Datamanagement

ETL DataView 3

Quickstart Guide







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2 Foreword

2.1 Introduction

This document describes **ETL DataView 3** as a quickstart guide. This quickstart guide describes the most common test types: protective earth test, insulation test, high voltage test and function test with the main settings as single step test and as part of a test plan.

As basis the variant LG-AC in connection with a safety test cage is used. Furthermore, it is assumed that the protective earth test is performed with the PE-testprobe, and for the rest of the test the unit under test is contacted fixed in the cage.

As workflow there is provided:

Inserting the unit under test in a contacting housing rsp. contacting the unit under test.

Protective earth test with safety test cage opened.

Closing the safety test cage to perform the remaining tests.

Opening the safety test cage and removing the unit under test.

The detailed instruction is stored for variant X2 on the media in the folder D:\ETL\DataView 3\Manuals as PDF-file, for variant X4 in the folder \Storage Card\Manuals or in the folder \SDCard\Manuals, for variant X5 in the folder \SDCard\Manuals and for the variants X6 and X8 on the ATS 400 in the folder C:\Programme\ETL\DataView 3\Manuals. For each language we have a translation in the appropriate subfolder. With the variant X2 D: is the drive containing the media.

Be aware that for the variants X4 and X5 you need to copy the manuals on a Windows system to be able to read them.

You can download all latest document with: ftp://ETL-FTP:d0wn10ad@134.98.90.37/Manuals/DataView 3 en.zip.

All screen shots are taken with the PC variant. For the variants X4 and X5 look the same apart from the visual effects.

2.2 Used Symbols



WARNING

Information to prevent extensive material and ecological damage.



PRECAUTION

Information on handling and usage. Disregard may lead to malfunctioning or marginal material damage. Information to prevent extensive material and ecological damage.





Danger

Information to prevent all kinds of personal damage.



ANNOTATION

Information to accentuate operating instructions.



HINT

Advice on how to handle the system or operation.



INITIAL COMMISSIONING

Information on actions and data which are necessary for the initial commissioning of the system.

2.3 Qualification of Staff



PROFESSIONAL STAFF

The operations described in this document are only allowed to be performed by persons who have the qualified technical formation or have been trained appropriately by the operator.

2.4 Additional Documents

For operating the device also the manual *Automatic Test System ATS400 Instruction Manual Base device* is neccessary.



3 Functional Description of ETL DataView

ETL DataView is a program to manage device settings and to create and manage individual test plans. The created test plans are the base for a reproducible test operation which is visualized in the program.

This manual is for **ETL DataView** version 3.22.52.

3.1 How will ETL DataView be used?

The software **ETL DataView** is either installed on your test system (X4, X5, X6, X8) or must be installed on your PC (eg. For remote controlling the X2 variant). You will find the necessary information in the detailed instruction.



PRECAUTION

Basically all variants can be controlled remotely with the PC version of **ETL DataView**. In this case, the program should not be active on the device.



HINT

Using the touch screen you do not need a keyboard or a mouse.

Keyboard or mouse may be more comfortable when you need to enter a lot of test plans or user advice.

3.2 What you need to take care of!

ETL DataView is configured compatible to your test system and test modules.

3.3 The Navigation

ETL DataView is optimized for using a touch screen. Basically, you can attach a keyboard and a mouse. Not all functions usually used in Windows are supported. There is no support for keyboard shortcuts or the context menu.

To navigate easily, large buttons are available. The navigation is built in an hierarchical way. All entries belonging to the same main theme can be done in the appropriate submenus. The entries are thematically arranged so technical items are correctly structured and will support an intuitive usage.

For all fields needing an entry you can open an approbiate window by clicking on the field. For text fields a keyboard will be shown or for numerical fields a number keyboard. In the following this is not mentioned anymore.

3.4 Layout of the User Interface

The layout is divided into a fixed header area and a mutabel main area.

3.4.1 Layout of the User Interface – Header Area

The header area contains the following controls:

■ The button Menu allows a direct jump to the main menu. Entries done in dialogs will be discarded without any further advice.



- For better orientation, the name of the menu and submenu will be displayed on the right.
- To the right of the clock symbol, the current date and time will be displayed.
- To the right of the person symbol, the currently logged in user is displayed. Is the symbol and the field missing, user management is disabled.

3.4.2 Layout of the User Interface - Main Area

The main area is the normal navigation area. The menu buttons, entries, display windows and popup menus for using the system will be displayed here.

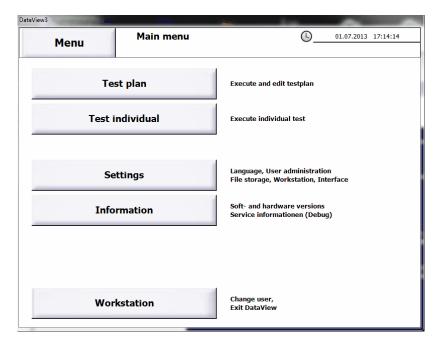


ANNOTATION

The main area changes depending on the chosen menu. The operating philosophy will be common to a theme and allows a save usage.

