Gravity: G/2” Water Flow Sensor Wiki - DFRobot

SKU:SEN0550 (https://www.dfrobot.com/product-2608.html)

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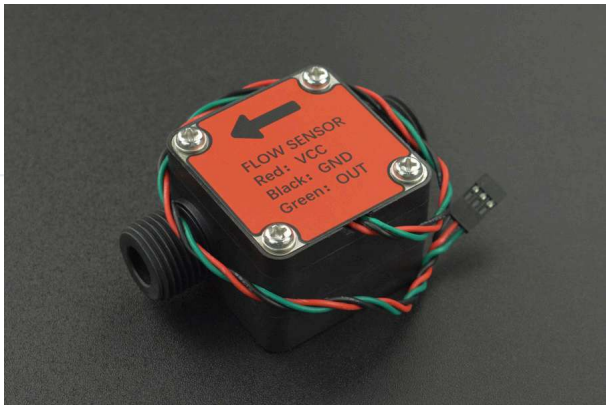


Introduction

This Gravity: Water Flow Sensor is designed based on the electromagnetic principle. It adopts o-ring rubber seal and uses silicone sealant at the outlet end to ensure good waterproofness. Also, it embraces high anti-electromagnetic interference and anti-vibration capabilities, offering reliable performance and long service life.

The sensor can be used with microcontrollers like Arduino UNO to measure the flow of liquids with high concentration and low mucosity like water, diesel, engine oil, milk, paint, detergent, honey, etc. (no impurity in liquid)

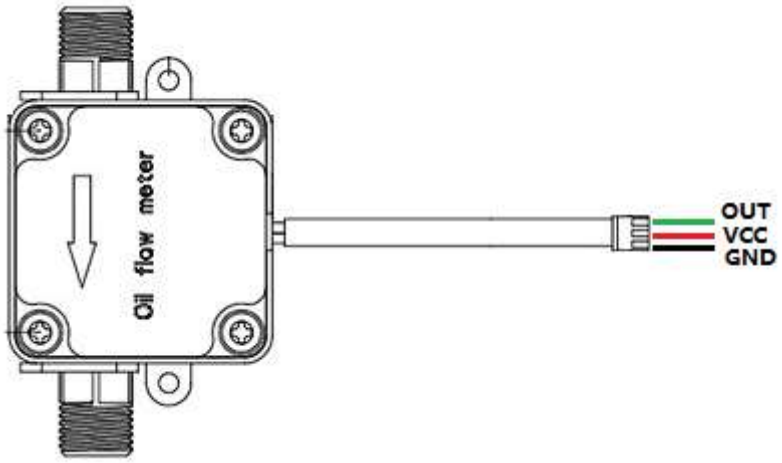
Features

- Gravity interface, easy to wire
- Wide voltage of 3.5~24V
- Measure the flow of the high-concentration but low-viscosity liquid
- RoHS compliant

