



SDK

SENSOR DEVELOPMENT KIT

ENABLING FAST INTEGRATION
OF THE MINIPID SENSOR

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Unrivaled Gas Detection

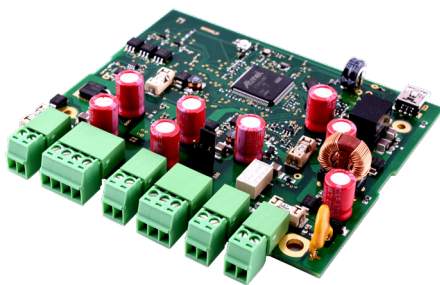
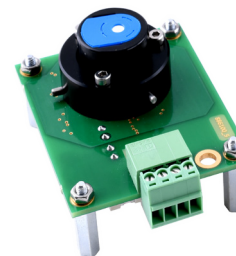


HIGH PERFORMANCE SENSOR DEVELOPMENT KIT FOR THE INTEGRATION OF THE MINIPID PHOTOIONIZATION DETECTION SENSOR OFFERS A FAST, SIMPLE, COST EFFECTIVE SOLUTION FOR OEMS

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.



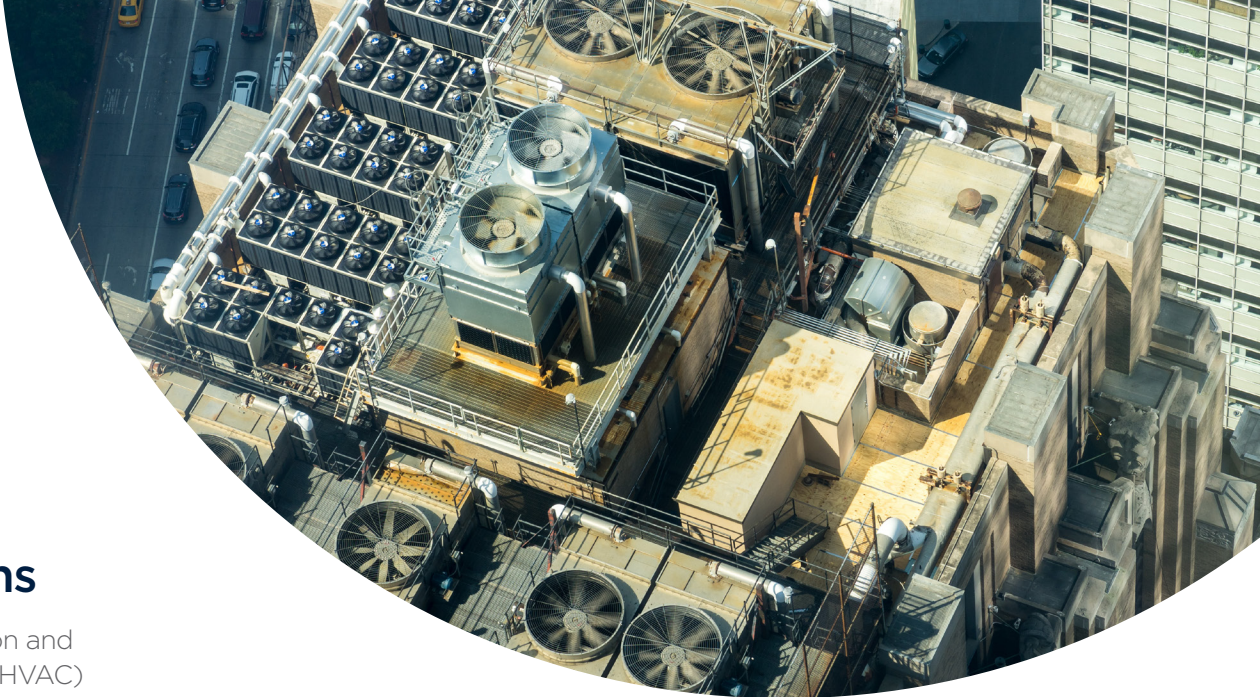
Integration PCB

The integration board connects to the sensor board to provide the ability to integrate PID into many 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 creating a small chamber. Push fit pipe connectors offer convenient connection of the MiniPID 2 to a pump or existing gas systems.