3.5 The Main Menu

After turning on the system rsp. starting **ETL DataView,** the Main menu will be displayed.





3.6 The Test Plan Menu

Using button Test plan the menu Test plan will be displayed.



Using the button **Select** manual a new window will be opened where you can choose and start previously created test plans.

Using the button **select ID** a new window will be opened in which created test plans can be chosen using an identification. For each unit under test a new identification is required.

Using the button **Test** batch a new window will be opened in which created test plans can be chosen using an identification. The test plans can be used for several units under test.

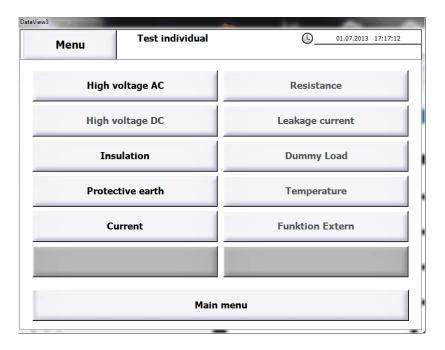
Using the button <code>Create</code> / <code>Edit</code> new test plans can be created or existing test plans can be changed, copied or deleted.

Using the button <code>Dummytest</code> a manual device check with a test dummy can be started.



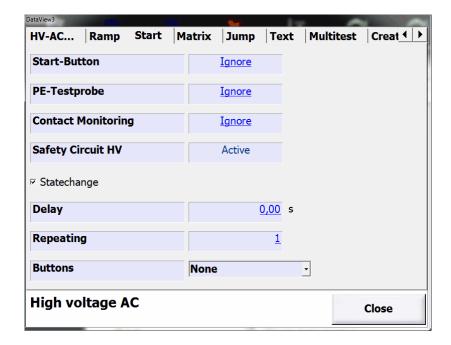
3.7 The Test Individual Menu

Using the button **Test indiviudual** you get into the submenu with the single test steps for the system. Clicking on the button for the desired test the test window will be opened. The test can immediately be started using the latest test parameters, limits and start conditions.



3.8 The Dialog Start

To start the test at the correct time the conditions can be configured in the dialog <code>start</code>. This dialog is available for all test who need a start condition. This dialog will be shown when activating the tab <code>start</code>.



Each signal can have one of four states.

Active: The signal must be set that a start can occur.

Not active: The signal must not be set that a start can occur.



Monitored: It will be monitored that the signal will be set at the time all other signals with state Aktive are already set. Will the singal not be set within a given time the test step will be aborted with failed. Are there several signals monitored the shortest time will be used to abort.

Ignore: The signal will not be used.

To choose the state Monitored at least one other signal must have the state Active.

Is there only one signal in the state Active and at least one other has the state Monitored, the state of the signal cannot be changed anymore.

It is the responsibility of the test plan editor to choose a meaningful combination for his testing scenario.

The signal Start-Button allows the start with the button Start on the front or with the signal Button Start on the ETL Interface.

The signal PE-Testprobe allows the start with the button on the PE-Testprobe.

The signal Contact Monitoring allows the start with the contacting, eg. using test pistols.

The signal Safety Circuit HV allows the start using the safety circuit. Using the test types HV-AC, HV-DC and ISO the state is always Active and cannot be changed.

Delay allows that the test will start after fulfilling the start conditions after a specific time.

Repeating allows to execute a test step once, each time or each nth-time. Is the value 0 the test step will be executed only once. Is the value 1 the test step will be executed each time. For other value it will be executed for the first unit under test and the omitted for the next n-1 units under test. This entry will not be shown when configuring a single test step.

Statechange forces that a signal having the state Active to change from not active to active that a start can be done. When contacting manually this ensures that the new test point has been contacted. This checkbox is not shown when configuring a singel tst step or the first step of a test plan. In these cases the checkbox is activated.

Buttons is a Combobox. You have two options to choose from. This combobox is not shown configuring a single test step and set to **None**.

None no buttons are dissplayed.

skip allows the test personal to skip the test. For the overall result the step is estimated as passed.

Start allows the test personal to start the test.

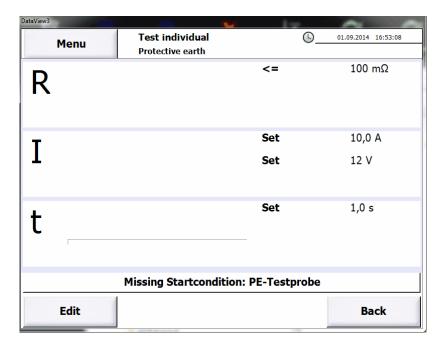
Choosing Start and Skip both buttons will be displayed.



