.	P	2 W		✓
Funktionspr.	S	2 VA		✓
Funktionspr.	PF	1.00		✓
Funktionspr.	I	0.01 A		✓
Funktionspr.	U	227.3 V		✓
Funktionspr.	f	50.0 Hz		✓

Signature					
Representative			Inspector		
	2/26/2014		Nürnberg	2/26/2014	
Location	Date	Signature	Location	Date	Signature

### Icon Key

	Function
1	Search
2	Open report file
3	Save report data
4	Print report with printer selection
5	Print report (quick print)
6	Shrink view
7	Enlarge view
8	Export the report
9	Export and transmit the report (e.g. via Outlook)
10	Generate a watermark for the print-out and the file

### 10.1 Prerequisites for Generating a Report

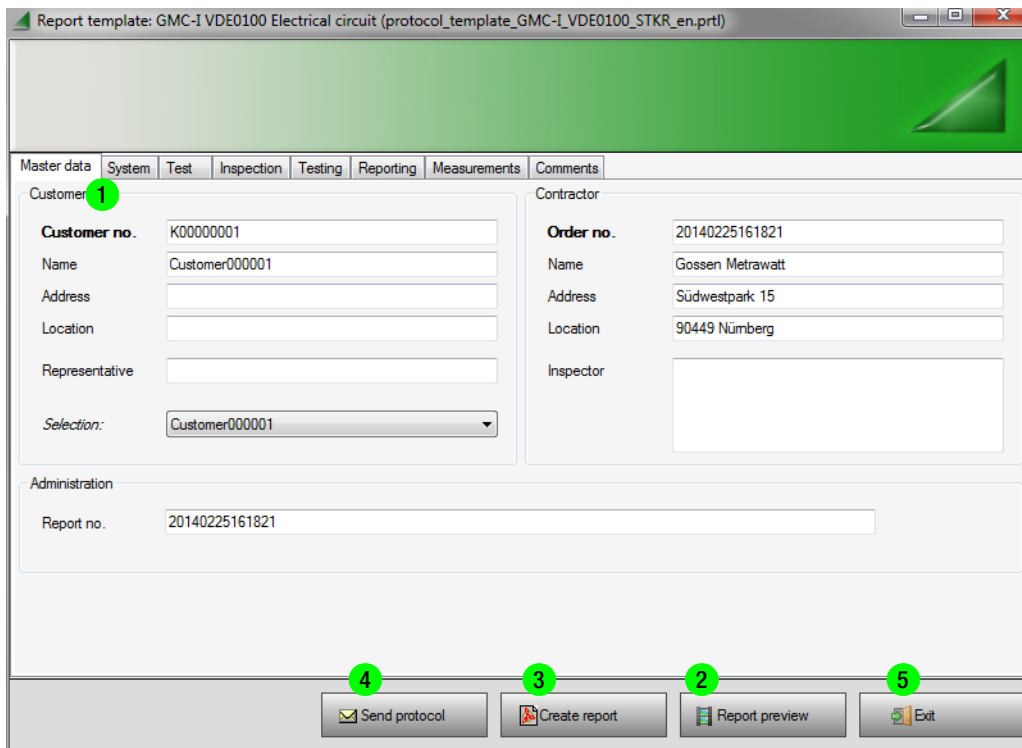
- A structure has been read in along with the measurement data from the test instrument.
- The measurement data have been assigned to a test object.

### 10.2 General Procedure

- 1 Select the desired test object in the ETC Explorer.
- 2 Click the **Generate Report** button.  
A print preview appears with the report data.
- 3 The report can be saved (PRNX format) by clicking the **Save** button which appears as a floppy disk icon.
- 4 In order to **read the data out to a printer** with selection of the desired printer, click the printer icon (with question mark). A **watermark** can be printed onto the report (see the icon to the right of the e-mail icon) if the corresponding preselection has been made.
- 5 In order to **export** the report preview to a special format, click to the right of the floppy disk icon. A dropdown menu appears.
- 6 Select a format from the menu, for example PDF file. An export options window appears which can be supplemented and acknowledged.
- 7 If you want to send a file by **e-mail**, click to the right of the e-mail icon. A dropdown menu appears.
- 8 Select a format from the menu, for example PDF file. An export options window appears which can be supplemented and acknowledged. A window then appears in your current e-mail program with the respective file as an attachment.



## 11 Report Wizard (not for SECUTEST BASE(10)/PRO)



### 11.1 Prerequisites for Generating a Report

- A structure has been created in ETC, loaded from a file or read in from the test instrument.
- Measurement data have been imported from the test instrument.
- VDE 0100 test instruments: measurement data have been saved under an electrical circuit or operating equipment.
- VDE 0113 test instruments: measurement data have been saved under a machine.

### 11.2 General Procedure

- 1 Enter your contractor data:  
Menu: Report > Contractor (see section 11.3).
- 2 Select a suitable report template:  
Menu: **Report > Report Template > GMC-I VDE ...**  
Depending on which test instrument (Optimized for;) or test standard has been selected, suitable report templates are displayed for selection.
- 3 Start the report wizard:
  - Action Area: Report Wizard or
  - Details/Properties: Generate Report or
  - Menu: Report > Report Wizard
- 4 Fill in the corresponding fields in the respective tab depending on the test instrument or standard in accordance with which testing has been conducted (see section 11.5 through section 11.12).
- 5 Before generating the finalized report, you can check all entries once again with the **“report preview”** in order to look for errors and correct them.
- 6 If the report preview is OK, generate the finalized report as a PDF file by clicking the **“Generate Report”** button.
- 7 If you would like to transmit the report, click the **“Send Report”** button. An e-mail window appears which already includes the report as an attachment in PDF format.
- 8 Click the **“Exit”** button in order to close the report wizard.

### 11.3 Entering Contractor Data

Enter your contractor data: Menu: Report > Contractor. These are then available for the generation of all future reports, and don't have to be reentered each time. After clicking the **“Browse”** button under the company logo field, you can enter your company logo as a **JPEG** or a **Bitmap** file.

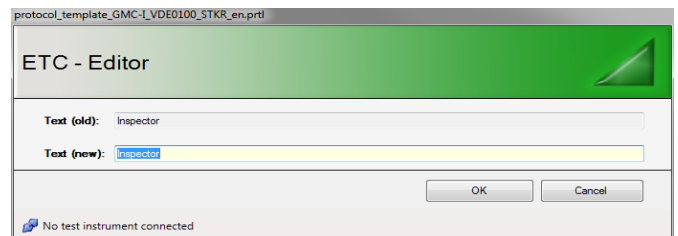
You can scan your signature and enter it as a **JPEG** or a **Bitmap** file as well.



### 11.4 Changing Tab Names

The tab designations (except for inspection, test and measured values) can be changed as required to meet your needs.

- Left or right click the tab designation to this end. The ETC editor appears.



- Enter the desired new designation to the **“Text (new):”** line and acknowledge by clicking OK.

The new designation is retained even after the program has been restarted.

## 11.5 The Master Data Tab

The report number and the work-order number are generated automatically when the report wizard is started, and always begin with the current date and end with a 6 digit consecutive number: **YearMonthDay123456**.

Enter customer and contractor data (data can be taken from a customer list after opening the dropdown list next to “Selection:”). Contractor data in the right-hand column also appear automatically, if your company data has already been entered in the “Report” menu under “Contractor”.

## 11.6 The System Tab

For system tests in accordance with DIN VDE 0100, the system's characteristic data have to be entered here including meter number, meter reading and characteristic values.

## 11.7 The Test Tab

This tab includes four groups, whose entries are mandatory for all tests.

### Executed in accordance with

Activate the checkbox for the standard in accordance with which testing has been conducted, or enter the designation of the standard in accordance with which testing has been conducted by overwriting the word “Other”.

### Utilized measuring instruments

Activate the checkbox for the measuring or test instrument used to execute the test, or enter the designation of your test instrument.

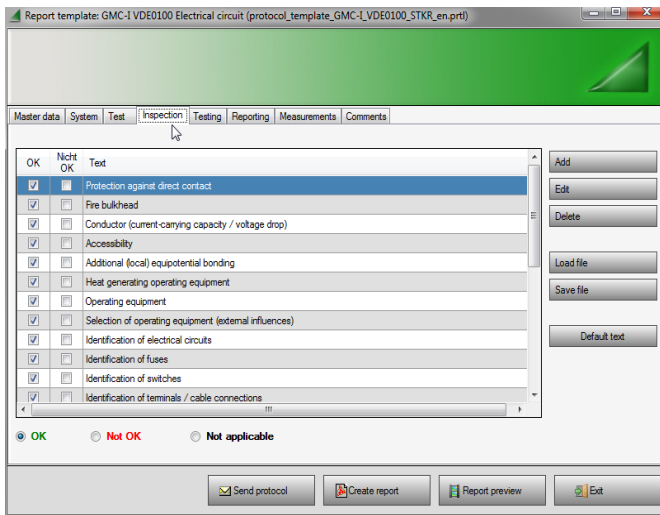
### Reason for testing

Activate the checkbox for the respective reason.

