

water Level and Pressure

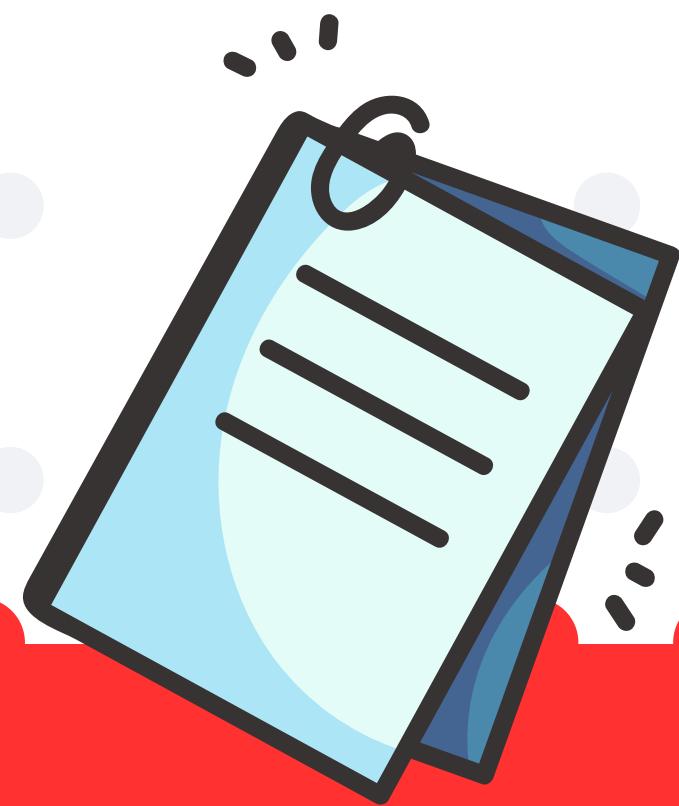
1st Virtual Meeting

February 7, 2026

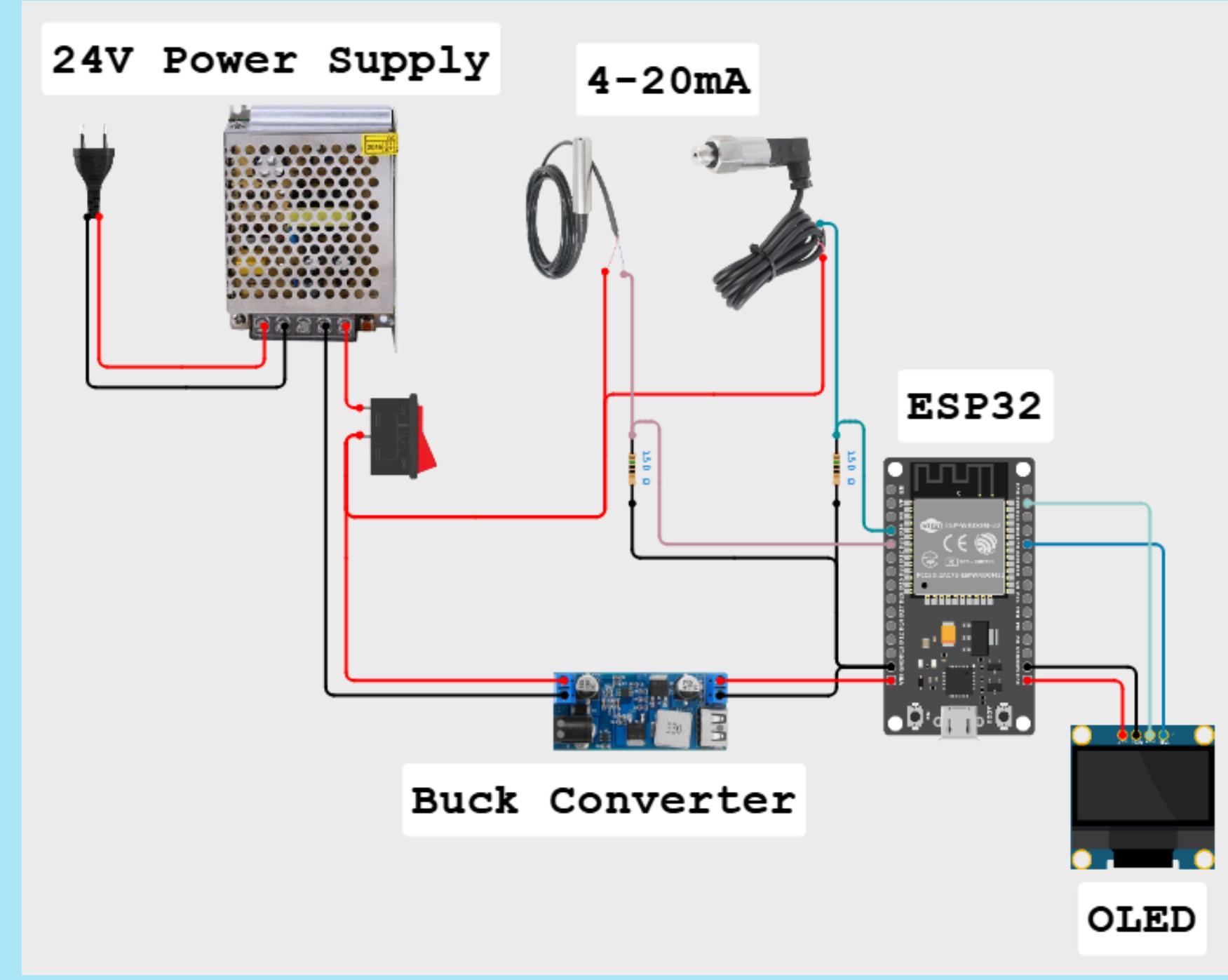


Agenda Preview

- Schematic Diagrams
 - Bill of Materials
 - ⌚ ➤ Materials Update
 - Program
- ⌚ ➤ Other Matters