4 Using a Single Test Step

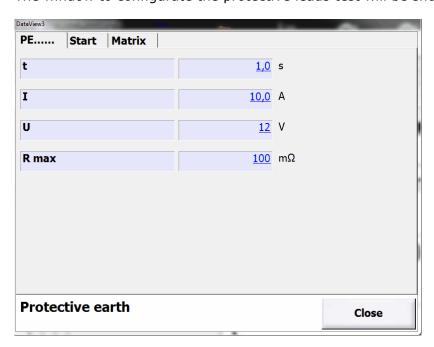
In the following, the execution of a single test step on the example of a protective earth test is described. It is assumed that the unit under test has been placed in the safety test cage and that the test will be done using the PE-testprobe. The device has been restarted, and the main menu is be displayed.

In the main menu click on the button **Test individual**. The menu with the single test steps will be shown. Click on the button **Protective Earth**. The window for the protective earth test will be opened.



Use the button Edit.

The window to configurate the protective leads test will be shown.



Mostly, the default values fit the case of application. If necessary, modify the values.



- t: Testing time in seconds. Testing time is the duration of test current streaming through the test object. Switch-on and -off time is not part of the testing time.
- I: Test current [A].
- **v**: Maximum test voltage [V]. This test voltage will not be exceeded if the resistance of the test object is too high.
- R max: Maximum permissible resistance with that the test will be passed.

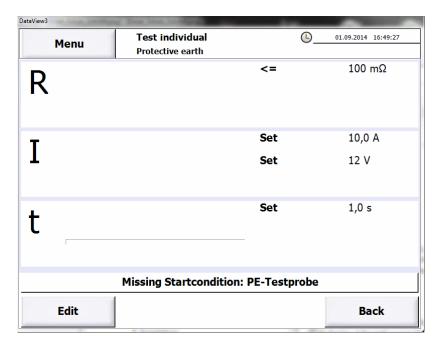
Advance to tab page Start. The dialog Start will be shown.



Configure the settings so that the status of **PE-Testprobe** is **Active** and of all others **Ignore**. Set the time in **Delay** to 0.0.



Press on Close. By doing this, all values are saved and you return to the window of the protective earth test.

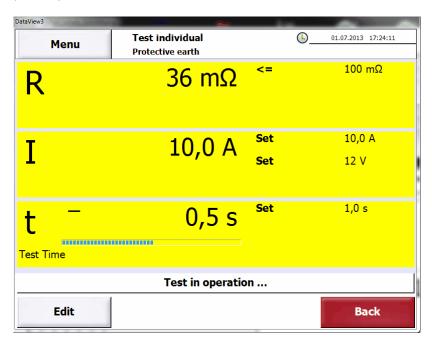


On the right you see the set testing parameters.

In the middle, the current respectively previous measured values are shown. If you have not done any tests yet, the array is empty.

Below, the not yet fulfilled starting condition is shown.

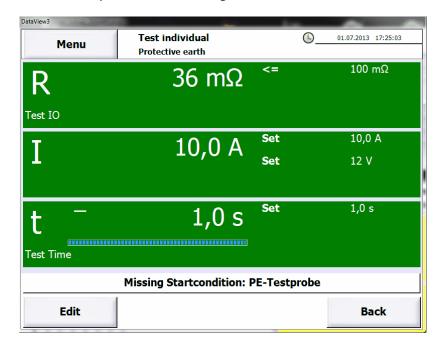
Bond the test object using the PE test probe. By pressing the button on the test probe you start the test.



The background colour changes to yellow. During the test, the current measurements are shown. The progress bar visualizes the test time. Test in operation... is shown as status.



The test stops after the testing time.



The maximum measured protective conductor resistance is depicted. The background colour changes into green if the test passed; otherwise it changes into red.

You can exit the window in two ways.

With the button Menu you will reach the Main menu.

With the button Back you will reach the menu Test individual. From there you can reach the Main menu as well.

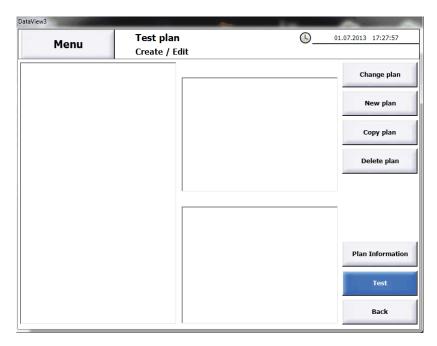


5 Creating a Test Plan

In the following, a test plan for protective earth, high voltage, insulation and function testing is created. We assume you are in the main menu.