### Further data

The start and finish dates of the test can be entered here.

## 11.8 The Inspection Tab



### Editing the List

A predefined list with standard inspection items (“standard texts”) can be supplemented with new items: “**Add**”. Existing inspection items can be changed: “**Edit**”. Irrelevant inspection items can be deleted from the list: “**Delete**”. The edited list can be saved to a file with any desired name: “**Save file**”, and loaded as required: “**Load file**”.

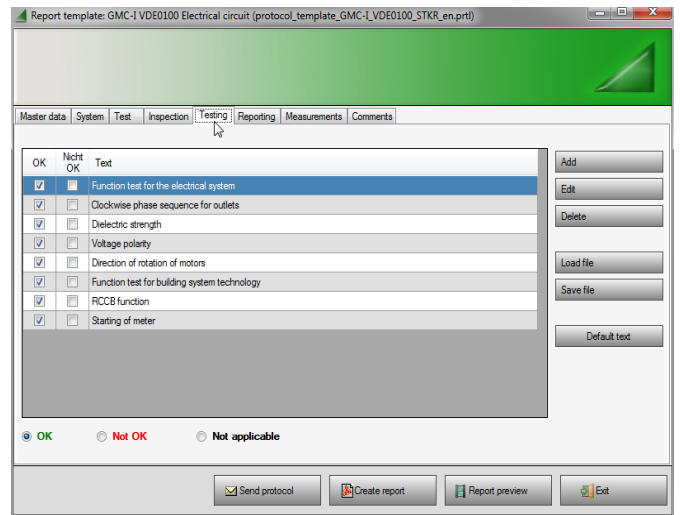
### Using the List

There are 3 ways to rate your test object by means of visual inspection:

- **OK**: the statement is valid or the requirements have been fulfilled.
  - **Not OK**: the statement is not valid or the requirements have not been fulfilled.
  - **Not applicable**: the statement or the requirements have no significance for the test object.
- ⇒ Work through the list from top to bottom by selecting the texts one after the other.
- ⇒ In order to enter your rating for the selected text, you can either activate the **OK** or **Not OK** checkbox in the same line, or click one of the three options in the footer.

All of the inspection items, including newly added ones, are set to **OK** as a default value.

## 11.9 The Testing Tab



### Editing the List

A predefined list with standard testing tasks (“standard texts”) can be supplemented with new items: “**Add**”. Existing testing tasks can be changed: “**Edit**”. Irrelevant testing tasks can be deleted from the list: “**Delete**”. The edited list can be saved to a file with any desired name: “**Save file**”, and loaded as required: “**Load file**”.

### Using the List

There are 3 ways to rate your test object by means of testing:

- **OK**: test was successful.
  - **Not OK**: testing has been failed.
  - **Not applicable**: the respective test has no significance for the test object.
- ⇒ Work through the list from top to bottom by selecting the texts one after the other.
- ⇒ In order to enter your rating for the selected text, you can either activate the **OK** or **Not OK** checkbox in the same line, or click one of the three options in the footer.

All of the testing tasks, including newly added ones, are set to **OK** as a default value.

## 11.10 The Reporting Tab

This tab is used for final evaluation, as well as for setting a deadline for the next test or service date.

A test interval can be generated via Outlook.

## 11.11 The Measured Values Tab

Nr.	Stromkreis	Leitungsart	Leiteranzahl	Leiterquerschl	Charakteristik	Nennstrom	Zs/Ifk
1	G00000002 Building000002 - V00000003 Distributor000003						
2	Electrical circuit000007	NYM-J	3	1.5	B/L	16A	

At the bottom of the table, there are radio buttons for 'Show all measurements' and 'Show only the worst measurements', and buttons for 'Send protocol', 'Create report', 'Report preview', and 'Exit'.

Whether all measured values or only those measurements with the worst measured values are displayed for the executed test can be selected in the footer.

## 11.12 The Comments Tab

Individual comments can be entered here for the respective test.

- 1 Click the “**New**” button:
- 2 Enter a designation for the following comment to the “**Headline**” field.
- 3 Enter your comment to the “**Text**” field.
- 4 After clicking the “**Accept**” button, the comment’s headline appears in the comments list in the left-hand column.
- 5 All of the comments included in the list can be saved to a file by clicking “**Save comments**”.
- 6 After clicking “**Browse**”, you can integrate images in JPG or PNG format into the report, e.g. thermograms, photos of the test object etc.

Alternatively, you can also access a suitable comment from a file by clicking “**Load comments**”.

Furthermore, photos can also be added by clicking “**Browse**” next to the image field.

## 11.13 Test Reports

Sample, Page 1 for Test per VDE 0100 with the PROFITEST MASTER

**GOSSEN METRAWATT**

Report no.  
20140226153936

# Test report

---

**Master data**

<b>Customer no.</b> K00000001	<b>Order no.</b> 20140226153936
Name Customer000001	Name Gossen Metrawatt Südwestpark 15 90449 Nürnberg
<b>Representative</b>	<b>Inspector</b>

---

**System**

<b>System</b> V00000003 - Distributor000003	<b>Mains</b> V/ Hz
<b>Meter number</b>	<b>System type</b> <input type="checkbox"/> TN-C <input type="checkbox"/> TN-S <input type="checkbox"/> TN-C-S <input type="checkbox"/> TT <input type="checkbox"/> IT
<b>Meter reading (kWh)</b>	<b>Electrical utility</b>

---

**Test**

<b>Beginning of test</b> 26.02.2014	<b>End of test:</b> 26.02.2014
<b>Reason for testing</b>	
<b>Executed in accordance with:</b>	
<b>Utilized measuring instruments</b>	

---

**Inspection**

Ok	n.OK
<input checked="" type="checkbox"/>	<input type="checkbox"/> Protection against direct contact
<input checked="" type="checkbox"/>	<input type="checkbox"/> Fire bulkhead
<input checked="" type="checkbox"/>	<input type="checkbox"/> Conductor (current-carrying capacity / voltage drop)
<input checked="" type="checkbox"/>	<input type="checkbox"/> Accessibility
<input checked="" type="checkbox"/>	<input type="checkbox"/> Additional (local) equipotential bonding
<input checked="" type="checkbox"/>	<input type="checkbox"/> Heat generating operating equipment
<input checked="" type="checkbox"/>	<input type="checkbox"/> Operating equipment
<input checked="" type="checkbox"/>	<input type="checkbox"/> Selection of operating equipment (external influences)
<input checked="" type="checkbox"/>	<input type="checkbox"/> Identification of electrical circuits
<input checked="" type="checkbox"/>	<input type="checkbox"/> Identification of fuses
<input checked="" type="checkbox"/>	<input type="checkbox"/> Identification of switches
<input checked="" type="checkbox"/>	<input type="checkbox"/> Identification of terminals / cable connections
<input checked="" type="checkbox"/>	<input type="checkbox"/> Identification of N and PE conductors
<input checked="" type="checkbox"/>	<input type="checkbox"/> Protection and monitoring units
<input checked="" type="checkbox"/>	<input type="checkbox"/> Cross-sections of protective conductor / ground conductor / equipotential bonding conductor
<input checked="" type="checkbox"/>	<input type="checkbox"/> Safety devices
<input checked="" type="checkbox"/>	<input type="checkbox"/> Isolating and switching devices
<input checked="" type="checkbox"/>	<input type="checkbox"/> Complete documentation
<input checked="" type="checkbox"/>	<input type="checkbox"/> Protective insulation
<input checked="" type="checkbox"/>	<input type="checkbox"/> Safety separation
<input checked="" type="checkbox"/>	<input type="checkbox"/> Extra-low voltage with safe separation
<input checked="" type="checkbox"/>	<input type="checkbox"/> Building systems technology – arrangement of bus components
<input checked="" type="checkbox"/>	<input type="checkbox"/> Building systems technology – laying of cables
<input checked="" type="checkbox"/>	<input type="checkbox"/> Building systems technology – cable lengths
<input checked="" type="checkbox"/>	<input type="checkbox"/> Building systems technology – target designation

