

# Product Datasheet

# 4R PID (V1.0)

Photo-Ionization Detector (10.6eV) (P/N:135-000-000)



## 4R PID PLUS Photo-Ionization Detector



SUSA PID sensor contains the miniature UV lamp, high sensitivity with low noise electronic components and integrated ionization chamber. The standard 4 series compact structure is designed for different application purposes, such as portable, fixed detectors, as well as analyzers. It offers a wide detection range, up to 10000ppm(IBE equivalent) and 5ppb resolution.

### Performance

Operating Principle	Photo Ionisation Detector
Detection Range	0~10000ppm (max)
Resolution	5ppb-2000ppb
Repeatability	< ±2%
Operating Temp Range	-40~50 °C
Operating Humidity Range	0~99%RH non-condensing
Operating Pressure Range	800~1200 mbar

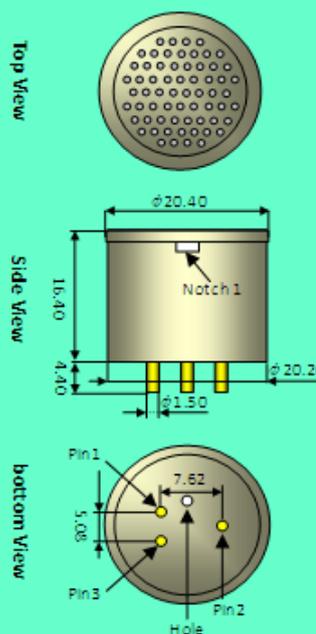
### Electrical

Operating Voltage	3.3±0.1V
Zero	60±20mV
Output Signal	2.0±0.5V
Security Certificate	Pending

### Lifetime

Storage Temp	0~20°C
Expected Operating Life	36 months in air
Lamp Operating Life	24 months lit hours
Standard Warranty	12 months

### PID Schematic Diagram



#### Notes:

- Weight < 16g
- Pin1: + V supply
- Pin2: Signal output
- Pin3: 0V supply
- Hole: Used for taking lamp
- Notch1&Notch2: Cut, Used for opening the upper cover

All dimensions ±0.1mm unless otherwise stated

### Performance Characteristics(10.6eV)

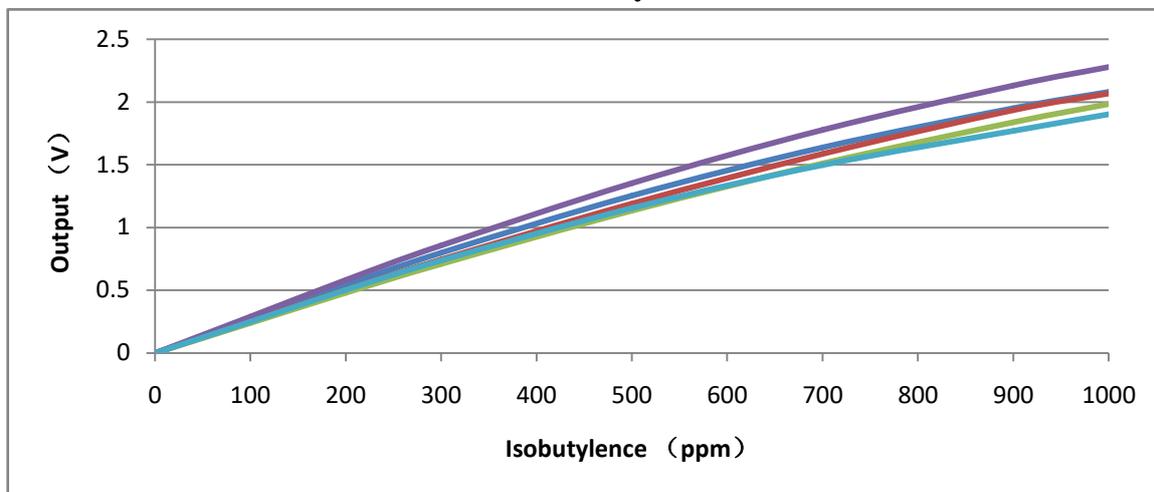
	20ppm	100ppm	300ppm	1000ppm	2000ppm	10000ppm
Rang (Isobutylene)	20ppm	100ppm	300ppm	1000ppm	2000ppm	10000ppm
Part Number	135-000-020	135-000-120	135-000-320	135-000-130	135-000-230	135-000-140
Resolution	5ppb	25ppb	75ppb	250ppb	500ppb	2ppm
Sensitivity (mV/ppm)	>75	>15	>5	>1.5	>0.3	>0.15
Response Time (T90)	≤5second	≤5second	≤5second	≤3second	≤3second	≤3second