Schematic Diagram



Updated Bill of Materials

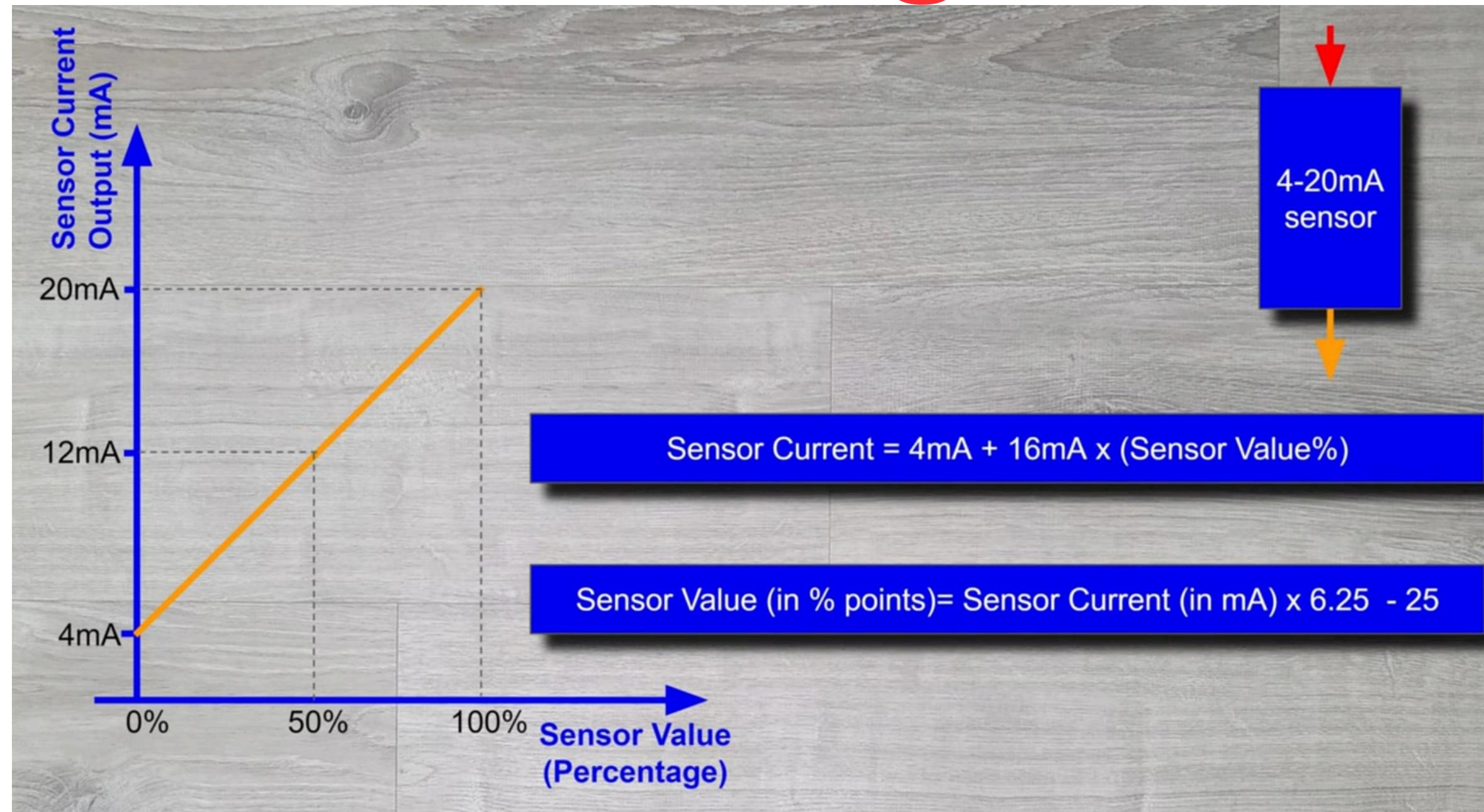
QTY.	UNIT	ITEM DESCRIPTION	UNIT PRICE	TOTAL PRICE
1	pc	24V Power Supply	P 400.00	P 400.00
2	pcs	Buck Converter	P 100.00	P 200.00
1	pc	8x12cm Universal PCB	P 70.00	P 70.00
1	set	Pin Headers	P 50.00	P 50.00
2	m	Soldering Lead	P 30.00	P 60.00
1	pc	ESP32 30P	P 320.00	P 320.00
1	set	2.54mm JST Connectors	P 120.00	P 120.00
1	pc	Enclosure Box	P 250.00	P 250.00
1	set	Jumper Wires	P 85.00	P 85.00
1	pc	OLED 1.3" I2C	P 280.00	P 280.00
1	pc	Rocker Switch	P 30.00	P 30.00

GRAND TOTAL (MATERIALS): P 1,865.00

Sensor Specs



Sensor Working Principle



Materials Update

The image displays two screenshots from a mobile application interface.