5.1 Creating a Test Plan

Press the button Test plan. You get to the menu Test plan. Here, press the button Create / Edit. The window Create / Edit will be opened.



No test plans will be shown yet.



Press the button New plan. A window opens where you can type in the name of the new test plan.



Type in the name of the test plan. As the name of the test plan is the name of the file too, you cannot use characters that Windows does not allow for file names. Close the window by pressing Ok.

5.2 Adding Test Steps

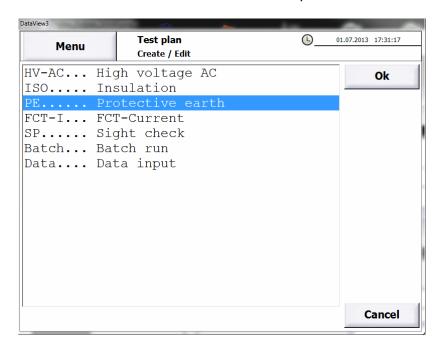
The window Create / Edit will be opened. The test plan does not contain any test steps yet.



The test steps will be added in the order they will be used later. Every new and pasted test step will be added after the selected test step. The test plan will be executed top down.



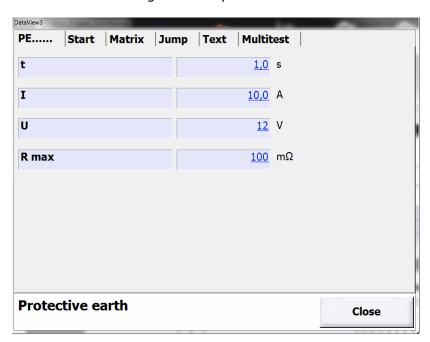
Press the Add-button. The window where you can select test steps will open.



Select PE..... Protective earth and close the window by pressing Ok.

5.2.1 Configuring Protective Earth test

The window to configurate the protective earth test will be shown.



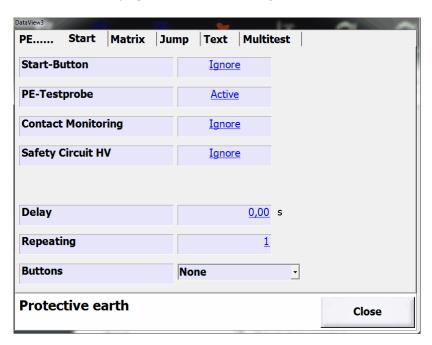
Mostly, the default values fit the case of application. If necessary, modify the values.

- t: Testing time in seconds. Testing time is the duration of test current streaming through the test object. Switch-on and -off time is not part of the testing time.
- I: Test current [A].
- **u**: Maximum test voltage [V]. This test voltage will not be exceeded if the resistance of the test object is too high.



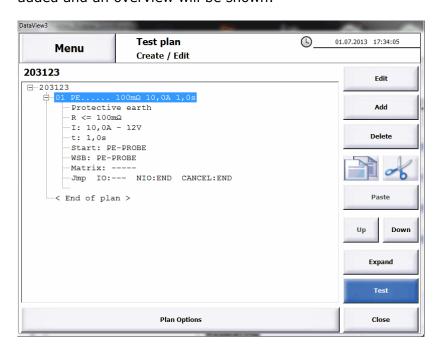
R max: Maximum permissible resistance with that the test will be passed.

Advance to tab page Start. The dialog Start will be shown.



Configure the settings so that the status PE-Testprobe shows Active and all others Ignore. Set the time in Delay to 0.0.

Press Close. Again, the window Create / Edit will be shown. The test step was added and an overview will be shown.



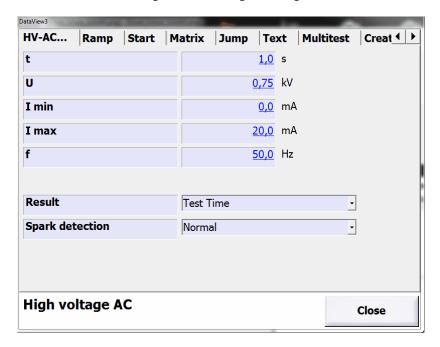
In an overview of a test step you can find the parameters, the starting conditions and further settings.

5.2.2 Configuring High Voltage Testing

Press Add, select HV-AC...High voltage AC and confirm with Ok.



The window to configurate the high voltage test will be shown.



The default settings ensure that there is no threat; the parameters have to be changed accordingly.

- t: Testing time in seconds. Testing time is the duration of test current streaming through the test object. Switch-on and –off time as well as ramp time are not part of the testing time.
- **u**: Test voltage. This voltage is applied to the test object during the test time. If this voltage is undercut fastly, this is taken as a disruptive breakdown whereupon the test will be ended.
- I min: Minimum test current. This current flows through the test object during the testing time. If this limit is undercut, the test is declared as fail.
- I max: Maximum test current. This current may not be exceeded during the test time otherwise it is declared as excess-current and the test ended.
- f: Frequency in hertz. Frequency of the test voltage.

