## Panel 1 — Voltage (VRMS)

**Title:** “Voltage (V)”  
**Visualization:** Time series  
**Flux Query:**

from(bucket: "energy\_lab")

|> range(start: v.timeRangeStart, stop: v.timeRangeStop)

|> filter(fn: (r) =>

r.\_measurement == "power\_samples" and

r.\_field == "vrms")

**Tips**

* Unit → Volts (V)
* Color → Yellow or Green
* Y-axis ≈ 180 – 250 V (if you want consistent scale)

## Panel 2 — Current (IRMS)

**Title:** “Current (A)”  
**Visualization:** Gauge (or Time series)  
**Flux Query:**

from(bucket: "energy\_lab")

|> range(start: v.timeRangeStart, stop: v.timeRangeStop)

|> filter(fn: (r) =>

r.\_measurement == "power\_samples" and

r.\_field == "irms")

**Tips**

* Unit → Amperes (A)
* Gauge thresholds → Green 0-5 A | Yellow 5-10 A | Red >10 A

## Panel 3 — Real Power (W)

**Title:** “Instant Power (W)”  
**Visualization:** Time series  
**Flux Query:**

from(bucket: "energy\_lab")

|> range(start: v.timeRangeStart, stop: v.timeRangeStop)

|> filter(fn: (r) =>

r.\_measurement == "power\_samples" and

r.\_field == "p\_real")

**Tips**

* Unit → Watts (W)
* Color → Orange

## Panel 4 — Power Factor (PF)

**Title:** “Power Factor (PF)”  
**Visualization:** Gauge  
**Flux Query:**

from(bucket: "energy\_lab")

|> range(start: v.timeRangeStart, stop: v.timeRangeStop)

|> filter(fn: (r) =>

r.\_measurement == "power\_samples" and

r.\_field == "pf")

**Tips**

* Min 0.7 → Max 1.0
* Thresholds → Red < 0.8, Yellow 0.8–0.9, Green > 0.9

## Panel 5 — Energy (kWh)

**Title:** “Cumulative Energy (kWh)”  
**Visualization:** Stat  
**Flux Query:**

from(bucket: "energy\_lab")

|> range(start: v.timeRangeStart, stop: v.timeRangeStop)

|> filter(fn: (r) =>

r.\_measurement == "power\_samples" and

r.\_field == "energy\_kwh")

**Tips**

* Calculation shows the running total energy from the sensor.
* Display → Last Value, Unit = kWh

## Panel 6 — Summary (Latest Values of All Fields)

**Title:** “Live System Snapshot”  
**Visualization:** Stat Grid  
**Flux Query:**

fields = ["vrms","irms","p\_real","pf","energy\_kwh"]

from(bucket: "energy\_lab")

|> range(start: v.timeRangeStart, stop: v.timeRangeStop)

|> filter(fn: (r) =>

r.\_measurement == "power\_samples" and

contains(value: r.\_field, set: fields))

|> group(columns: ["\_field"])

|> last()

**Tips**

* Display → Name and Value
* Shows each parameter’s latest reading (Voltage, Current, Power, PF, Energy).