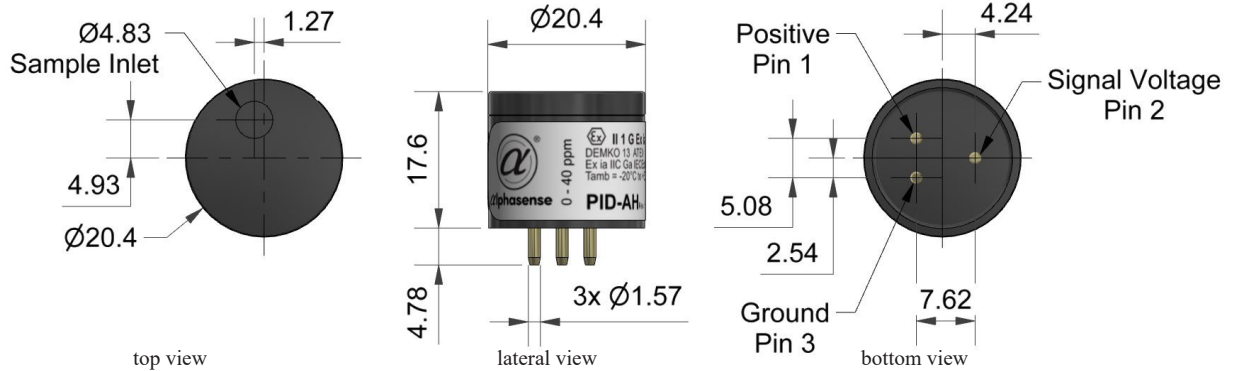




PID-AH5 photoion detector



Figure 1 P, D-AH5 Diagram



remarks :

1. Please do not block the $\varnothing 4.83$ sensing area

2. Pin definition:

- Pin 1: Power input
- Pin 2: Signal output
- Pin 3: Grounding

3. Unless otherwise stated, all dimensional errors are ± 0.1 mm

4. Plug-in connection is required

5. Welding or cutting the connecting pins may permanently damage the sensor and cause the warranty to become void

Performance (using a 10.6 ev bulb)

Target gas	VOCS with ionization potential less than 10.6eV	
Minimum detection level	ppb isobutene	F
linearity range	ppm isobutene	40
Overdrive	ppm isobutene	40
Minimum sensitivity	linearity range	mV / ppm isobutylene
Typical sensitivity	linearity range	mV / ppm isobutylene
Complete stabilization time	minute	5
preheating time	Seconds (from start to full operation t)	5
offset voltage	{ X	40~75
Response time (t90)	second	dispersal pattern
		2

electrical

power dissipation 80 MW ~ 200 mW depends on the supply voltage

service voltage $H_2 \sim 5.5 \times O_2$

output signal 0.040~2.85V

environment

temperature range $0^{\circ}C \sim 60^{\circ}C$

temperature characteristic See figure below

Relative humidity range humidity sensitivity No condensation
Working period: 0% ~ 75% rh instantaneously
0 ~ 95% close to zero

key parameter

Working life,	5 years (excluding replaceable bulbs and grilles)
S approved	, ECEX Ex ia, C Ga; ATEX II 1 G Ex ia IIC Ga-200C <Ta <+60OC filter
onboard filter	out liquids and micro-particles
membrane	Users can be replaced, life expectancy =10000 hours
bulb grid	Users can replace
weight	1.1*
Location sensitivity warranty	not have Electronic components and casing 24 months, bulb 12 months. Bulb and grid replaceable. 10.6ev Bulb typical lifespan 10,000 hours.
Patent information	US Patent 6,646,444; Japanese Patent 3,793,757

Note: Unless otherwise specified to ensure sensor suitability, all sensors shall comply with their own requirements. All testing shall be conducted under ambient conditions. As customer applications fall outside our control, the provided information does not carry any legal liability. Customers shall conduct tests under their own conditions.

