

DMS Software

DMS 0100/INST DMS 0702/PAT DMS COMPL

Quick Reference Guide

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Quick Reference Guide

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Introduction

Notes in the instructions



Caution, observe operating instructions.



Note. Please observe without fail.



The operating instructions contain information and notes that are necessary for correct operation and use of the software. Read the operating instructions attentively and follow them in all points before the installation and use.

These operating instructions contain the description of the modules INST and PAT. On installation of only individual modules not all functions or areas are available and can be used.

- E-Check is a protected term of the Landesinnungsverband Bayern.
- Adobe Acrobat is a registered trademark of Adobe Systems Incorporated.
- Access 2000 is a registered trade mark of the Microsoft Corporation
- Windows is a registered trademark of the Microsoft Corporation.
- Pentium is a registered trademark of the International Business Machines Inc.

Introduction

Module PAT:

Software for the administration and recording of the tests of machines and equipment according to DIN VDE 0701/0702 (as well as DIN VDE 0113/0751) corresponding to BetrSichV

Module INST:

Software for the administration and recording of the tests of electrical installations according to IEC 60364-6-61, DIN VDE 0100/0105

Scope of supply

- Software Fluke DMS on data medium (e.g. CD-ROM)
- Printed short instructions (these instructions)
- Operating instructions in the PDF format on data medium
- Fluke DMS 0702/PAT: RS-232 interface cable incl. gender changer (suitable for Fluke 6500)
- Fluke DMS 0100/INST: RS-232 interface adapter (suitable for Fluke 1653)
- Fluke DMS COMPL: interface cable and interface adapter

In the case of Fluke DMS updates no interface cables or interface adapters are supplied.

System prerequisites

Recommended configuration

Processor Pentium® 4 or higher with support

of all customary operating systems

Operating system Microsoft Windows® 2000 with

Service Pack 1 Microsoft

Windows® XP.

Memory 256 MB RAM

Hard drive memory 400 MB

Monitor Super VGA (800 x 600).

Drive CD-ROM

Input device Mouse or compatible

Interface RS-232 for data transmission

USB by means of optional adapter cable, (USB - RS-232)

Notes



The manufacturer guarantees that the software works essentially in accordance with the printed accompanying material. In the current state of the art and fast further and new development of operating systems, it cannot be guaranteed that the software will run on all systems. In no event is Fluke liable towards a user for any, especially, chance or consequential damage which are attributable in any form to the use of the software.



Viruses! In the present state of the art it cannot be guaranteed 100% that the enclosed data medium is free of viruses. Despite a careful virus test with the latest anti-virus programs we cannot be liable for any damage caused by viruses.



Under certain unfavourable circumstances data can be lost or changed in every electronic memory. Fluke undertakes no liability for financial or other losses that have arisen due to loss of data, incorrect handling or other reasons.



Data backup! It is indispensable that your data are backed up at regular intervals. On failure of the computer system (e.g. hard disk defect or other hardware error) data can be lost or damaged, see notes on data backup.

Installation

On installation of the software the required files are copied onto the hard disk.

The two sub-folders DATEN and BACKUP are also created in the stated installation folder. The database FDMS12.MDB (or FDMSPRO12.MDB) is filed in the DATEN sub-folder. The transmission protocols are also filed in this folder. This folder can be set under the "Setup I Directories" menu. If this folder is not stated, the DATEN sub-folder of the application is used. Data are backed up in the BAK-KUP sub-folder. All backup copies of the transmission protocols and the backup of the database are filed in this folder. If no folder is entered, the application uses the BACKUP sub-folder.



Before the installation of the Fluke DMS software please restart Windows or end all running application programs (also programs working in the background, such as virus scanners)...



The two programs "Adobe Acrobat Reader" and "Access 2000 Runtime Module" are required for the function of Fluke DMS. If these two programs are not yet installed on your computer, they must be installed together with the software. Adobe Acrobat Reader will be installed. The missing "Access 2000 Runtime -Module" will be installed automatically in the background.



The Help function cannot be used without "Adobe Acrobat Reader".



The Microsoft Internet Explorer version 3.0 or higher must be installed on your computer so that the print, page view and data export functions can be selected. If it is not, the Microsoft Internet Explorer 5.0 can be installed from the CD-ROM, this is located in the folder "\AccessRTde\le5\de\le5\setup.exe".

- Insert data medium (e.g. CD-ROM) in the corresponding drive of your computer.
- The SETUP.EXE program is started automatically when the CD-ROM is inserted.

If not, start the Windows Explorer and select the corresponding drive.

- Select the "SETUP.EXE" file with the Explorer and start the installation with a double click. Optionally you can also start the installation via the "START", menu with "RUN" and entering for instance "D:\SETUP.EXE ". The "SETUP" program installs the Fluke DMS program on your hard disk.
- The installation is now started, the "SETUP" program guides you through the further installation process. Follow the installation instructions on the screen.



The "SETUP.EXE" program checks during the installation whether "Access 2000", the "Access 2000 Runtime Module" and "Acrobat Reader" are already installed on your computer.

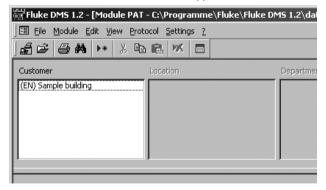
Program start

You now start the Fluke DMS program. At the first program start you will be asked for the following entries:

- Interface
- · Company name/company logo

Corresponding windows appear in each case one after the other. Confirm the entries corresponding to your requirements. You can also later change all settings for interface, language, company name and company logo under the 'Setup' menu.

You are then in the main window of the application.



Main window after the start of Fluke DMS (e.g. 0702/PAT)

Program operation Main menu

The menu bar with the main menu is located at the upper border. You reach all functions of the program via this. The main menu has the following functions

"File | Module | Edit | View | Protocol | Settings | ?".

