



SENSORTECH

An Amphenol Company



PID-10.6eV 3 Datasheet

The SGX PID Sensor

The SGX PID (Photo-Ionisation Detection) sensors are designed to offer the most accurate method to detect VOCs in the PPM (parts per million) and PPB (parts per billion) range. Our PIDs are not cross sensitive to common atmospheric gasses (CO₂, CO, Sox, NO_x, water vapour). Furthermore, it offers high humidity resistance and long-term (temperature) stability. Our sensors are used across a wide number of industries and applications, wherever you have a need to detect gases and vapours.



Quality, Safety, Responsibility

Technical Specifications

Performance

| | |
|---|--|
| Sensitivity | >600 mV/ppm |
| Range | >3 ppm |
| Minimum Detection Limit | 0.5 ppb |
| Response Time | T90 < 12s |
| Supply Voltage (using internal regulator) | 3.6 - 10 V (non intrinsically safe 10 - 18 V) |
| Supply Voltage (using a regulated power supply) | 3 - 3.6 V |
| Current | 20 - 32 mA (130 for 100 ms at start up) |
| Power Consumption | 100 mW at 3.3 V |
| Output Signal (using internal regulator) | 0 - 3.2 V |
| Output Signal (using a regulated power supply) | 0 to rail voltage - 0.1 V |

Environmental Details

| | |
|--------------------------|--------------|
| Temperature Range | 0°C to +40°C |
| Operating Humidity Range | 0-99% RH |

Lifetime Details

| | |
|-------------------|--|
| Lamp Life | 10 000 hours |
| Expected Lifetime | >5 years |
| Warranty | 10.6 eV lamp and PID Body = 12 months |

| Order Code | Supply Voltage |
|---------------|----------------|
| PID-10.6eV-3A | 3.2V to 3.6V |
| PID-10.6eV-3B | 3.6V to 10V |

Patents & Certification

| | |
|------------------------|---|
| Patents | US 7.046.012 EC 1474681 |
| Europe | ATEX II 1G Ex ia IIC Ga (-40 °C ≤ Ta ≤ +55 °C) @ 1.1W |
| Worldwide | IECEX II 1G Ex ia IIC Ga (-40 °C ≤ Ta ≤ +55 °C) @ 1.1W |
| North America | UL913 (8th) Edition Class I, II, III, Division 1 CSA-C22.2 No157-92 |
| Eurasian Customs Union | № EA9C RU C-GB.HA65.B.00635/20 |



PID-10.6eV 3

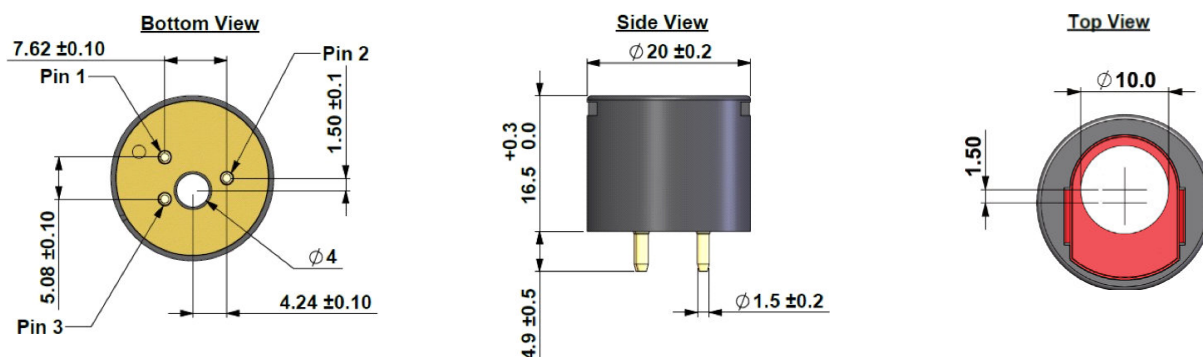
Features

- 0.5 ppb sensitivity
- 10,000 hours continuous lamp life
- Anti-contamination design
- Patent pending filter
- Humidity-resistant
- Serviceable electrode stack and lamp
- Intrinsically safe

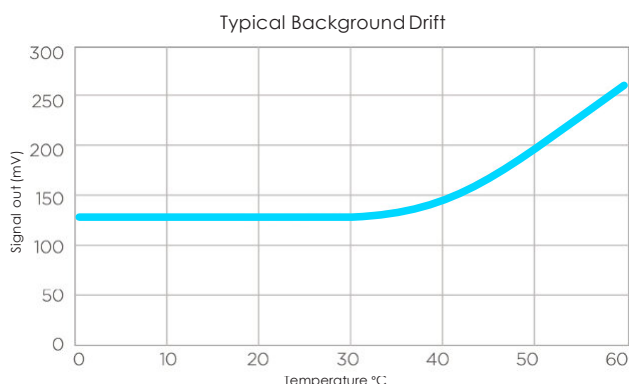
Typical Applications

- Clean room
- Air quality monitoring
- Fertility labs
- Semiconductor fabrication
- HVAC
- Glove boxes

Dimensions



Temperature Curve



Sensor Development Kit (SDK)

Sensor Development Kit is used as an efficient way to test and integrate the SGX Sensortech photoionisation detection sensors into any application.

SDK includes everything needed to run PID including an integration board, sensor board, gas delivery hood and a PC application.



Accessories and Replacement Parts

| Category | Type | Part number | Description |
|-------------|--------------------|-----------------|--|
| PID Spares | Lamp | PID-Lamp-10.6eV | Long-life Lamp spare for 10.6eV and 10.0eV PID sensors |
| PID Spares | Electrode Stack | PID-Stack-3 | Electrode Stack spare for PID-10.6eV-3A/B |
| PID Spares | Lamp spring | PID-spring | Lamp spring |
| Accessories | Stack removal tool | PID-Stack-tool | Stack removal tool |
| Accessories | Lamp cleaning kit | PID-Lamp-kit | Lamp cleaning kit |
| Accessories | Gas chamber | PID-chamber | Gas Delivery Chamber |
| Accessories | PCB board | PID-PCB | PID connection PCB (not includes PID sensor) |

DISCLAIMER:

SGX Europe Sp. z o.o. reserves the right to change design features and specifications without prior notification. We do not accept any legal responsibility for customer applications of our sensors. SGX Europe Sp. z o.o. accepts no liability for any consequential losses, injury or damage resulting from the use of this document, the information contained within or from any omissions or errors herein. This document does not constitute an offer for sale and the data contained is for guidance only and may not be taken as warranty. Any use of the given data must be assessed and determined by the user thereof to be in accordance with federal, state and local laws and regulations. All specifications outlined are subject to change without notice.

SGX Europe Sp. z o.o. sensors are designed to operate in a wide range of harsh environments and conditions. However, it is important that exposure to high concentrations of solvent vapours is to be avoided, both during storage, fitting into instruments and operation. When using sensors on printed circuit boards (PCBs), degreasing agents should be used prior to the sensor being fitted. SGX Europe Sp. z o.o. makes every effort to ensure the reliability of its products. Where life safety is a performance requirement of the product, we recommend that all sensors and instruments using these sensors are checked for response to gas before use.

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