

FlukeView Forms

Documenting Software

Tutorial 5: Using FlukeView Forms with the Fluke 1653 Electrical Installation Tester

Introduction

This tutorial shows you how to transfer 1653 data to *FlukeView Forms*, and familiarizes you with the ways 1653 data may be displayed on a form. It also provides an overview of adjusting 1653 readings (tests) so they display properly on your forms. Finally, it discusses how to customize the sample 1653 form templates in *FlukeView Forms Designer*.

Overview

FlukeView Forms automates the transfer of readings stored in the Fluke 1653 for display on customizable forms. Each stored reading includes the test type, test conditions, and results, plus the time of day that the test was made, and the location codes that identify each reading.

FlukeView Forms can also set the 1653's clock and assign a custom 8 character identification code to the meter (see the **Meter/Change Meter Setup** menu).

A word about location codes

When storing a reading in the 1653, you can set two numeric fields (-a-, and -b- on the LCD) to identify the test. A third field (-c-) is automatically incremented with each test. *FlukeView Forms* uses these codes to help automate processing the data.

- If you change the -a- code when you move to a different distribution panel, *FlukeView Forms* will identify all the readings from that panel as a 'session' and support quickly copying a 'session' to the form.
- If you change the -b- code when you move to a different circuit on the panel, *FlukeView Forms* will group all the tests run on the same circuit together. This is particularly important for presenting the data in a Wide Format where the test results are presented in separate columns on a single row for each circuit.

Tutorial

Getting data from the 1653

Run *FlukeView Forms*. The lower right hand corner of the *FlukeView Forms* window shows the PC communication port that *FlukeView Forms* is using, and the cable icon shows the communications status. (Double-click on the port name to change the port.)

When you connect the instrument and turn it on, *FlukeView Forms* will detect the meter and bring up the **Get Meter Data** dialog. Press **OK**. *FlukeView Forms* will upload the data and on completion open the Fluke 1653 virtual meter displaying the data uploaded in the Long Format (one test per row).

FlukeView Forms will highlight in yellow all tests with the highest panel code (-a- field) and will have copied these tests to the current form.

The 1653 virtual meter

The virtual meter shows the data from the connected 1653's memory in the Long Format. From the virtual meter you can:

- Sort the rows by **Time** or **Location** codes
- From the top of the virtual meter, select **Sessions**:
 - Select **Sessions** if multiple panel codes were used
 - Select **ALL** readings
 - Select **USER - select Rows** to be able to highlight individual readings to be acted on.
- Copy the selected readings to the form
- Export the selected readings to a file in CSV format.
- Clear the meter's memory
- Resize the virtual meter to better view the data

When you **Copy into Form**, *FlukeView Forms* copies the selected readings in the order that they appear in the virtual meter into the currently displayed form.

A discussion of the differences between **Save** and **Save As** for saving forms in *FlukeView Forms* is described in *Tutorial 3, "Editing Meter Data on a Form"*, under the section titled "Using Save and Save As Commands"

Fluke 1653 Reading Formats – Long and Wide

Sample Forms

Two sample forms for the 1653 are provided in the **sample_1653.fdb** database: **Sample 1653 Long Format** and the **Sample 1653 Wide Format**.

The *FlukeView Forms Designer* application is used to create new form templates or customize existing templates, including adding company logo's, changing the number of pages, and adding columns to show additional user data such as wire size or overcurrent device types.

Long Format

The long format table looks essentially the same as the virtual meter, except that the table has a column for you to enter descriptive information. Right clicking on the table will bring up the right click menu. The **Select Readings** menu item brings up a dialog allowing you to rearrange the display readings into logical groups by moving the rows up or down, inserting blank rows, and modifying the location codes for each test. You can also have the table sorted by time or location codes.

Wide Format

In the wide format table, test results are presented in separate columns on a single row for each circuit. When the data was copied into the form, *FlukeView Forms* sorted the selected tests by location codes and assigned tests to wide rows. Thus if you stored the results of a Voltage, RCD Trip, RCD Time, Loop Impedance, and Continuity test on a circuit (using the same -a- and -b- fields), *FlukeView Forms* would place each reading in its own column in the same wide row. You can add descriptive information for each row.