Specification

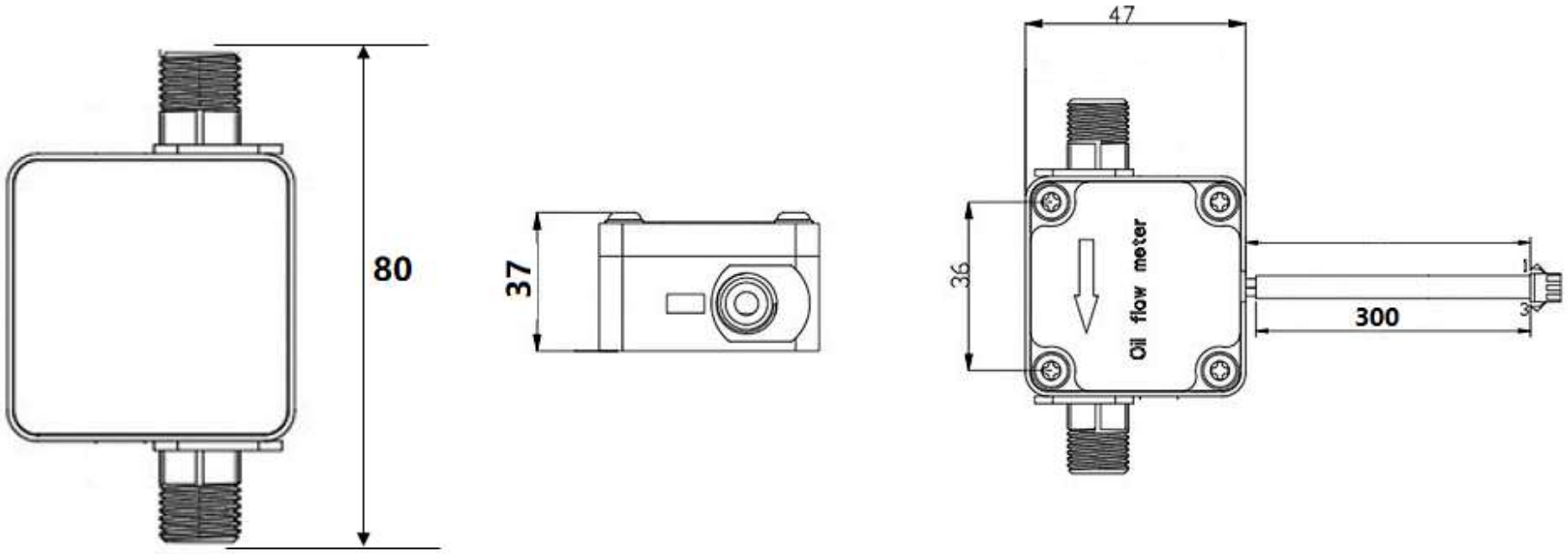
- Operating Voltage: DC3.5~24V
- Operating Current: ≤10mA (DC5V)
- Output Mode: NPN pulse signal
- Pipe Diameter: G1/2
- Thread I.D.: 10mm/0.39"
- Thread O.D.: 20.5mm/0.81"
- Thread Length: 29mm/1.14"
- Water Pressure Resistance: ≤1.2MPA
- Insulation Resistance: >100MΩ
- Flow Range: 30-1200L/H
- Error Range: ±1% (5-600L/H)
- High Level of Output Pulse: >DC4.7V (input voltage DC5V)
- Low Level of Output Pulse: <DC0.5V (input voltage DC5V)
- Duty Cycle of Output Pulse: 50%±10%
- Flow & Pulse Correlation: 1L=150 pulses
- Operating Temperature: ≤80°C
- Operating Humidity: 35%~90%RH (no frosting)
- Storage Temperature: -25°~+80°C
- Storage Humidity: 25%~95%RH
- Dimensions: 80×47×37mm/3.15×1.85×1.46"

Pinout



Num	Label	Description
Green Wire	OUT	Signal Output
Red Wire	VCC	Positive Power Supply 3.5V-24V
Black Wire	GND	Negative Power Supply