Explanation of the menu functions



Menu functions

The menu bar with the main menu is located at the upper border. You reach all functions of the program via this. In addition, some program functions can be selected directly by the buttons located below, see also the next page.

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Main menu



Receive data from test instrument (see also under File menu)



Read data from file (see also under File menu)



Print (see also under Protocol menu)



Find test (see also under Edit menu))



Add record (see also under Edit menu)



Cut (see also under Edit menu)



Copy (see also under Edit menu)



Paste (see also under Edit menu)



Delete data record (see also under Edit menu)



Read in data (see also under View menu)

Display of the data records

List boxes with which data records for the existing customers are displayed are located below the menu bar.

In each individual window a selection is made from a list with data records. For instance, if the UUTs of the Service department should be displayed, then "Sample company", "Location B" and "Service" department are simply selected one after the other.

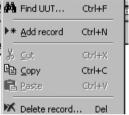
The view of the current data record is located below the window. You only have to click on the required window to change the view or selection of "Location", "Department", "UUT" and "Test". The current view can be seen from the header above the data records.



With a set screen resolution greater than 800x600 the size of the window can be changed by shifting the bar.

Pop-up menu, selection by right mouse button

Depending on the current window, an additional function menu can be selected with the right mouse button continue to the "Edit" menu. A part of the most important functions is listed here. t.



Pop-up menu in the "Location", "Department", "UUT", "Test" data record windows."



With the "Copy" functions, data records and texts can be edited with "Copy" and then "Paste".



Pop-up menu in the input fields

Input correction

The software stores the texts from the input fields in the database. The current entries are accepted in the database as soon as the current input field is left.

If an input field is deleted inadvertently, the last entry can be undone with the "Ctrl+Z" keyboard shortcut.

Basic settings

Basic settings



Only the basic settings that are required for the following example are mentioned here. You will find the complete explanation of all settings in the main instructions on the CD (selectable with F1).

Setting the company address

1) Select the "Company" submenu from the "Settings" menu. The following window appears:



Company address and company logo settings

Enter your company address in the Address field.

- 3) If wanted enter the folder and the file name of your company logo in the Logo field, the Fluke logo is default. The company logo must be available in the bitmap (*.bmp) format. Both appear on the printed single test reports.
- Confirm with "OK".



If available, you can include your E-Check* Logo. For this purpose click the "Change" button under E_Check* Logo and select the corresponding folder and the file name of your E-Check* Logo. The E-Check* Logo should be available in the bitmap format (*.bmp) or as Windows Metafile (*.wmf). The E-Check* Logo appears when ZVEH test reports are printed out.



The company logo and the E-Check* Logo are scaled on the printout to the size of approx. 24 X 24 mm. We recommend you to create your company logo in this size with a resolution of 150 to maximum 300 dpi.

· E-Check is a protected term of the Landesinnungsverband Bayern.

Setting the serial interface

Select the "Serial interface" submenu from the "Settings" menu.
 The following window appears:



Interface setting

- 2) Enter the serial interface used for the data transmission from the test instrument in the "COM" input window.
- 3) For instance, select COM 1 and confirm with "OK".

Settings of the test instrument data

Here you can make further settings corresponding to the relevant test instrument used (only module PAT)

- Test code display: ref. Fluke 6500, important for correctly displaying and printing the test code.
- User code: ref. PC multitester 8993, important for correct use of the user code.
- UUT number: ref. 9032, 9050 and 9092, important for correct use of the customer and UUT number
- Location code: ref. Fluke 6500, important for correct use of the customer and location code

Protocol settings

Place, date and signature file for the protocol printout can be determined here.

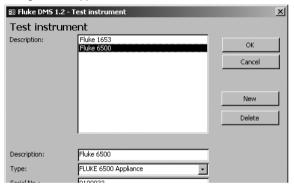
Settings of the user (only DMS professional)

Users and authorizations can be determined here.

Basic settings

Settings of the test instrument

Select the "Test instrument" submenu from the "View" menu. The following window appears:



Settings of the test instrument

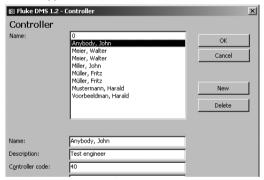
- 1) Click on the "New" button to create a new test instrument.
- The "Type" field contains the type of test instrument. Select the corresponding type of the test instrument (e.g. Fluke 1653 or Fluke 6500).
- Change the data according to your wishes, enter the "Name", "Calibration date" and "Remark" fields correspondingly.
- Confirm with "OK".

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The communication parameters and the type of data transmission are set by the selection in the "Type" field.

Settings of the controller

Select the "Controller" submenu from the "View" menu. The following window appears:



Settings of the controller

- 1) Click on the "New" button to create a new controller.
- Modify the data according to your wishes, enter the "Name", "Description" and "Remark" fields correspondingly.
- 3) In the "Controller code" field enter the controller code (e.g.: the personnel number). Tests are assigned to certain controllers by this. Make sure that the length agrees with the setting of the user code.
- 4) Confirm with "OK".



The "Controller code" field must absolutely be filled out for Fluke DMS 0702/PAT! The controller code must be unequivocal, no duplicate numbers may occur, so that the automatic assignment of the tests to the individual controllers can be made.



The "Controller code" field has no function in the Fluke DMS 0100/INST software. The personnel number, for instance, can be entered here.

Creating data record for customer

- Select the data records for the customers. For this purpose select either the "View | Customer" menu or click directly in the "Customer" list box.
- Now create a new data record. For this purpose use the "Edit I Add record" menu command or use the pop-up menu that is selected with the right mouse button. A new data record named "xxx" is created.
- Change the name of the customer to "Customer A" and now enter your data for the new data record.
- 4) Complete the remaining fields as required.



