FLUKE®

1742/1746/1748

3 Phase Power Quality Logger

Fluke Connect and WiFi

Instructions

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FLUKE CONNECT® APPLICATION AND SERVICES END USER LICENSE AGREEMENT (EULA) AND SERVICES AGREEMENT

For complete details, go to https://connect.fluke.com/eula.

Visit Fluke's website at www.fluke.com.

To register your product, visit http://register.fluke.com.

To view, print, or download the latest manual supplement, visit http://us.fluke.com/usen/support/manuals.

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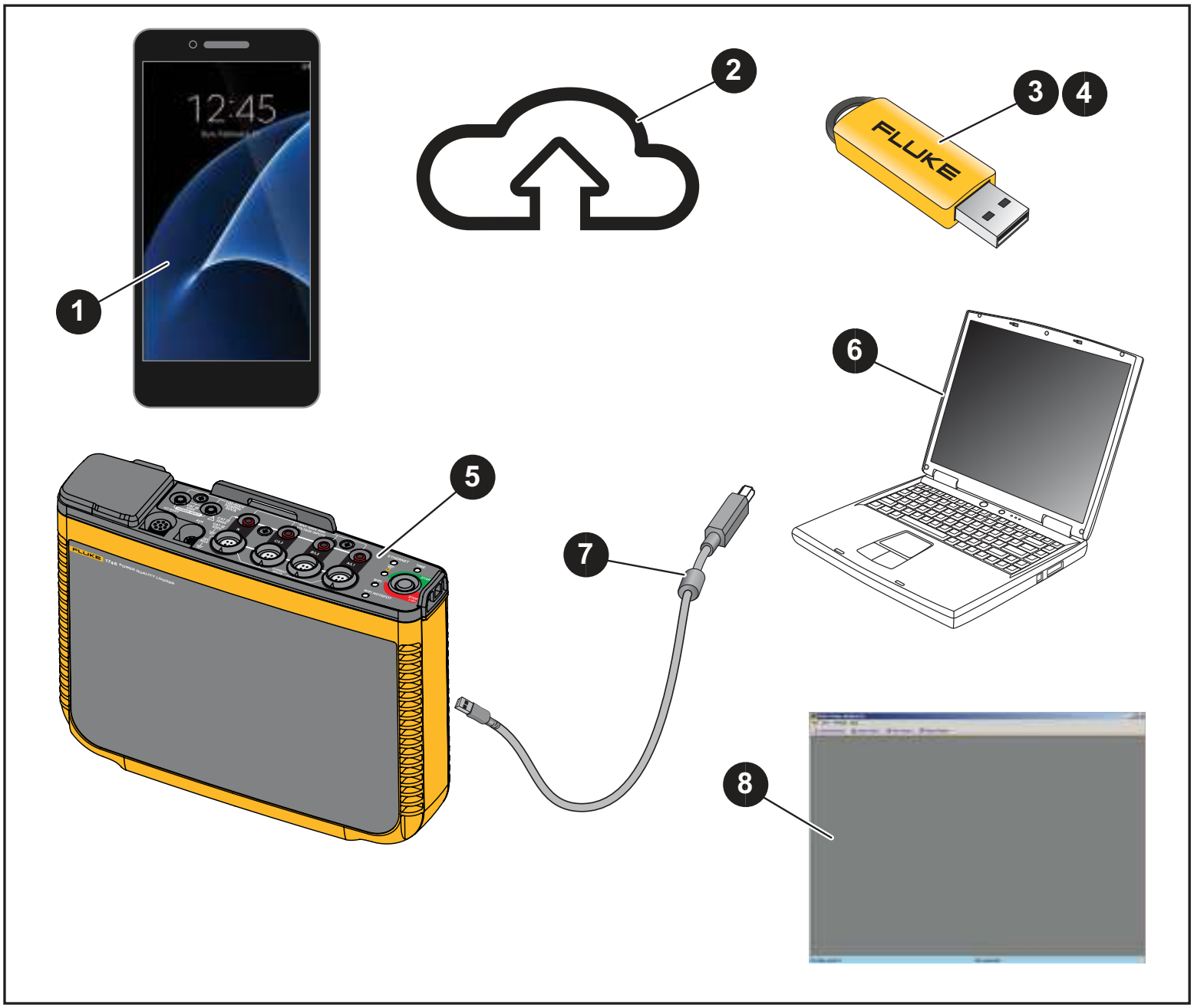
Overview

Introduction 3
Before You Start 3
Terms to Know 4
Power Quality Logger Setup 6
    Step 1: Verify WiFi Adapter Installation 6
    Step 2: Product Registration/WiFi License 6
    Step 3: WiFi License Installation 7
Activate Subscription 9
Fluke Connect Setup 11
    Step 1: Download the Fluke Connect App 11
    Step 2: Open the Fluke Connect App 12
Connect to Logger 12
    Step 1: Use the App to Talk to the Logger 12
    Step 2: Configure the Logger 14
    Step 3: Verify and Correct Connections 16
    Step 3a: Remote Monitoring 20
    Step 3b: Local Logging 24
Instrument Settings 26
Assets 30
    Asset Groups 30
    Alarms 30
Remote Monitoring Session 31


12:45
FLUKE
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Introduction

With the wireless connectivity (WiFi) feature of the Product, you can:

- Configure the Logger, verify measurement, and set up a logging session with Energy Analyze Plus PC software and the Fluke Connect smartphone app
- Download data to Energy Analyze Plus PC software
- Stream all data to the Fluke Connect Cloud
- Manage assets and share data with the Fluke Connect smartphone app
- Receive alarm notification from a remote monitoring session

Before You Start

What you need:

1. Android or iOS smartphone (go to https://www.fluke.com/en-us/support/fluke-connect-frequently-asked-questions to find a list of supported devices)
2. Internet access
3. WiFi-Infrastructure license that enables Logger connection with WiFi access points for remote monitoring through WiFi (provided with Product registration)
4. USB Drive (included with Product)
5. Power Quality Logger (the Product or Logger)
6. PC
7. USB Cable A, mini-USB
8. Energy Analyze Plus Software (go to https://www.fluke.com/en-us/support/software-downloads for the latest software update)

During this setup you will need to document the Login name and password for:

- Power Quality Logger
- Fluke Connect app
- WiFi Password (for the Logger)
- WiFi SSID and password for the Internet WiFi Access Point (or use an Ethernet connection)

Terms to Know

Definitions of terms used in this document:

WLAN	A wireless local area network (WLAN) is a wireless distribution method for two or more devices that use high-frequency radio waves and often include an access point to the Internet. A WLAN allows you maintain a network connection as you move around the coverage area, often a home or small office.
WiFi Hotspot	With the built in USB WiFi Adapter, the Logger is a WiFi hotspot for: • wireless control of the Logger • download of measurement data The WiFi direct connection uses WPA2-PSK (pre-shared key) with AES encryption.
WiFi Infrastructure	WiFi Infrastructure mode is how you connect your devices using a wireless access point as a central device. To join the WLAN, all wireless clients must be configured to use the SSID of the access point. The access point is then connected with the wired network to allow wireless clients access to, for example, Internet connections. With a second WiFi-to-USB adapter the Logger can connect to a WiFi access point and supports WPA2 PSK security as well as no security. This connection requires a DHCP service running in the access point to assign IP addresses automatically.

Local Logging	Logger mode starts a session to store all measurement data on the Logger.
Remote Monitoring	All measurement data is transferred in real-time to the Fluke Connect Cloud for secure storage. Measurement data is also available on the Logger (limited by the internal data storage size) for download to Energy Analyze Plus software. From the cloud, your team has access from anywhere to measurement data with a supported mobile device or PC web browser. Only Team users defined in Fluke Connect can access this data. To sync data to the Fluke Connect Cloud, the Logger must be connected to a WiFi access point or Local Area Network with Internet access. WiFi connection requires a DHCP service running in the access point to assign IP addresses automatically.