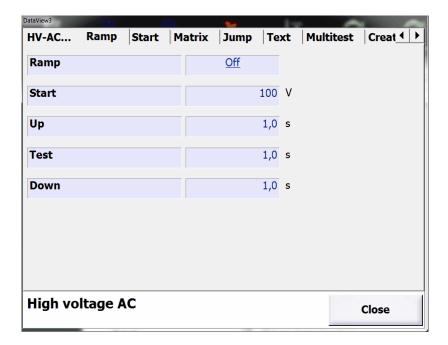
Result: Here you can select how the analysis is done. In case of Test Time the analysis stops with the end of the testing time. In case of Start button the analysis stops with pressing the start button.

Spark detection: Here you can select if the detection of spark is activated and how sensitive it is. The detection of spark asseses the voltage drop based on size or speed. In case of off, no spark detection is performed. In case of Coarse, only bigger sparks are detected, if you select Normal, the sensitivity is medium and if you select Feine even smallest sparks are detected.

Change the values so they fit your test object.



Advance to tab page Ramp. The configuration of the ramp will be shown.



Default setting is that no ramp is used.

Ramp: Turns the ramp-function on and off. The other parameters can be changed if the ramp-function is turned on.

Start: Voltage the ramp starts with.

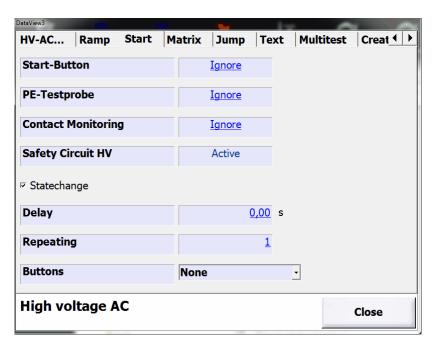
Up: Time in seconds from starting voltage to test voltage.

Test: Testing time in seconds. Duration which the voltage is applied to the test object. It is the same value as t in the configuration view.

Down: Time in seconds from test voltage to 0 volt.

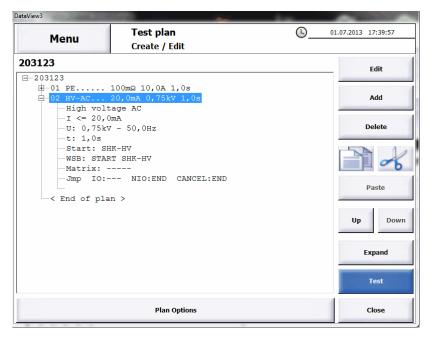


Advance to tab page **Start**. The configuration page for the starting conditions will be shown.



Set the status of the Start-Button to Ignore. Click on the checkbox Statechange so it is activated. With this setting, the test begins as soon as the test cage is closed.

Press Close. Again, the window Create / Edit will be shown. The test step was added and an overview of the test step will be shown.

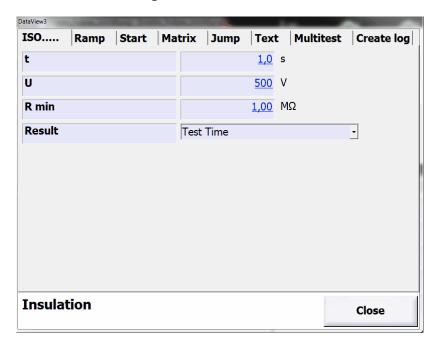


5.2.3 Configuring Insulation test

Press the button Add, select ISO..... Insulation and confirm with Ok.



The window to configurate the insulation test will be shown.



The default settings ensure that there is no threat; the parameters have to be changed accordingly.

- t: Testing time in seconds. Testing time is the duration of test current streaming through the test object. Switch-on and -off time is not part of the testing time.
- **v**: Test voltage. This voltage is applied to the test object during the test time. If this voltage is undercut fastly, this is taken as a disruptive breakdown where upon the test will be ended.
- R min: Minimum resistance. If the resistance undercuts this limit, the test will be declared a failure.

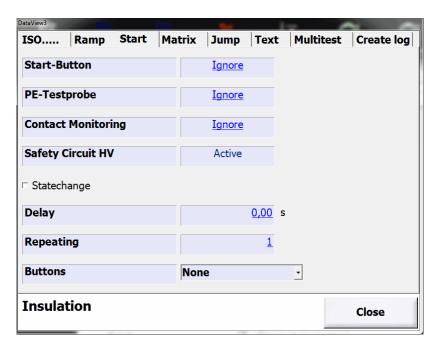
Result: Here you can select how the analysis is done. In case of Test Time the analysis stops with the end of the testing time. In case of Start button the analysis stops with pressing the start button.

