Introduction

Fermion: MEMS Carbon Monoxide CO Gas Detection Sensor employs state-of-the-art micro electromechanical system (MEMS) technology, endowing the sensor with compact dimensions (13x13x2.5mm), low power consumption (< 20 mA), minimal heat generation, a short preheating time, and swift response recovery. The sensor can measure carbon monoxide gas concentrations qualitatively and is suitable for carbon monoxide leak alarms and portable carbon monoxide detectors.

The MEMS series currently encompasses 11 different types of gas sensors (HCHO, CO, CH4, VOC, NH3, H2S, EtOH, Smoke, Odor, H2, NO2), which can be combined as per specific requirements.

Please note: This sensor is capable of only qualitative measurements. For quantitative measurements, kindly consider purchasing the Gravity: Factory Calibrated Electrochemical CO Sensor (0-1000 ppm, I2C & UART).

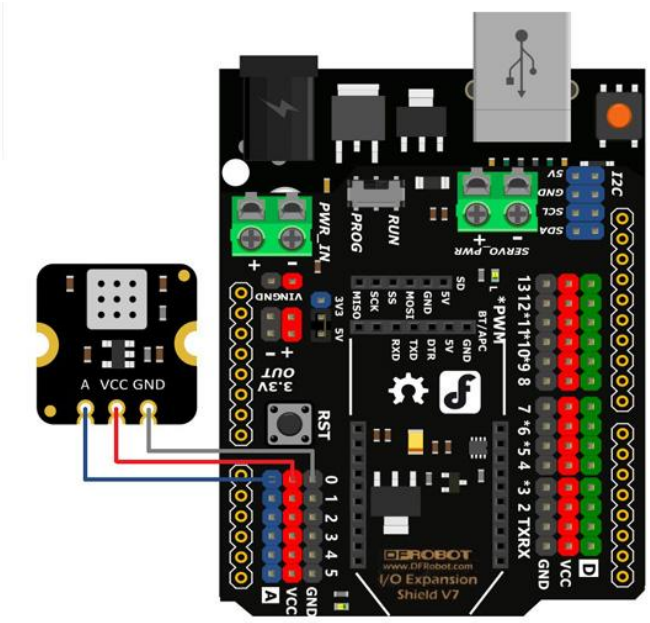

Figure: Wiring Diagram of Fermion: MEMS CO sensor and Arduino UNO

Precautions for use

Kindly remove the protective film before usage.

To prevent exposure to volatile silicon compounds vapors (such as silicone adhesive, hair gel, silicone rubber, or other locations where volatile silicon compounds are present).

Avoid exposure to high concentrations of corrosive gases (such as H2S, SOX, Cl2, HCl, etc.).

Prevent contamination from alkalis, alkali metal salts, and halogens.

Refrain from prolonged exposure to extreme environments (such as high temperatures, high humidity, high pollution).

Avoid contact with water, condensation, and freezing.

Minimize excessive vibration, impact, and dropping.

Please refrain from employing this module in systems that involve personal safety concerns.

For extended periods of non-usage, it is advisable to preheat the module for at least 24 hours.

Features

Compact size, measuring only 13*13*2.5mm

Low power consumption

High sensitivity and rapid response recovery

Advanced MEMS technology

Applications

Petrochemical carbon monoxide detection

Metallurgy carbon monoxide detection

Mining carbon monoxide detection

Environmental protection

Specification

Gas detected: CO

Detection range: 5-5000ppm

Operating voltage: 3.3-5V

Operating current: < 20 mA

Output signal: Analog voltage

Sensitivity: R0(in air)/Rs(in 150ppm CO) ≥ 3

Operating temperature: -10-50℃

Operating humidity: 15-90%RH (non-condensing)

Lifespan: ⩾5 years (in air)

Dimension：13×13 x 2.5mm/0.0.51×0.51x0.1"

Documents

Product wiki

Schematics & Dimension

Characteristic Parameter

Component Packaging

Shipping List

Fermion: MEMS Carbon Monoxide CO Sensor (breakout) × 1

2.54mm pitch header pin × 1