

# Tube Pressure

SKU:U130



## Description

Tube pressure is a wide range **air pressure sensor** that supports **-100 ~ 200Kpa**. You can connect one end of the tube to the gas inlet. This sensor transmitted onto mapping value **-100 ~ 200Kpa** and **0.1 ~ 3.1V** voltage output. Also having a protective housing for long term stability. It's an accessory that your industrial use cannot live without.

## Product Features

- Includes Integrated piezo-resistive pressure sensor with wide temperature compensation
- Linear output, easy to use
- Measurement range: -100 ~ 200Kpa
- Output: 0.1 ~ 3.1V
- Precision: 1.5Kpa
- 2x LEGO compatible holes
- Support UIFlow graphical programming

## Include

- 1x Tube Pressure Unit
- 1x HY2.0-4P cable

## Application

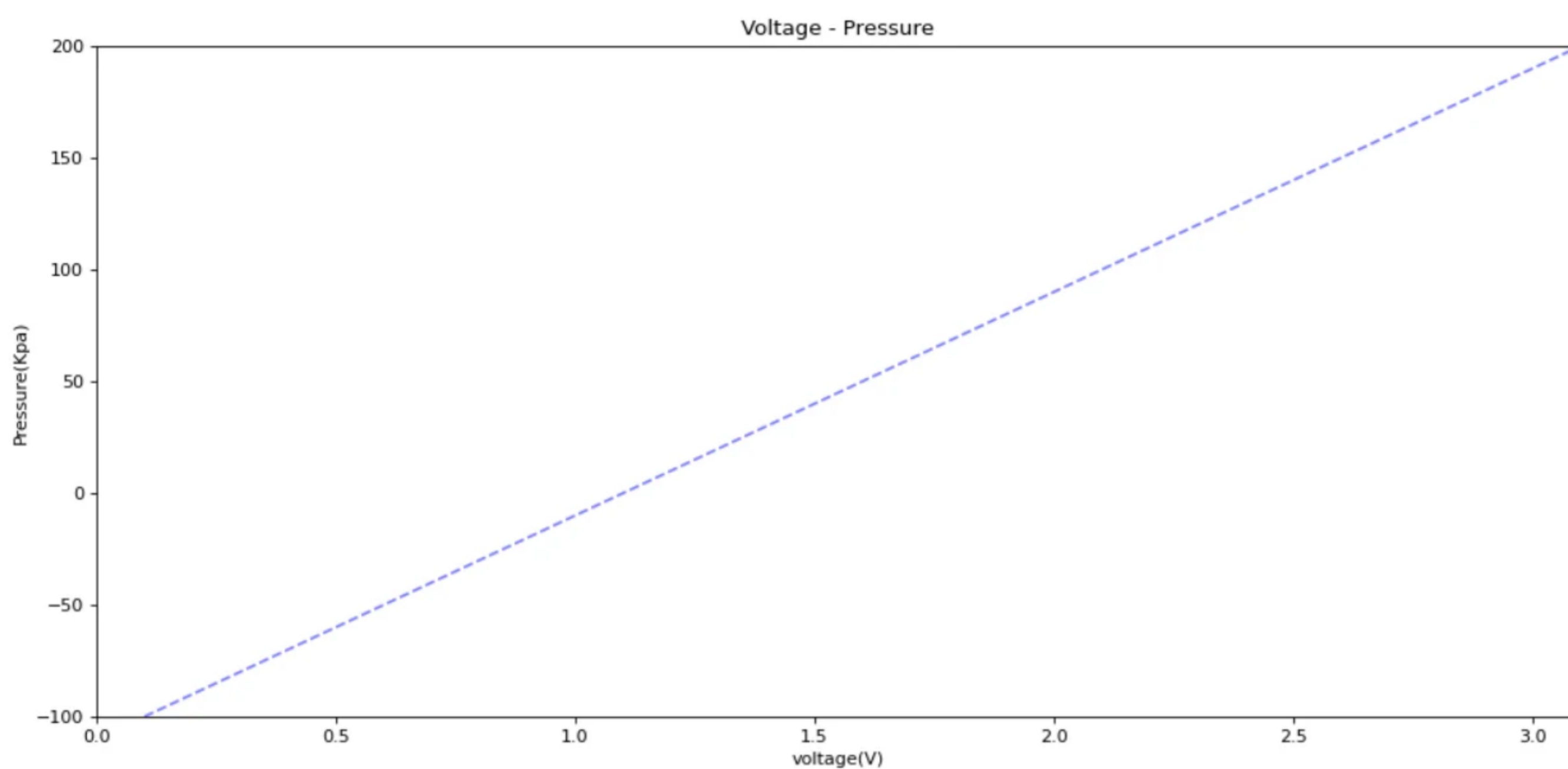
- Air pressure measurement

# Output voltage and pressure value conversion

//P: Actual test pressure value, unit (Kpa)