Change the values so they fit your test object.

If necessary you can create a ramp by pressing the Ramp-button. This is the same dialog as in **Fehler! Verweisquelle konnte nicht gefunden werden.**.

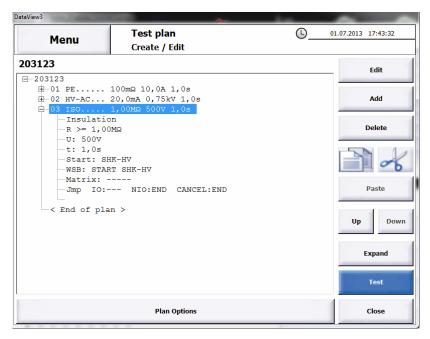


Advance to tab page **Start**. The configuration page for the starting conditions will be shown.



Set the status of the **Start-Button** on **Ignore**. With this setting the test will be continued without a break.

Press Close. Again, the window Create / Edit will be shown. The test step was added and an overview will be shown.



5.2.4 Configuring Function Testing

Press Add, select FCT-I... FCT-Current and confirm with Ok.



The window to configurate the function test will be shown.



The default settings are designed in a way that you have to change the parameters.

- **u**: Test voltage. This voltage is applied to the test object as supply voltage. The parameter will be ignored if the power supply is external.
- **f**: Frequency. Frequency of the test voltage. The parameter will be ignored if the power supply is DC voltage or external.
- t: Testing time in seconds. During the testing time the monitoring with regard to the limits is performed. This time begins as soon as the starting conditions are reached. If the test is done as optical control using the buttons attached to the device, this parameter will be ignored.
- I min: Minimum current. If the current undercuts this limit, the test is declared a fail. This parameter is shown if Current is selected as measuring channel.
- I max: Maximum current. If the current exceeds this limit, the test is declared a failure. This parameter is shown if Current is selected as measuring channel.
- U min: Minimum voltage. If the voltage undercuts this limit, the test is declared a failure. This parameter is shown if Current is not selected as measuring channel.
- U max: Maximum voltage. If the voltage exceeds this limit, the test is declared a failure. This parameter is shown if Current is not selected as measuring channel.
- Result: Here, two inputs are possible. In the upper selection you can choose the method; either Measuring canal Or Button Pass/Fail. In the lower selection you can choose the channel for the method Measuring canal. If the method Button Pass/Fail is chosen, the limits will not be regarded. The parameters I min, I max, U min, U max as well as the values for Start will be ignored.

Graphic: Here you can select whether a graphic should be shown during the function test or not, and whether it should be saved or not. In case you select None, a



graphic will neither be shown nor saved. If you select **Show only** the graphic will only be shown. In case you select **Show and save** the graphic will be shown and saved.

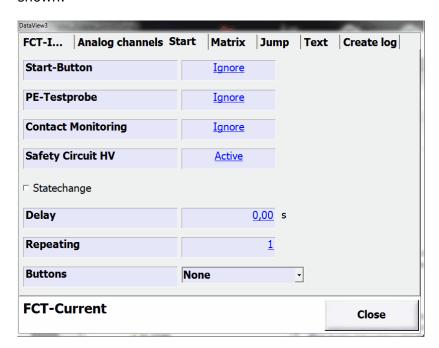
Source: Source by which the test object is supplied. The possible sources depend on your device. If an external supply is selected, with the checkbox **Source is DC** you can state that it is DC voltage.

Voltage: Selection of the test objects supply. If you select Turn off after test, the supply voltage is turned off after the test has ended. With the setting Leave on after test the supply voltage will remain on. With the setting Turn off no test will take place. Only the supply voltage will be turned off. With the setting Turn off if N.I.O the supply voltage will only be turned off if the test has failed. If you select Turn on the supply will be turned on but no test will take place.

Start: Setting if the analysis is done with regard to the limits. This and further parameters will be ignored if the method is set as Button Pass/Fail. If you select After Delay, the analysis begins when (after turning on) the time in Delay has expired. With the setting > min the analysis begins when the measuring channel has exceeded the limit in I min or U min. If you select Delay and > min, both, the time in Delay has to be expired, and the measuring channel has to have exceeded the limit in I min or U min. With the setting Gradient the measuring channel has to have undercut the value in Gradient. With the setting < max the measuring channel has to have undercut the value in I max or U max. If you select Delay and < max, both, the time in Delay has to be expired, and the measuring channel has to have undercut the limit in I max or U max. If you choose > min, Gradient and < max, the analysis has to have begun until Timeout at the latest. Otherwise the test will be declared a failure.

Change the values so they fit your test object.

