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FLUKE.

FlukeView Forms
Documenting Software

Users Manual

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FlukeView Forms
Documenting Software

Introduction

FlukeView Forms Documenting Software lets you transfer data from a supported digital test instrument directly to forms on your computer. This automates your troubleshooting or recording process, reduces the possibility for manual error and allows you to collect, organize and display meter data in a format that meets your needs.

Contacting Fluke

To order accessories, receive assistance, or locate the nearest Fluke distributor or Service Center, call:

USA: 1-888-99-FLUKE (1-888-993-5853)
Canada: 1-800-36 FLUKE (1-800-363-5853)
Europe: +31 402-675-200
Japan: +81-3-3434-0181
Singapore: +65-738-5655
Anywhere in the world: +1-425-446-5500

Address correspondence to:

Fluke Corporation	Fluke Europe B.V.
P.O. Box 9090	P.O. Box 1186
Everett WA 98206-9090	5602 BD Eindhoven
USA	The Netherlands

Visit us on the World Wide Web at: www.fluke.com

FlukeView Forms Documentation

The following documentation is available for use with *FlukeView Forms*.

Table 1. Documentation Sources

Documentation	Format / Where to Find	Use For
Users Manual	Adobe Acrobat / Available on the *FlukeView Forms* CD, and installed with the software	Basic operation and overview
Meter Connection Pages		Step-by-step instructions for connecting each type of meter
Tutorials		Step-by-step instructions for common tasks
Online Help	Windows Help / *FlukeView Forms* **Help** menu	On-the-spot application help
Technical Notes	Adobe Acrobat / Available at www.fluke.com and on the *FlukeView Forms* CD	Detailed technical information.

FlukeView Features

Acquires and documents readings from supported digital meters through IR or standard serial communications.

- Displays acquired results in graphs and tables.

- Allows you to save and print results.

- Allows you to retrieve and view previously saved results.

- Allows real-time logging directly to a connected PC, with meters that support interactive logging.

- Allows you to transfer collected readings to other PC applications.

- Provides standard form templates to display results professionally.

- Includes *FlukeView Forms Designer* program for creating customized form templates (not included in *FlukeView Forms Basic*).

FlukeView Forms Basic

FlukeView Forms Basic is a less customizable version of FlukeView Forms, designed to provide only basic data communications and display capability. It contains a subset of the features provided by the full *FlukeView Forms* product, and can be used with only a limited number of standard form templates.

Installation

This section describes how to install *FlukeView Forms* and *FlukeView Forms Designer.* Also, follow these instructions to upgrade from an older version of the software.

System Requirements

Operating System: Microsoft ME, Windows NT 4.0, Windows 2000, Windows XP or Windows Vista.

Minimum recommended hardware: Pentium class microprocessor, 32 MB RAM, and up to 70 MB hard disk space (100 MB to install).

USB cables are not supported for Microsoft Windows NT 4.0. An available USB port on the PC is also required.

Note

To install the software on Windows NT, Windows 2000, Windows XP, or Windows Vista, you must log in with Administrator privileges.

Installing FlukeView Forms

To install FlukeView Forms, please see the printed *FlukeView Forms Installation Guide*. For installation of the Fluke USB-IR cable, see the *USB-IR Cable Installation Instructions*.

Overview of FlukeView Forms

The *Users Manual* provides an overview of what you need to know to use *FlukeView Forms*. This includes:

