

MINIPID2 HS

PID SENSOR



STATE OF THE ART PHOTOIONISATION
SENSOR FOR DETECTING VOC GASES.

ionscience.com

Unrivalled Gas Detection^{ion}.





MARKET LEADING PHOTOIONISATION
SENSOR TECHNOLOGY CAPABLE OF
DETECTING LOW LEVEL VOC GASES,
TYPICALLY SUITED TO INDOOR AIR
QUALITY APPLICATIONS.

Features and Benefits

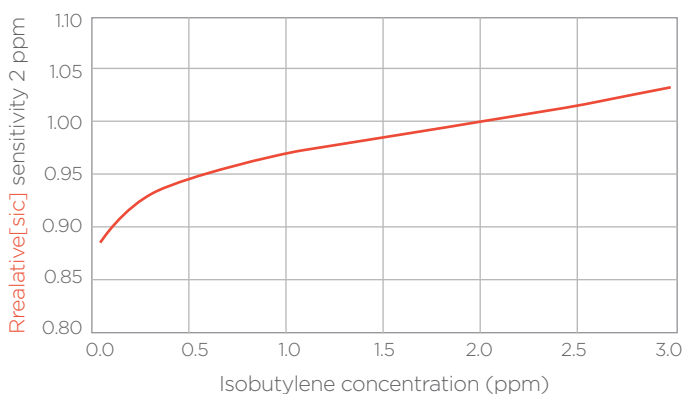
- Patented humidity resistant technology
- High sensitivity for ppb level detection
- 10.6 eV UV lamp
- 10,000 hours continuous lamp life
- Removable, pneumatically sealed electrode stack
- Certified Intrinsic Safety
- Series-4/A1 package size
- 12 month warranty
- Sensor lifetime >5 years (excluding lamp and electrode stack)
- Manufactured in the UK

Typical Applications

- Indoor/outdoor air quality monitoring
- Personnel safety
- Industrial hygiene
- Site soil and air sampling
- Fugitive emissions and volatile spills
- Law enforcement
- Emergency response

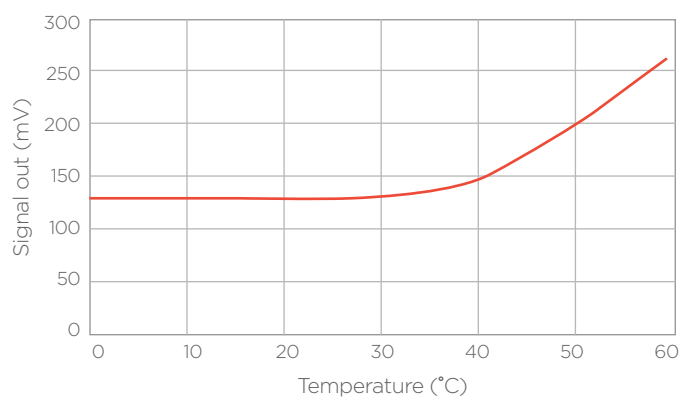
Technical specifications

Typical MiniPID 2 HS linearity

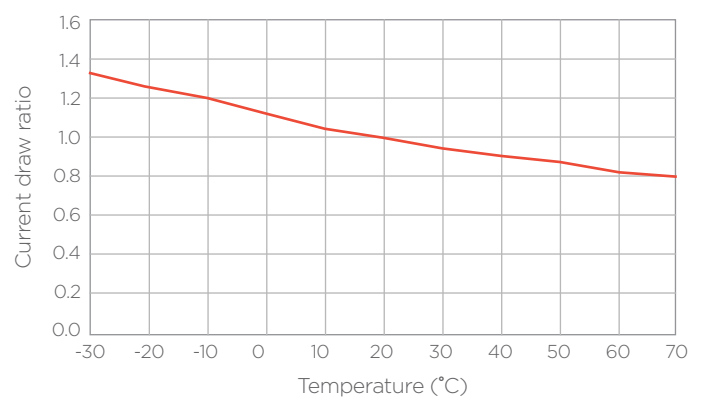




Typical background drift over temperature

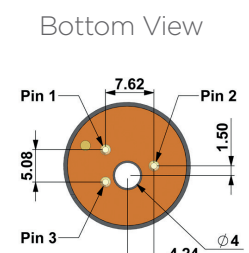
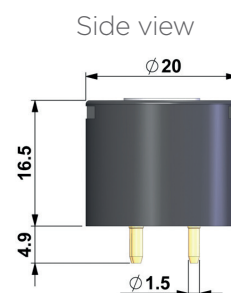
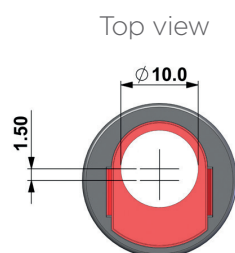


Sensitivity relative to 20 °C over temperature



Schematic Diagram

1 = Positive Supply Voltage
2 = Signal Output
3 = 0V Ground





Technical specifications continued

ELECTRICAL	
Power consumption	90 mW (max) at 3.3 V
Supply Voltage	Dependent upon sensor type: 3.0 - 3.2 V and 3.2 - 3.6 VDC. Ideally regulated +/- 0.01V (onboard regulator disabled. Performance dependent on input voltage) 3.6 - 10 VDC (onboard regulator enabled) 3.6 - 18 VDC (onboard regulator enabled. Not IS approved)
Output signal range	Supply voltage minus 0.2 V (when on-board regulator enabled supply voltage is 3.3 V)
Current	24 - 33 mA (dependent upon supply voltage)
Peak current	130 mA, 100 ms max.

PERFORMANCE	
Target gases	VOC's ionised by 10.6 eV light
Minimum detection limit	0.5 ppb*
Minimum range	3 ppm*
Sensitivity	700 mV/ppm*
Warm up time	10 minutes
Response time	10 seconds
Filter lifetime	1 year
Operating life	>5 years

ENVIRONMENTAL	
Operational temperature range	-20 to +60 °C
Relative humidity range	0-99 % RH, non-condensing
Pressure range	900 - 1100 mbar

PATENTS	
US 7,046,012	
EU 1471681	

FURTHER SPECIFICATIONS	
Onboard filter	Hydrophobic, removes particulates and liquids
Error state signal (diagnostics)	< 50 mV
Weight	< 8 g
Package type	Series-4 package size, 3-pin interface
Serviceable parts	Electrode stack, lamp
Warranty period	12 months
Recommended storage conditions	10 - 30 °C, ≤95 %RH (no dew condensation)

INTRINSIC SAFETY	
IS Approval	ATEX, IECEx II 1G Ex ia IIC T4 Ga CLASS1, DIV1 Groups ABCD, Conforms to UL STD. 913 Certified to CSA STD. C22.2 No 157 -40 °C < Ta < +55 °C @ 1.1W (65 °C @ 0.9W)

* All concentrations refer to isobutylene in air at 20°C and 1 atm.

MiniPID 2 High Sense datasheet V1.1 Information in this brochure is subject to change without notice and does not represent a commitment on the part of Ion Science. No claims, promises or guarantees are made about the accuracy, completeness, or adequacy of the information contained herein.

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