The "Contact, Company, Street, Post code and City" fields are printed on the test report and data of the customer. Therefore these fields should be completed.

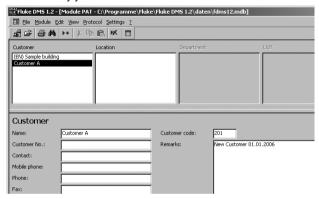


The customer code must be unequivocal, no duplicate numbers may occur! This field must absolutely be completed.



If duplicate numbers are present, you are notified by a corresponding message after the entry.

After the entry your window should look as follows:



New data record for customer with entered data.

Example for Fluke DMS 0702/PAT

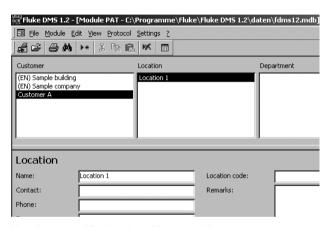
In this example it is shown how data records are created, measurement data are read from the test instrument, the database is assigned and reports are printed. However, the Fluke DMS software is also able to create all data records independently and to assign the measurement data. However, information on customer, location, department and UUT must be updated manually.

Now change to the module PAT, use the "Module" menu function for this.

Creating data record for location

- Now change to the "Location" window. For this purpose select either the "View I Location" menu or click directly in the "Location" list box. The previously created customer "Customer A" must still be displayed in the "Customer" window.
- 2) Now create a new data record. For this purpose use the "Edit I Add record" menu command or use the pop-up menu that is selected with the right mouse button. A new location for the customer "Customer A" is created.
- Change the name of the location to "Location 1" and now enter your data for the new data record.
- 3) Complete the remaining fields as required.

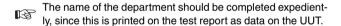
The address fields 1 to 4 are printed on the test report as data on the UUT. Therefore these fields should be completed.

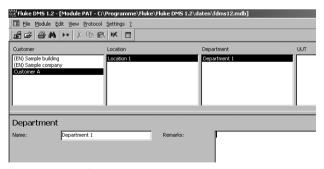


New data record for location with entered data.

Creating data record for department

- Now change to the "Department" window. For this purpose select either the "View I Department" menu or click directly in the "Department" list box. The previously created data records for "Customer A" and "Location 1" must still be displayed in the corresponding windows.
- 2) Now create a new data record. For this purpose use the "Edit I Add record" menu command or use the pop-up menu that is selected with the right mouse button. A new department for the location "Location 1" for the customer "Customer A" is created.
- 3) Change the name of the department to "department 1".
- 4) Complete the "Remark" field as required.





New data record for department with entered data.

Creating data record for UUT

- Now change to the "UUT" window. For this purpose select either the "View | UUT" menu or click directly in the "UUT" list box. The previously created data records for "Customer A", "Location 1" and "Department 1" must still be displayed in the corresponding windows.
- 2) Now create a new data record. For this purpose use the "Edit I Add record" menu command or use the pop-up menu that is selected with the right mouse button. A new UUt for the department "Department 1" for the location "Location 1" for the customer "Customer A" is created.
- 3) Change the UUT number to "123".
- 4) Change the name to "Drilling machine".
- The fields for "Test interval" and "intermediate test interval" are set to 12 months corresponding the selected type. Leave these two values unchanged.
- 6) The field for "Continue test" is set to the current date, the field for "Continue intermediate test" remains empty. Leave these values also unchanged.
- 7) The Test code field indicates the test code of the type.
- 8) Complete the "Remark" field as required.
- Complete the Type name, Device type, Year of manufacture, Current, Voltage and Power fields as required.



For the automatic assignment the UUT number within a customer must be unequivocal, no duplicate numbers may occur. This field must absolutely be completed.

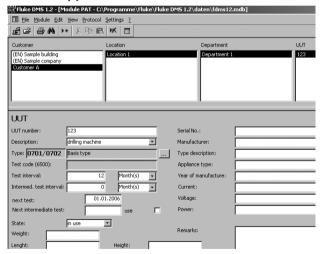
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Example for Fluke DMS 0702/PAT

If duplicate UUT numbers exist within a customer, you are informed about this directly by a corresponding message.

The "UUT number, Name, Type, Serial No., Manufacturer, test code, remark, Type name, Device type, Year of manufacture, Current, Voltage and Power" fields are printed on the test reports.

After the entry your data record should look as follows:



Complete data record for UUT

Performance of tests

The due UUTs are firstly displayed in a list and selected. The list is then printed out. The tests must be performed and the measurements transferred back into the Fluke DMS database. Test reports are then printed.

Preparation of the test instrument

1) -Delete the measurement memory on your test instrument.

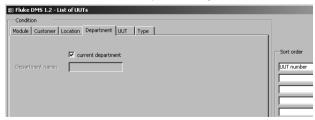
Creating list with due UUTs

 Select customer, location and department in the Fluke DMS software (sample company, Location A, Purchasing) corresponding to the following picture



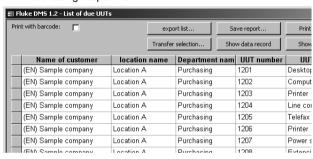
"Department" window

2) Select the "Protocol I Due UUTs" function and change to the "List of UUTs" window on the Department register.



"List of UUTs" window

- Mark the "Current department" field. I.e. only due UUTs from the currently selected department are sought.
- 4) Confirm with "Continue" and the list of the due UUTs is displayed for "Sample company" customer, "Location A" location and "Purchasing" department.



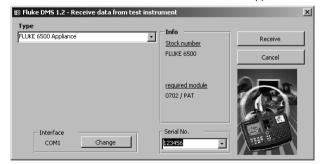
"List of due UUTs" window

- 5) Mark the "Print with barcode" field.
- 6) Now print the list with the due UUTs. To do this click on the "Print report" button. The entire list of due UUTs is printed out.

