

SDK

SENSOR DEVELOPMENT KIT



ENABLING FAST INTEGRATION
OF THE MINIPID SENSOR

ionscience.com

Unrivalled Gas Detection.





HIGH PERFORMANCE SENSOR DEVELOPMENT KIT FOR THE INTEGRATION OF THE MINIPID PHOTOIONIZATION DETECTION SENSOR OFFERS A FAST, SIMPLE, COST EFFECTIVE SOLUTION FOR OEMS

The ION Science sensor development kit (SDK) is a cost effective, efficient way to test and integrate the ION Science photoionization detection (PID) sensors into any application. The SDK is comprised of two printed circuit boards (PCBs), a sensor PCB and an integration PCB.

Sensor PCB

The sensor PCB provides a breakout of the sensor pins, making it easier to supply power to a PID sensor and read the raw analogue output signal. Each Sensor PCB is supplied with a MiniPID sensor.



Integration PCB

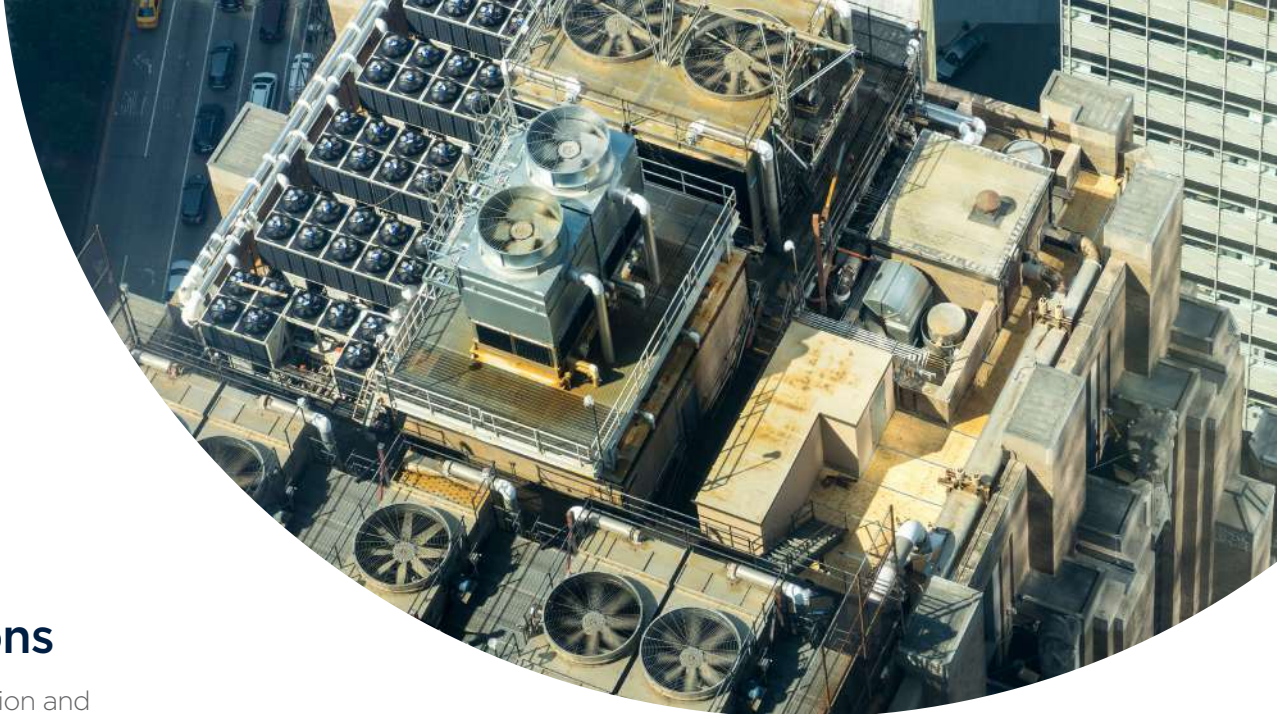
The integration board connects to the sensor board to provide the ability to integrate PID into applications. The integration board will output a calibrated signal on 4-20 mA, Modbus® RS485 and can be configured to switch a relay on at a given VOC concentration. The integration board is configured with a simple PC application.

Gas Delivery Hood

The gas delivery hood seals against the MiniPID 2 electrode stack creating a small chamber. Push fit pipe connectors offer convenient connection of the MiniPID 2 to a pump or existing gas systems.



Both PCBs have a small footprint and can be easily fitted into existing original equipment manufacturers' (OEMs) equipment and systems. A PCB mounted gas delivery hood delivery hood is supplied as part of the kit or can be purchased separately. This fits over the PID sensor to make it easy to deliver gas.