- Starting *FlukeView Forms*

- Selecting a form template

- Transferring data from the meter to the PC

- Managing forms to meet your needs

- Saving and retrieving data

- Exporting data

- Managing your database

- Troubleshooting

Most users start *FlukeView Forms*, select a form template, connect the meter to the PC, transfer data, add user data, and then print and save the form. More advanced users might spend time customizing form templates, retrieving and exporting data, and managing the database.
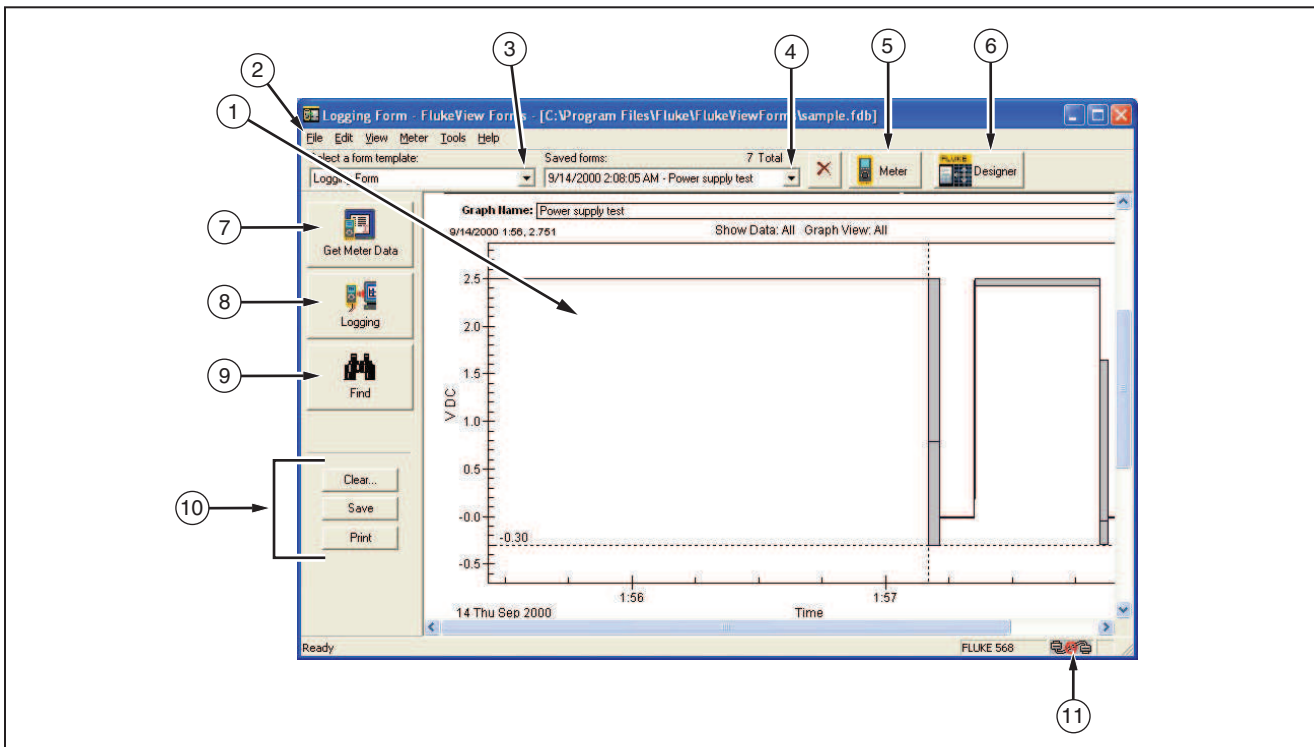
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Figure 1. FlukeView Forms Screen

Table 2. Graphic User Interface Components

No.	Description
①	Active form template. Displays meter data and user-entered data.
②	*FlukeView Forms* menu.
③	**Select a form template** drop-down list. Lists all form templates available in the open database. Identifies the active template currently being displayed.
④	**Saved forms** drop-down list. Lists all forms you have saved with the active template. Displays the name of the saved form you are viewing, or **(untitled)** if the form has not been saved.
⑤	Virtual **Meter** button. Opens the virtual meter window. The virtual meter displays the active meter readings and copies single-readings to the active form. It also lists, summarizes, and exports uploaded data.
⑥	**Designer** launches the designer.
⑦	**Get Meter Data** button. Uploads data from meter memory and displays it in the active form.
⑧	**Logging** button. Begins set up and interactive logging from the meter. Displays logged data on the active form.
⑨	**Find** button. Helps you locate forms you have saved previously.
⑩	**Clear**, **Save** or **Print** the active form.
⑪	Meter connection icon tells you if a meter is connected and communicating with your *FlukeView Forms* software.