Right-click on the table to bring up the right-click menu. The **Select Readings** option brings up a dialog allowing you to manually move the wide rows up or down in the table, insert blank rows, delete Tests (all the test data shown in the selected rows), and modify the location codes.

Adjusting which tests show in a wide row

If you chose not to use location codes when saving the data, or if you saved the results of several continuity tests with the same location codes, then the wide row assignments are likely going to need adjustment. *FlukeView Forms* provides three ways to do this.

The first two methods are quicker to use when the meter data was stored without using location codes. First, right-click on the Wide Format table, pick the **Synchronize Formats** item. The **Synchronize Formats** dialog will appear. The upper portion of this dialog is almost identical to the **Select Readings** dialog from the **Long Format** table. The lower portion of the table shows how the wide format assignments will be changed as you re organize the readings. Selecting a row in the long view highlights the corresponding tests in yellow for easy tracking.

Method 1

1. Modify the location codes so that the tests to show on a common wide row have the same "-a-" and "-b-" codes.
2. When done, press the **Sort by Location** button to group the readings together, and press **OK** to have all the wide rows adjusted.

Method 2

1. Manually sort the tests by selecting and moving rows together that should share a wide row. You can insert blank rows where you want to specify that a new wide row should begin.
2. Press **OK** to have all the wide rows adjusted based on this order.

The third method works well for making minor adjustments to meter data that was stored with location codes.

Method 3

1. Right click on the Wide Format table and pick **Select Reading**".
2. Click on a row to adjust.
3. Click the **Select Tests** button. The **Select Tests** dialog will appear, showing you the data in a long format sorted by wide row number. The tests that are in the wide row you selected are shown highlighted in this dialog.

4. Click on individual tests to change which tests should be grouped together on the wide row. Clicking on a row selects only that test, hold down the **Control** key and click to select multiple tests. Note that if the current row has a Continuity test in it, control clicking on another Continuity test will unselect the initial test and select the new one - one test per column only.
5. Press **OK** to make the change in the wide row. If the selected tests have different location codes (-a- and -b- fields), you will be prompted to choose a common location code.

How do the Wide Format and Long Format interact?

The Wide Format and Long Format are two different views of the same data and have limited interactions. Deleting tests or modifying location codes with the **Select Reading** dialog will clearly affect both views.

- Text typed in the **Description** column in one table has no relation to the other table.
- In addition, moving/inserting/deleting or sorting rows does not effect the description text in the table (it stays with the table row, not with the data associated with the row).
- Reorganizing the rows in either table with the **Select Readings** dialog also has no effect on the other view

The **Synchronize Formats** dialog relates the two formats and provides an interactive explanation of the relationship. Rows in the long view (the upper section) are displayed with alternating gray/white backgrounds to indicate common wide row assignments. When you can click on one or more of these rows, the test data is highlighted in yellow in the wide format section below.

As you move rows or insert blank rows the wide format view row assignments are re-evaluated and redisplayed. Pressing **OK** changes both the Long Format and the Wide Format to match your changes.

The **Synchronize Formats** dialog is initially loaded with the Long Format and calculates/displays the corresponding wide format, so any work you might have already done in organizing your tests from the **Select Readings** (Long Format) dialog will be automatically brought in as the starting point. If however you had used the **Select Readings** (wide format) prior to using **Synchronize Formats**, you can click on the **Load Wide Format** button to use that work as the starting point, automatically organizing the long format view to the match.

Customizing the 1653 Form Templates

Note: See FlukeView Forms Tutorial 1, "Creating a Customized Form Template", for step-by-step instructions on getting started with the FlukeView Forms Designer.

This section addresses customization of forms at three levels.

- The first level is to change the name or appearance of one of the sample forms.
- The second level changes the appearance of the data in the table to match your requirements.
- The third level presets some of the comments for using the form for a particular customer.

The **Sample_1653.FDB** database that you start with has two sample templates to serve as starting places for viewing 1653 data. Let's make some quick changes to them.