---

**Testing**

Ok	n.OK
<input checked="" type="checkbox"/>	<input type="checkbox"/> Function test for the electrical system
<input checked="" type="checkbox"/>	<input type="checkbox"/> Clockwise phase sequence for outlets
<input checked="" type="checkbox"/>	<input type="checkbox"/> Dielectric strength
<input checked="" type="checkbox"/>	<input type="checkbox"/> Voltage polarity
<input checked="" type="checkbox"/>	<input type="checkbox"/> Direction of rotation of motors
<input checked="" type="checkbox"/>	<input type="checkbox"/> Function test for building system technology
<input checked="" type="checkbox"/>	<input type="checkbox"/> RCCB function
<input checked="" type="checkbox"/>	<input type="checkbox"/> Starting of meter

---

**Reporting**

Yes	No
<input type="checkbox"/>	<input type="checkbox"/> Submit circuit documentation
<input type="checkbox"/>	<input type="checkbox"/> Submit EIB performance specification and documentation
<input type="checkbox"/>	<input type="checkbox"/> Test results: error-free
<input type="checkbox"/>	<input type="checkbox"/> Adhesive test label applied inside of the electrical circuit distributor
<input type="checkbox"/>	<input type="checkbox"/> System is in compliance with recognized electrical engineering rules

**Next reporting:** 26.03.2014  System must be repaired by the following date

**Test interval (months):** 1

**Comment:**

---

**Signature**

<b>Representative</b>	<b>Inspector</b>
Nürnberg 26.02.2014	Nürnberg 26.02.2014
<i>Location Date Signature</i>	<i>Location Date Signature</i>

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### Note

The report preview is very similar, but not identical to the final report.



Protokoll

2 of 2 Page Width

Nr.	Stromkreis	Leitungsort	Leiteranzahl	Leiterquerschnitt	Charakteristik	Nennstrom	Zs/Ik	Zl/Ik	RISO	RCD In	RCD Idn	IF ID	IDN ta	IF UB	RLO	Bestanden
1	G00000002 Building000002 - V00000003 Distributor000003															
2	Electrical circuit000007	NYM-J	3	1.5	BL	16A										

RE

---

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## 12 Special Functions – Extras Menu

### 12.1 Importing Measured Values

Depending on the test instrument, objects such as electrical circuits, machines, operating equipment and devices can be imported to ETC along with their measured values by clicking **Import** in the **Extras** menu. The data import wizard shows the stipulated assignment of the objects to the columns.

#### Data Import Wizard, Object Assignment for PROFITEST MASTER

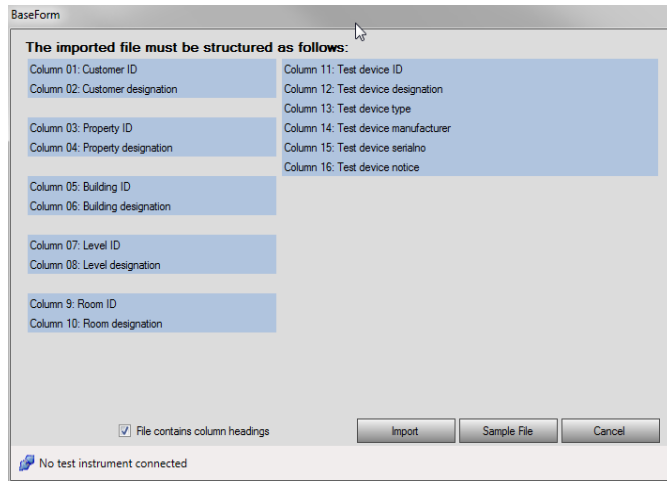


Figure 1 For Importing Stipulated Assignment of Objects to Columns

### 12.2 Exporting Measured Values

After clicking **Export > Measured Values** in the **Extras** menu, all measured values can be exported to tables in the following file formats:

- Excel (XLSX or XLS file)
- ASCII (CSV or TXT file)
- XML (XML file)

Depending on which hierarchical level is selected, the contents of the table differ as follows:

- **Hand-over report** (operating equipment room, workshop, overall)
- **Operating equipment** (no., object, electrical circuit, *operating equipment* ...)
- **Electrical circuit** (no., object, *electrical circuit*, conductor type, cross-section ...)
- **Objects** (no., *object*, ID number, designation, type ...)

First of all, an export wizard appears which allows you to show or hide the predefined columns by activating or deactivating the desired checkboxes.

#### Example, Export Measured Values, Object

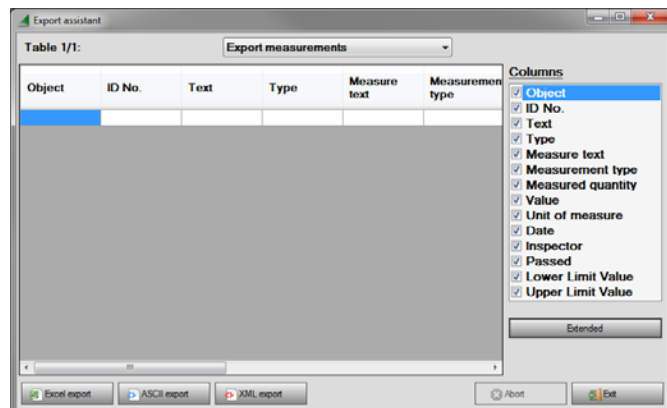


Figure 2 Export Column Selection

Further settings can be entered before starting export after clicking "Extended".

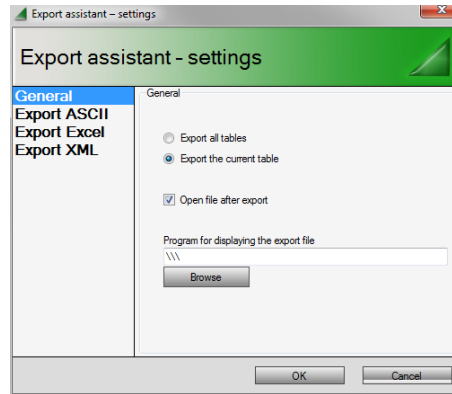


Figure 3 Export Format Selection

Afterwards, start export to the respective file using one of the three buttons in the footer.

### 12.3 Selecting Profiles

The scope of possible objects for a given structure varies depending on the test instrument ("Optimized for:" setting) and the profile.

Data exchange between report generating programs is currently only possible with the **PROFITEST MASTER** test instrument.

Tester \ Software	ETC	PS3/vFM	CAD	PC.doc	EManager
Customer	✓	✓	✓	✓	✓
Building	✓	✓	✓	✓	*
Distributor	✓	✓	✓	✓	
RCD	✓	✓	✓	✓	
Electrical circuit	✓	✓	✓	✓	
Earth electrode	✓				
Machine	✓				

\* Buildings can only be entered to EManager as sub-items under customers.

- Select the **PROFITEST MASTER** test instrument.
- Select, for example, PS3 under "Select profiles" in the "Extras" menu.

Now, only those objects which are compatible for both ETC and PS3 are displayed for setting up a structure.

#### Default Profiles

Profiles are reset to the test instrument's default values. This is advisable when different profiles are possible for different test instruments, as is the case, for example, with the **PROFITEST MTECH** and the **PROFITEST XTRA**.

### 12.4 Editing Selection Lists

After clicking **Selection Lists > ...** in the **Extras** menu, all stored lists can be loaded, edited (supplemented with additional list elements) and resaved (see section 9):

- RCD nominal residual current
- RISO nominal voltage
- Operating equipment
- Inspector
- ...

## 12.5 Generating a Barcode List – the Barcode Wizard

After clicking **Barcode Wizard** in the **Extras** menu, a list with barcodes for the selection of object types can be generated. Furthermore, selection is possible between 2 barcode formats, as well as between read-out as an Excel or a PDF file.