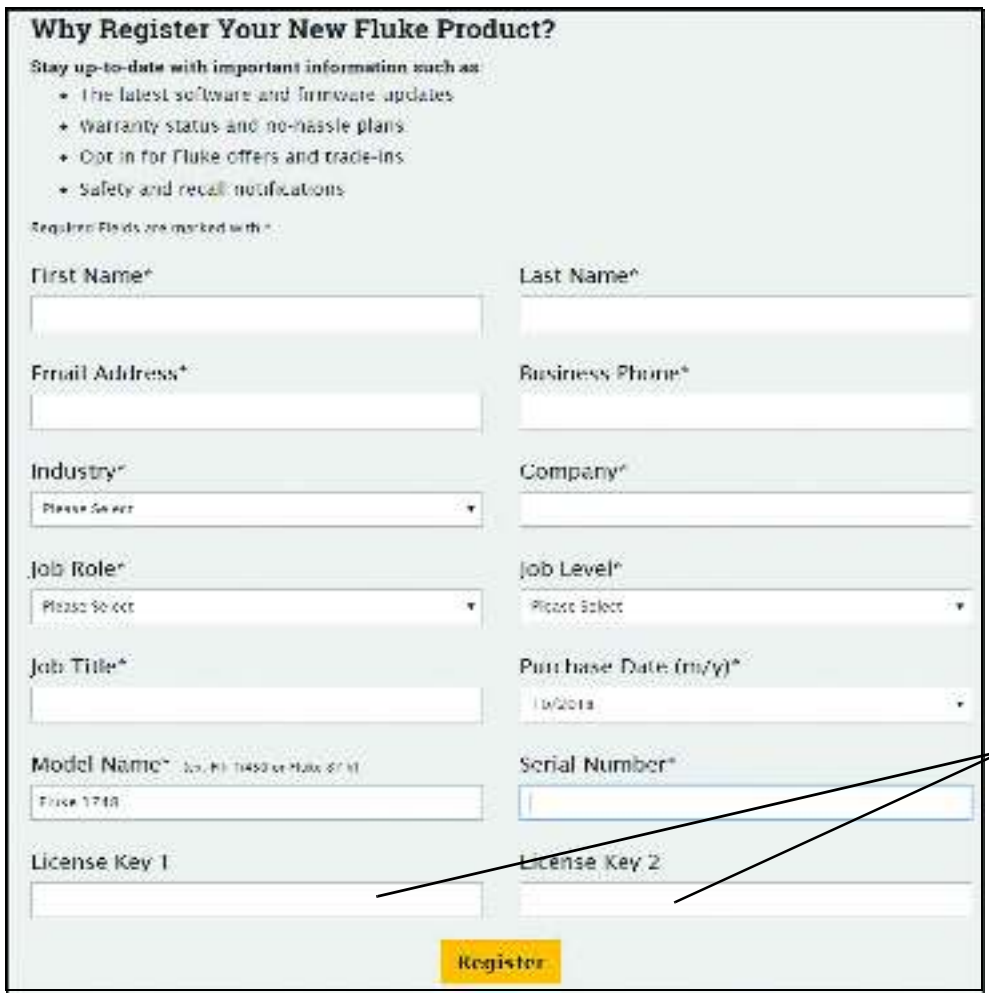
Power Quality Logger Setup

Step 1: Verify WiFi Adapter Installation

The WiFi adapters are installed when the radio certification is available for your country. Check www.fluke.com for availability. To install or replace the adapters, see the *1742/1746/1748 Users Manual* at www.fluke.com.

Step 2: Product Registration/WiFi License

1. Register at http://a.fluke.com/registration to receive the complimentary WiFi-Infrastructure license and the optional *Remote Monitor* license by email.



Note
The registration page varies slightly for the local of the web page you access.

License keys not required for complimentary WiFi license

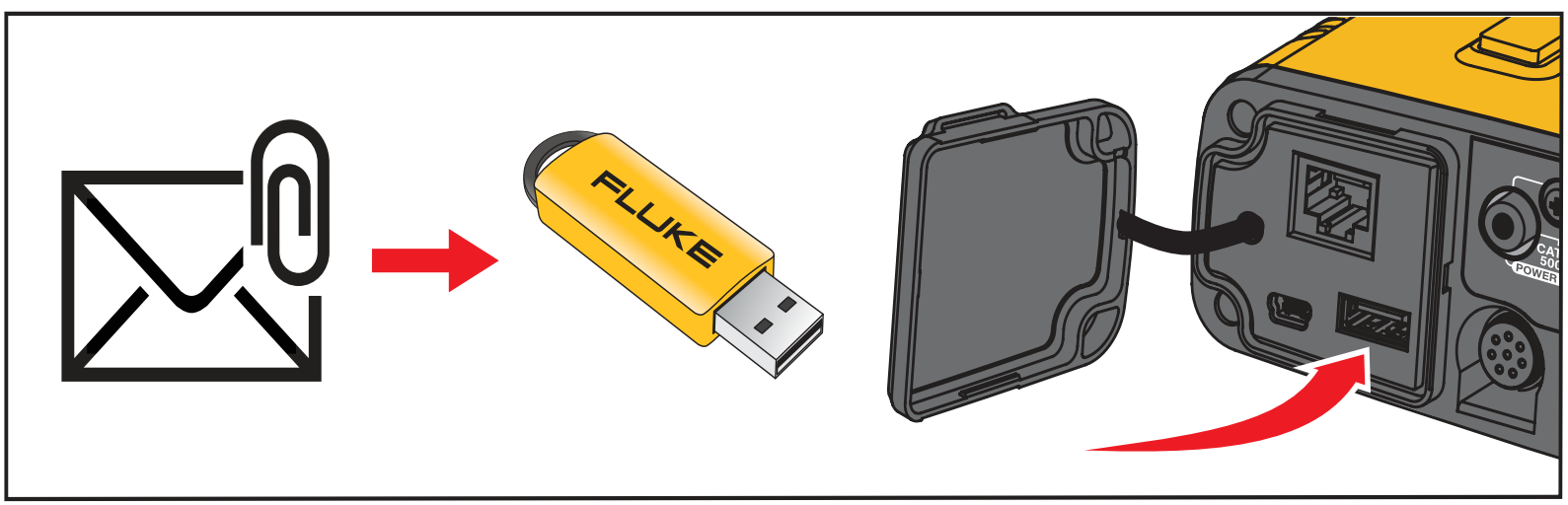
Note

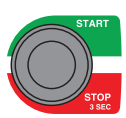
Connection of the Product to a WiFi access point requires the complimentary WiFi-Infrastructure license.

2. Complete the required fields.
3. Click **Register**. You should receive an email within 15 minutes with the license attachment and instructions.

Step 3: WiFi License Installation

1. On the USB drive, create a folder named **Fluke174x** (do not use spaces in the folder name).
2. Copy the license file (*.txt) to this folder.
3. Connect the USB drive to the USB port on the Logger.



4. Push 

to turn on the Logger.
5. Connect your PC with the WiFi access point of the Logger. Or, use the USB cable to connect the PC to the Logger.
6. Enter the WiFi password: **fluketools**.

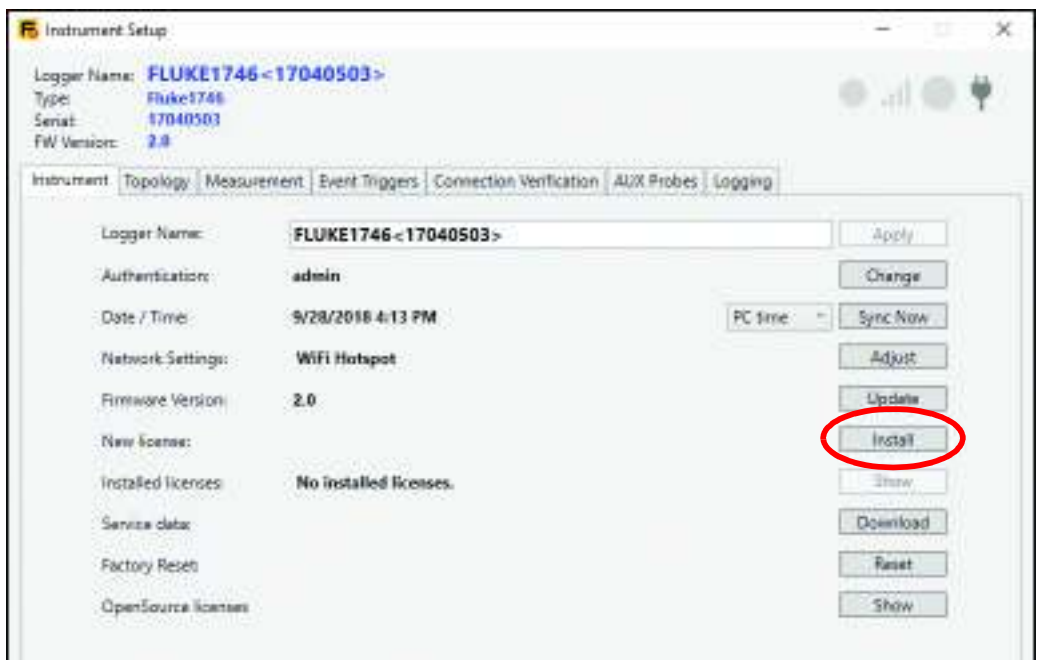
7. On the PC, open the *Energy Analyze Plus* software program.
8. Go to **Instrument Setup** > **Select Logger** and log in.