Typical applications

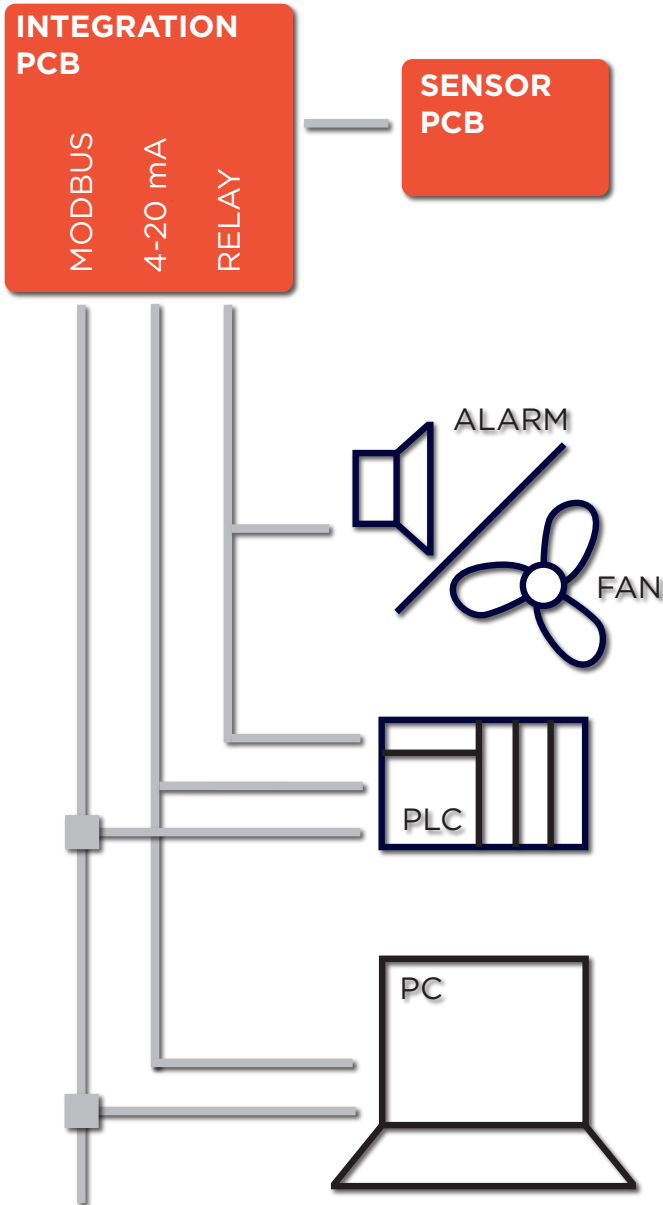
- Heating, Ventilation and Air Conditioning (HVAC) filter breakthrough
- HVAC air quality monitoring and control
- Fence line monitoring
- Connect to Arduino or Raspberry pi for IoT sensor applications
- Outdoor air quality monitoring
- Laboratory air monitoring

Features

- 4-20 mA input and output
- Modbus* communication
- Data logging
- Simple sensor calibration
- MS Windows compatible configuration software
- Bayonet locking gas hood
- Easy sample delivery

Benefits

- Reduced time to market
- Reduced R&D costs
- Industrially proven technology





Technical specifications

Sensor PCB

Dimensions in mm

- 50 (W) x 62 (D) x 40(H)

Output

- Analogue 0 to rail voltage

Input voltage

- 5 Vdc \pm 0.5 V

Working temperature

- -20 °C to +60 °C

Humidity resistant

- 0 to 99% RH non condensing

Integration PCB

Dimensions in mm

- 99 (W) 85 (D) 20.5 (H)

Outputs

- Modbus RS485
- Relay (250 Vac / 2A)
- 4-20 mA outputs

Input voltage

- 12 to 30 Vdc \pm 0.5 V

Working temperature

- -20 °C to +60 °C

Humidity resistant

- 0 to 99% RH non condensing

Range

- 0 to 100ppm or 0 to 1000ppm

Gas delivery hood

Dimensions in mm

- Total height including PCB 40mm

Pipe connection

- 1/16" OD barb push fit.
- 1/16" ID / 1/8" OD Viton pipe recommended

Seal material

- Viton

Max gas pressure

- <300 mBar

Suitable MiniPID 2 sensors:

- MiniPID 2 PID sensor
- MiniPID 2 PID sensor

Sensitivity

- 0.1 ppm
- 0.001 ppm

Lamp energy

- 10.6eV
- 10.6eV

Product availability

- Sensor PCB
- Gas delivery hood
- Integration PCB
- Sensor development kit

Description

Accepts MiniPID PPM & PPB sensors
Encapsulates the MiniPID 2 sensor allowing a sealed pump connection
Programmable module allowing simple setup and calibration of the MiniPID 2
The SDK contains all above components in a single kit

SDK V1.0. This publication is not intended to form the basis of a contract and specifications can change without notice.

Manufactured by:

ION Science Inc
4153 Bluebonnet Drive
Stafford, Texas 77477

T Toll Free (877) 864-7710
E info@ionscienceusa.com