User Manual: Installation and Setup of Tuya-Based Smart Plug

1. Introduction

This manual provides a step-by-step guide for installing and configuring a Tuya-compatible smart plug to monitor energy consumption. It outlines the requirements, installation process, mobile application setup, and integration instructions for data access and dashboard visualization.

2. Required Components

- Tuya-compatible smart plug (with energy monitoring capability)
- Smartphone with internet connectivity
- Tuya Smart / Smart Life app
- Stable Wi-Fi network
- Appliance or device to be monitored

3. Installation Steps

Step 1: Download and Install the Mobile App

1. Open the Google Play Store or Apple App Store.
2. Search for **"Tuya Smart"** or **"Smart Life"**.
3. Download and install the app on your smartphone.

Step 2: Register or Log In

1. Open the app and sign up for a new account, or log in with an existing Tuya/Smart Life account.
2. Grant the necessary permissions (location, Bluetooth, etc.) when prompted.

Step 3: Connect the Smart Plug

1. Plug the Tuya smart plug into a power socket.
2. Ensure the indicator light is blinking rapidly. If not:
3. Press and hold the power button on the plug for 5–6 seconds to enter pairing mode.

Step 4: Add Device in App

1. In the app, tap the **"+"** or **"Add Device"** button.
2. Choose **"Socket (Wi-Fi)"** from the device list.
3. Connect to a **2.4 GHz Wi-Fi network** (5 GHz is not supported).
4. Enter your Wi-Fi credentials when prompted.

Step 5: Pairing and Setup

1. The app will begin pairing with the device. This may take 30–60 seconds.
2. Once connected, rename the device (e.g., "Energy Monitor Plug") and assign it to a room if desired.
3. Confirm setup is complete by switching the plug ON/OFF via the app.

4. Enabling Energy Monitoring

1. In the device control panel within the app, navigate to the **"Electricity"** or **"Energy Monitoring"** section.
2. You should see real-time data such as:
    o Voltage (V)
    o Current (A)
    o Power (W)
    o Energy consumption (kWh)
3. Allow the device to run while connected to the appliance to collect meaningful data over time.

5. Accessing Data for Dashboard Integration

- Tuya restricts open access to real-time data through public APIs.
- For integration:
    ➢ Monitor the network traffic using developer tools or a proxy tool
    ➢ Extract real-time JSON data periodically or log it manually via screenshots/spreadsheets.
    ➢ Use the extracted data to upload into the dashboard's JSON interface.

6. Safety and Maintenance

- Ensure the smart plug is **not overloaded** beyond its rated capacity (usually 10A or 16A).
- Operate only in dry environments; avoid exposure to water.
- Periodically update the app and firmware for enhanced security and performance.
- Unplug the device during electrical storms or maintenance.

7. Troubleshooting

Issue	Solution
Plug not entering pairing mode	Long press the power button until light blinks rapidly
Unable to connect to Wi-Fi	Use a 2.4 GHz network and check signal strength
Energy data not showing	Ensure the plug supports energy monitoring and firmware is up to date
Data not updating	Reopen app, refresh device status, or reset plug