Starting FlukeView Forms

To start *FlukeView Forms*:

1. From the Windows taskbar, select **Start, Programs, Fluke,** then **FlukeView Forms.**

2. Click the **FlukeView Forms** menu item.

Selecting a Form Template

FlukeView Forms templates are designed to display data in different ways. After you select the appropriate form template, it becomes the active form. When you transfer meter data, it displays in the active form.

1. On the **File** menu, select **New Blank Form**.

2. A **New Blank Form** dialog box appears. Double-click a form template name in the **Select a form template** list.

Note

If you open a new blank form template, FlukeView Forms asks if you want to save any changes you have made to the current active form.

FlukeView Forms provides general-purpose form templates. See online tutorials for more information on customizing form templates.

Getting Data from the Meter to the PC

The meter communicates with a PC through a USB or serial cable. *FlukeView Forms* transfers meter data to the PC three ways:

*   Upload data from meter memory

*   Interactive logging

*   Single-reading copy to the active form

The type of meter you have determines which transfer methods can be used.

How Your Meter Communicates Data

The following table shows how certain Fluke meters communicate data to the PC, as well as the type of data readings the meters support. See *Logged Readings and Display Readings* later in this manual for additional details about types of readings.

Connecting the Serial Cable to a PC

1. Attach the IR cable or standard serial cable to your PC.

2. Attach the other end of the cable to the meter. For more details or information on your specific meter, see *Meter Connection Pages* on your CD.

Changing the Communications Port

The communications port that *FlukeView Forms* uses is displayed at the bottom right of the *FlukeView Forms* screen.

To change the communications port:

1. Open *FlukeView Forms*.

2. On the **Tools** menu, select **Options**. The **Options** dialog box appears.

3. Click the **Communications** tab.

4. In the **Port** list, click the communications port you want to use. The default communications port for FlukeView Forms is COM1.

Table 3. Meter Communication Styles

Fluke Meter Model	Uploading	Interactive Logging	Single-Reading Copy to Form
87 IV / 187		L	D
89 IV / 189	L,D	L	D
53 / 54	L,D		
183 / 185	D	L	D
287/289	L,D	L	D
45 / 8808A / 8846A		L	D
568	D	L	D
789		L	D
975	L,D		
1653	D		
1550B	D		
'L' – Logged Readings / 'D' – Display Readings			

Note

If a meter is not found in Table 3, then refer to the meter's users manual.

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Logged Readings and Display Readings

FlukeView Forms deals with two types of meter data, *logged readings* and *display readings*. Refer to Table 3 to determine the type of readings generated by your meter(s).

Logged readings are taken during a logging session. There are two ways to generate logged readings:

• During interactive logging between a meter and a PC running *FlukeView Forms*.

• Some meters support logging directly to meter memory. In this case, logged readings are stored in meter memory and uploaded from meter memory to *FlukeView Forms* at a later time.

Display readings are taken one at a time, as opposed to being recorded during a logging session. Display readings are transferred to *FlukeView Forms* two ways:

• When you upload individually saved readings from meter memory.

• When you perform a single-reading copy to form.

Note

Readings stored in meter memory are identified variously as saved readings, stored readings or memory readings in the meter manuals.

Logged readings in a logging session always have the same units. For example, results are all V ac, all V dc, etc. However, display readings may be in different units. Display readings are not graphed in *FlukeView Forms*, but logged readings can be.

Note

FlukeView Forms treats readings from Fluke 53/54-II, 975, 983, 568 and 287/289 meters as both logged readings and display readings.

Uploading Data

If your meter has memory, the meter can record data without a PC present and store it in meter memory. *FlukeView Forms* then uploads data from the meter memory to the PC. Data storage on the meter is limited by the meter memory.

Meters that support uploading data are listed on Table 3.

