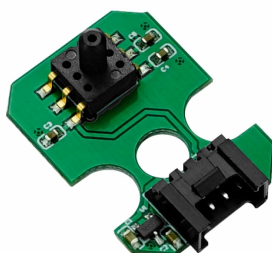
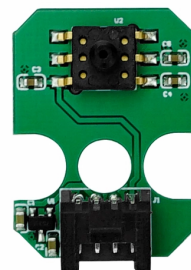


Unit Tube Pressure

SKU:U130



Description

Unit Tube Pressure is a **positive and negative pressure gauge** that supports a wide measurement range from **-100 ~ 200Kpa**. During use, the device connects via a tube, with the other side linked to the gas measurement environment. The sensor proportionally maps **-100 ~ 200Kpa** to an output voltage of **0.1 ~ 3.1V**. It comes with a full-coverage protective housing to ensure stable operation of the sensor, making it ideal for applications such as **gas pressure detection** in industrial equipment.

Features

- Integrated compensated pressure sensor
- Linear output, easy to use
- Measurement medium: gas
- Positive and negative range: -100 ~ 200Kpa
- Proportional output: 0.1 ~ 3.1V
- Accuracy: $\pm 1.5\text{Kpa}$
- 2 x LEGO compatible holes

Includes

- 1 x Unit Tube Pressure
- 1 x HY2.0-4P Grove Cable (20cm)

Applications

- Equipment air pressure measurement

Specifications

Specification	Parameter
Sensor Model	MCP-H10-B200KPPN
Measurement Medium	Gas
Positive & Negative Range	-100 ~ 200Kpa
Proportional Output	0.1 ~ 3.1V
Accuracy	$\pm 1.5\text{Kpa}$ (0 ~ 85°C)
Supply Voltage	5V
Product Size	32.0 x 24.0 x 12.5mm
Product Weight	4.6g
Package Size	138.0 x 93.0 x 13.5mm
Gross Weight	10.0g

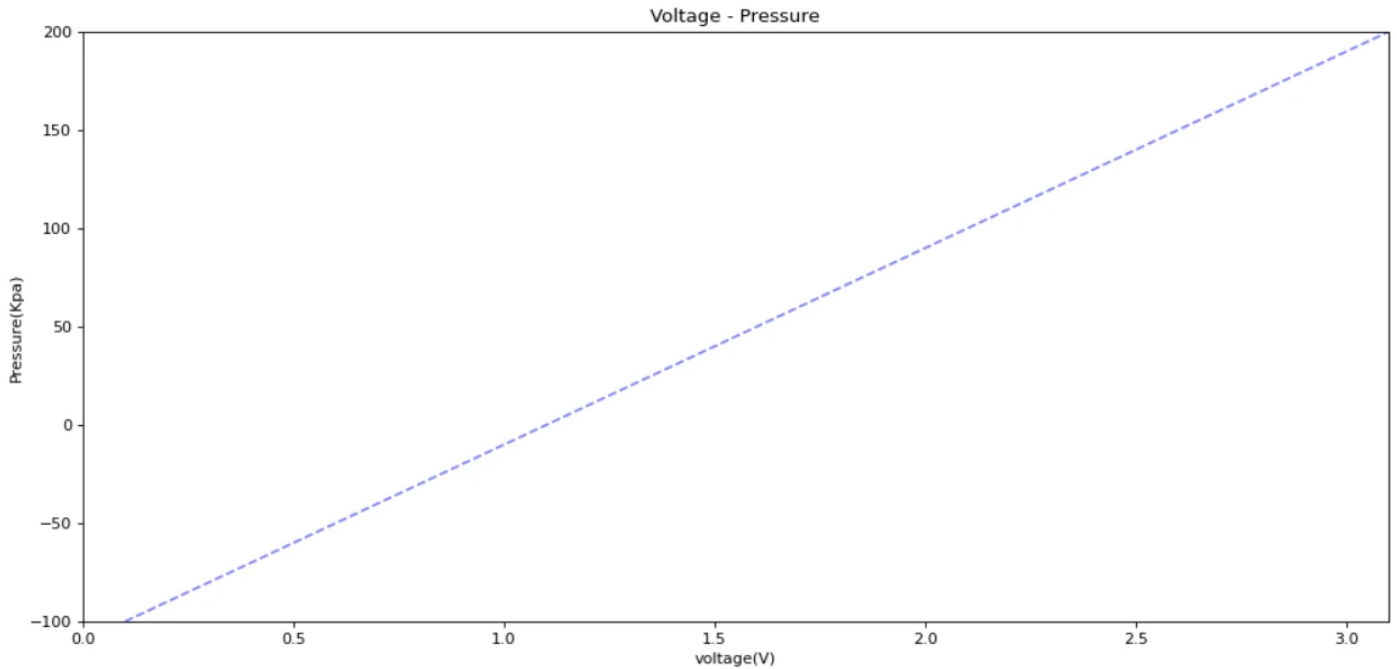
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Output Voltage and Pressure Conversion