Transferring the measurements into Fluke DMS

After the tests are performed the measurements are transferred from the test instrument to the computer.

- B
- Optionally for this example you can load the measurement results of the performed tests directly from a file without having to perform the measurements.
- For this purpose use the "File | Read data from file" function, and load the measurement data from the file "ESMO01.ESCA".
- Select the "File | Receive data from test instrument " function. After this function is selected the window below appears:



"File I Receive data from test instrument" window

- 2 Enter the serial number of the test instrument in the Serial No. field.
- 3) Click on the "Receive" button, the following window appears:

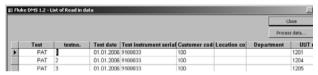


"Serial Communication" window

- You now start the data transfer at the test instrument. You can follow the transfer of the individual measurements.
- Wait absolutely until all data are transferred. The window is closed at the end of the transfer.

Editing the read in data

During the transfer all read in measurements are stored additionally in a backup file (with the file extension *.ESCAP) in the "BACKUP" sub-folder. A list with the read in measurements appears after the data transfer.



Read in data" window



The data are accepted in the database as present in the Read in data window. For instance, if a controller code, customer code, test instrument, etc. is not yet available, the missing data record is marked light green and is created automatically. Missing UUTs are created in this case with the "Basic type" UUT type. The created UUT type can be changed subsequently. The last test can also be adapted subsequently to the changed UUT type.

The data can be partially corrected and supplemented in this list. Editing possibilities are:

- Delete tests
- Enter/change test number
- Change test date
- Change or assign test instrument serial number
- Change/assign customer code

- Change/assign location
- · Change/assign department
- Change/assign UUT number
- Change or assign controller code
- Enter/change remarks on the test
- Create UUTs
- Change location
- State name of the UUT
- State test code of the UUT type of the UUT.

To change a field click on the field concerned and select the wanted entry from the filed list.

- In the example click on a "Customer code" field with the entry 0.
 You obtain a list of all available customer codes by clicking on the 9 button.
- After the changes are made click on the "Process data" button and the read in data are accepted in the Fluke DMS database.



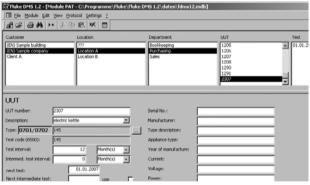
Missing controllers, test instruments, customers, locations, departments and UUTs are created in this process.



If a location or a department is not stated, then the location or a department is created for the associated customer with the name "???".

Automatic creation of tests

In the next picture you see an example of a test that was created automatically from the read in data on processing data. The individual test steps are marked automatically as "Passed" or "Failed" The "Passed" field (next to the test date) is marked automatically if all test steps have been passed. In addition the next test date is automatically calculated.



"Test" window

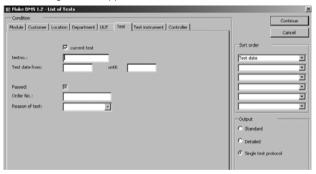
If required the order number and the reason for the test can be stated for every test.

Printing out test reports

Test reports are then printed. Fluke DMS offer the possibility of printing out total or single test reports.

Printing out single test report

- Have the data record for the test on 15.03.04 of UUT number 1206 displayed.
- Select the "Protocol | Print single test report " function and the following window appears:



"List of tests" window

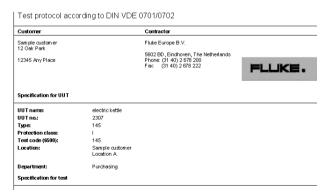
Make sure that the "Current test" field is marked. This means in the example that only the currently selected test is printed.

 Click on the "Continue" button and the list of the test reports of a test appears.



"List of single test protocols" window

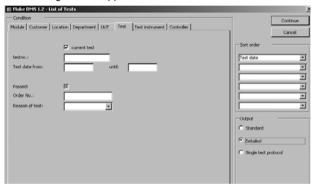
- Click on the "Print report", button to print a single report for the displayed UUTs.
- If you click on the "Show report" button, you can view the individual reports.



[&]quot;Single test protocol" printout

Printing test report with test steps

- Have the data record for the test on 15.03.04 of UUT number 1206 displayed.
- Select the "Protocol | Print single test report " function and the following window appears:



"List of tests" window

Make sure that the "Current test" field is marked. This means in the example that only the currently selected test is printed.

3) Change the output from "Single test protocol" to "Detailed".

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Example for Fluke DMS 0702/PAT

 Click on the "Continue" button and the list of the test reports of a test appears.



"List of tests" window

 Click on the "Print report", button to print a single report for the displayed UUTs. The printout appears.

List of tests created at: 20.04.2006 Customer name Location name Department name UUT no. UUT name Test no. Test instrument Test date Passed Inspector Order No. Test reason Intermediate test Remark (EN) Sample company Location A Purchasing 1201 Desitop computer 01.01.2006 9100033 Demo Test step Visual test mains cable Earth bond resistance ±200 m A (0,30hm), up to 5 m max 0,3 Ohm Cable test L-N Cable test L-N Differential current [3,5 mA] max3,5 mA Touch leakage current (0.5 m.s) max 0.5 mA

"List of tests" printout

Example for Fluke DMS 0100/INST

In this example it is shown how data records are created, measurement data are read from the test instrument, the database is assigned and reports are printed. However, the Fluke DMS software is also able to create all data records independently and to assign the measurement data. However, information on customer, installation, test, distribution and current circuit must be updated manually.

Now change to the module INST, use the "Module" menu function for this.