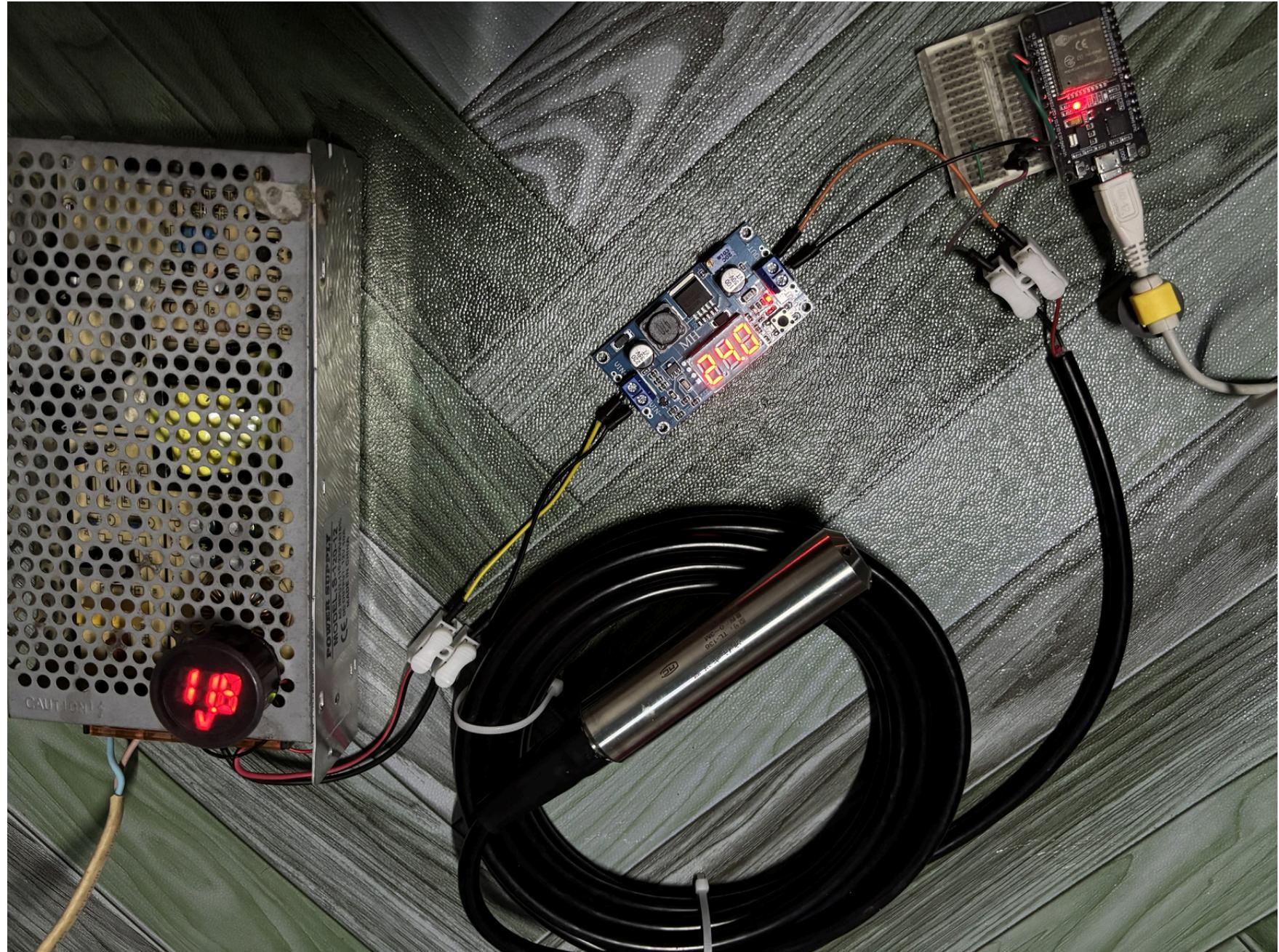
Screenshot 1: Product Listing

- Time: 8:56
- Product: AURORY IP 67 waterproof ABS material Junction box
- Description: BLACK WATERPROOF JUNCTION BOX
- Image: A stack of black junction boxes.
- Details: Senior electrician recommend, Specifications, and a "Specifications" link.
- Bottom: 7 Variations Available, showing five options: F4, F3, F2, F14, and F3.
- Text: AURORY Junction Box, IP67 Waterproof Black Box, Professional ABS Plastic Dustproof Electronic Pr...
- Buttons: "This is a product snapshot" and "Live View".

Screenshot 2: Delivery Tracking

- Time: 8:55
- Header: Departed from China
- Text: Estimated delivery date: 7 Feb - 11 Feb
- Timeline:
 - Shipped
 - Departed from China
 - Arrived Philippines
 - Out for Delivery
 - Delivered
- Text: Guaranteed On-Time Delivery: Get a ₱50 voucher if no delivery was attempted by 11-02-2026. [View More](#)
- Order Details: Standard International, PH2632399551500
- Delivery History:
 - 5 Feb 03:55: [China]Parcel has been handed over to delivery service provider
 - 4 Feb 06:59: [China]Parcel has departed from :Shopee Yiwu sorting centre
 - 4 Feb 01:40: [China]Parcel has arrived at :Shopee Yiwu sorting centre
 - 2 Feb 22:30: [China]Sender has shipped your parcel
 - 2 Feb 09:18: [China]Sender is preparing to ship your parcel
 - 2 Feb 08:22: Order is placed
- Section: You May Also Like
- Items:
 - 60% ESECTESLA
 - 29%

