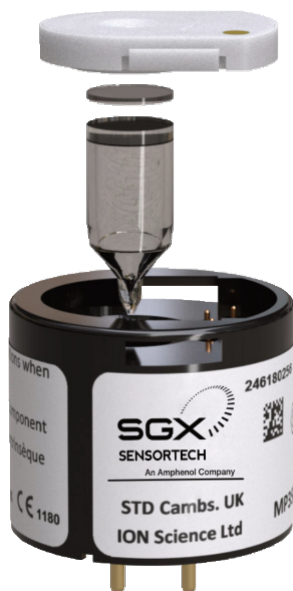




# SENSORTECH

An Amphenol Company



## PID-10.0 eV 100 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 (CO<sub>2</sub>, CO, Sox, NO<sub>x</sub>, 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	>15 mV/ppm
Range	>100 ppm
Minimum Detection Limit	5 ppb
Response Time	T90 < 8s
Supply Voltage (using internal regulator)	3.6 - 18 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	-40°C to +65°C
Operating Humidity Range	0-99% RH

## Lifetime Details

Lamp Life	10 000 hours
Expected Lifetime	>5 years
Warranty	12 months

## Operation

Operating Principle	Amperometric, 3-electrode
Bias Voltage	0 mV
Recommended Load Resistor	220 Ω
Warm Up Time	< 60 s

## Housing

Housing Material	PPO
Weight	< 6.3 g

## 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-10.0eV 100**

## Features

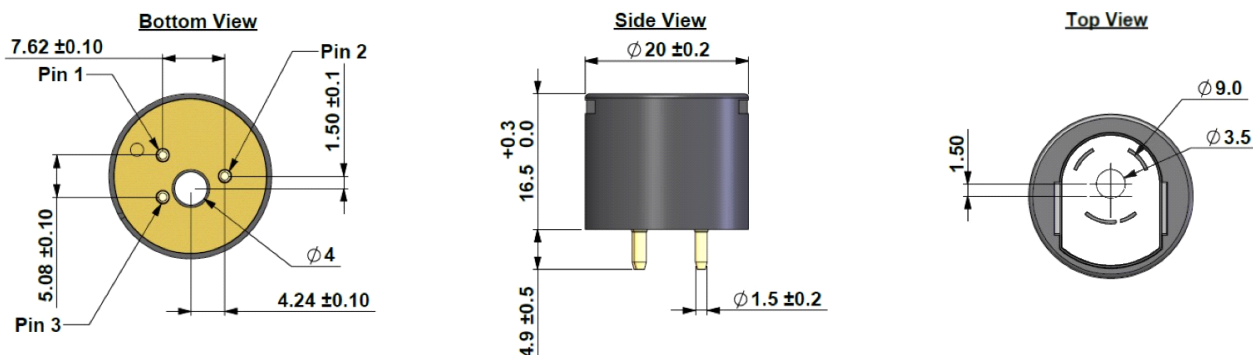
- Wide dynamic range
- Anti-contamination design
- Humidity resistant
- 10,000 hours lamp life
- Lamp out diagnostic
- Serviceable electrode stack and lamp
- Intrinsically safe
- Series 4/A package

## Typical Applications

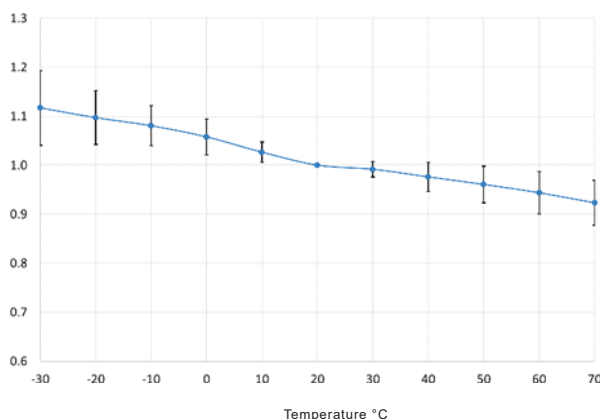
- Industrial health and safety
- Confined space entry
- Air quality monitoring
- Arson investigation
- Indoor air quality monitoring
- HVAC
- Leak detection
- Soil contamination and remediation

Order Code	Supply Voltage
PID-10.0eV-100A	3.2V to 3.6V
PID-10.0eV-100B	3.6V to 10V

## Dimensions



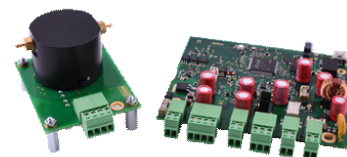
## Temperature Curve



## Evaluation Kit (EK5-PID)

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

EK5-PID includes everything needed to run our PID sensor including an integration board, PCB board, gas chamber 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-100	Electrode Stack spare for PID-10.6eV-100A/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)
Accessories	Evaluation Kit	EK5-PID	Includes everything needed to run our PID sensor: integration board, sensor board, gas delivery hood and a PC application

### 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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