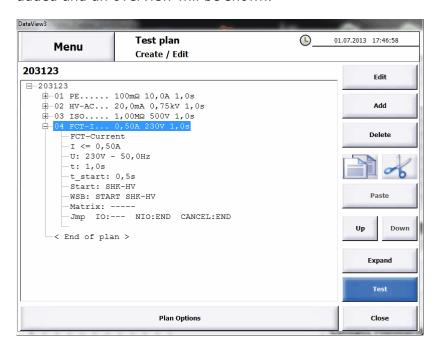
Advance to tab page **Start**. The configuration page for the starting conditions will be shown.





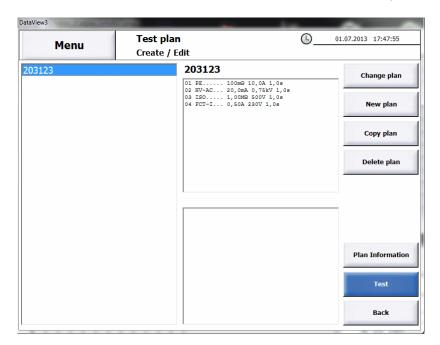
Set the status of the Start-Button on Ignore. Leave the status of Safety circuit HV on Active. With this settings the test will be continued without interruption.

Press Close. Again, the window Create / Edit will be shown. The test step was added and an overview will be shown.



5.3 Saving the Test Plan

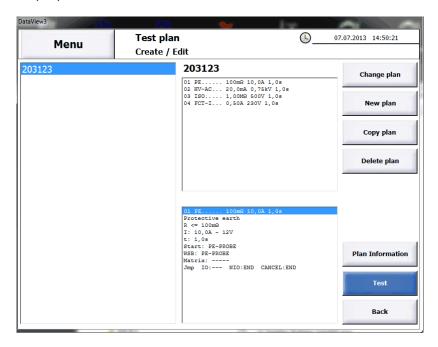
Press Close. The window with the overview of the test plans will be shown.



On the left, a list of all test plans will be shown. If you select a plan, you can see the test steps at the top in the middle.



If you select a test step in this control element, a summary of the test step will be displayed at the lower center.



Confirm the button Menu to come back to the Main menu.

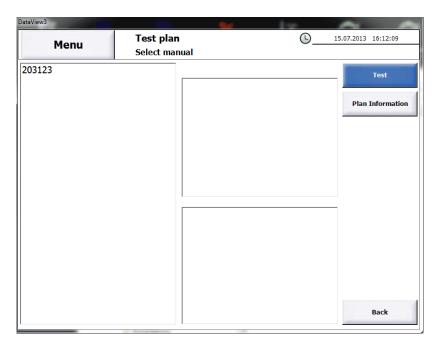


6 Performing a Test Plan

You are in the main menu, no matter if you have just started the system or created a test plan as in the previous chapter.

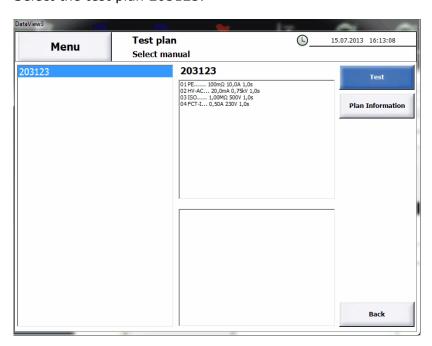
6.1 Selecting a Test Plan

Press on Test plan. In the new menu click on Select manual.



A list of the test plans will be shown.

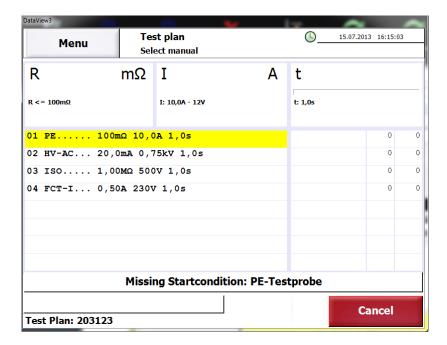
Select the test plan 203123.



At the top in the middle, a list of all test steps will be shown.



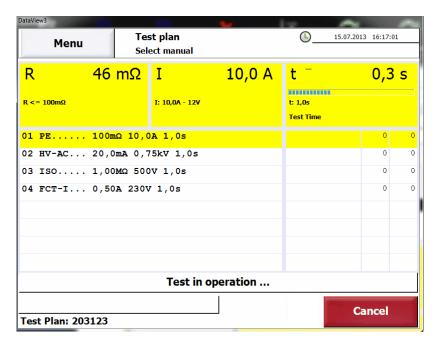
Click on Test.



The test plan will be loaded and a table of the test steps displayed. The first test step is marked and waiting to be started. In the lower part of the window you can read that you have to press the start button at the PE-Testprobe in order to start the test.