Typical applications

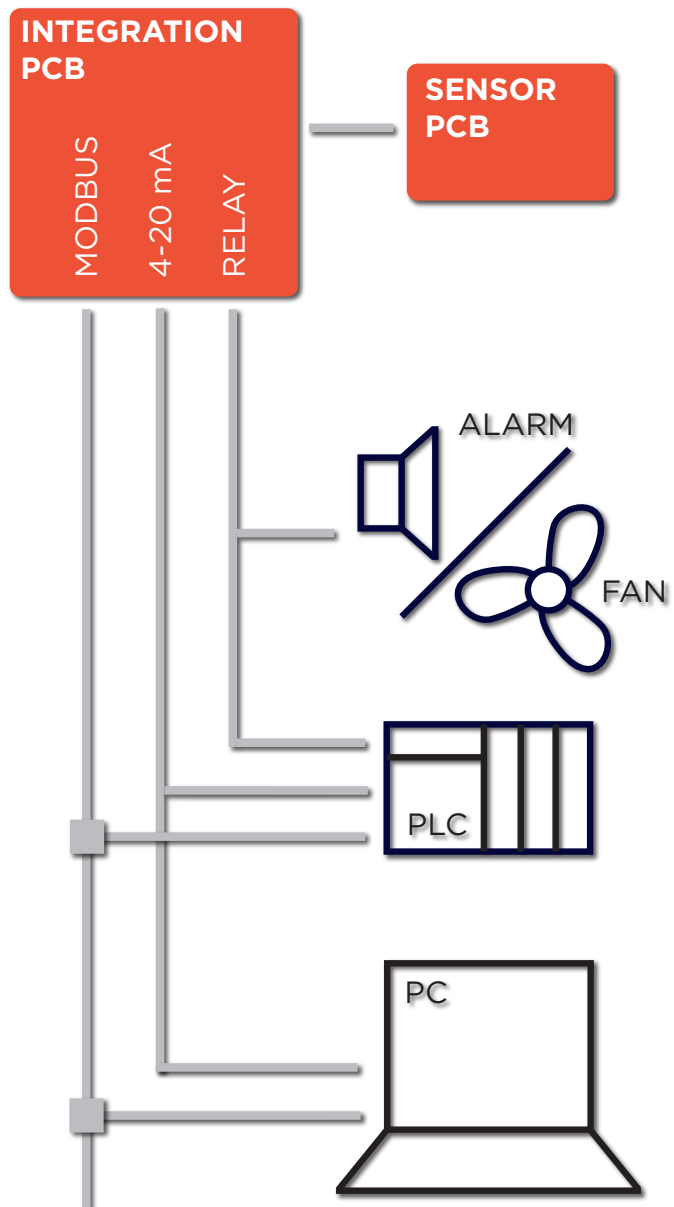
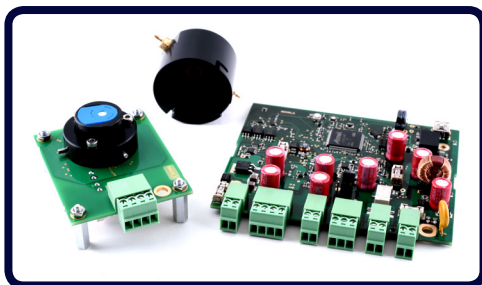
- Heating, Ventilation and Air Conditioning (HVAC) filter breakthrough
- HVAC air quality monitoring and control
- Fenceline monitoring
- Connect to Arduino or Raspberry pi for IoT sensor applications
- Outdoor air quality monitoring
- Laboratory air monitoring

Features

- Industrially proven technology
- 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
- Small footprint for easy integration

Benefits

- Reduced time to market
- Reduced R&D costs





Technical specifications

Sensor PCB

Dimensions in mm

- 50 (W) x 62 (D) x 40(H)
(Total height with hood)

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 100 ppm or 0 to 1000 ppm

Gas delivery hood

Dimensions in mm

- 35.5 $\varnothing$ x 26.5 (H)

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

Compatible MiniPID 2 sensors:

- MiniPID 2 ppm
- MiniPID 2 ppm
- MiniPID 2 ppb
- MiniPID 2 ppb

Lamp energy

- 10.6 eV
- 10.6 eV
- 10.6 eV
- 10.6 eV

Voltage

- 3.6V-10V
- 3.6-18V
- 3.6-10V
- 3.6-18V

Part number

- MP3SMLLCU2
- MP3SMLLNU2
- MP3SBLBCU2
- MP3SBLBNU2

Product availability

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

Description

Accepts any MiniPID 2 10.6 eV regulated sensor with a 3 pin configuration
Allows easy pneumatically sealed gas delivery to sensor
Programmable module allowing simple setup and calibration of the MiniPID 2
The SDK contains all above components as a single kit

SDK V1.1 This publication is not intended to form the basis of a contract and specifications can change without notice.

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