//Vout: sensor voltage output value

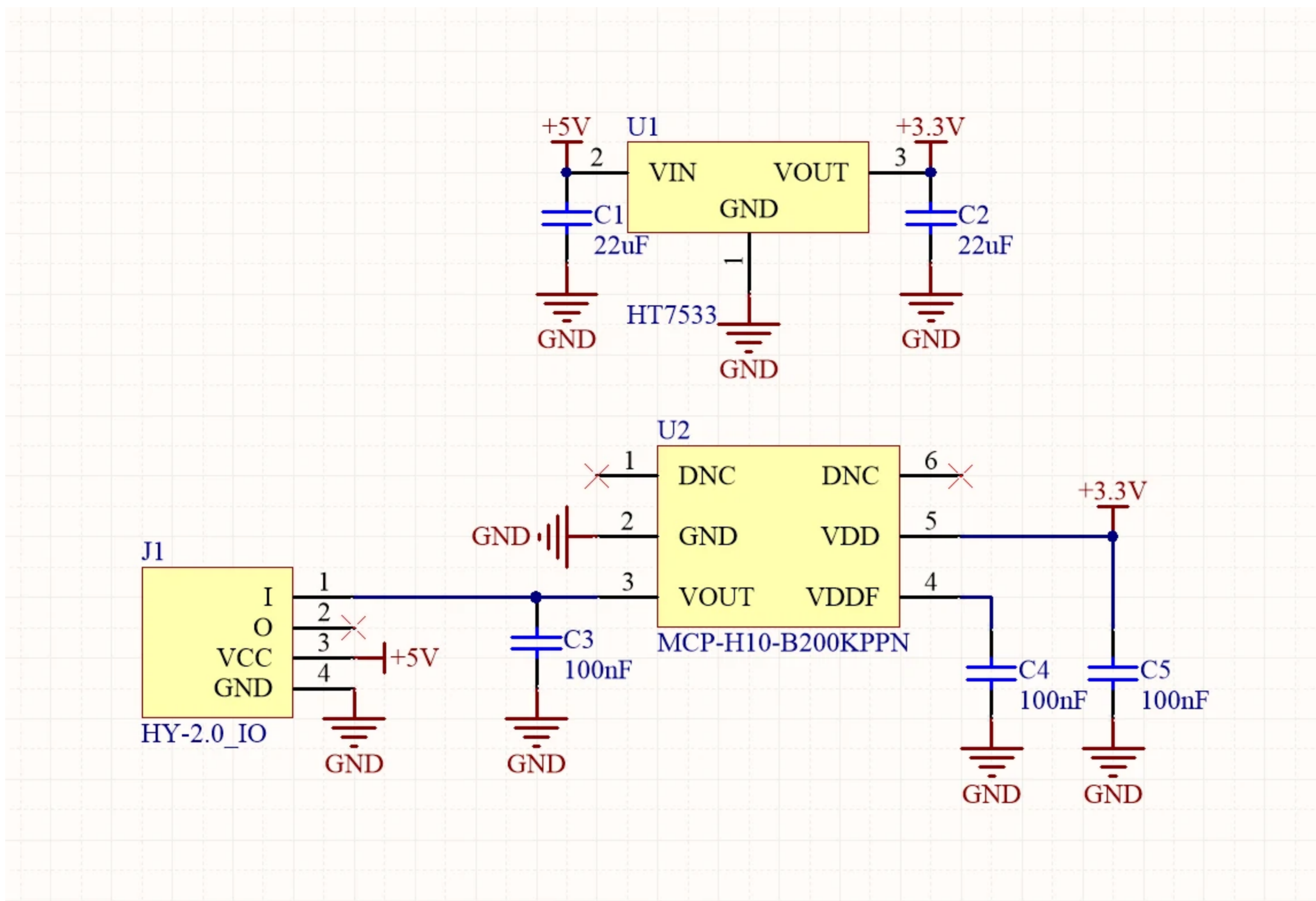
$$P = (V_{out} - 0.1) / 3.0 * 300.0 - 100.0$$



## Specification

Specifications	Parameters
Sensor Model	MCP-H10-B200KPPN
Detections	Gas
Measurement range	-100 ~ 200Kpa
Output	0.1 ~ 3.1V
Precision	1.5Kpa (0 ~ 85°C)
Supply voltage	5V
Net weight	4.8g
Gross weight	10g
Product size	24 * 32 * 12mm
Packing size	93 * 138mm

## Schematic



## Examples

### Arduino

```
#include <Arduino.h>

int sensorPin = 32; // Sensor Pin

void setup() {
  Serial.begin(115200);
  pinMode(sensorPin, INPUT); //Sets the specified pin to input mode. 设置指定引脚为输入模式
}

void loop() {
  float raw = analogRead(sensorPin); // read the value from the sensor. 读取当前传感器的值
  float Vout = raw/4095*3.6;
  float P = (Vout-0.1)/3.0*300.0-100.0;
  Serial.printf("pressure: %f.2 Kpa\r\n", P);
  delay(100);
}
```

### UIFlow





```
adc0 - set atten ATTN_11DB
adc0 - set width WIDTH_12BIT
Loop
set data - to Convert to int
  adc0 - read value - 100 ÷ 3000 × 300 - 100
Label label0 - show data + " Kpa "
```

# Video

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