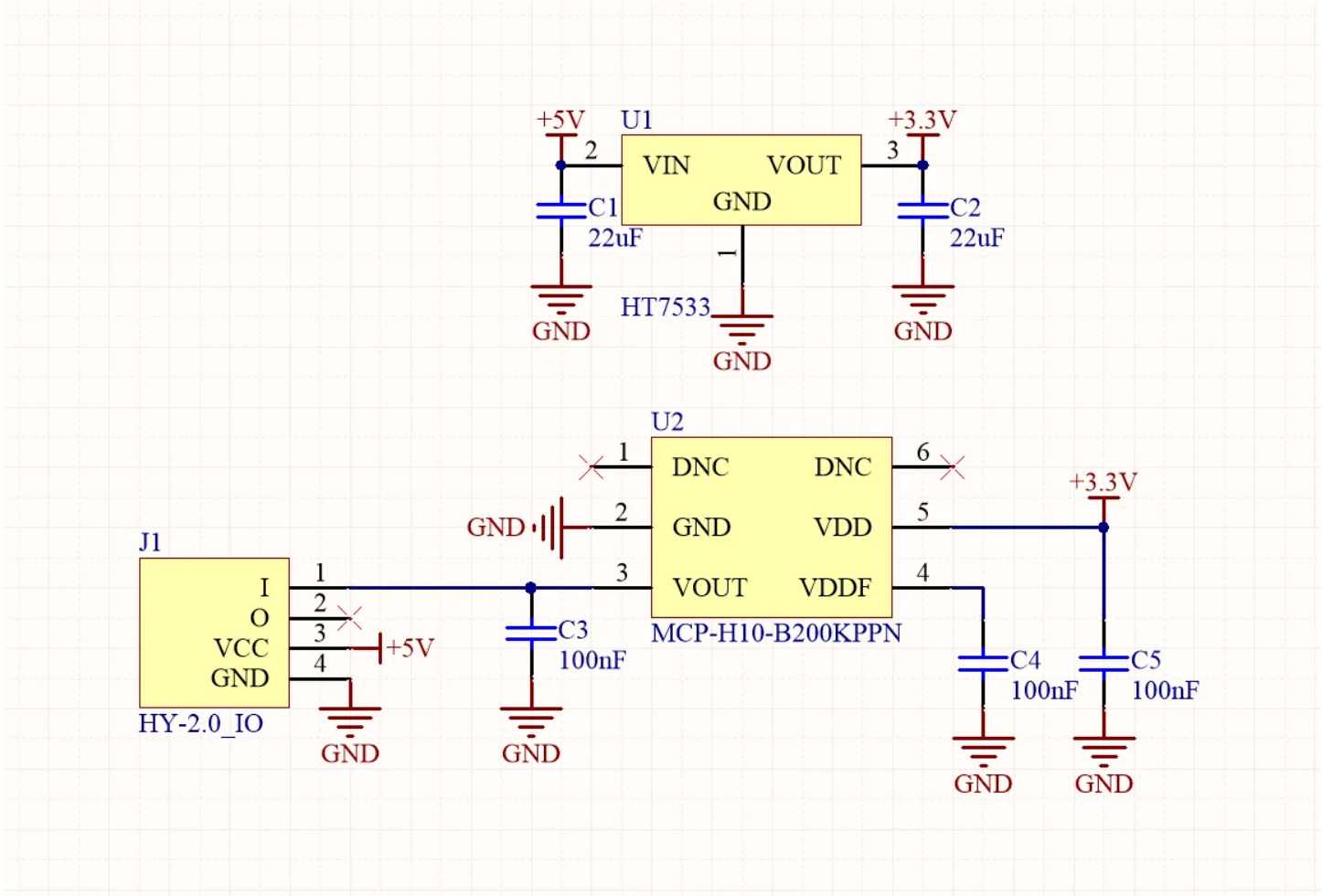
- P: Actual measured pressure value, unit (Kpa)

