Photoionization PID Sensor

User's Manual V1.0

(Model：4R-PID)

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Zhengzhou Winsen Electronics Technology Co., Ltd

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Photoionization PID Sensor 4R-PID

Product Introduction

4R-PID is a high-performance photoionization PID sensor. It has the characteristics of high sensitivity, wide detection range and wide spectrum. It can detect thousands of volatile organic compounds (VOCs) and some inorganic vapors in different application fields. The detection range starts from 1ppb and is up to 10000 ppm, with extremely fast response speed and high resolution. It can be used in kinds of portable and fixed instruments and various of analytical instruments.

Features

High sensitivity   Wide detection range   Fast response time;

Reliable stability   Long service life   World leading technology.

Main Application

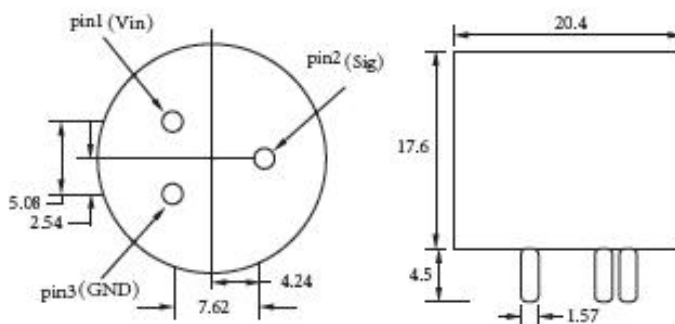Emergency Response   Industrial Hygiene   Personal Safety   Detection of VOCs

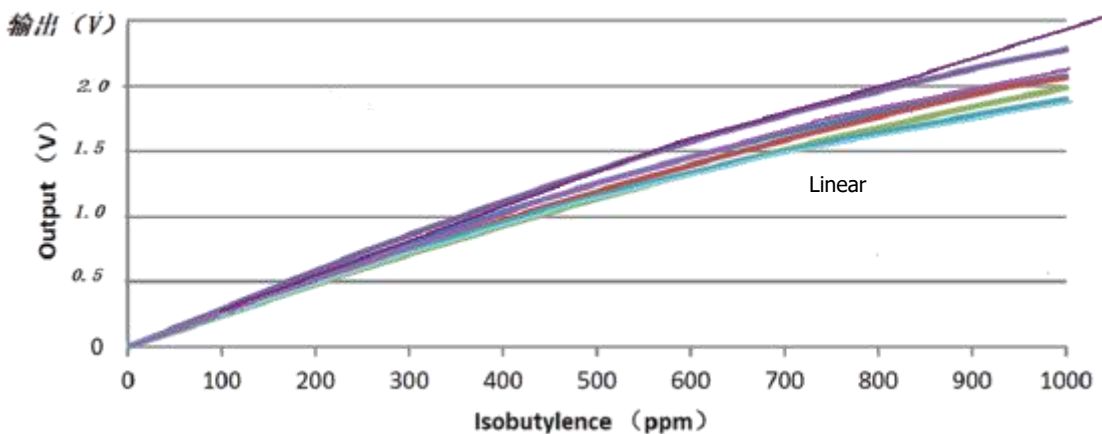Environmental Quality Monitoring   Oil and Petrochemical Safety   Soil Pollution Management

Dimension (unit: mm)

Technical Parameters

Detection Range（ppm）	10ppm	20ppm	40ppm	100ppm	300ppm	1000ppm	2000ppm	6000ppm	10000 ppm
Resolution	1ppb	5ppb	10ppb	25ppb	75ppb	250ppb	500ppb	500ppb	2ppm
Sensitivity（mv/ppm）	>40	>20	>10	>5	>3	>1	>0.3	>0.1	>0.1
Target Gas	VOC，Energy≤10.6eV Volatile Gases								
Working Voltage	3~5 V								
Zero Voltage	U0>20 mV								
Output Voltage	0.02~2V (Up to3.3 V)								
Response Time（T90）	≤5 S								
Working Tem	-40~60 ℃								
Accuracy	≤±2% (No Condensation)								
Humidity	0~99% (No Condensation)								
Working Pressure	800~1200 mbar								
Storage Tem	0~25℃								
Warranty	12 Months								

Signal Output

Cautions:

The sensor should be preheated for at least half an hour for the first time;

When calibrating, pLease don't operate it until the sensor is completely stable, and the zero point should be calibrated in dry clean air;

It is recommended to use about 50% isobutylene gas as calibration gas;

It is forbidden to hot plug the sensor when power on;

It is forbidden to weld the sensor pins. It is necessary to use a matching socket for connection, and the socket is allowed to be welded;

The sensor shall not be subjected to excessive impact and vibration;

Do not use the sensor in systems involving personal safety;

Do not install the sensor in the strong air convection environment to avoid the fluctuation of indication value or damage to the sensor due to the air pressure;

Do not use or store in the environment above the max detection range for a long time;

The signal from the sensor can be AD sampled directly.