To upload data:

1. Start *FlukeView Forms*.

2. Select the form template you want to use by opening the **File** menu and selecting **New Blank Form**. Highlight the form template in the **New Blank Form** dialog box and click **OK**.

3. Connect the meter to the PC using the IR cable.

4. Turn the meter on.

Note

If your meter has a PC/IR SEND button, you must use that button to initiate communication with the PC.

5. On the **Meter** menu, select **Get Meter Data** to upload the meter data to the active form. The **Get Meter Data** dialog box appears. In some cases, this step is unnecessary. Instead, you are prompted with the **Get Meter Data** dialog box automatically.

    You can also press the **Get Meter Data** button to access the dialog box.

6. Data readings are copied directly into the active form.

Interactive Logging

In interactive logging, readings are logged directly from the meter and stored on the PC. This allows *FlukeView Forms* to take advantage of the PC's larger memory while connected to the PC during the logging session. However, the meter must support interactive logging and be either ac powered or have sufficient battery power to run for the length of the logging session.

Meters that support interactive logging are listed on Table 3.

To begin interactive logging:

1. Connect the meter to the PC.

2. Select the form template you want to use by opening the **File** menu and selecting **New Blank Form**. Highlight the form template in the **New Blank Form** dialog box and click **OK**.

3. On the meter, choose the meter function and range you want to use to measure the input.

4. In *FlukeView Forms*, click the **Meter** button at the top right-hand portion of the toolbar. Use the virtual meter to confirm that the meter readings are correct.

5. From the **Meter** menu, select **Logging**. The **Logging Window** appears. You can also press the **Logging** button to access the **Logging Window**.

6. Set up your logging session using the **Setup** tab of the **Logging Window** (or make no changes to **Setup**, and use the default configuration).

7. Click **Start** or **Stop** to start or stop logging.

The **Setup**, **Schedule** and **Status** tabs of the **Logging Window** display settings for and provide information about the logging session. Use them to:

• Change the default logging settings under **Setup**.

• **Display Simulation Graph** to examine the effects of your logging settings on example data.

• Manually **Start** and **Stop** a logging session, or set scheduled **Start**/**Stop time**s for a logging session under the **Schedule** tab.

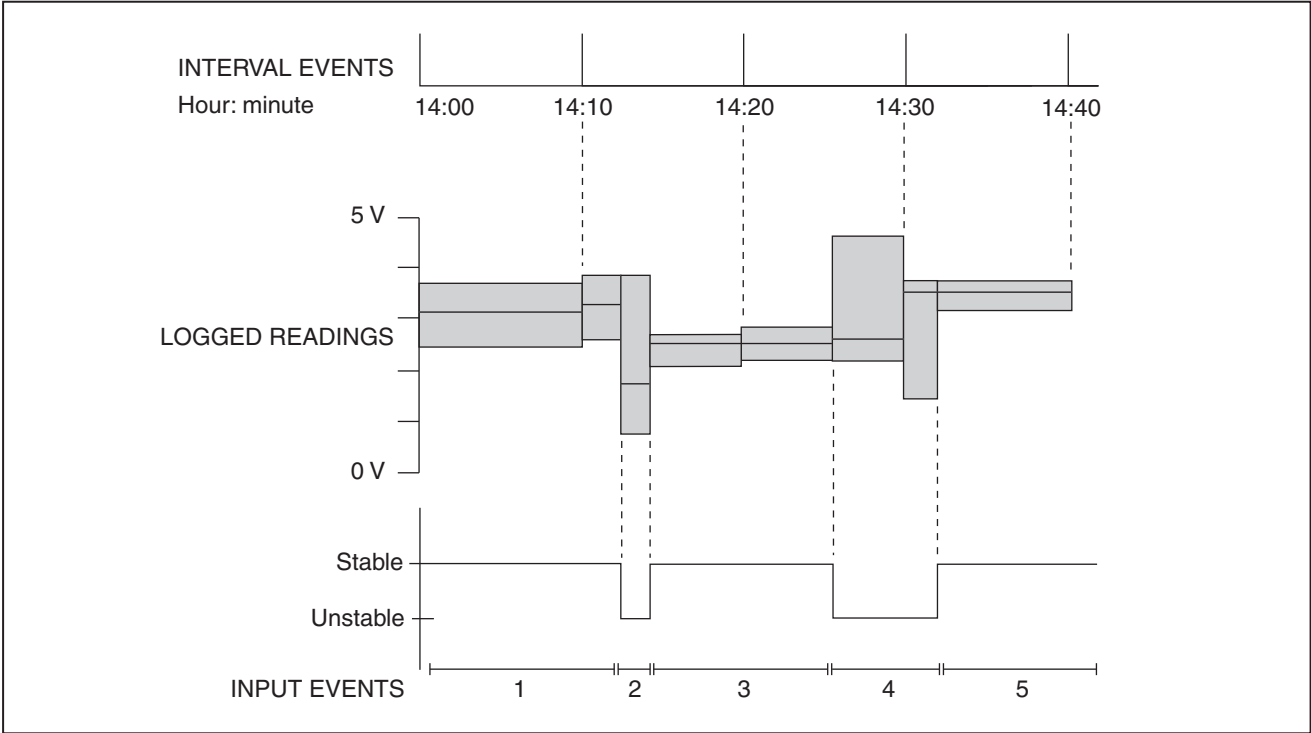• Examine the progress of the active logging session under **Status**.