Creating data record for installation

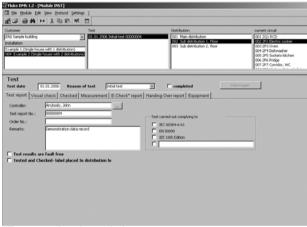
- Different templates for installations with the corresponding structure of distributions and current circuits (e.g. single family house, apartment block, building current distribution) can be created. These can be copied and changed as required.
- Change to the "Installation" window. For this purpose select either the "View I Installation" menu or click directly in the "Installation" list box. The previously created customer "Customer A" must still be displayed in the "Customer" window.
- 2) Now create a new data record. For this purpose use the "Edit I Add record" menu command or use the pop-up menu that is selected with the right mouse button. A new installation for the customer "Customer A" is created.

- Change the name of the installation to "Installation 1" and now enter your data for the new data record.
- 4) Complete the remaining fields as required.
- The code for the installation is allocated automatically when it is created, leave this unchanged. However, this can be changed if needed. The installation code is not used in Fluke 1653.
- A picture can be filed for every installation This picture is printed out in the "Protocol | Test | Current circuit list" report. To file an installation picture click on the "..." button on the right next to the "Picture" input field. The "Select picture file" window then appears. Now open the corresponding picture file. You can switch the display of a picture on or off with the "View" (or "Close") button.
- The picture should be available in the bitmap format (*.bmp) or as Windows Metafile (*.wmf).
- The installation picture is scaled on the printout to the size of approx. 78 x 61 mm (W x H). We recommend you to create the picture in this size with a resolution of 150 to maximum 300 dpi.

Creating data record for test

- Change to the "Test" window. For this purpose select either the "View | Test" menu or click directly in the "Test" list box. The previously created data records for "Customer A" and "Installation 1" must still be displayed in the corresponding windows.
- 2) Now create a new data record. For this purpose use the "Edit I Add record" menu command or use the pop-up menu that is selected with the right mouse button. A test for the installation "Installation 1" for the customer "Customer A" is created.
- All fields and entries that are present in the Register windows are printed out on the ZVEH reports "Handing-Over report, Test report and E-Check* report".

Completion of the "Test report" register window



"Test report" register window

- Select the name of the controller. For this purpose click on the "..." button on the right next to the "Controller" input field.
- A new "Controller" window appears. Select an entry, to do this click on the corresponding controller (e.g. controller Müller) and confirm with "OK".

- Complete the "Order No." fields (e.g. with 2004-05) and "Remark" as required.
- 4) All further marking fields and input windows can be marked and completed as required..



A test report number is entered automatically in the "Test report No." field. For this purpose Fluke DMS 0100/INST searches in all customers for the last allocated number and enters the next free number in this field. However, this suggested test report number can be changed at any time.

Completion of the "Visual check, Checked, E-Check*-report" register windows



In these register windows you can mark and complete the marking fields and input windows as required corresponding to the performed tests.

Completion of the "Measurement" register window



In this register window the two marking fields and the "Insulation resistance between bus conductors" input field can be used for evidence of the described tests.

This register window has two additional "Earth resistance" und "Used measuring and test instruments" fields. These two fields have the following properties:



In the "Earth resistance" field the highest measured earth resistance for all associated distributions and current circuits is entered on reading measurements. This value can be changed at any time.

This value can originate from a direct earth measurement or from a RCD contact voltage measurement. If the measurements are changed subsequently in the associated tables under "distribution current circuit measurements", then this value is not updated.

· E-Check is a protected term of the Landesinnungsverband Bayern.



The type and the serial number of up to four used measuring instruments is entered on reading measurements in the "Used measuring and test instrument" field. However, a measuring instrument can also be entered directly. For this purpose click on the "..." button on the right next to the input field. The "Test instrument" window then appears. Find the corresponding entry and confirm with "OK".



The two input fields as well as the two "Measuring instrument type" and "Serial No." marking fields are printed out on the ZVEH reports "Test report".

Completion of the "Handing-Over report" and "Equipment" register windows

- Information on VNB (EVU), mains voltage, meters and type of system can be stated in the "Handing-Over report" register window.
- The assignment of the equipment to the individual rooms and locations as well as distributions and current circuits is entered in the "Equipment" register window.
- The entries from these two register windows are printed out on the Handing-Over report.
- The "Equipment" table has 58 columns and maximum 48 rows. The columns 1-29 are printed on the first page, the columns 30-58 on the next page.

Creating data record for distribution



Distributions and current circuits are created manually in this example.



The structure of an installation can be entered before a test by the possibility of manual entry of distributions and current circuits. It is possible to print out a current circuit list which represents for the controller an aid for entering the distribution and current circuit code when saving the measurements.



Different templates for installations with the corresponding structure of distributions and current circuits (e.g. single family house, apartment block, building current distribution) can be created. These can be copied and changed as required.

- Change to the "Distribution" window. For this purpose select either the "View | Distribution" menu or click directly in the "Distribution" list box. The previously created data records for "Customer A", "Installation 1" and "initial test" must still be displayed in the corresponding windows.
- 2) Create a new data record. For this purpose use the "Edit | Add record" menu command or use the pop-up menu that is selected with the right mouse button. A new distribution "xxxxx" for the initial test in the "Installation 1" for the customer "Customer A" is created.



The **code for the distribution** is allocated automatically when it is created, leave this unchanged. However, this can be changed if needed. The code must be a three-digit number between 1 and 99.



The purpose of the code for the distribution is that measurements in the test instrument can be stored so that they can be assigned automatically to the associated distributions and current circuits on reading. The code for the distribution is the number that is entered for the distribution on storing at the test instrument and under which the measurements are stored in the test instrument.



In the Fluke installation tester 1653 the data record field is used as distribution code.



In addition a **number (No.)** can be stated for the distribution, leave this field empty. If a name is entered here, this is printed out instead of the distribution code.