Dimensions



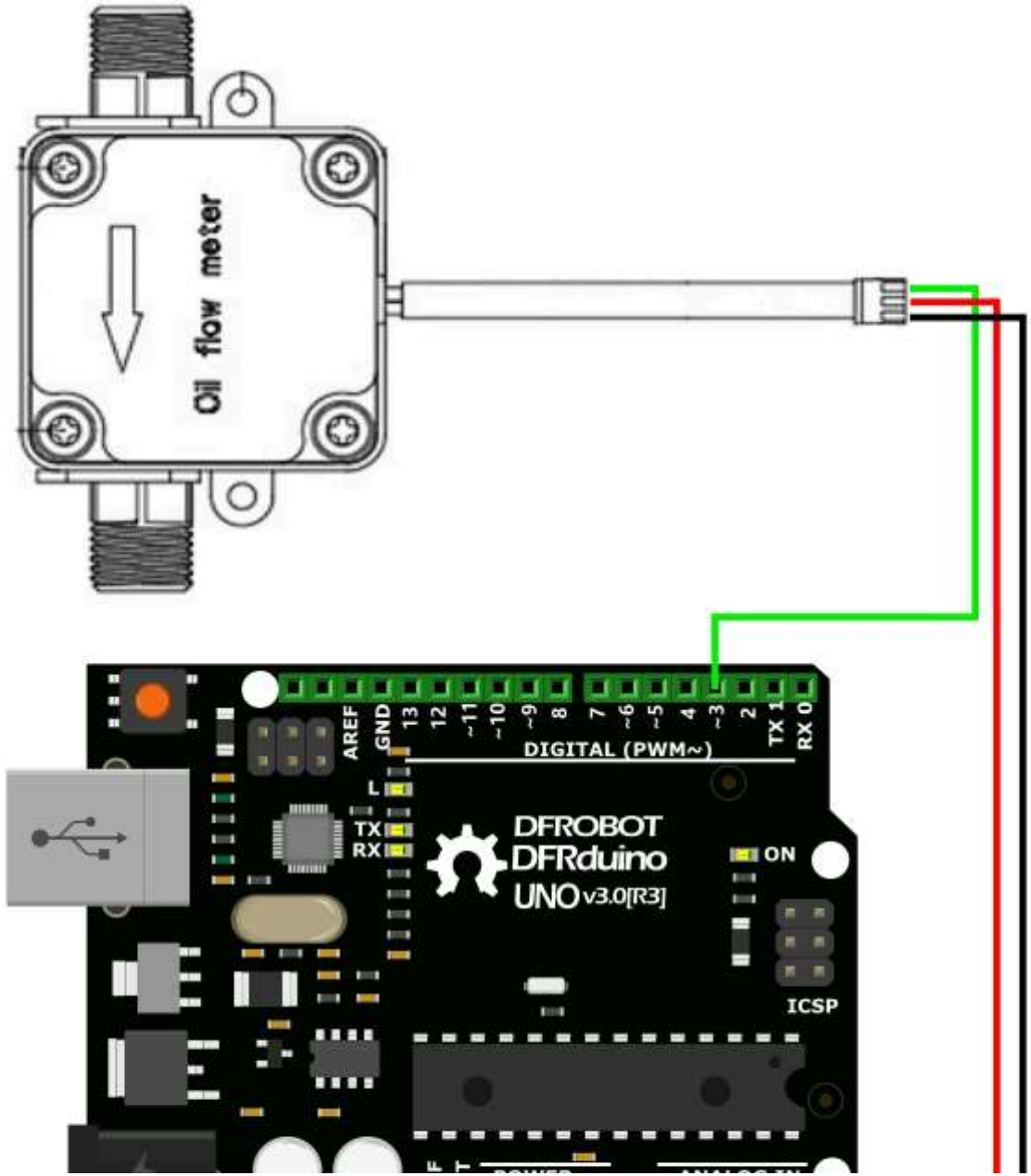
Tutorial

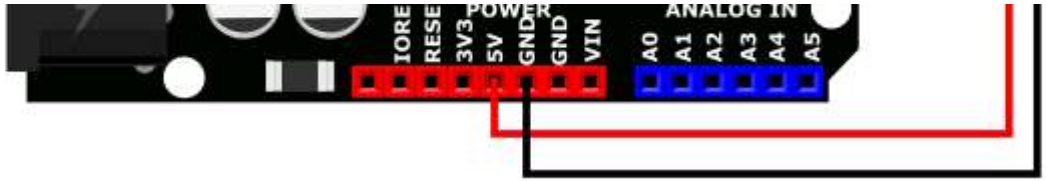
Requirements

- **Hardware**
  - DFRduino UNO R3 (https://www.dfrobot.com/product-838.html) (or similar) x 1
  - Water Flow Sensor x 1
- **Software**

- Arduino IDE (https://www.arduino.cc/en/Main/Software)

Connection Diagram


Oil flow meter
AREF
GND
13
12
~11
~10
~9
8
7
~6
~5
4
~3
2
TX 1
RX 0
DIGITAL (PWM~)
L
TX
RX
DFROBOT
DFRduino
UNO v3.0[R3]
ON
ICSP



Sample Code

```
volatile double waterFlow;
void setup() {
  Serial.begin(9600);  //baudrate
  waterFlow = 0;
  attachInterrupt(1, pulse, RISING);  //DIGITAL Pin 3: Interrupt 0
}
void loop() {
  Serial.print("waterFlow:");
  Serial.print(waterFlow);
  Serial.println("   L");
  delay(500);
}

void pulse()   //measure the quantity of square wave
{
  waterFlow += 1.0 / 150.0; // 150 pulses=1L (refer to product specification)
}
```

FAQ

For any questions, advice or cool ideas to share, please visit the **DFRobot Forum** (https://www.dfrobot.com/forum/).

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