- Vout: Sensor voltage output value
= K, B: Coefficient value and offset value for sensor model MCP-H10-B200KPPN (K = 100, B = -110)
- Calculation formula: $P = K \times V_{out} + B$

```
float K = 100.0;  
float B = 110.0;  
float P = analogVolts * K - B;
```



Schematics

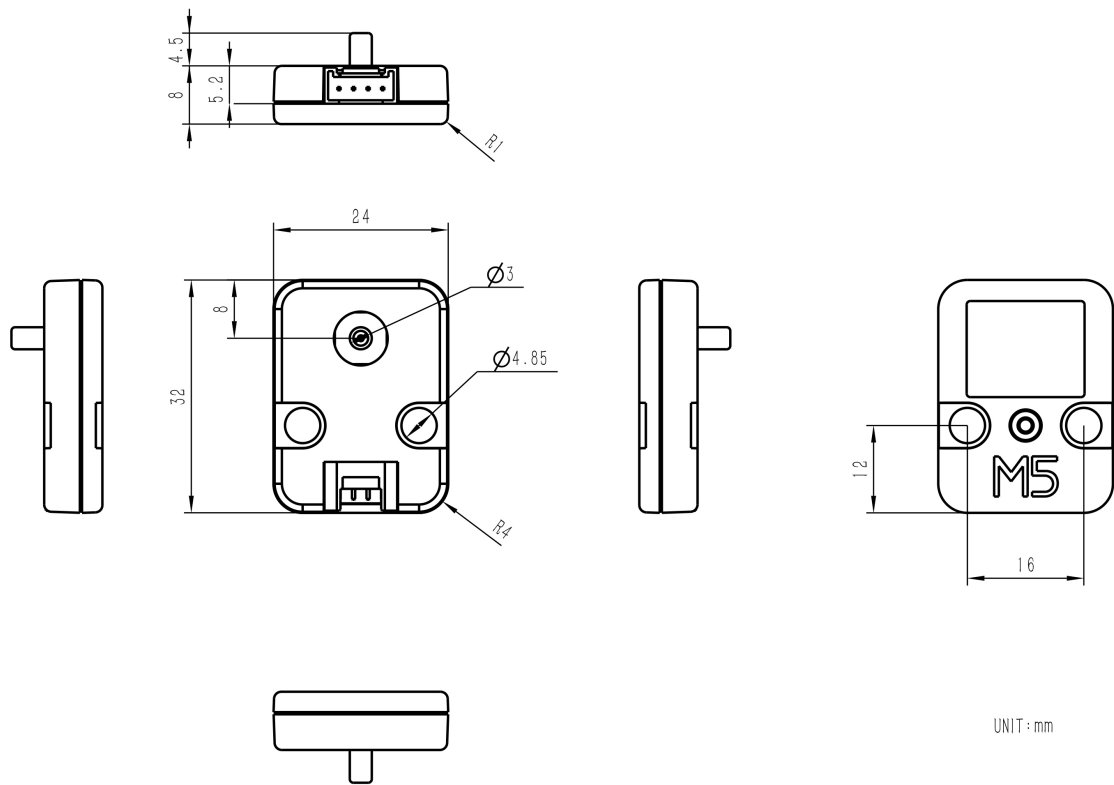


PinMap

Unit Tube Pressure

HY2.0-4P	Black	Red	Yellow	White
PORT.B	GND	5V	NC	Analog Output

Model Size



Softwares

Arduino

```
1  #include <Arduino.h>
2
3  int sensorPin = 36;
4
5  void setup()
6  {
7      Serial.begin(115200);
8      pinMode(sensorPin, INPUT);
9      analogReadResolution(12);
10     analogSetAttenuation(ADC_11db);
11 }
12
13 void loop()
14 {
15     // read the analog / millivolts value:
16     int analogValue = analogRead(sensorPin);
17     int analogVolts = analogReadMilliVolts(sensorPin);
18
19     // print out the values you read:
20     Serial.printf("ADC analog value = %d\n", analogValue);
21     Serial.printf("ADC millivolts value = %d\n", analogVolts);
22
23     float K = 100.0;
24     float B = 110.0;
25     float P = analogVolts / 1000.0 * K - B;
26     Serial.printf("Pressure: %f.2 Kpa \n", P);
27     delay(100); // delay in between reads for clear read from serial
28 }
```

UiFlow1

- [Unit Tube Pressure UiFlow1 Docs](#)

Video

[tube_pressure_video.mp4](#)