   The factory default is:

   User name: admin

   Password: <blank> or admin

   The Instrument Setup window opens.



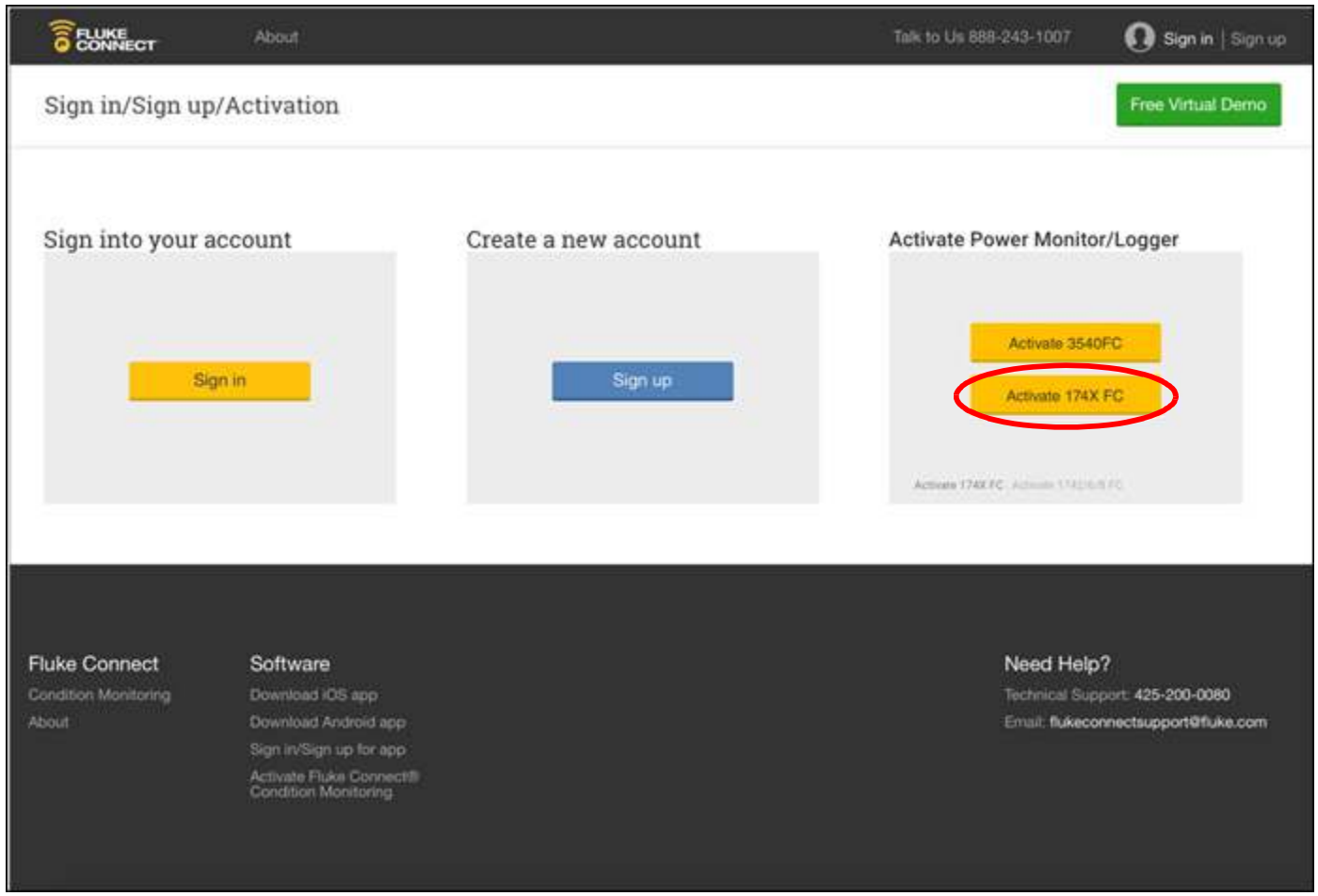
9. Click **Install**.

   A new window opens to show the installed licenses. Follow the prompts.

Activate Subscription

The optional subscription for the Remote Monitoring feature requires that you associate the serial number and activate the Logger to a Fluke Connect account. This setup is required only once unless the device administrator changes.

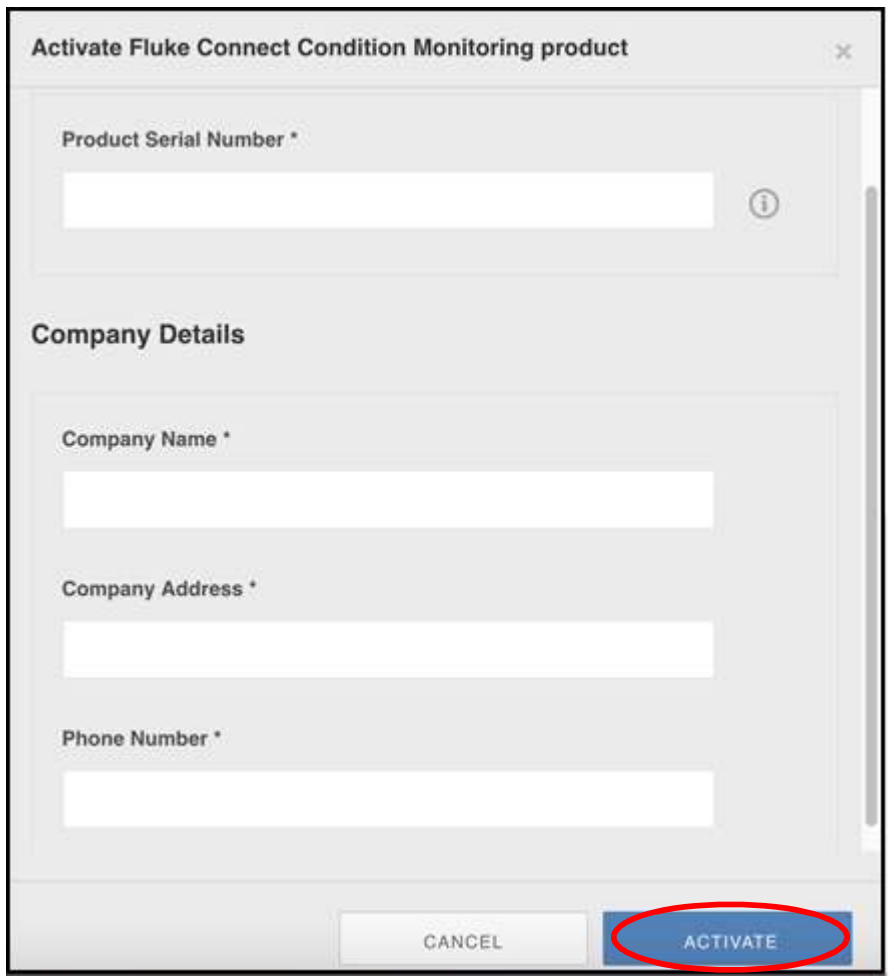
1. Go to https://connect.fluke.com.
2. Select **Activate 174x FC**.



Note

Activation of the 174x is not required when you use the Fluke Connect App to configure and start a local logging session only.

3. Sign-up to create a new account, or if you already have an account, sign-in. The Fluke Connect App also uses this account information.
4. Complete the form and select **Activate**.