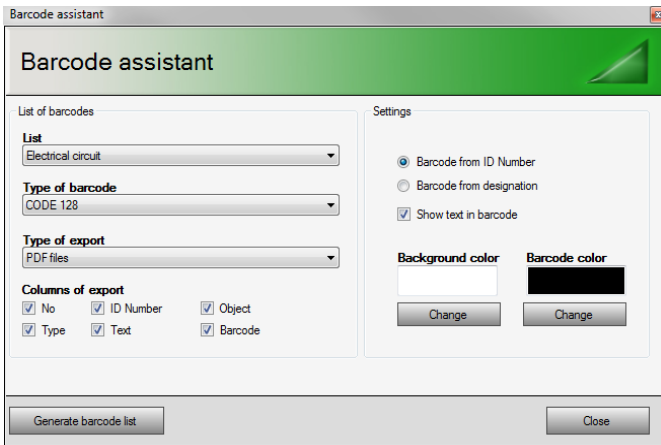


Figure 4 Settings Menu for Generating a Barcode List

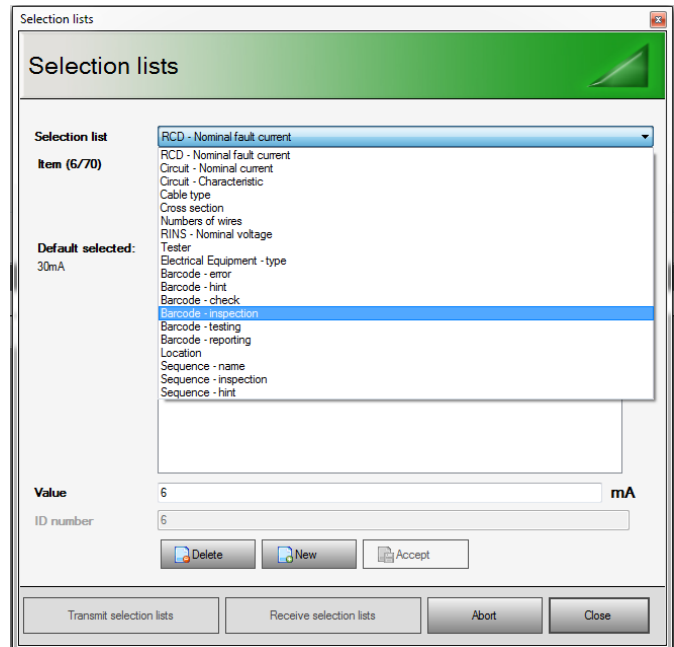


Figure 7 Select Pre-defined Barcode Types – e. g. Barcode - inspection

№r	Art	Identnummer	Objekt	Text	Barcode
0001	Electrical circuit	5000005	Kunde00001 - Geb.aud400002 - Ver.fest400003 - Stromkreis00004 - Stromkreis00005		5500005
0002	Electrical circuit	5000006	Kunde00001 - Geb.aud400002 - Ver.fest400003 - Stromkreis00006		5500006
0003	Electrical circuit	5000007	Kunde00001 - Geb.aud400002 - Ver.fest400003 - Stromkreis00007		5500007
0004	Electrical circuit	5000014	Kunde00001 - Geb.aud400010 - Ver.fest400012 - Stromkreis00014		5500014
0005	Electrical circuit	5000015	Kunde00001 - Geb.aud400010 - Ver.fest400012 - Stromkreis00015		5500015
0006	Electrical circuit	5000016	Kunde00001 - Geb.aud400010 - Ver.fest400012 - Stromkreis00016		5500016
0007	Electrical circuit	5000017	Kunde00001 - Geb.aud400010 - Ver.fest400012 - Stromkreis00017		5500017
0008	Electrical circuit	5000018	Kunde00001 - Geb.aud400010 - Ver.fest400012 - Stromkreis00018		5500018
0009	Electrical circuit	5000019	Kunde00001 - Geb.aud400010 - Ver.fest400012 - Stromkreis00019		5500019
00010	Electrical circuit	5000032	Kunde00025 - Geb.aud400006 - Ver.fest400028 - Stromkreis00032		5500032

Figure 5 Sample Barcode List

### 12.5.1 Rules for Barcode Generation

First of all, the special content for the barcodes has to be defined in the ETC selection list (from **barcode defects** to **barcode reporting**), see figure 6 to figure 8. To make the barcodes of the barcode selection list available in the test instrument, they have to be transferred to the **PROFITEST MASTER** subsequently (button **Transmit selection lists**).

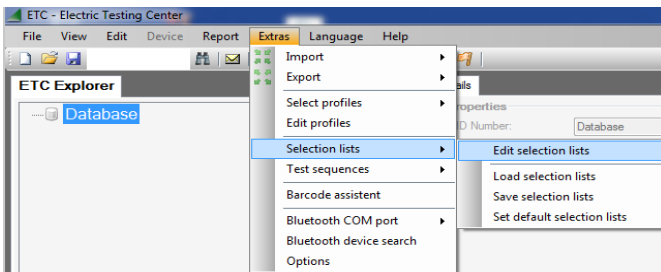


Figure 6 Open Menu „Edit selection lists“

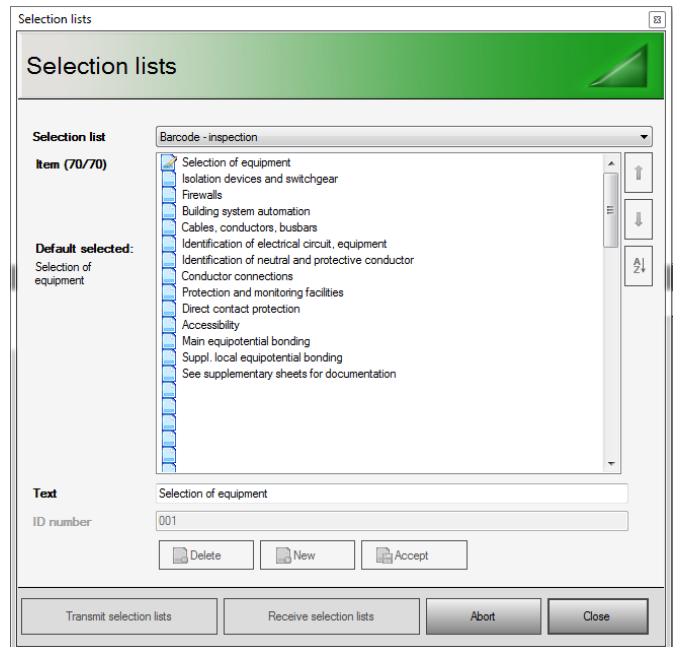


Figure 8 Supplement and Import Barcodes from the Category ‚Barcode - Inspection‘, if applicable

Simply link a command (see following examples) with the associated number as parameter 2 in order to convert the text into a barcode.

The \* sign serves as a separator in this case.

During reading, the barcode reader generates the associated text in the **PROFITEST MASTER** report window.

*	Com-mand	*	Parameter 1	*	Parameter 2	*	Comment	Example	Definition
*	ADD	*	EC	*	001 ... 100	*	Barcode – defects	*ADD*EC*001*	
			HC		001 ... 070		Barcode - comment	*ADD*HC*070*	
			CC		001 ... 070		Barcode - test	*ADD*CC*040*	Protective conductor ineffective
			IC		001 ... 070		Barcode – inspection	*ADD*IC*031*	
			TC		001 ... 070		Barcode - trial testing	*ADD*TC*003*	Function of protection, safety and monitoring equipment
			RC		001 ... 070		Barcode - reporting	*ADD*RC*011*	

## Commands from the PROFISCAN ETC Leaflet

Enter regular text always without control characters (examples)	
living room	living room
nursery	nursery
<b>Frequently required commands</b>	
Opens storage view	*MEM*
Confirmation with „ok“	*OK*
Confirmation with „Not ok“	*NOT*OK*
Deletes complete text entry	*DEL*ALL*
Deletes the latest entered character	*DEL*
<b>Creation – functions</b>	
New customer	*ADD*OBJ*01*
New building	*ADD*OBJ*02*
New distributor	*ADD*OBJ*03*
New RCD	*ADD*OBJ*04*
New electric circuit	*ADD*OBJ*05*
New equipment	*ADD*OBJ*06*
New earth electrode	*ADD*OBJ*08*
New machine	*ADD*OBJ*09*
<b>Navigation – functions</b>	
Jumps to editing mode of selected object	*EDIT*OBJ*
Navigates upward in the database	*NAVI*UP*
Navigates downward in the database	*NAVI*DOWN*
Navigates to the right in the database	*NAVI*RIGHT*
Navigates to the left in the database	*NAVI*LEFT*
Search ID	*SEARCH*ID*
Search designation	*SEARCH*TXT*
Search all	*SEARCH*ALL*
Continue search	*SEARCH*NEXT*