Technical Specification



PID-AH5 performance parameters



Technical Specification

Figure 2 Linearity (0-40ppm)

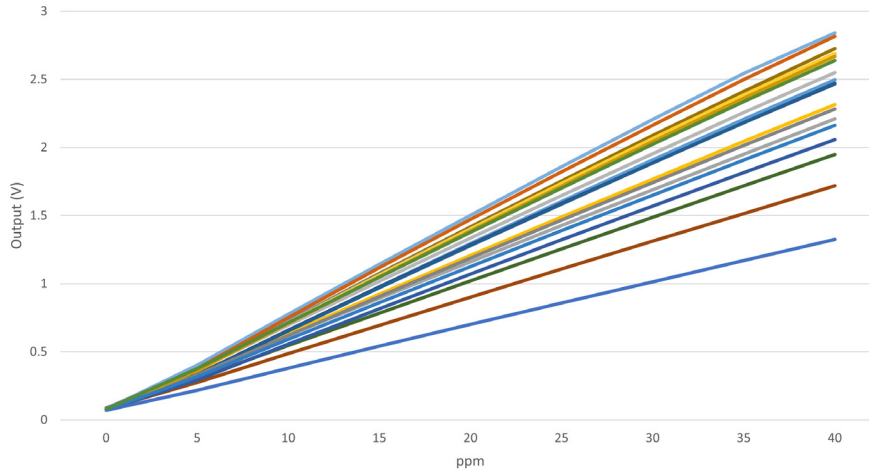


Figure 2 shows the response curves of the 20 sensors over their entire working range. The sensors are linear throughout their entire range.

Figure 3 Sensitivity Temperature Characteristics

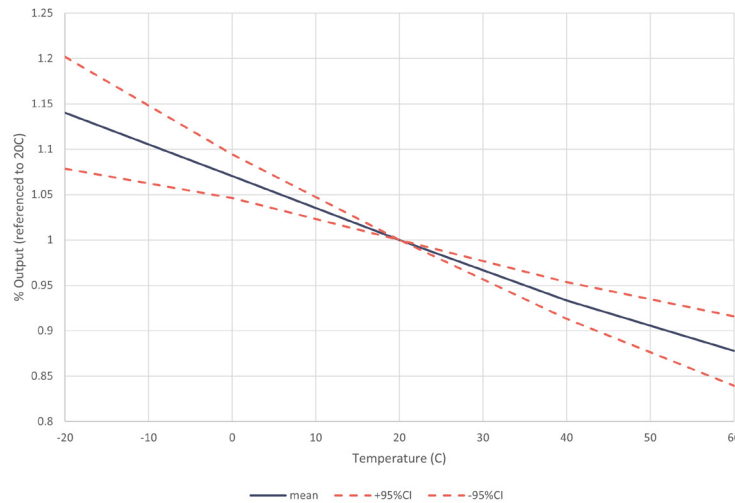


Figure 3 shows the temperature characteristics of sensitivity, which has been corrected for the gas law.

This data is derived from the test results of a typical batch PIDAH5 sensor in 30ppm isobutylene.

Figure 3 shows the mean and \pm 95% confidence interval of the percentage output (see 2 0°C).

Table 1: List of replacement parts/consumables

P / N	explain	P / N	explain
001-0036-00	gas hood	001-0043-00	Maintenance toolbox, including: 2 :: Polishing sheets
001-0037-00	Lid with snap-on fastener	001-0044-00	Sensors repair kit, including: 2 :: 10.6 eV lamp 1 :: Detector ionization chamber assembly 1 * 1 μ m, Teflon made large top filter 1 * 10 μ m, cloth bottom filter
001-0038-00	pad	001-0045-00	Lightbulb cleaning kit
001-0039-00	1 μ m, Teflon, top filter, large	001-0047-00	Quick response to 0 ~ 2000 ppm sensors
001-0040-00	10 μ m, cloth, bottom filter		
001-0041-00	Detector ionization chamber assembly		
001-0042-00	10.6 eV lamp		
001-0046-00	10.6 Independent packaging of bulbs eV		

When a product reaches the end of its service life, do not dispose of electronic sensors, components, or instruments in household waste. Instead, contact the instrument manufacturer, Alphasense, or its authorized distributors for disposal instructions. Important: Unless otherwise specified, all sensors are tested under ambient conditions. As customer applications may exceed our control parameters, the provided information does not constitute legal liability. Customers should conduct their own testing to ensure the sensors meet specific requirements.

To continuously improve our products, we reserve the right to modify design features and specifications without prior notice. The data provided in this document is for reference only. Alphasense Ltd shall not be liable for any indirect losses, injuries, or damages arising from the use of this document or its contained information. (©ALPHASENSE LTD) Document Reference: PIDAH5/OCT22