Task 1) Make it your own

Save custom template

- Change the template name
 - Change the name on the form
1. Start *FlukeView Forms Designer*.
 2. Use the **File/Open** menu and choose the **Sample 1653 Wide Format** template.
 3. Click on the text at the top of the form **1653 Wide Format**. A dotted line will appear around the text. Right click within this area and select **Properties**. The **Properties** dialog for the selected form item will appear. This static text form item is the *FlukeView Forms Label* form item.
 4. Change the text to "My Wide Form".
 5. Press **OK** when done.
 6. Use **File/Save As** to name this template "My Wide 1".

Now let's continue to make some modifications.

7. Use the **Edit/Insert Form Item** menu to get a list of the *FlukeView Forms* items.
8. Change the **Display Form Items for Meter** selection from **All FlukeView Form Items** to **FlukeView Forms Items for Fluke 1653**. This will eliminate items that are linked to meter data types not supported by the 1653. The current form include **Label** items for static text, the **Bitmap** item set to the Fluke logo bitmap, a couple of **Memo** items for user entered comments, and two form items that are linked to meter data: the **Meter Identification** item, and the **Display Readings Table**.

Next, let's modify the **Display Reading Table**.

Task 2) Customize the Display Reading Table

Change the table to:

- Not show the panel number
 - Label the -b- code as Circuit
 - Add a check box column.
1. Right-click over the table and select **Properties**. On the **General** tab, note the **Default** column layout is set to **Fluke 1653 (wide table)** if you select Fluke 1653 (long table), the table will change to the **Long Format** view. Let's leave it in the wide table format.
 2. Select the **Columns** tab. We plan to use this form to display data from only one distribution panel per save. We already have a memo object above the form that is labeled "Site", so we don't really need to show the panel (-a-) location code in the first column.
 3. Click on the top most item **(1) Location**.
 4. Press the **Disable** button. The item moves to below column 17 and is now shown as { } Location - signifying it is no longer to be displayed.

5. Move back to the top and select the new column (1) - this is the -b- code.
6. Press the **Rename** button.
7. Type "Circuit" and press **OK**.
8. Move down to the item below the **Location** and select one of the { } **User Annotation** items.
9. Press the **Enable** button - it becomes column 18. Move it up to become column 2.
10. Select **Checkbox** in the User Annotation Type.
11. Press the **Rename button** and name it "Passed" and press **OK**.
12. Press **OK** again to exit the **Properties** dialog.
13. Move the cursor to between the first and second columns in the top (gray) row.
14. Press the **Left** button and slide it right to resize the column.
15. Repeat for the second column. Adjust the column width of the **Description** column left until the horizontal scroll bar goes away.

You could also add other user annotation columns with the annotation type "selectable text" and set the available selections to say, the Over Current device type and set the default selection to the most common type or another for wire gages used in your location.

16. Use **Save** to keep these changes to "My Wide 1" form template.

Task 3: Set default entries

Now that you've customized the form template for your general use, let's look at changing the default user annotations for a particular site.

We know for this customer, that circuit 1 is the kitchen, and circuit 2 is the test bench. We're planning to use location codes (-b- fields on the meter) when storing data with code 01 for the kitchen circuit and code 02 for the test bench.)

1. Click in the cell for row 1, in the description column and type "Kitchen".
2. Click in the cell beneath it and type "test bench".
3. Click the check boxes for row 1 and 2 to default to checked.
4. Select the memo item above the table and press the **Delete** key.
5. From the **Insert Form Item** box, insert a label item. Position it and stretch it to fill the area above the table where the memo field was.
6. Use the **Properties** box and type in "Site: Customer XY, 12345 A Street".
7. Press **OK** when done.
8. Use **Save As** to save the form as "Customer XY form".

Note that there is no direct association with the text and the uploaded data. For example, if you used location code 02 for the kitchen and location code 01 for the test bench, the data will be put on the form with the test bench data before the kitchen data (ordered by location codes). What we've done is to set the default text for rows one and two to what we expect.

See Also

- *FlukeView Forms Users Manual*, “Getting Data from the Meter / Uploading Data”