HONEYWELL
AQ7PID GAS SENSOR

Honeywell introduces the new intelligent PID sensor which can detect TVOC in a PPB level – AQ7 PID

AQ7 PID has a digital interface, featured with long lifetime, and built-in temperature & humidity compensation.

The ease of integration combined with pre-calibration drives a significant benefit to OEMs and users in terms of simplifying instrument integration and maintenance, thereby decreasing the cost of development and maintenance.

AQ7 PID's built-in temperature and humidity sensor combined with Honeywell advanced compensation algorithm enhancing the reading accuracy in environmental applications.

Whether you are looking for a PID sensor that's used for handheld portable device or a fixed instrument, AQ7 PID provides your answer for both mobile and fixed applications.

Part Number:
C04-0960-011

FEATURES AND BENEFITS

Long lifetime – The UV lamp of Honeywell AQ7 PID has stable UV light intensity and long working lifetime.

High accuracy– Honeywell AQ7 PID has high accuracy and linearity in full scale, especially in PPB concentration level.

Long-term stability – Honeywell AQ7 PID has low zero and span drift, benefits continuous online monitoring.

Environmental suitability–Honeywell AQ7 PID's temperature and humidity compensation enables OEMs to apply it in varying environmental conditions.

Digital interface – Honeywell AQ7PID has a UART protocol to communicate with the instrument with chip select option in the Communication Protocol.

Fault indication – Honeywell AQ7PID can flag specific failure mode.

Honeywell

TABLE 1. TECHNICAL SPECIFICATIONS

MEASUREMENT	
Operating Principle	UV phtoionization
Target Gas	TVOC
Measurement Range	0-20 ppm
Overload	200ppm
Accuracy*	0-300ppb:≤±50ppb 300ppb-20ppm:≤±15% of reading
Response Time(T90)*	≤ 30s
Indication Resolution*	0.1 ppb
Repeatability*	<3% @2ppm iC_4H_8
Output	Digital output with temperature and humidity compensation
Measurement Interval	Maximum of 1 sample per second (1 Hz)
ENVIRONMENTAL	
Operating Temperature Range	-20°C to 55°C
Operating Humidity Range	0 to 95%RH non-condensing
Recommended Storage Conditions	Stored in factory original package at 0~30°C environmental temperature
Recommended Flow Rate	Typical: 250SCCM when using recommended gassing hood. (Consult Characterization Note).
LIFETIME	
Expected Operating Life	5 years(except lamp and detector)
Lamp Lifetime	18000 working hours
Warranty	12 months from date of despatch
PHISICAL CHARACTERISTICS	
Size	Φ 40.5mm × 26.5mm(H)
Weight	Typical 90g
Interface	Serial Interface (UART) with Chip Select
Housing Body Material	Stainless steel
ELECTRICAL	
Power Supply	4.7V-5.5VDC
Current	Max: 150 mA Average: 20 mA
Power Consumption	< 500 mW

*Specifications are based on measurements made with iC4H8 standard gases using a flow rate of 250 SCCM and are valid at 20° C, 0%RH and 1013 mBar using Honeywell recommended gas hood.

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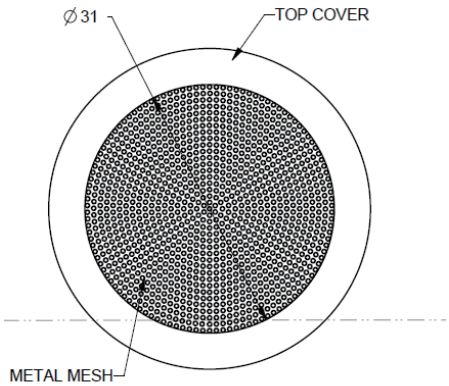
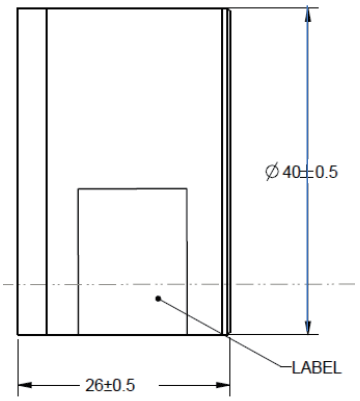
OUTLINE DIMENSIONS





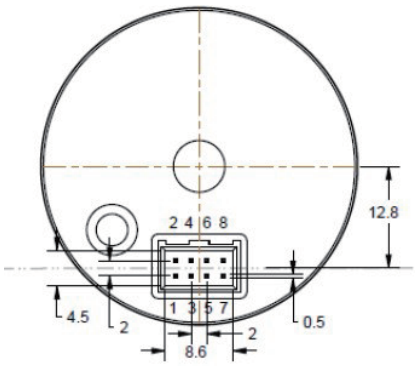


TABLE 2.PINOUT

Pin	Name	Description
1	VCC	Power supply.
2	CS	0 ~ 0.25V Low level is active, 3.05 ~ 3.3Vhigh level is invalid.
3	NA	Float it
4	RXD	Receive data input, 3.3V TTL, connect to external TXD
5	NA	Float it
6	GND	Ground
7	SDEP	Sensor switch, 0 ~ 0.6V is OFF, 2.2 ~ 3.3V is ON:
8	TXD	Transmit data output, 3.3V TTL, connect to external RXD

NOTE

Connection should be made via recommended mated parts only. Soldering to the sensor and too high voltage will result in damage and invalidate the warranty.

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship during the applicable warranty period. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgment or consult your local sales office for specific warranty details. If warranted goods are returned to Honeywell during the period of coverage, Honeywell will repair or replace, at its option, without charge those items that Honeywell, in its sole discretion, finds defective. **The foregoing is buyer's sole remedy and is in lieu of all other warranties, expressed or implied, including those of merchantability and fitness for a particular purpose. In no event shall Honeywell be liable for consequential, special, or indirect damages.**

While Honeywell may provide application assistance personally, through our literature and the Honeywell web site, it is buyer's sole responsibility to determine the suitability of the product in the application.

Specifications may change without notice. The information we supply is believed to be accurate and reliable as of this writing. However, Honeywell assumes no responsibility for its use.

⚠ WARNING
MISUSE OF DOCUMENTATION

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

Failure to comply with these instructions could result in death or serious injury.

SAFETY NOTE

This sensor is designed to be used in environmental applications. To ensure that the sensor and/or instrument in which it is used, are operating properly, it is a requirement that the function of the device is confirmed by exposure to target gas (bump check) before each use of the sensor and/or instrument. Failure to carry out such tests may jeopardize the safety of people and property.

FOR MORE INFORMATION

Honeywell Sensing and Safety Technologies services its customers through a worldwide network of sales offices and distributors. For application assistance, current specifications, pricing or the nearest Authorized Distributor, visit our website or call:

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