3) Select as name for the distribution "Meter cabinet with distribution field". To do this click on the field "6" on the right next to the input field and a list of all used distribution names appears. Select the corresponding entry from the list



For the automatic assignment the measurements to the distributions and current circuits the distribution code within a test must be unequivocal, no duplicate numbers may occur. The distribution code is allocated automatically when it is created, leave this field unchanged. However, the code can be changed if needed.



If duplicate distribution codes exist within a customer, you are informed about this directly by a corresponding message. These must then be changed in the Distribution window correspondingly.

Creating data records for new current circuits

Distributions and current circuits are created manually in this example.

- Change to the "Current circuit" window. For this purpose select either the "View | Current circuit" menu or click directly in the "Current circuit" list box. The previously created data records for "Customer A", "Installation 1" and "Initial test" and "Meter cabinet" must still be displayed in the corresponding windows.
- 2) Now create a new data record. For this purpose use the "Edit I Add record" menu command or use the pop-up menu that is selected with the right mouse button. A new current circuit "001 xxxxx" for the distribution "Meter cabinet with..." for the initial test in the "Installation 1" for the customer "Customer A" is created.
- The **code for the current** circuit is allocated automatically when it is created, leave this unchanged. However, this can be changed if needed. The code must be a three-digit number between 1 and 99.
- The purpose of the code for the current circuit is that measurements in the test instrument can be stored so that they can be assigned automatically to the associated distributions and current circuits on reading. The code for the current circuit is the number that is entered for the current circuit on storing at the test instrument and under which the measurements are stored in the test instrument.



In the **Fluke installation tester 1653** the data subset field is used as code for the current circuit.



In addition a **number (No.)** can be stated for the current circuit, the name of the current circuit in the distribution can be noted here. Enter "1F1" in this field. If a name is entered here, this is printed out instead of the current circuit code.

- Select "Bathroom" for the name of the current circuit. For this purpose click on the field "6" on the right next to the input field. A list of all used distribution names then appears. Select the corresponding entry from the list.
- Select the type of the conductor/cable used. For this purpose click on the "..." button on the right next to the input field. The "Conductor/Cable" window then appears. Find the corresponding entry(e.g. NYM-J 3x1.5 mm2) and confirm with "OK".
- Select the type of the **fuse** used. For this purpose click on the "..." button on the right next to the input field. The "Fuse" window then appears. Find the corresponding entry (e.g. LSB 16) and confirm with "OK".
- 4) Select the type of the RCD used. For this purpose click on the "..." button on the right next to the input field. The "RCD" window then appears. Find the corresponding entry (e.g. RCD 25/0.03 A) and confirm with "OK".

- 5) Now create two further new data records, to do this use the "Edit I Add record" menu command or the pop-up menu via the right mouse button. Two new current circuits "002 xxxxx" and "003 xxxxx" are created.
- 6) Select for the two new current circuits the current circuit names "Kitchen" and "Bedroom, Nursery" To do this click on the field "6" on the right next to the input field and select the corresponding entry from the list.
- For the current circuit number enter in each case "1F2" and "1F3".
- Select the type of the conductor/cable used. For this purpose click on the "..." button on the right next to the input field. Find the corresponding entry(e.g. NYM-J 3x1.5 mm2) and confirm with "OK".
- 9) Select the type of the **fuse** used. For this purpose click on the "..." button on the right next to the input field. Find the corresponding entry (e.g. LSB 16) and confirm with "OK".

For the automatic assignment the measurements to the distributions and current circuits the current circuit code within a test must be unequivocal. No duplicate numbers may occur. The current circuit code is allocated automatically when it is creative.

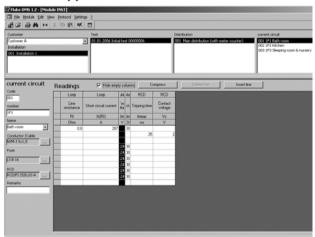
current circuit code is allocated automatically when it is created, leave this field unchanged. However, the code can be changed if needed.

B

If duplicate current circuit codes exist within a customer, you are informed about this directly by a corresponding message. These must then be changed in the Current circuit window correspondingly.

- 10) Now create the measurements for the selected current circuit, to do this click twice on the "Insert line" button or use the pop-up menu via the right mouse button. A line is created in each case for entering measurements.
- 11) Enter in these two lines a few measurements in the corresponding fields. For entry click on the required field and enter measurements.

After the entry your window should look as follows:



Data record for distribution and current circuit with entered data and measurements (example)

Performance of tests and measurements

A current circuit list with the codes, numbers and names for the distributions and current circuits is printed out. This serves as template for storing the measurements in the test instrument.

An explanation for the distribution is printed out. The numbers and names of the associated current circuits are printed on this.

Preparation of the test instrument

1) Delete the measurement memory on your test instrument.

Printout of a current circuit list for distribution and current circuits

The codes, numbers and names for the distribution and current circuits are printed on the current circuit list.

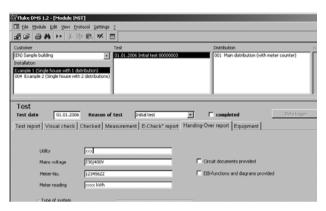


The current circuit list serves as template for storing the measurements in the test instrument under the correct distribution and current circuit code.



In the Fluke Installation tester 1653 the distribution code must be entered under 'a' and the current circuit code under 'b' so that the assignment in Fluke DMS can be made correctly!

1) Select customer, installation (sample code, example 1, initial test) corresponding to the "Show tests" picture.



"Show test" window

- Select the "Protocol | Test | Current circuit list" function and confirm it with "Continue".
- For a preview of the printout and for form setting click on the "Show report" button, here you can set the margins for this printout form.
- Now print out the current circuit list. To do this click on the "Print report" button.



"Current circuit list" printout

Printout of an explanation for current circuits

The numbers and names for the distribution and the associated current circuits are printed on the explanation.