Defects List General id=“58“ txt=“Barcode - Defects“	
Defective cover	*ADD*EC*010*
Cover missing	*ADD*EC*011*
Equipment not installed properly	*ADD*EC*012*
Equipment designation missing	*ADD*EC*013*
Defective housing	*ADD*EC*014*
Unit polluted / ventilation impeded	*ADD*EC*015*
Faulty equipment	*ADD*EC*016*
Accessibility not guaranteed	*ADD*EC*017*
Mechanical protection missing	*ADD*EC*018*
Improper connection	*ADD*EC*019*
Thermal damage	*ADD*EC*020*
Fire protection missing	*ADD*EC*021*
Material not suitable for ambient temperature	*ADD*EC*022*
Bulkhead firewall missing	*ADD*EC*023*
Overcurrent protection incorrectly adjusted	*ADD*EC*024*
Documentation incomplete	*ADD*EC*025*
Documentation not up-to-date	*ADD*EC*026*
Neutral conductor missing	*ADD*EC*027*
Sealing missing	*ADD*EC*028*
<b>Defects List Protective Measures against Electric Shock</b> id=“58“ txt=“Barcode - Defects“	
Protective conductor ineffective	*ADD*EC*040*
Protective conductor incorrectly labelled	*ADD*EC*041*
Protective conductor missing	*ADD*EC*042*
Contact protection missing	*ADD*EC*043*
Protective insulation interrupted	*ADD*EC*044*
Protection type incorrect	*ADD*EC*045*
Main equipotential bonding missing / incomplete	*ADD*EC*046*

Defects List General id=“58“ txt=“Barcode - Defects“	
Supplementary equipotential bonding missing / incomplete	*ADD*EC*047*
Protective conductor used as phase conductor	*ADD*EC*048*
RCD missing	*ADD*EC*049*
RCD shunted	*ADD*EC*050*
Voltage levels not safely separated	*ADD*EC*051*
Incorrect protective measure	*ADD*EC*052*
<b>Defects list - Distributor</b> id=“58“ txt=“Barcode - Defects“	
Target designation missing	*ADD*EC*060*
Target designation missing	*ADD*EC*061*
Wiring faulty	*ADD*EC*062*
Overcurrent protection device incorrectly adjusted	*ADD*EC*063*
Incorrect overcurrent protection device	*ADD*EC*064*
Screw cap defective	*ADD*EC*065*
Fuse mended	*ADD*EC*066*
Arc separation missing	*ADD*EC*067*
Cover missing	*ADD*EC*068*
<b>Defects list – Cables, Conductors and Cable Lay-out Systems</b> id=“58“ txt=“Barcode - Defects“	
Improper cable lay-out	*ADD*EC*080*
Conductor damaged	*ADD*EC*081*
Conductor inadmissible	*ADD*EC*082*
Cable gland not in compliance with regulations	*ADD*EC*083*
Incorrect cross section	*ADD*EC*084*
Wire end ferrules missing	*ADD*EC*085*
Excessive fire load	*ADD*EC*086*
Lay-out systems inorrectly dimensioned / fastened	*ADD*EC*087*
<b>Defects list – Installation devices</b> id=“58“ txt=“Barcode - Defects“	
Illuminant incorrect	*ADD*EC*090*
Illuminant defective / missing	*ADD*EC*091*
Lamp cover missing	*ADD*EC*092*
Fire break not observed	*ADD*EC*093*

Inspection text (Check list) id=“60“ txt=“Barcode – Test“	
New equipment	*ADD*CC*001*
Expansion	*ADD*CC*002*
Modification	*ADD*CC*003*
Maintenance/Repair	*ADD*CC*004*
Periodic testing/E-Check	*ADD*CC*005*
DIN VDE 0105	*ADD*CC*006*
DIN VDE 0100 Part 600	*ADD*CC*007*
DIN VDE 0829/EN 50090	*ADD*CC*008*
UVV BGV A3 <i>(Accident Prevention Measures according to German Trade Association Provision A3)</i>	*ADD*CC*009*
Miscellaneous	*ADD*CC*010*

Visual Inspections (Yes/No) id="61" txt="Barcode – Inspection"	
Selection of equipment	*ADD*IC*001*
Disconnecting and switching devices	*ADD*IC*002*
Bulkhead firewalls	*ADD*IC*003*
Building systems engineering	*ADD*IC*004*
Cables, conductors, busbars	*ADD*IC*005*
Labelling of electrical circuit, equipment	*ADD*IC*006*
Labelling of neutral and PE conductor	*ADD*IC*007*
Cable splices	*ADD*IC*008*
Protection and monitoring facilities	*ADD*IC*009*
Protection against direct contact	*ADD*IC*010*
Accessibility	*ADD*IC*011*
Main equipotential bonding	*ADD*IC*012*
Supplementary local equipotential bonding	*ADD*IC*013*
Documentation see supplementary sheets	*ADD*IC*014*

Trial testing (Yes/No) id="62" txt="Barcode - Trial test"	
Functional test of unit	*ADD*TC*001*
Residual current device (RCD)	*ADD*TC*002*
Functioning of protection, safety and monitoring equipment	*ADD*TC*003*
Sense of rotation of motors	*ADD*TC*004*
Clockwise rotation of 3-phase current socket outlet	*ADD*TC*005*
Building systems engineering	*ADD*TC*006*

Report wording (Yes/No) id="63" txt="Barcode - Reporting"	
Circuit documents submitted	*ADD*RC*001*
EIB User Requirements Specification submitted	*ADD*RC*002*
Test result without complaints	*ADD*RC*003*
Inspection badge affixed on electric distribution panel	*ADD*RC*004*
Unit conforms to the accepted rules of technology	*ADD*RC*005*

## 12.6 Bluetooth

See "Test Instruments with Bluetooth Interface – Extras Menu" on page 7.

## 12.7 Installing USB Drivers

See "Installing the USB Device Drivers" on page 3.

## 12.8 Test Sequence Operations With and Without Sequence Editor

If the same sequence of tests will be run frequently (one after the other with subsequent report generation), for example as specified in the standards, it's advisable to make use of test sequences.

Automated test sequences can be compiled from manually created individual measurements with the help of the test sequence function. A test sequence consists of up to 200 individual steps, which are executed one after the other.

Fundamentally, differentiation is made amongst three types of individual steps:

- **Note:** Test sequences are interrupted when a pop-up message is displayed for the inspector. The test sequences is not resumed until the messages has been acknowledged. Sample Message Before Insulation Resistance Measurement "Disconnect the device from the mains!"
- **Visual inspection, testing and report generation:** The test sequence is interrupted when a passed/failed evaluation is displayed. The comment and the results of the evaluation are saved to the database.
- **Measurement:** same as individual measurements with the PROFITEST MBASE+, PROFITEST MTECH+, PROFITEST MPRO and PROFITEST MXTRA test instruments with storage and parameters configuration

Test sequences can currently be created for the PROFITEST MBASE+/MTECH+/MPRO/MXTRA and SECULIFE SR test instruments. However, creation and use of test sequences is differentiated as follows:

### PROFITEST MBASE+/MTECH+/MPRO/MXTRA → section 12.8.1:

Test sequences created at a PC are transferred to the PROFITEST MBASE+/MTECH+/MPRO or MXTRA test instrument, and can be selected and started at the test instrument independent of the PC. See also "ETC and the PROFITEST MASTER" on page 11.

### SECULIFE SR → section 12.8.2:

A test sequence created at or uploaded to the PC controls measurements executed by the SECULIFE SR in the so-called remote operating mode.

### 12.8.1 Loading, Editing, Saving and Transferring Test Sequences for Applications with the PROFITEST MPRO/ MXTRA

The test sequences are created at the PC with the help of ETC software, and are then transferred to a PROFITEST MBASE+/MTECH+/MPRO or MXTRA test instrument.

Measurement parameters are also configured at the PC. However, parameters can be changed at the test instrument during the test sequence before the respective measurement is started.

When the test step is started once more, the parameter settings specified in ETC are loaded again.



#### Note

ETC does not subject the parameters to a plausibility check. As a result, the newly created test sequence should be checked at the test instrument before it's permanently added to the database.

Limit values are not currently set in ETC, and have to be adjusted during the automatic test sequence.

### Accessing the Menu for Editing Test Sequences

In order to be able to edit existing test sequences (e.g. add test steps or change parameter settings), they first have to be loaded to ETC.