Figure 2. Interval Events and Input Events

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Event Logging

During interactive logging*, FlukeView Forms* compresses the input being measured by the meter into a series of *events.* Each event is represented by a sample at the start of the event, a duration, starting time, ending time, and the highest, lowest and average values detected during the event. The highest (max) and lowest (min) readings include the timestamps when each were detected. See the Graph View options (right click on the graph) to view the samples on the events.

For a more detailed discussion of all types of events, see the *FlukeView Technical Notes*, available on your CD.

Each event is stored in an individual logged reading.

Note

If your meter supports the display of two readings at once, and both are being displayed, then both readings may be logged, depending on the settings you have selected.

When you start logging, the meter readings are monitored by *FlukeView Forms* and are classified by event type. The two event types you will see most often are:

- *Input events* are logged when the input reading changes beyond the user-defined input event settings. You define, in settings, which readings are similar enough to constitute an input event.

  Input events are described as either *stable* or *unstable*. Stable input events contain readings that fall inside the user-defined settings. Unstable input events contain readings that fall outside the user-defined settings. See Figure 2.

- *Interval events* are logged when the user-defined logging interval has ended. Interval events can be thought of as a series of readings divided into sections by time. See Figure 2.

Input events are useful for detecting anomalies in a group of data, when monitoring a process or when troubleshooting a problem. Interval events are useful if the values you record are fairly stable in nature and your main purpose is documentation for record keeping.

If the values you record are fairly stable, but monitoring variance from the norm is critical, recording both interval events and input events can be a valuable trouble-shooting tool. The interval events serve as routine documentation, while the input events record any significant changes that occur during the intervals.

By default, *FlukeView Forms* logs both input and interval events. You can view either or both on the form. If you decide to record only input events or only interval events, you lose this flexibility, but you reduce the number of readings you take and save disk space on your PC.

Note

> *See the FlukeView Forms Technical Notes for a more comprehensive description of how event logging is performed and how to effectively use it for your purposes.*

Setting Up Your Logging Session

From the **Meter** menu, open the **Logging Window**.

From the **Logging Window**, set up your logging session by selecting the **Setup** tab. You can then customize the default logging setup to collect your data.

Simulation Graph

Display Simulation Graph lets you view the effects of changing the logging settings. It shows how an example input is compressed into events with the current logging settings. After you change the logging settings and click the **With Setup Data** radio button, the Simulation Graph updates to reflect your changes.

Click on the **<<** button if you want to change the example input data to approximate the inputs you are expecting to measure.