Current Setup



Program

SensorOutputVerification.ino

```
1 #define SENSOR_PIN 34      // ADC1 pin (recommended: 32-39)
2 #define NUM_AVG 1000       // Averaging for noise reduction
3 #define RESISTOR_VALUE 149 // ohms
4 #define ADC_MAX 4095.0     // ESP32 12-bit ADC
5 #define ADC_REF 4          // ESP32 reference voltage (approx)
6
7 // =====
8 void setup() {
9   Serial.begin(115200);
10  delay(1000);
11
12 // Configure ADC
13 analogReadResolution(12);           // 0-4095
14 analogSetPinAttenuation(SENSOR_PIN, ADC_11db); //~0-3.3V input
15
16 Serial.println("ESP32 4-20mA Pressure Sensor");
17 Serial.println("-----");
18 }
19 // =====
20 void readSensor() {
```

Output Serial Monitor X

Message (Enter to send message to 'ESP32 Dev Module' on 'COM15')

New Line ▾

```
ADC Avg: 594.0 | Voltage: 0.580 V | Current: 3.894 mA | Percentage: 0.00 %
ADC Avg: 593.1 | Voltage: 0.579 V | Current: 3.888 mA | Percentage: 0.00 %
ADC Avg: 594.5 | Voltage: 0.581 V | Current: 3.897 mA | Percentage: 0.00 %
ADC Avg: 596.1 | Voltage: 0.582 V | Current: 3.908 mA | Percentage: 0.00 %
ADC Avg: 595.7 | Voltage: 0.582 V | Current: 3.905 mA | Percentage: 0.00 %
ADC Avg: 597.9 | Voltage: 0.584 V | Current: 3.920 mA | Percentage: 0.00 %
ADC Avg: 596.2 | Voltage: 0.582 V | Current: 3.908 mA | Percentage: 0.00 %
ADC Avg: 595.2 | Voltage: 0.581 V | Current: 3.902 mA | Percentage: 0.00 %
ADC Avg: 595.1 | Voltage: 0.581 V | Current: 3.901 mA | Percentage: 0.00 %
ADC Avg: 591.5 | Voltage: 0.578 V | Current: 3.878 mA | Percentage: 0.00 %
```

SensorOutputVerification.ino

```
19 // =====
20 void readSensor() {
21   uint32_t adc_sum = 0;
22
23   for (int i = 0; i < NUM_AVG; i++) {
24     adc_sum += analogRead(SENSOR_PIN);
25   }
26
27   float adc_avg = ((float)adc_sum / NUM_AVG); //To make it round up
28
29   // Convert ADC to voltage
30   float voltage_value = (adc_avg / ADC_MAX) * ADC_REF;
31
32   // Convert voltage to current (mA)
33   float current_mA = (voltage_value / RESISTOR_VALUE) * 1000.0;
34
35   // Convert 4-20mA to percentage (0-100%)
36   float percentage = (current_mA)*6.25-25;
37
38   // Clamp values (safety)
39 }
```