Fluke Connect Setup

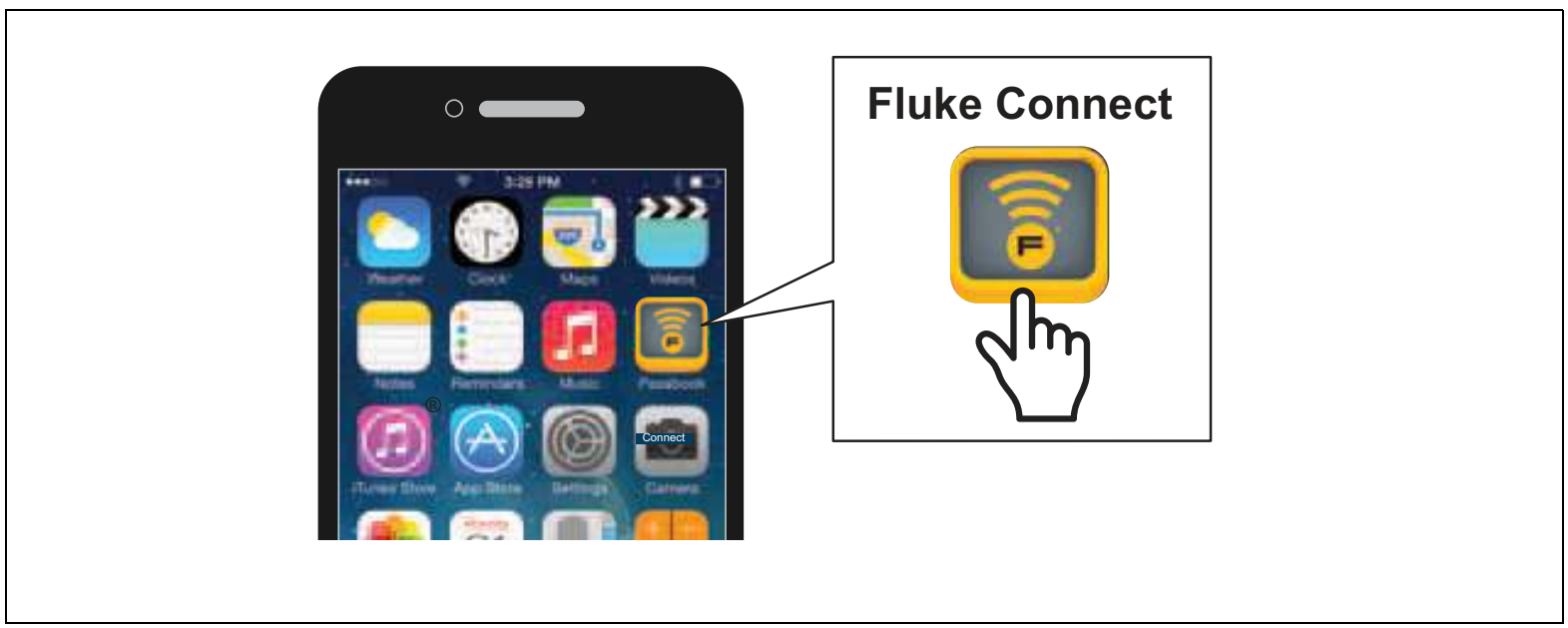
Step 1: Download the Fluke Connect App

iOS

Android

Step 2: Open the Fluke Connect App

1. Confirm that your smartphone is connected to the Internet.
2. Open the Fluke Connect app on the smartphone.



3. Log in to the app.

   If you have activated the Product for the remote monitoring feature already, make sure to use the same credentials in the app.

   Note

   If you are a first-time user, create a new Fluke Connect account.

Connect to Logger

Step 1: Use the App to Talk to the Logger

1. With the Fluke Connect app, go to **Set Up Logging or Monitoring** > **Power & Energy Monitors/Loggers** > **Power Quality Logger**.

2. When prompted, go to **Settings** > **WiFi** on the smartphone.

3. From the list of available WiFi Access Points, select the Logger:

   Fluke174x<SerialNumber>

   Password: **fluketools**

4. Click **OK** in warning message about Internet access.

   Note

   It is normal to see the WiFi symbol with an exclamation mark in the status bar on the mobile phone.

5. When WiFi connection is complete, go back to the Fluke Connect app and log in to the Logger.

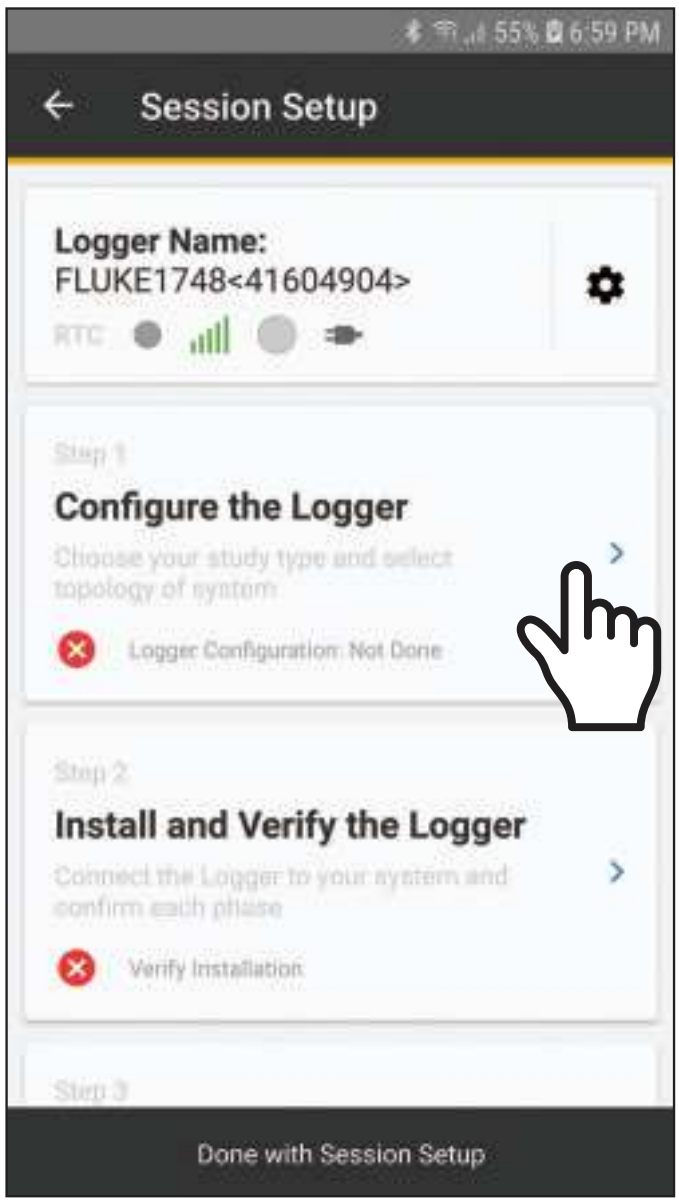
   The factory default is:

   User name: **admin**

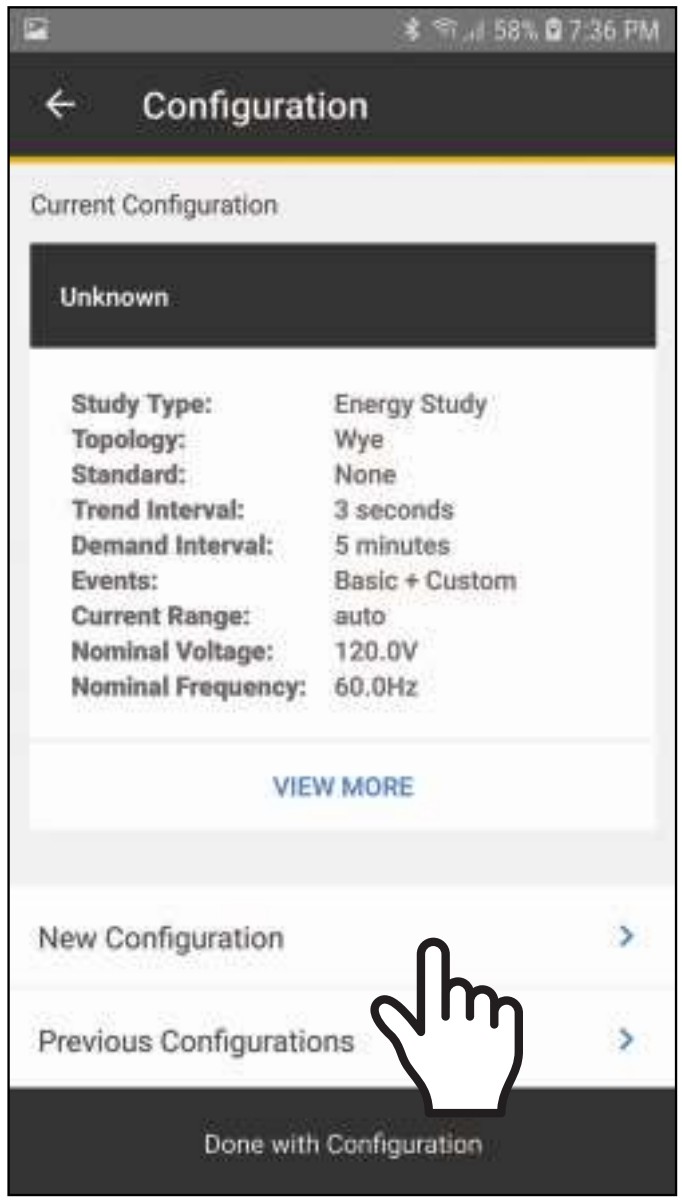
   Password: **admin**

Step 2: Configure the Logger

1. With the Fluke Connect app, go to **Configure the Logger**.



2. Tap **New Configuration** to make a new measurement configuration.

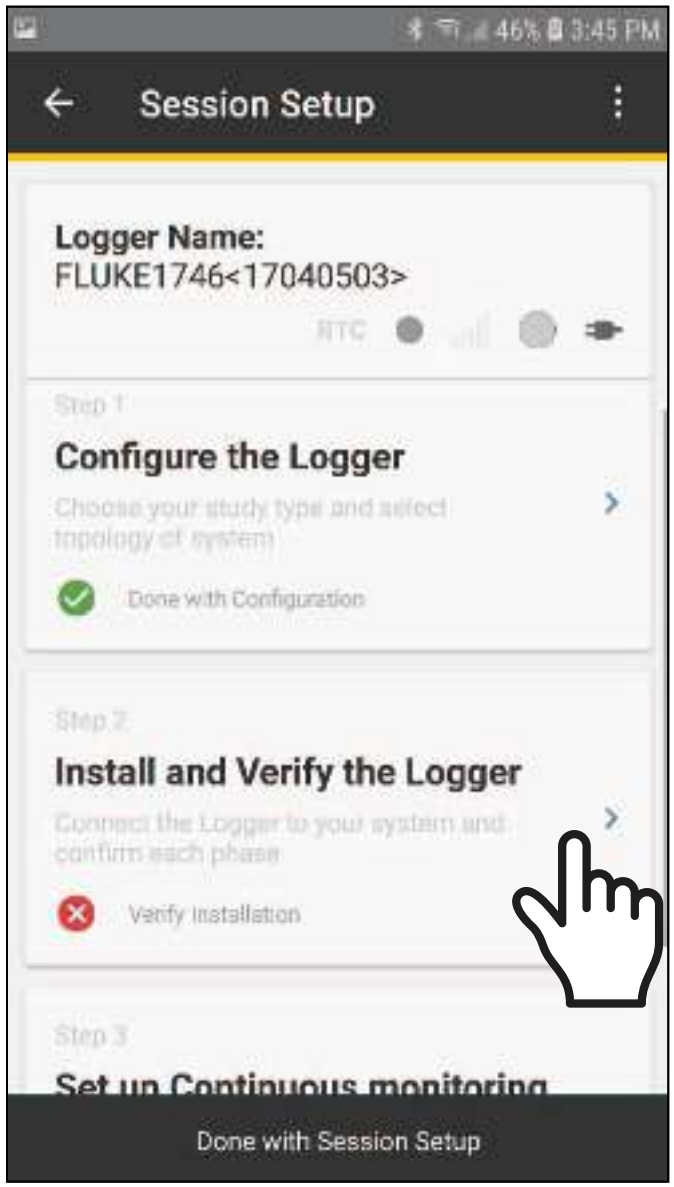


3. Tap **Previous Configurations** to load, edit, and apply a stored configuration template. Scroll down the screen to see all the information.
4. Tap **Done with Configuration** to continue.

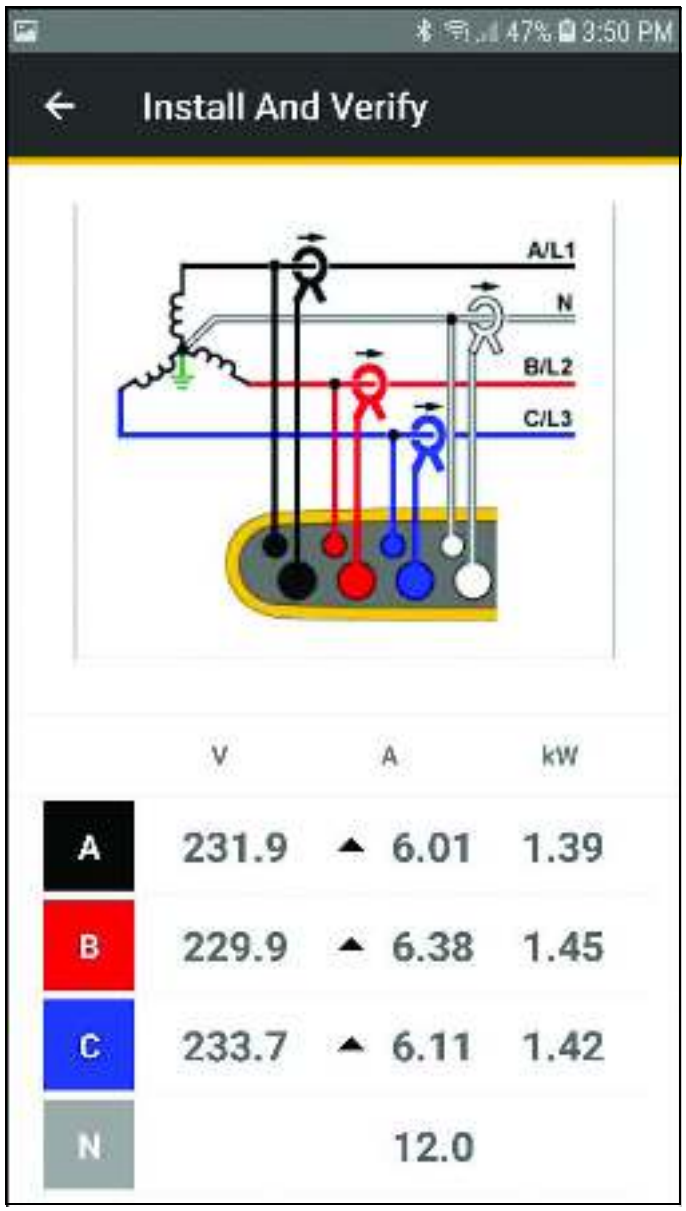
   The app updates with a green check mark.

Step 3: Verify and Correct Connections

1. Tap **Install and Verify the Logger**.

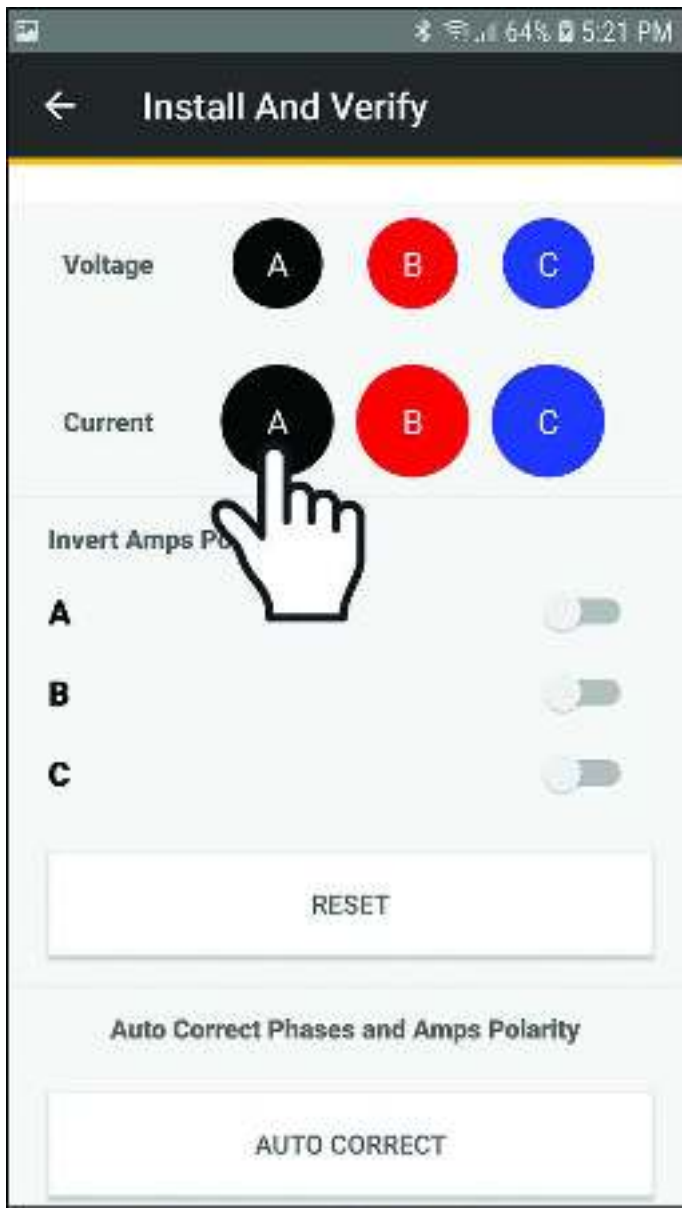


2. Verify that the connections are correct.



3. Scroll down the screen to see all the information.

4. To switch phases, hold finger tip on phase and drag. To invert polarity on a current sensor, activate the slider for that clamp.