There are two ways to do this:

- ETC: Extras → Test Sequences → Load Test Sequences (from the "test\_sequence\_xyz.seq" file)
- or
- ETC: Device → Test Sequences → Receive Test Sequences (from the connected PROFITEST MBASE+/MTECH+/MPRO or MXTRA test instrument)

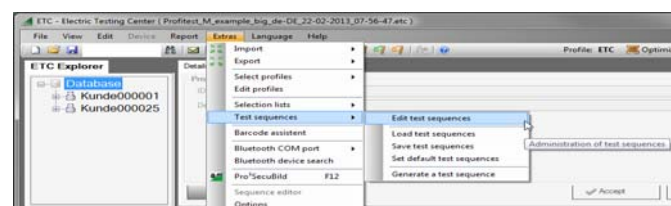


Figure 9 Accessing the "Edit Test Sequences" Command

## Operating Overview: Creating Test Sequences at the PC

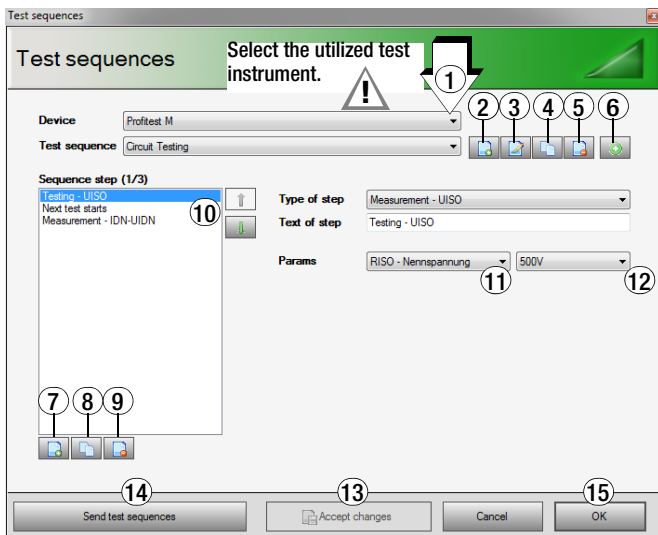


Figure 10 Overview of Functions for Creating Test Sequences

- 1 Select the utilized test instrument.
- 2 Create a new test sequence – enter a designation.
- 3 Change the designation of the selected test sequence.
- 4 Duplicate the selected test sequence; (Copy) is added to the name of the duplicated sequence.
- 5 Delete the selected test sequence.
- 6 Import an existing (stored) test sequence (from the PC).
- 7 Create or add a new test step for the selected test sequences.  
– Select the test step type from the list to this end and either accept or edit its designation.
- 8 Duplicate the selected test step.
- 9 Delete the selected test step.
- 10 Change the position of the selected test step within the sequence.
- 11 Select test parameters for the selected test step type from the list.
- 12 Select a setting for the measuring parameter from the list.
- 13 Accept and save change to the measuring parameter.
- 14 Transfer test sequences to the test instrument.
- 15 Exit the test sequences menu.

### Saving Test Sequences in ETC to the PC

We recommend saving default test sequences, as well as edited and new test sequences, to the PC or to other data storage media using the desired filename (test\_sequence\_xyz.seq) with the help of the following menu command: Extras → Test Sequences → Save Test Sequences. Data loss resulting from certain administrative operations is prevented in this way (see following notes).

Due to the fact that only up to 10 test sequences can be transferred to the test instrument, no more than 10 test sequences should be saved to any given file.

Test sequences which have been saved to a file can be reloaded to ETC at any time by clicking “Extras → Test Sequences → Load Test Sequences”.

Sequences can be further edited by clicking “Extras → Test Sequences → Edit Test Sequences”.

Please note that active test sequences in ETC are deleted when:

- Test sequences are received from the test instrument (ETC: Device → Test Sequences → Receive Test Sequences)
- The user interface language is changed (ETC: Language → ...)
- Data from the test instrument are backed up (ETC: Device → Data Backup → Backup)

Please note that test sequences which have been loaded to the test instrument are deleted when:

- Selection lists are received from the PC (ETC: Device → Selection Lists → Send Selection Lists)
- New test sequences are received from the PC (ETC: Device → Test Sequences → Send Test Sequences)
- Backup data is restored to the test instrument: (ETC: Device → Data Backup → Restore)
- The test instrument is reset to its default settings (SETUP switch position → GOME SETTING key)
- The firmware is updated
- The user interface language is changed (SETUP switch position → CULTURE key)
- The test instrument’s entire database is deleted

### Transferring Test Sequences from the PC to the Test Instrument

After executing the following ETC command, all previously created test sequences (up to 10) are transferred to the connected test instrument: “Device → Test Sequences → Send Test Sequences”.

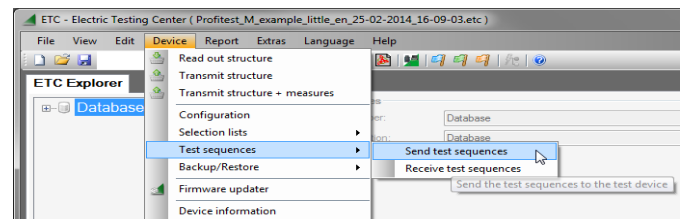


Figure 11 Accessing the “Send Test Sequences” Command

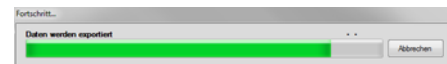


Figure 12 Progress Bar: Exporting Data

For as long as the test sequences are being transferred, the progress bar shown above is displayed at the PC and the illustration shown to the right appears at the test instrument’s display.

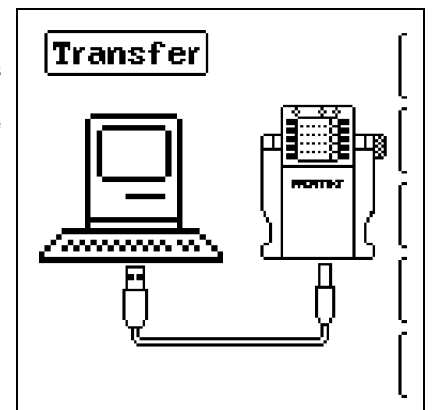


Figure 13 Display for Confirmation of Data Transmission to the Test Instrument

After data transmission has been completed, the display at the test instrument is switched to the “database” memory menu. The display is returned to the measuring menu for the respective switch position by clicking **ESC**.



## 12.8.2 Loading, Creating, Saving and Starting Test Sequences for Applications with the SECULIFE SR

The following prerequisites must be fulfilled in order to create and run a test sequence:

- The **SECULIFE SR** test instrument must be connected to mains power and switched on.
- The **SECULIFE SR** test instrument must be connected to the PC via the USB port.
- “**Seculife SR connected**” appears in the ETC footer.
- Optimized for: “**Seculife SR**” appears in the ETC header at the top on the right.
- A structure for assigning measurement results must previously be created in, or loaded to ETC.
- A test object has to be selected from the structure, for which a test sequence will be created or opened.

### Creating a Test Sequence with the Help of the Sequence Editor

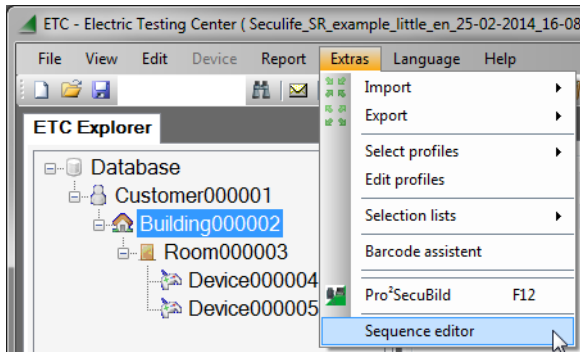



Figure 14 Accessing the Sequence Editor

- ⇒ Open the **sequence editor** by clicking **Sequence Editor** in the **Extras** menu, or by clicking the  icon.
- ⇒ Click **New** in order to create a new test sequence.
- ⇒ Enter a name for the test sequence.
- ⇒ Select a standard from the list (EN 62353 is the default setting), or enter a new standard.
- ⇒ In order to enter a new standard, click the button to the right of “Create”. After checking, and if necessary changing the limit values for the individual measurements, you’re prompted to enter a new sequence name (standard is meant here).
- ⇒ Add the individual measurements (gear icon) to the test sequence by selecting the catalog entry, pressing and holding the left mouse key and dragging the entry to the green progress arrow.
- ⇒ Set the parameters for the individual measurement in accordance with the measuring environment.
- ⇒ If you want to perform several measurements per test step, select “Multiple Measurements”. The “Continuous Measurement” setting is not sensible in this case. Enter a duration of 1 to 15 seconds.
- ⇒ A “user message” can be added prior to each measurement by selecting the catalog entry, pressing and holding the left mouse key and dragging the entry to the green progress arrow.
- ⇒ Enter instructions which are appropriate for the respective measurement, for example: “Contact all accessible conductive parts with the probe!”
- ⇒ While creating the test sequence, the order of the individual measurements or user messages can be changed at any time by selecting the desired individual measurement or user message and dragging it to the corresponding arrow for the new position.
- ⇒ After the test sequence has been completed, it should be saved before it’s started.