- B
- The explanation can be attached in the relevant distribution to explain to the installation owner the assignment of the switches and fuses to the current circuits.
- Select customer, installation and test (sample code, example 1, initial test).
- Select the "Protocol | Test | Explanation" function. After this function is selected a "List legend" window appears, confirm it with "Continue".
- For a preview of the printout and for form setting click on the "Show report" button, here you can set the margins for this printout form.
- Now print out the explanation. To do this click on the "Print report" button.

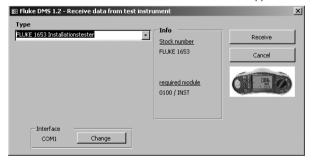
Transferring the measurements into Fluke DMS 0100/INST

After the tests are performed the measurements are transferred from the test instrument to the computer.

- Ę
- Optionally for this example you can load the measurement results of the performed tests directly from a file without having to perform the measurements. In the example measurements of a single family house are used.
- B

For this purpose use the "File | Read data from file" function, and load the measurement data from the file "ESMO01.ESCA".

 Select the "File | Receive data from test instrument " function. After this function is selected the window below appears:



"File I Receive data from test instrument (with serial number)" window

Select from the list the test instrument type of which you want to read measurements, e.g. Fluke installation tester 1653.



If a test instrument is not yet available in the instrument list, it is created automatically on data transfer. The data can then be supplemented via the "View | Test instrument" menu.



If no serial number is transferred, the Serial No. field appears for one-time entry of the number. If several test instruments without serial number of the same type are present, the relevant serial number must be selected from the list before the data transfer.

4) Click on the "Receive" button, the following window appears



"Serial Communication" window



Wait absolutely until all data are transferred. The window closes automatically after the end of the last measurement.

Assignment of the measurements to customer, installation and test

After the measurement results are read from a measuring instrument or from a file, the read measurements must be assigned to customers, installations and test.

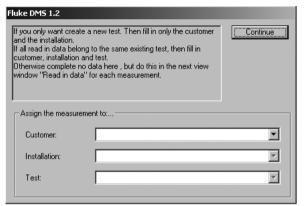
If no assignment for test, distribution and current circuit is determined, then new data records are created automatically.

Important! Data records for customers and installations must always be created manually so that the measured data can be assigned.

Quick Reference Guide

Example for Fluke DMS 0100/INST

 A window appears with the statement of the assignment for the read in measurements.

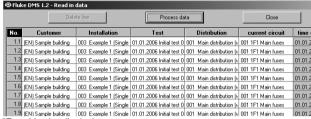


"Assign the measurement to:" window

- Enter the customer, the installation and the test to which the read in measurements should be assigned. Select sample customer, example 1 and initial test and confirm with "Continue".
- The automatic assignment of the measurement result to the distributions and current circuits can take place only if the distribution and current circuit codes were entered correctly corresponding the current circuit list.

Assignment of the measurements to distribution and current circuits

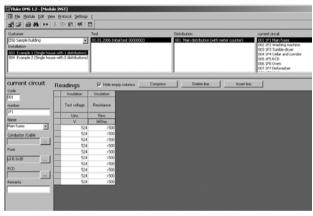
A list with the read in measurements now appears.



"Read in data" window

- Click on the "Process data" button and the read in data are accepted in the Fluke DMS database.
- 2) Then click on the "Close" button, to close the window:
- Check the assignment of the measurements to the distribution and the individual current circuits in the database, to do this select sample customer, example 1, initial test, '001 meter cabinet with distribution field' and 001 1F1 back-up fuse'.

4) To hide empty columns, click on the "Hide empty columns' (A) marking field, the read in measurement results are shown in the following picture



"Measurements" window

Printing out test reports

Test reports are then printed. Fluke DMS 0100/INST offers the following possibilities of outputting test reports:



Output of the reports based on the ZVEH reports (Handing-Over report, test report, E-Check*) as printout or snapshot file.

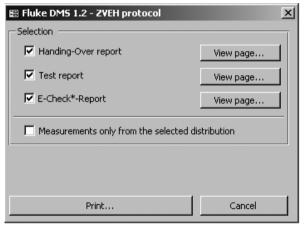


Output of the test and measuring reports as printout or as file in the snapshot format (SNP), text format (TXT), Rich Text Format (RTF) or Excel format (XLS).

 E-Check is a protected term of the Landesinnungsverband Bayern.

Printing out ZVEH test report

- 1) Have the selected customer, the installation and test displayed.
- Select the "Protocol | Test | acc. ZVEH" function and the following window appears:

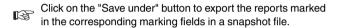


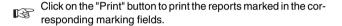
"ZVEH reports" window

With "Measurements only from the selected distribution..." the report can be reduced to the printout of the selected distribution.

3) Click on the "Preview" button directly on the right next to the wanted marking field (e.g. Handing-Over report) to view the corresponding report before the printout and to set up the page before the printout.

There are the following functions in addition to the "Page setup" function:





Then click on the "Cancel" button, to close this window again:

Handing-Over No.	:			0	000	000	003	3							Or	de	r١	10.	:									
Customer SA200 (EN) Sample building 15A Kingston road 12345 Any Town Mr. Miller												Fluk 5600 Phor	e Eu	Eir 31 4	npai e B.V ndho 0)2 iger	/. ven. 678	The	e Ne	ther			llati	ons	•	u	JIK	■.	
Installation: Example 1 ((Sin	gle I	hous	e w	đh 1	dist	_	lion) lain:		Hag	e			230	/400	v	Circ	uit d	Jocu	me	nts į	prov	ride	d)
System: ☑ TN system Meter-No. 123496ZZ]T1	sys Me	_	reac	din	300	□ ∞ 89	_	yste	HTI			-	EID-	fun	ctio	ns e	nd (iag	ram	s pr	ouid	led)
Raum / Anlagenteil Anzahl der Betriebsmittel	Keller	Treppenhaus	Flur	Gäste WC	Abstellraum	Küche	Esszimmer	Wohnzimmer	Schlatzimmer	ünderzimmer	Bad																	
	$\overline{}$	-	_	001	001	001		001			001						_								_			
Stromkreisnummer	F2	Fé	F9	F9	F9		F10	F10	F11	F11	F 12										Ш						Ш	
Stromkreisnummer	F3		Ш		Ш	F?				L	L	Ш	L		Ш						Ц						Н	
Stromkreisnummer	Fé		Ц		Н	F8		Ш		_	L	Ш	L		Ц				Ш	Ш	Ш			Ш			\vdash	
Leuchten-Auslass Leuchten	1	3	1	1	1	1	2	2	1	1	2																	
Niedervolt Halogen																											П	
Ausschalter	1			1	1		1			1											Ш						Ш	
Serienschafter											1				Ш						Ш						Ш	
Nechselschalter			2			2	2	2	2	L	L	Ш	L		Ш						Ш						\sqcup	
Kreuzschatter			2		Ш					L	L	Ш	L								L						Ш	
Taster		ı	Ц		Ш					L	L	Ш	L		Ш				Ш	Ш	Ш		Ш				Ш	
Dimmer			1		1			1			1	1	1		1										1			

"Handing-Over report" example printout

Test r	eport		Page	1	of 2 acc.	ZVEH
Test re	port No.:	00000003		Orc	der No.:	
Customer	•		Electrics co	mpany	(contractor)	
SA200			Fluke Europ	e B.V.		
	ple building		5602 BD. E	indhove	en, The Netherlands	KM.
15A King 12345 Ar			Phone: (31	40126	78 200	
Mr. Miller			Project Man	ager / I	Responsible for installation:	
Installatio	n: Example 1 (Single hous	e with 1 distribution)			_	
Utility	xxx	Mains volta	ge 23	0/400√	Circuit documents provided	
System:	✓ TN system]TT system [] IT system		EIB functions and diagrams provid	led \square
Meter-No.	123456ZZ	Meter reading xxxx	⟨Vh			
Test	executed according to	☐ IE C 60364-6-61		[IEE 16th Edition	
		■ EN 50090		[
Reason oft	est 🗹 Initial test	☐ Extension		Chang	e 🗆	
Visual cl	neck:	☐ Heat sources		[Main earth bar	
Correct	selection of equipment	ldentification of circ.	uit and equipment	. [Additional earth bar	
☐ No darr	age to equipment	Laying of conductors	5	[
☐ Protect	ion against direct contact	☐ SELV		[
☐ Securit	у	☐ Insulated voltages		[Location of bus appliances in circuit	
☐ Fire shi	eld	Double insulation		[Control bus conductors	
Checked						
Function equipm	n of security and guard ent	Right rotation in Indu	ustrial 3-phase	[Function of EIB-facility	
Functio	n of installation	Right rotation of mot	tors	[
Measure	ment Earth resistance	Ohm	☐ Continu	ity PE	Main earth bar	
	Bus conductor insulati	on resista kOhm	Continu	ity/Po	larity of bus conductors	
Use d n eas tring						
and test Instruments:						
Remarks:	Demonstration data n	ecord	'			

"Test report" example printout

Quick Reference Guide

Data backup

E - Check*-Repor	t	Page	1 of 2	ecc.	ZVEH
Test report No.:	00000003	c	Order No.		
Customer		Electrics com	pany (contractor)		
SA200		Fluke Europe I	B.V.		
(EN) Sample building		sem an sive	hoven, The Netherlan		LKE.
15A Kingston road		Dhana Ca so	haicae ann		LLKE.
12345 Any Town		Project Manag	ger / Responsible for	installatio	
Mr. Miller					
nstallation					
non stationary equipment the electrical installation of	ecked for proper function at lea t (e.g. extension leads) must be and equipment must be regular	tested at least every 6 r ly checked for their prop	er condition.		
the electrical plant and no	on-portable installations must be	e checked by authorized	personnel at least evi	ery 4 years.	
Remarks					

"E-Check*-report" example printoutt

Data backup

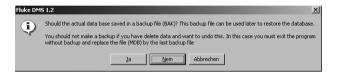
It is indispensable that your data are backed up at regular intervals. On failure of the computer system (e.g. hard disk defect or other hardware error) data can be lost or damaged.

For data backup copy the following files on a corresponding external data medium (e.g. floppy, ZIP disk, tape drive, CD-ROM or network drive)

- The DMS database (FDMS12.MDB or FDMSPRO12.MDB) in the "DATEN" folder
- 2) Your read in measurement data (all files with file extensions *.FLK) in the "BACKUP" folder

Temporary data backup

For temporary data backup on ending the program the DMS database can be saved for data backup in a backup file in the "BACKUP" sub-folder with the name "FDMS.BAK". The following window appears:



"Data backup" window

 Confirm with Yes if you want to make a copy of the database, the database is saved at the current state as "...BACKUP \ FDMS12.BAK or FDMSPRO12.BAK ". Saving can take a longer time according to computer speed and size of the database.

If your data are destroyed or inadvertently deleted after the next program start, this copy can be used later for data restoration.

Restoration of the data

- For data restoration first rename the invalid or destroyed database "FDMS12.MDB or FDMSPRO12.MDB" in the "DATEN" folder as for example "FDMS12.ALT or FDMS12PRO.ALT".
- Then copy the backup file "...\ BACKUP \ FDMS.BAK" into the "DATEN" folder.
- Rename the "FDMS12.MDB or. FDMSPRO12.MDB" file as "FDMS.MDB or FDMSPRO12.MDB" and restart the program.

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In the case of enquiries regarding the software please state the name and the serial number of the software. You will find this information under the "? (Help) | Info" menu, see the following window:



"? | Info" window