5. To cancel changes, tap **RESET.**
6. Tap **AUTO CORRECT** and allow the app to automatically correct the connections for phase and amps polarity.
7. Tap to return to the Session Setup window.

   When the verification is complete, tap **Done with Session Setup**.
8. Tap **Set Up Remote Monitoring** or **Local Logging**.

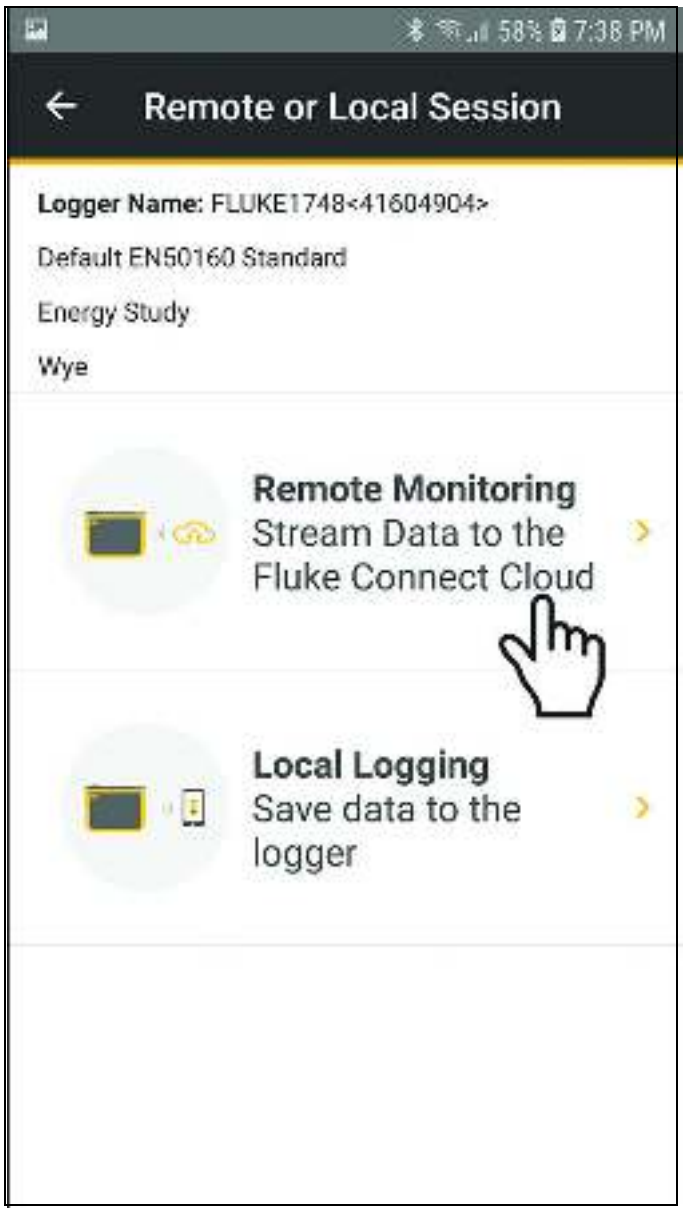
   The app prompts you to select the type of monitoring session:

   - For *Remote Monitoring*, see **Step 3a**.
   - For *Local Logging*, see **Step 3b**.

   Scroll down the screen to see all the information.

Step 3a: Remote Monitoring

1. Tap **Remote Monitoring**.

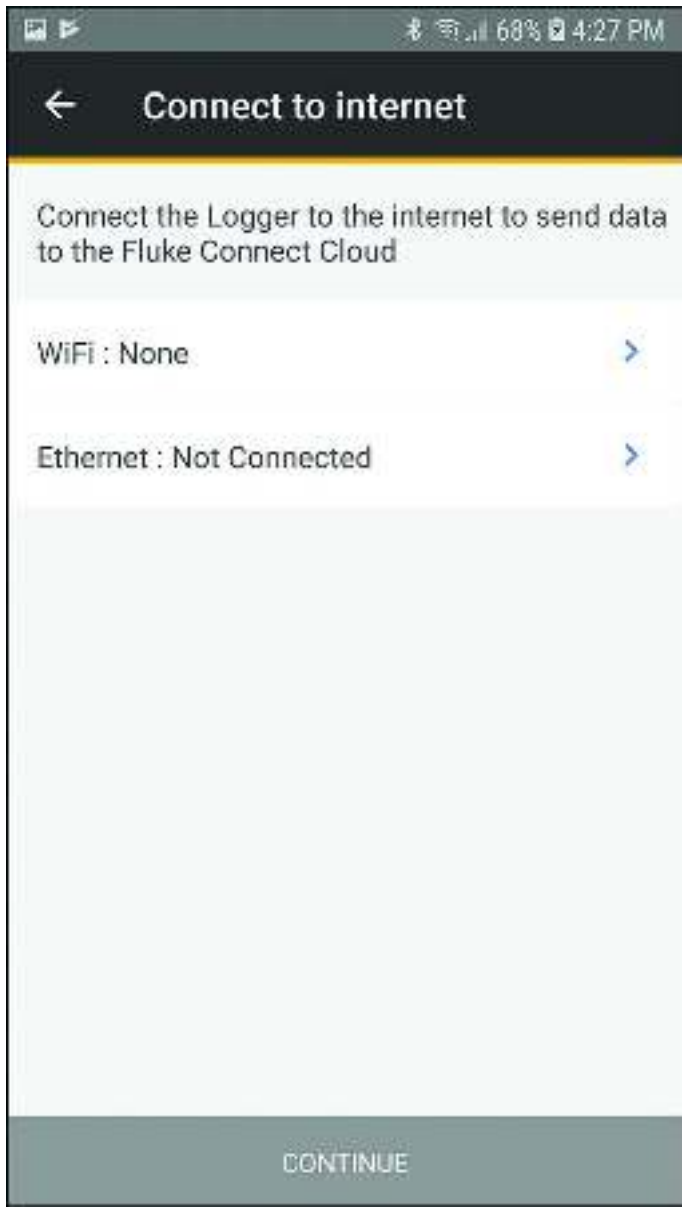


Note

Remote Monitoring requires:

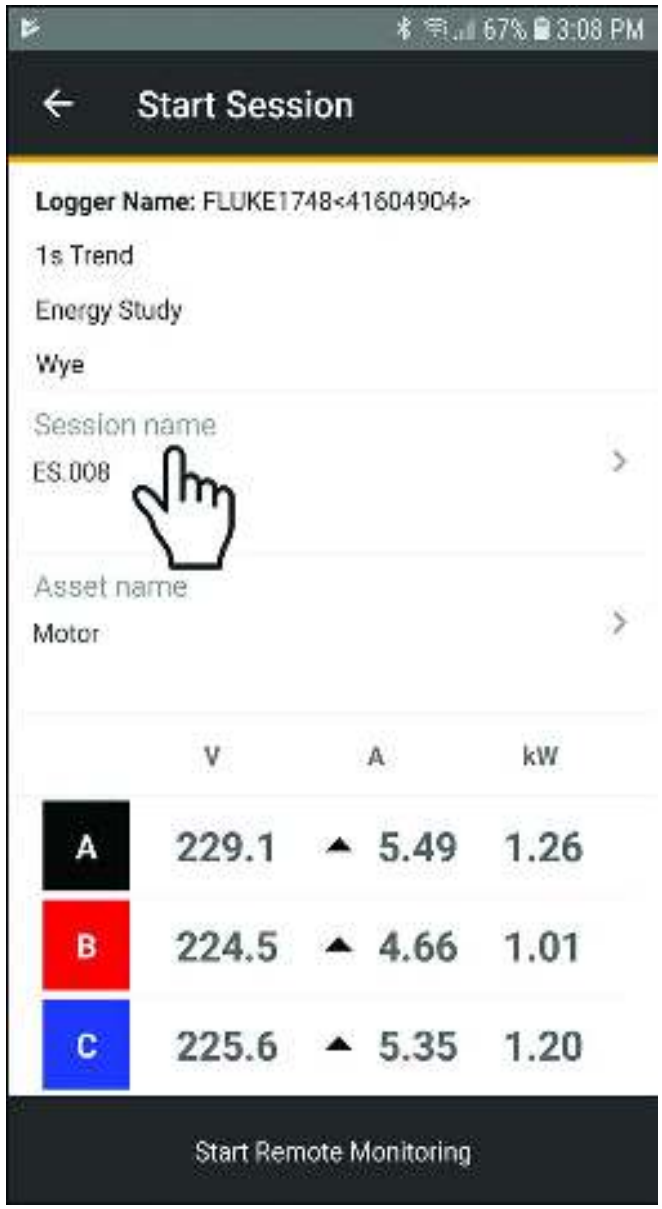
- *Installed* Remote Monitoring *License*
- *Installed* WiFi-Infrastructure *License (for WiFi connection to access the Internet)*
- *Valid subscription to Fluke Remote Monitoring (included with the Remote Monitoring license)*