Changing the Logging Interval

To change the logging interval, open the **Logging Window**, select the **Setup** tab and make changes in the **Interval** section. Changing the logging interval:

- Does not usually significantly change a graph of the data. A very small interval (10 seconds or less) rarely provides more significant data, especially if input event data is also being recorded.

- Does directly impact the number of records stored (smaller interval means more records are recorded).

- Does **not** change the number of times that *FlukeView Forms* requests readings from the meter. This is an internal value based on the type of meter and the PC's CPU speed and current performance.

Changing the Input Event Settings

Changing the input event settings allows you to specify what changes in the input are significant enough to begin a new input event.

To change event settings, open the **Logging Window**, select the **Setup** tab and make changes in the **Events** section.

With **Relative Threshold** selected under **Threshold method**, you specify a percentage change in the readings that begins a new event. Relative thresholds work well when signal noise (insignificant changes in the input signal) is proportional to the expected signal value.

With **Fixed Threshold** selected under **Threshold method**, you specify a fixed-value change in the readings (in the units of measure that the meter is using) that begins a new event. Fixed thresholds work well when you want to capture a significant unit change in the input you are measuring.

If the meter supports internal event logging, you can choose to have the meter perform the input event detection. When the meter is performing the input event detection, the input change detection is noticeably faster.

Note

With the exception of the Fluke 789: If your meter supports the display of two readings at once, and both are being displayed, you need to select whether the input event thresholds are applied to the primary or secondary display.

Viewing the Status of a Logging Session

Once logging starts, from the **Logging Window**, select the **Status** tab to watch the current logging session as it occurs.

The **Recent Activity Chart** graphically displays the most recently logged events; the current event is yellow, while older events are blue, and eventually scroll off the left side of the chart.

The number of events logged and the current high, low and average values for the event in progress are also displayed in tabular form.

The active form also updates when an event closes.

Single-Reading Copy to Form

You can capture a single display reading from your meter and copy it to a form for printing or saving. This is useful when you only need the reading that appears on the meter for your records.

To capture a single reading from your meter, the meter must be connected to the PC. You may copy more than one reading to the form, but the readings must be copied one at a time.

The most common way to perform a single-reading copy to form is to use the virtual meter window. Open the virtual meter by clicking the **Meter** button at the top right-hand portion of the toolbar.

Meters that support single-reading copy to form are listed in Table 3.

The drop-down list in the top left corner of the virtual meter window gives you several options for viewing data.

- The **Primary/Secondary Readings** option gives you a small screen that reflects the meter display.

- The **Meter Display** option simply gives you a larger-screen view of this data. Both views allow you to use single-reading copy to form.

To perform a single-reading copy to form:

1. Make sure the meter is connected to the PC. Check the meter-connection icon on the lower-right corner of the *FlukeView Forms* screen or the display on the virtual meter.

2. Open the virtual meter by clicking the **Meter** button at the top right-hand side of the toolbar.

3. Set the virtual meter view to either **Primary/Secondary Readings** or **Meter Display**.

4. When the virtual meter displays a reading you want to copy, click on **Copy Into Form**.

The reading appears at the bottom of any display reading table on the form, or in a testpoint reading form item.

Data from Multiple Meters on a Single Form

You can display data from more than one meter on a single form. This allows you to compare data collected from separate meters or from the same meter at different times.

Use data groups to differentiate between data collected from different meters. When you transfer meter data to a form, specify the data group to associate with the data:

- When uploading data from meter memory, select the data group on the **Get Meter Data** dialog box under **Send data to group**.

- When interactively logging from the meter, select the data group on the **Logging Window** setup screen under **Log to Data Group**.

- For copying meter data from the virtual meter to the active form, you will be prompted for the data group to associate with the data.

Each form item that displays meter data is set to a particular data group, and displays the meter data corresponding to that data group. (Logged Readings Graphs can show data from multiple data groups on the same graph.)

To display multiple data groups on a form, the form template you are using **must** be enabled for multiple data groups. Otherwise, the form can only contain data from a single meter. Use *FlukeView Forms Designer* to enable data groups on a form template.