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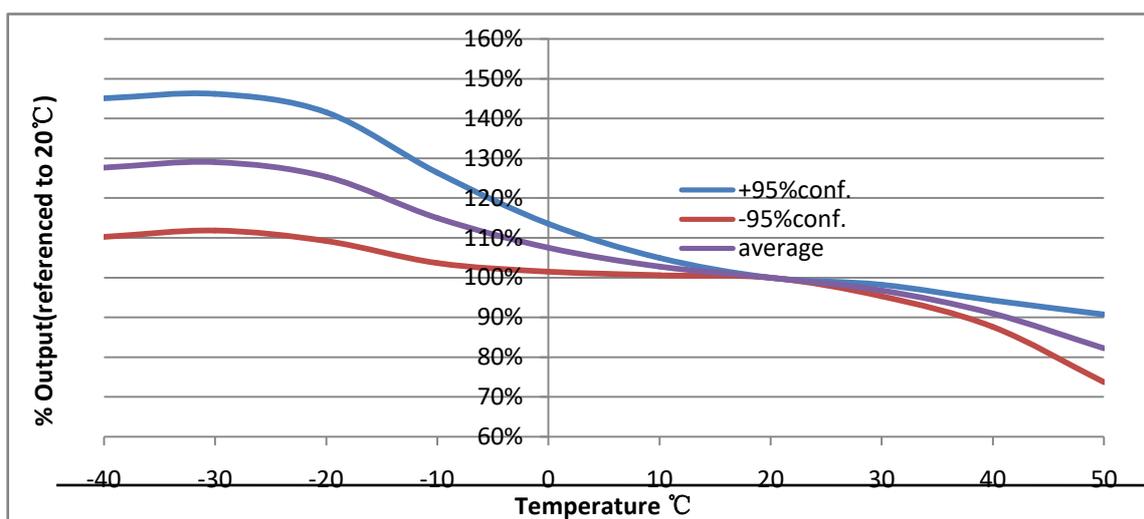
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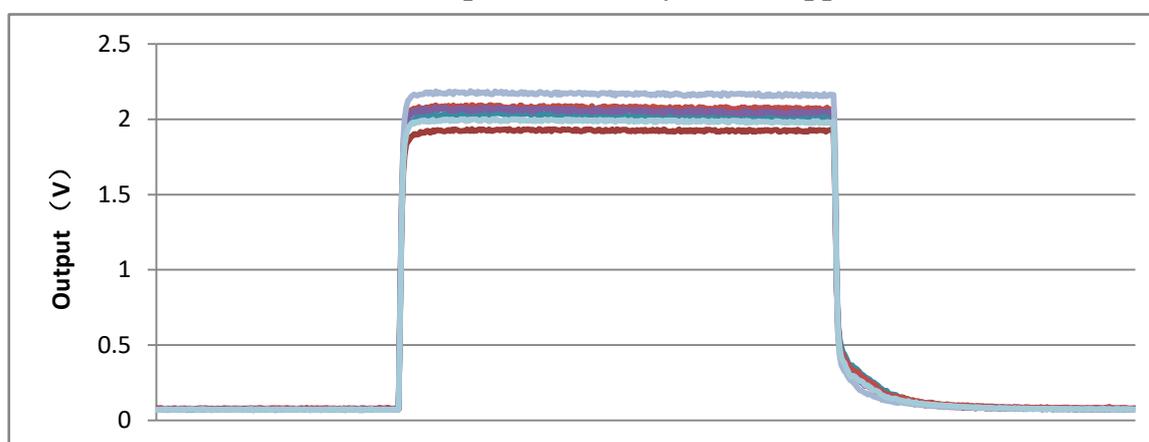
Linearity



Temperature Depend



Response (Isobutylene 100ppm)



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**Maintenance Guide**

Once every half a year is recommended and more often to maintain the PID sensor is needed if the field application is complicated, like dusts and VOCs exist constantly.

**Operating instruction**

1. Carefully rotate the slot type screwdriver to lever up the cap side by side, take off the cap with the dust filter.
2. Pull out the teflon detector (ionization chamber).
3. Taken the lamp out, through the hole with non rigid material.
4. The window of lamp can be scrubbed with methanol or acetone.
5. The detector can be cleaned with methanol or acetone for ultrasoniccleaning.



lamp detector cover body

**NOTE:** all sensors are tested at ambient environmental conditions. The information provided is given without legal responsibility. Customers should test under their own conditions, to ensure that the sensors are suitable for their own requirements.