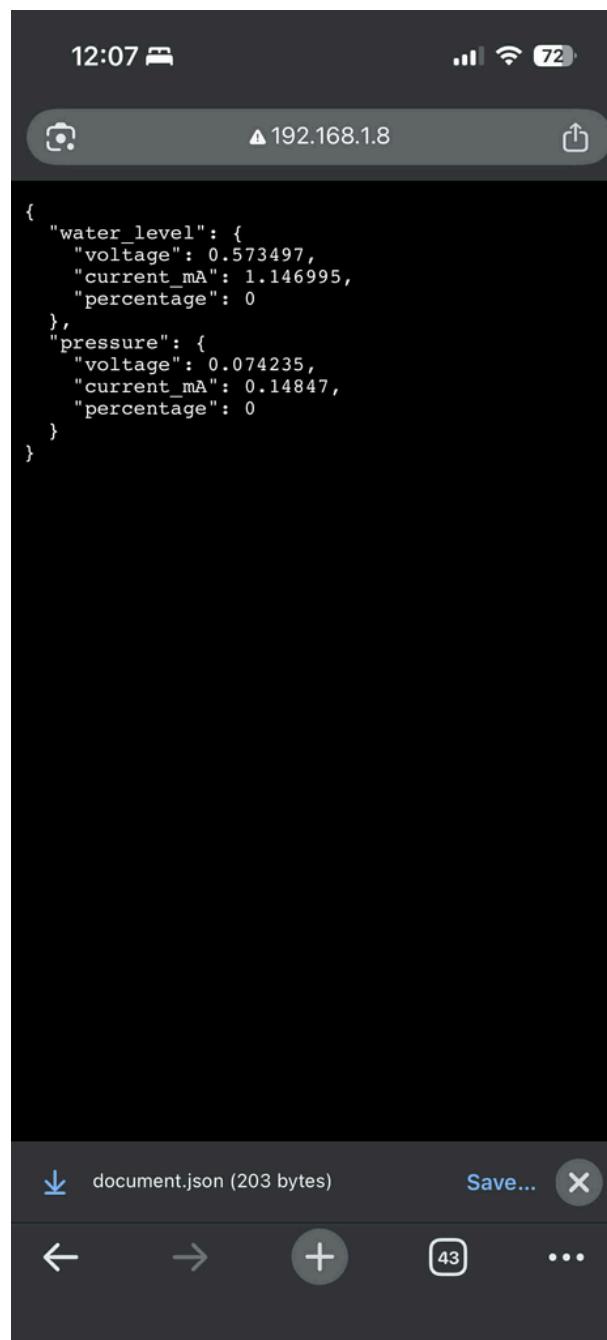
Output Serial Monitor X

Message (Enter to send message to 'ESP32 Dev Module' on 'COM15')

New Line ▾

```
ADC Avg: 589.4 | Voltage: 0.476 V | Current: 3.176 mA | Percentage: 0.00 %
ADC Avg: 589.7 | Voltage: 0.477 V | Current: 3.178 mA | Percentage: 0.00 %
ADC Avg: 587.3 | Voltage: 0.475 V | Current: 3.165 mA | Percentage: 0.00 %
ADC Avg: 589.1 | Voltage: 0.476 V | Current: 3.174 mA | Percentage: 0.00 %
ADC Avg: 587.9 | Voltage: 0.475 V | Current: 3.168 mA | Percentage: 0.00 %
ADC Avg: 0.3 | Voltage: 0.000 V | Current: 0.002 mA | Percentage: 0.00 %
ADC Avg: 0.0 | Voltage: 0.000 V | Current: 0.000 mA | Percentage: 0.00 %
ADC Avg: 0.0 | Voltage: 0.000 V | Current: 0.000 mA | Percentage: 0.00 %
ADC Avg: 0.0 | Voltage: 0.000 V | Current: 0.000 mA | Percentage: 0.00 %
ADC Avg: 0.0 | Voltage: 0.000 V | Current: 0.000 mA | Percentage: 0.00 %
```

Web Output



Output Serial Monitor X

Message (Enter to send message to 'ESP32 Dev Module' on 'COM15')

```
-  
WiFi connected  
IP address: 192.168.1.8  
Web server started  
Connecting to WiFi.....  
WiFi connected  
IP address: 192.168.1.8  
Web server started  
{  
  "water_level": {  
    "voltage": 0.573497,  
    "current_mA": 1.146995,  
    "percentage": 0  
  },  
  "pressure": {  
    "voltage": 0.074235,  
    "current_mA": 0.14847,  
    "percentage": 0  
  }  
}
```



OTHER
" " **MATTERS**



Thank You for Your Attention

Please, feel free to ask any questions.