2. Configure the connection to the Internet.



3. Tap **CONTINUE**.

4. Tap **Session name**.



5. As an option, create a custom name for the session and use the **Description** field to enter more details about the measurement.

   For information about the maximum length and allowed characters, see the Help file for *Energy Analyze Plus* software.

6. Assign the measurement to an Asset.

   Use available assets from the list or create new asset groups and assets. See *Assets* for more information about how to create and configure assets.

7. Review the live readings. If connections are not correct, correct before you continue.

8. Tap **Start Monitoring**.

   a. The Power LED on the Logger starts to flash.

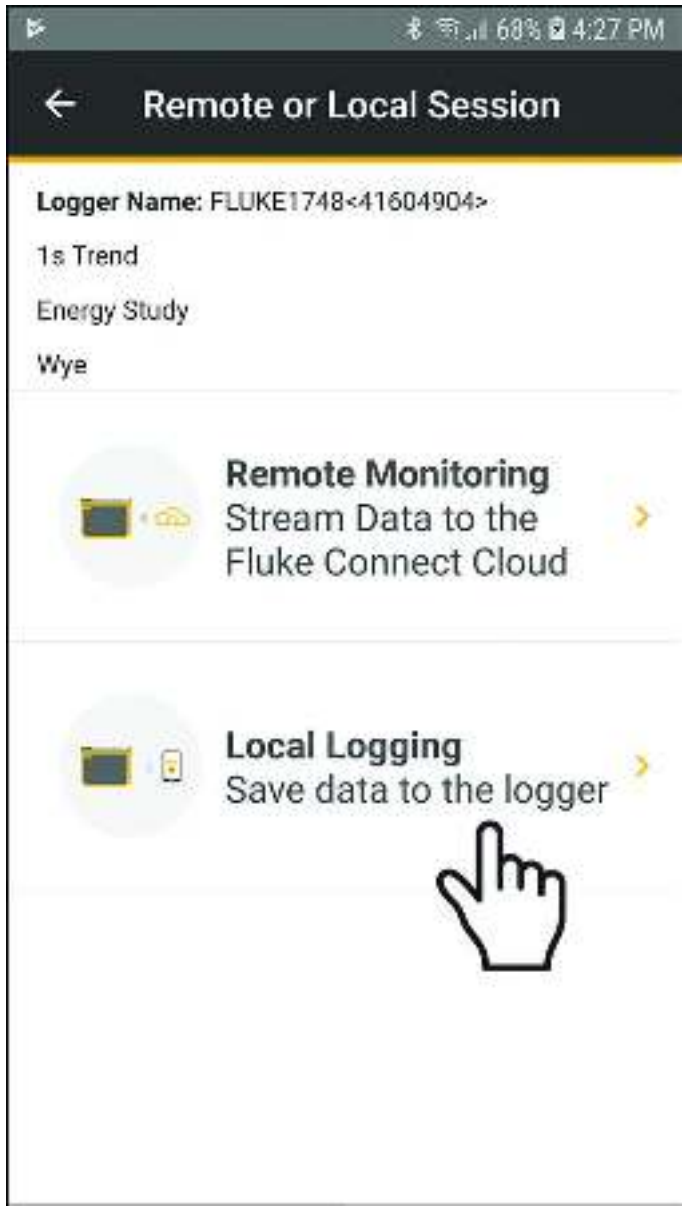
   b. The WiFi or Ethernet LED flashes blue to indicate successful upload of measurement data to Fluke Connect Cloud.

   If the WiFi or Ethernet LED is not flashing blue:

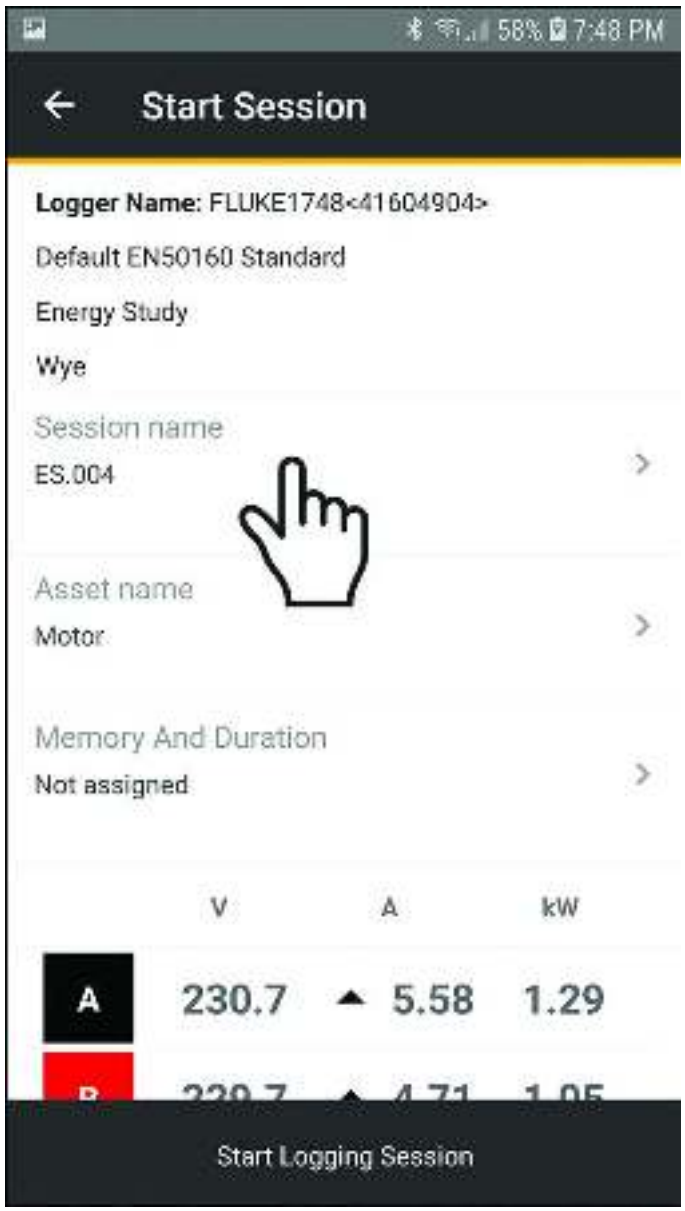
   - Check the WiFi or Ethernet connection settings in the Logger. Make sure the selected WiFi access point still available.
   - Check that the WiFi or Ethernet network has access to the Internet.

Step 3b: Local Logging

1. Tap **Local Logging**.



2. Tap **Session name**.



3. As an option, create a custom name for the session and use the **Description** field to enter more details about the measurement.

   For information about the maximum length and allowed characters, see the Help file for *Energy Analyze Plus* software.

4. Assign the measurement to an Asset, tap **Asset Name**.

Note

You must assign measurements to an Asset when local logging is uploaded the Fluke Connect Cloud.

5. Review the live readings. Scroll down the screen to see all the information. If connections are not correct, correct before you continue.

Note

In Memory and Duration are options for how to record data. The linear memory model stores data until the configured recording period elapses. The circular memory model stores data until the session is manually stopped. If all storage memory is used, the oldest data is overwritten with new data.