## Test Sequence



### Attention!

#### Before starting the measurements:

Read the operating instructions for the **SECULIFE SR** and comply with the safety precautions listed therein.

The test sequences can be started in two different ways:

- Start from the sequence editor by clicking the start button.
- Start from the “Details” area in the ETC window by clicking the “Start Test” button.

In this case as well, two different procedures are possible:

- **Manual measurement:** starts selected individual measurements, (see “Remote Mode – Individual Manual Measurements”)
- **Sequence:** starts an automated test sequence after selecting the sequence name (see “Test Sequence via Sequence Editor”)

### Test Sequence via Sequence Editor

- ⇒ Start the measurement by clicking **Start** (F5) in the sequence editor’s header.

“Starting sequence” appears.

The active window for the individual measurement at the test instrument is copied to the PC monitor screen.

- ⇒ If there are user messages for the test sequence, they have to be acknowledged. If “Yes” is clicked, the individual measurement is started. If “No” is clicked, the test sequence is cancelled.

“Waiting for values” appears at the display. The measured values are transferred automatically when the specified time has elapsed.

The respectively active test step is framed in yellow.

- ⇒ **Continuous measurement:** The test step is ended and the measured values are transferred if you press the **PRINT** key on the test instrument or click the “**Accept**” button in the pop-up window.
- **Specified measuring time:** Values are transferred automatically after the specified time has elapsed.
- **Out of tolerance values:** If a message appears indicating an out of tolerance value, the sequence can be either aborted or continued.
- Transferred values are entered in the bottom half of the sequence editor.
- ⇒ If the sequence is aborted, the sequence editor is closed.
- ⇒ Whether the sequence is aborted or completed, the “Exporting data” pop-up window appears, the sequence editor is closed and the list of measurements is transferred to the main ETC window.

If test results from previous measurements were already listed here, they are not overwritten – instead, the new ones are added and numbered accordingly.

### Special Case: Multiple Measurements

If “Multiple Measurements” has been activated for a test step:

- The following message appears: “Contact measuring point and click start”.
- ⇒ Click the start button.
- After the specified time has elapsed (continuous measurement is not possible in this case), the values are transferred automatically.
- ⇒ Press the “Start” button repeatedly until all relevant measurement points have been contacted.
- ⇒ Multiple measurement is closed by clicking the “Exit” button, and the display jumps to the next test step.

## Sequence Editor: Loading or Creating and Starting a Test Sequence for the SECULIFE SR

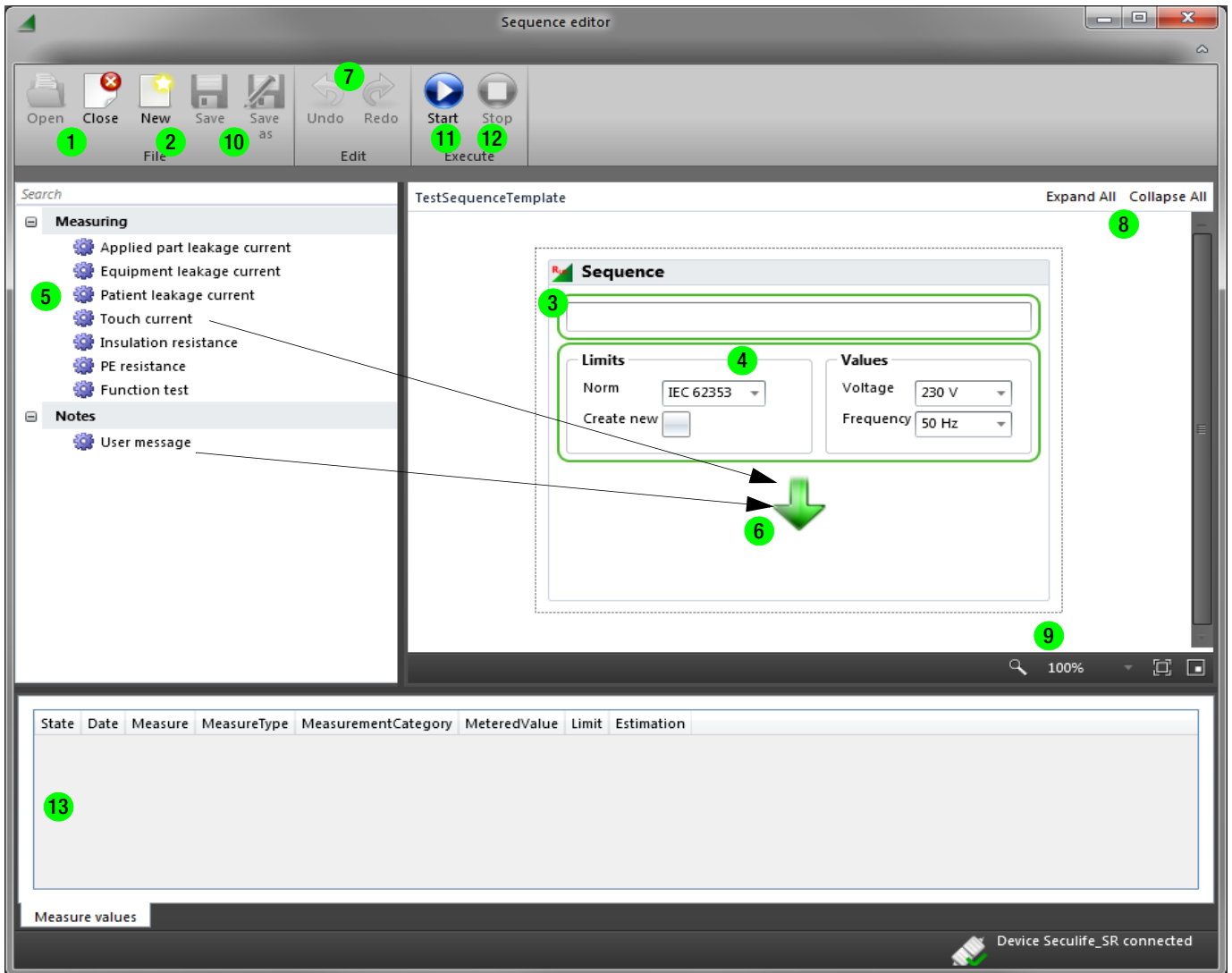


Figure 150 overview of the Sequence Editor's Functions

### Key for Sequence Editor Functions

- 1 **Open:** Load a stored test sequence.
- 2 **New:** Create a new test sequence.
- 3 Enter the designation of the new test sequence.
- 4 Adjust the parameters of the selected test step.
- 5 Select a test step under **Measurement** or a user message for the inspector under **Notes**: press and hold the left mouse key and ...
- 6 ... drag to the progress arrow.
- 7 Individual steps can be undone or restored while creating the sequence.
- 8 **Collapse all:** Only the names of the test steps are displayed (for improved clarity).  
**Expand all:** Test steps are once again displayed with all of their parameters.
- 9 The size of the test step display can be selected here.
- 10 **Save / Save as:** The completed test sequence can be saved using the current, or any other desired filename.
- 11 **Start:** The test sequence can only be started with the **Start** button in the sequence editor.
- 12 **Stop:** If necessary, the test sequence can be suspended by clicking the **Stop** button.
- 13 Test results are displayed here in a table.