See the online Tutorial #4, "Multiple Data Groups," for step-by-step instructions on how to use data groups.

Note

Multiple data groups are not supported in FlukeView Forms Basic *form templates.*

Using Forms

The form is the primary element of *FlukeView Forms* documenting software. Each online form contains form items, which display meter data or user-entered data.

Once you have transferred data from the meter to the active form, you can enhance the presentation of data in a number of ways.

Manually Adding User Data

Most form templates have form items designed for information that is manually entered by the user. If you place your cursor in a field and the symbol I appears, that is a user data field. You can enter comments and additional data in these fields.

To retain user data when adding a new set of meter data:

1. Press the **Clear** button.

2. Choose **Meter data only** from the **Clear Form** dialog box.

3. Get the new meter data.

Formatting Data on an Existing Form

You can change the way data appears on an existing form by altering the graphs and tables.

To alter graphs or tables, place your cursor inside the graph or table and right-click. A menu of options for that form item appears.

For instance, when looking at a graph, you can zoom in or out and print or save various views of the graph to suit your needs. This lets you highlight relevant data.

Or, you can select **Add a Note** from the **Edit** menu to add a "sticky note" to the form. Position it to annotate the data being displayed in a graph, a table, etc.; the Note will be saved and printed with the form.

See the online Tutorial #2, "Formatting Meter Data," for step-by-step instructions on how to alter the appearance of meter data on a form.

Printing a Form

To print a form:

1. On the **File** menu, select **Print**. You can also use the **Print** button.

2. Sometimes, there is more meter data than the tables on the form can display. Select **Print tables at end of print job** to print all meter data in tabular form immediately after the form is printed.

3. Change printer, print range, or copy settings.

4. Click **OK**.

Saving a Form

Saving a form stores all data and formatting on the active form so that you can view the form at a later time. If you do not save the form, all the data on the form is lost when you transfer new data from your meter, change the form template, or exit *FlukeView Forms*.

To save a form, from the menu, select **File**, then **Save**. You can also use the **Save** button. **Save** is disabled if there is no new data to save.

Saved forms are identified by the form template and the date and time they were first saved. You can also enter a 30-character remark to help identify the form. The remark is displayed after the date and time in the **Saved forms** list at the top of your screen. See "Finding and Opening Saved Forms" in this manual for more information.

Placing Existing Meter Data in a New Form Template

If the active form contains meter data, you can display the same data in a different form template.

1. Select **Copy Form Data** from the **Edit** menu.

2. Open the **Select a form template** drop-down list and select a different form template. If you haven't already saved the form, a **Save** dialog box gives you the option to save the data in your original form template.

3. A blank form is created from the form template you selected.

4. Select **Paste Form Data** from the **Edit** menu. The meter data is pasted to the form.

Note

User data must be re-entered when you move existing data from one form template to another.

Display Selected Readings

Sometimes, you might not want to display or save all of the readings you have taken from the meter. The **Select Readings** dialog box allows you to:

- Delete unnecessary readings from the form.

- Rearrange the order of display readings on the form. If display readings are taken in the wrong order, they show up in the wrong order on the display readings table and testpoint readings form items. **Select Readings** allows you to correct their order.

- Combine multiple logged readings into a single reading.

Note

You cannot edit the actual meter data. You can only delete entire readings, or you can change the order of readings.

1. From the menu, select **Tools**, then **Select Readings** to display the **Select Readings** tool.

2. The **Select Readings** dialog box appears. Click **Help** for instructions on deleting, reordering, or combining readings.

   See the online Tutorial #3, "Editing Data," for further instructions on using the **Select Readings** dialog box.

Finding and Opening Saved Forms

If you save a form, you can access that form again at a later time.

Opening a Saved Form

To open a form that you have saved previously:

1. Open *FlukeView Forms*.

2. In the **Select a form template** drop-down list, select the template in which you saved the form.

3. In the **Saved forms** drop-down list, browse to the form and click to open.

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