6.2 Performing a Test

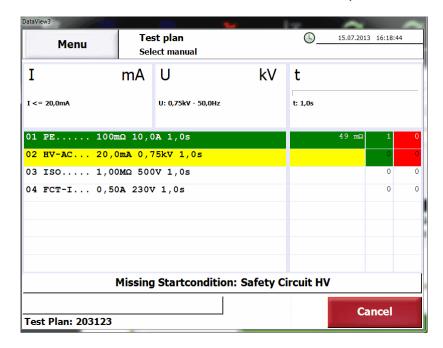
Mount the test object in the test cage and contact it. Start the test by pressing the start-button on the PE-Testprobe.



The test will be started. Resistance, test current and test time will be displayed.

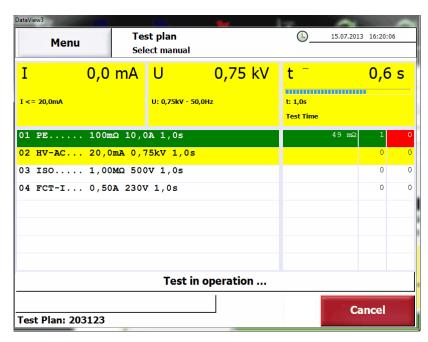


After the test has been ended it will automatically switch to the next test step.



The first test step is colour-coded according to its result. You can find the value of the result in the second column.

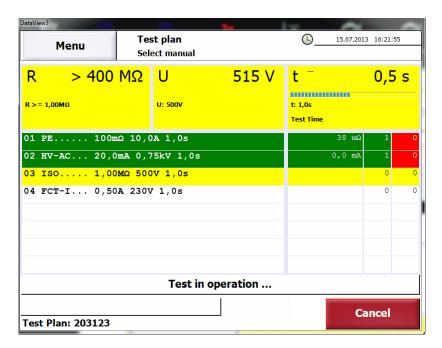
The test stops and waits for the safety circuit to be closed. Lay the PE-Testprobe into the tray and close the test cage. Afterwards, the remaining tests will be performed.



During the high voltage test, current, test voltage and test time are displayed.

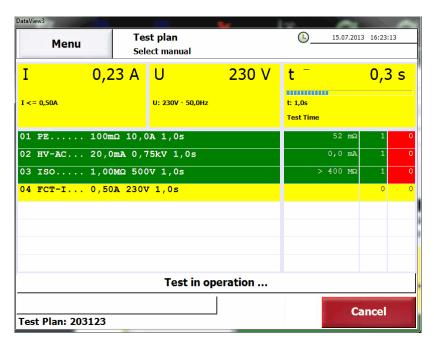


After the high voltage test, the test step is colour-coded according to its result. You can find the value of the result in the second column. The insulation test will be started.



During the insulation test, resistance, test voltage and test time are displayed.

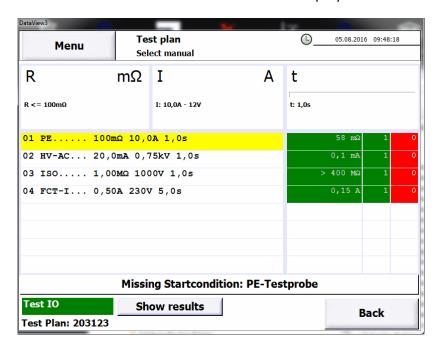
After the insulation test, the test step is colour-coded according to its result. You can find the value of the result in the second column. The function test will be started.



During the function test, current, supply voltage and test time are displayed.



After the function test the system waits for the next test object. The test step is colour-coded according to its result. You can find the value of the result in the second column. The overall result will be displayed in the lower part of the window.



Open the test cage, disconnect the bonding to the test object and remove it from the test cage.

Herewith, the test is completed.

6.3 Finishing the Test Plan

When all test objects are tested you can finish the test plan. By pressing Menu you reach the Main menu. With the button Cancel you get back to the selection of the test plans.

6.4 Exiting DataView

To exit DataView go to the Main menu. Press on Workstation, and subsequently on Exit DataView. In the following dialog, you press on Yes. Therewith, you get back to the Windows Desktop.



7 Technical Support

You can find further topics on how to use ETL DataView in our detailed instruction. You can download all current documents on ftp://ETL-FTP:d0wn10ad@134.98.90.37/Manuals/DataView 3 en.zip.

If you have questions on how to use the program please contact us via support@etl-prueftechnik.de. If possible, your request should contain the data listed below. The serial number can be found on the reverse of the device. The number of the version can be found in ETL DataView 3 under Information -> Software.

Dear support team,

I have a question/problem with the following device: Order number:

Carriel mumber

Serial number:

Version ETL Dataview:

Version IO-CPU:

Version LT-CPU:



8 Personal Notes



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