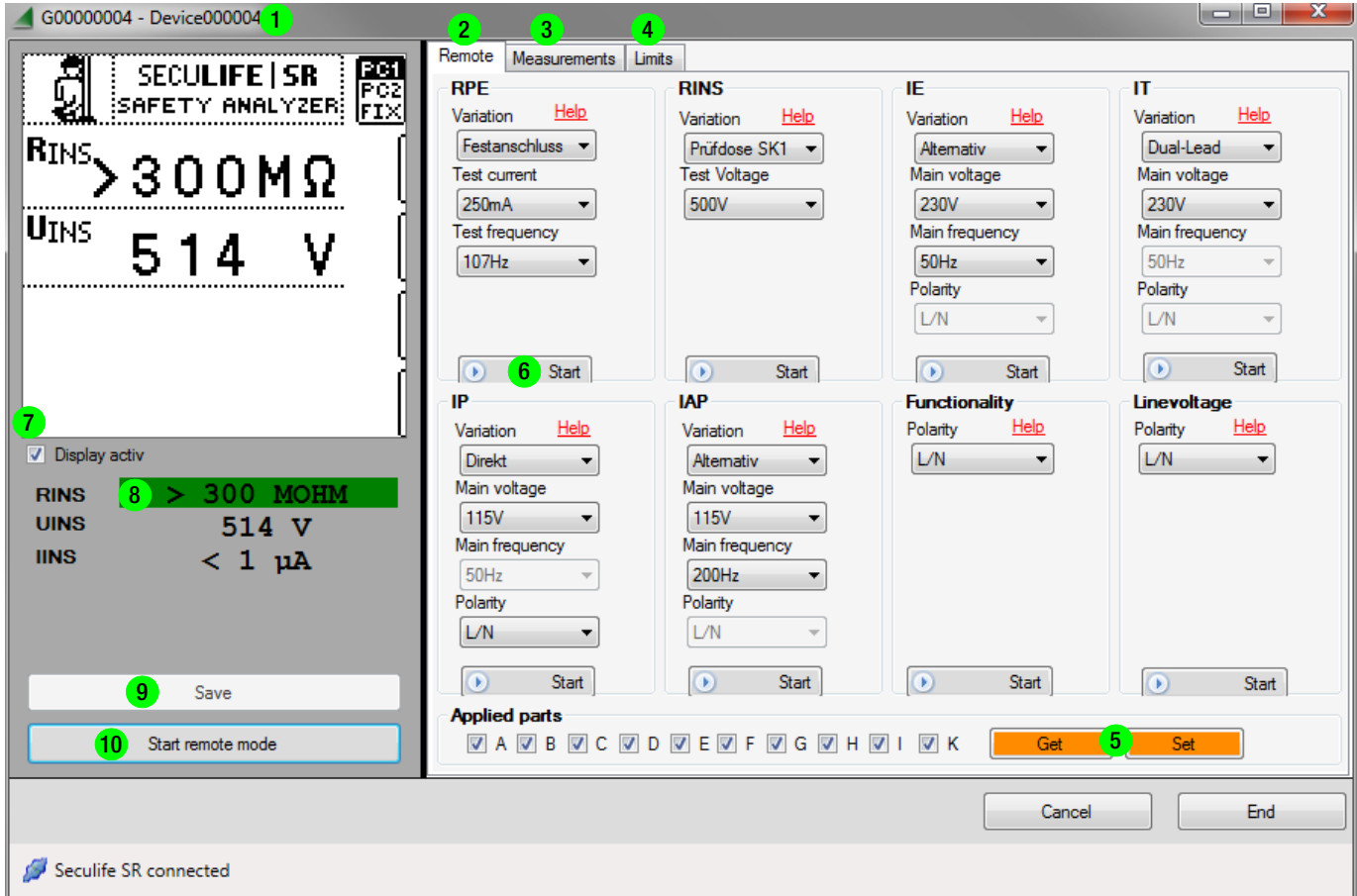


Figure 16 Overview of Remote Mode Functions

**Key for the Remote Mode Functions Window**

- 1 **Device xxx:** structure element or object for which the test will be conducted.
- 2 The **Remote** tab: user interface for parameters configuration, for setting patient ports and start/stop activation
- 3 The **Measurement** tab: space for saved measurements, where individual or all measurements can also be selected and deleted
- 4 The **Limit Values** tab: limit value settings for all measurements
- 5 **Patient ports:**  
**Get function in remote mode:** The ports which are currently activated for the  $I_P$  or  $I_{AP}$  measurement are detected (checkmarks are inserted to the corresponding boxes after clicking the **Get** button).  
**Set in remote mode:** The ports can be activated for the  $I_P$  and  $I_{AP}$  measurements (insert checkmarks to patient ports and click **Set**).
- 6 **Start:** Turns into a red **Stop** button after it's clicked.
- 7 **Display active:** If a checkmark is inserted, the same display content appears here as is also the case at the test instrument.
- 8 Current measurement results – corresponds with the display as soon as the measurement has been completed. If the limit values have not been violated, the measurement results are display with a green background.
- 9 **Save:** During the measurement, currently displayed values can be saved with this button and transferred to the **Measurements** tab.
- 10 **Stop remote mode:** button for stopping remote mode operation. The test instrument can then be operated directly at its own control panel.

**Test Sequence**

The remote window allows remote operation of all individual measurements.

- Configure the parameters for the measurement you want to start.
- The desired patient ports have to be activated by entering a checkmark and clicking “Set” for the  $I_P$  and  $I_{AP}$  measurements.
- Check the limit values for the measurements to be performed and adjust them if necessary.
- Click the **Start** button for the selected measurement.
- The active window for the individual measurement at the test instrument is duplicated at the left-hand side of the display, if “Display active” has been checked.
- The respectively desired display value can be transferred to the “Measurements” tab during the measurement by clicking the “Save” button.
- The measurement has to be stopped manually by clicking the “Stop” button.

The measurement results appear underneath the display. The measured value appears with a green background if the measurement has been passed.

Saved measurements can be queried, deleted or exported in the **Measurements** tab.

## 13 Appendix

### 13.1 Hot Keys

Combination	Menu	Function
Ctrl + N	File	Create a new structure.
Ctrl + O	File	Open a file or load a structure.
Ctrl + S	File	Save the current structure.
Alt+F4	File	Exit application.
Ctrl + A		Text entry fields, e.g. in details: select entire text.
Ctrl + C	Edit	Copy
Ctrl + X	Edit	Cut
Ctrl + V	Edit	Paste
F1	Help	Getting started
F2	Context menu	Rename nodes and objects.
F5	View	Change back and forth between text mode (designation) and ID number mode.
F8	Extras	Rest profiles to default settings.
F11	Extras	Opens the barcode wizard.
*		Key in numeric keypad: expands tree nodes and their sub-nodes.
+		Key in numeric keypad: expands tree nodes.
/		Key in numeric keypad: collapses tree nodes and their sub-nodes.
-		Key in numeric keypad: collapses tree nodes.
Ctrl + Up Ctrl + Down	Context menu	Moves the node up or down.
Ctrl + Q		Save file and exit the program.
Ctrl + D	File	Send structure as e-mail (prerequisite: the test instrument is connected to the PC).
Ctrl + U	Device	Receive structure from test instrument (prerequisite: the test instrument is connected to the PC).
Ctrl + I	Help	Opens the export wizard and indicates the number of objects.
Delete		Deletes the selected tree node or object.

### 13.2 List of Abbreviations and their Meanings

Abbreviation	Meaning
Hint	General information for the user
Inspection	Visual inspection questions from the test report
Testing	Test questions from test report
Reporting	Notes on reporting
Measurement - IDN-ta	Measurement of tripping time of RCD
Measurement - IDN-UIDN	Measurement of contact voltage as a function of the nominal residual current of the RCD
Measurement - IF-ID	Measurement of tripping current of RCD
Measurement - IF-UIDN	Measurement of contact voltage as a function of the nominal residual current of RCD
Measurement - IL	Measurement of leakage current by means of leakage current adapter PRO-AB
Measurement - IMD	Measurement of leakage resistance upon which the insulation monitor responds
Measurement - IRAMP	Measurement of tripping time and tripping current at the same time with reduced accuracy
Measurement - ICLAMP	Measurement of current by means of a clamp
Measurement - charging station	Testing of charging stations for electric vehicles with the appropriate adapter (e. g. PRO-TYP I and II)
Measurement - RCM-ta	Measurement of response time of a differential current monitor
Measurement - RCM-UIDN	Measurement of contact voltage as a function of the nominal residual current of the differential current monitor
Measurement - RE	Measurement of earth resistance with line voltage
Measurement - RE-BAT	Measurement of earth resistance with battery voltage
Measurement - REINS	Measurement of leakage resistance of insulating floors and walls or other materials
Measurement - RE-RHO	Measurement of specific earth resistance
Measurement - RINS	Measurement of insulation resistance
Measurement - RLO	Measurement of low-value resistances of equipotential bonding conductors or of protective conductor resistances
Measurement - U	Measurement of line voltage
Measurement - UINS	Test voltage during insulation resistance measurement and response voltage for the testing of overvoltage protection devices
Measurement - URES	Residual voltage measurement according to VDE 0113
Measurement - METER	Function for meter start-up test for Ferraris meters
Measurement - ZLN-dU	Measurement of voltage drop
Measurement - ZLN-IK	Measurement of line impedance and short-circuit current
Measurement - ZLPE	Measurement of loop impedance and short-circuit current
Measurement - ZST	Measurement of standing-surface insulation

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## 14 Product Support

If required please contact:

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E-mail: support@gossenmetrawatt.com