6. Tap **Start Local Logging**.

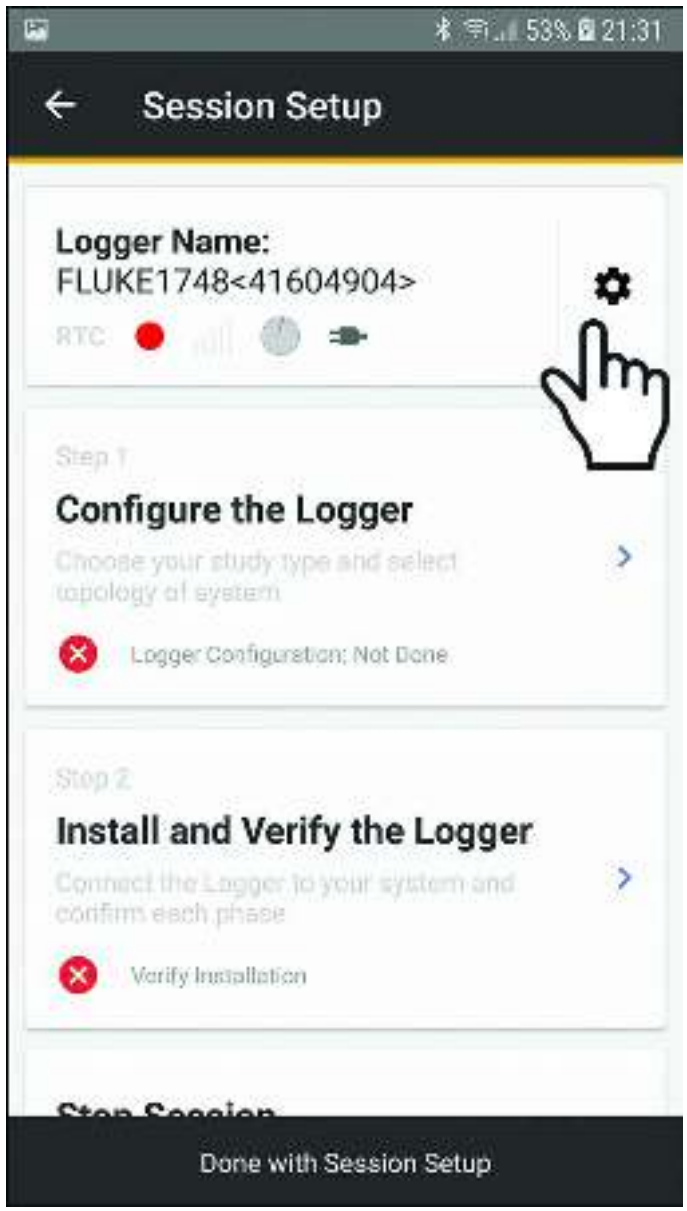
   The Power LED on the Logger starts to flash.

Instrument Settings

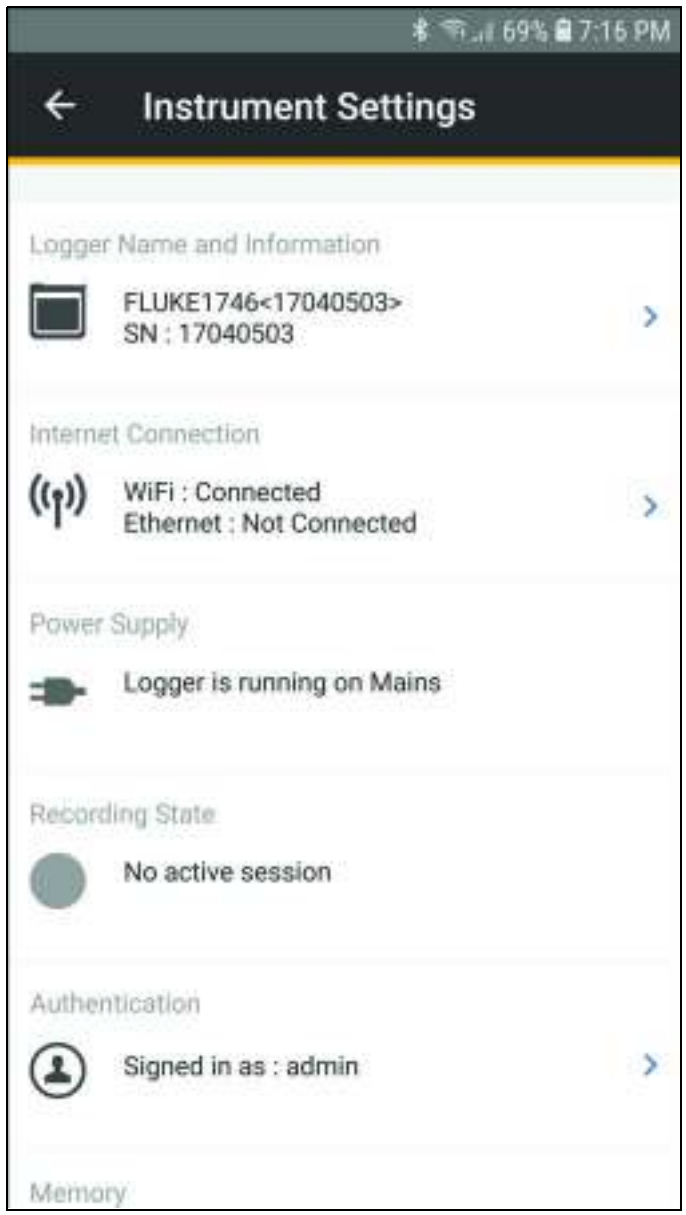
To check the setup:

1. Go to **Session Setup**.

2. Tap .


53% 21:31
Session Setup
Logger Name:
FLUKE1748<41604904>
RTC
Step 1
Configure the Logger
Choose your study type and select topology of system
Logger Configuration: Not Done
Step 2
Install and Verify the Logger
Connect the Logger to your system and confirm each phase
Verify Installation
Done with Session Setup

The current settings show on the display. Scroll down for more settings.



Use **Instrument Settings** to:

- Edit the Logger Name
- Select a WiFi access point to connect
- Select Ethernet settings
- View power supply status
- View recording status
- Change user name and password to log-in to the Logger
- View Memory status
- View instrument date and time and select time synchronization source
- View details of attached current sensors
- View firmware version
- View installed licenses
- Download Service Log Data to Phone
- Reset to factory defaults

Assets

Assets allow you to add text descriptions and images about the measurement location, set the asset status, and configure alarms. You can organize and collect the measurements for one location from different Fluke Connect supported tools, for example, a Logger, a vibration sensor, and a thermal imaging camera.

Modify the asset at any time from within the Fluke Connect App or on Fluke Connect Web (http://connect.fluke.com) to add additional images and notes, update status information, and configure alarms.

Asset Groups

Create asset groups and sub-groups to define a hierarchy, for example:

company > building > floor > cabinet

Alarms

You can set alarms on limit violation of the trend data, such as voltage RMS, current RMS, power, and THD. Configure the alarm as:

- above limit violation
- below limit violation
- within-range violation
- out-of-range violation

Power quality events, such as dips, swells, and interruptions are sent by the tool and do not need an asset alarm configuration.

Note

Make sure the mobile phone is connected to the Internet after you change the asset configuration to synchronize the data with the Fluke Connect Cloud.

Remote Monitoring Session

With the Fluke Connect app, you can review remote monitoring sessions in the app and export the session data to Energy Analyze Plus software.

To export session data:

1. Go to **View Active Monitoring Sessions**.
2. Tap **Export session data**.
3. Configure the start/end dates and time.
4. Enter the email address of the recipients and tap **Export session data**.

   A link to download the measurement file is sent by email.
5. On a PC, download the measurement file (extension *.fel).
6. Double-click on the downloaded filename in Windows File Explorer to open the file in Energy Analyze Plus software.
7. Energy Analyze Plus prompts you to save the file as a project (compound file with extension *.fca).

You can review monitoring sessions, export the data to Fluke Energy Analyze, and manage assets and associated alarms with a web browser.

To review monitoring sessions:

1. In a web browser (for example, on your PC) go to https://connect.fluke.com.
2. Sign in with your Fluke Connect credentials.
3. Go to **Measurements** > **Active Sessions** or **Saved Sessions** to analyze and export the measurement data.
4. Go to **Assets** to update the asset status, modify the descriptions, add images, and configure or adjust alarms.