OOMLF102 GAS SENSOR

001-33
Issue 3

Lead-Free Oxygen (O_2) Gas Sensor

FROM STANDARD SENSORS TO CUSTOMIZED SENSORS

Experienced EnviteC by Honeywell engineers work closely with customers to analyze their requirements when designing sensors for standard and OEM applications. Throughout the design process, support is provided right up to the final integraton of the solution. Our engineers can customize sensors characterized by a maximum possible degree of precision, for example fit, form, and signal behaviors such as signal range or integrated temperature compensation.

With innovative technology and engineering expertise, Honeywell has developed a patent-pending, lead-free oxygen sensor series. Honeywell lead-free O_2 sensors are a one-to-one, drop-in replacement - no application redesign needed in most cases.

ADVANTAGES

- High accuracy and reliability in response
- Resistant to N_2O
- Enhanced signal stability and product quality
- Short delivery times
- Technical support
- Made in Germany
- FDA cleared

ADDITIONAL INFORMATION

Instructions for Use as well as the Honeywell Healthcare Solutions XRL Cross Reference list are available at https://sps.honeywell.com/gb/en/support/advanced-sensing-technologies/cross-reference-list.

PORTFOLIO

The EnviteC sensor family is part of the extensive line of Honeywell gas sensors. To learn more about the product, or the many other gas sensors in this series, click here.

Lead-Free Oxygen Sensor:
OOMLF102

INTENDED USE

EnviteC by Honeywell Medical Oxygen Sensors are intended for use as the oxygen sensing component of an oxygen analyzer that measures oxygen concentration in breathing gas mixtures in the following applications:

- control device of oxygen concentrators
- medical ventilators
- anaesthesia systems and respirators
- incubators
- gas supply systems

Use is limited to system monitoring, as the sensors are not suited for breath by breath analysis of breath gases. Please refer to the Instructions for Use. If your required use is to replace the original oxygen-sensing component of an oxygen analyzer, consult the Honeywell Healthcare Solutions XRL Cross Reference list for selecting the appropriate sensor.

FEATURES AND BENEFITS

Quality
- Compliant with European MDD (CE certification)
- Compliant to EU RoHS Directive 2011/65/EU as amended by Directive 2015/863
- Industry-leading lifespan
- Designed and manufactured according to EN ISO 13485

Flexibility
- Customized sensor design
- Simple analysis of sensor signal
- Flexible response times

Accuracy
- Linearity of sensor signal between 0 % to 100 % oxygen better than 3 % relative
- Meets ISO 80601-2-55 requirements
- Built-in NTC compensation

On-going Research
- Long-term tests

EnviteC by Honeywell

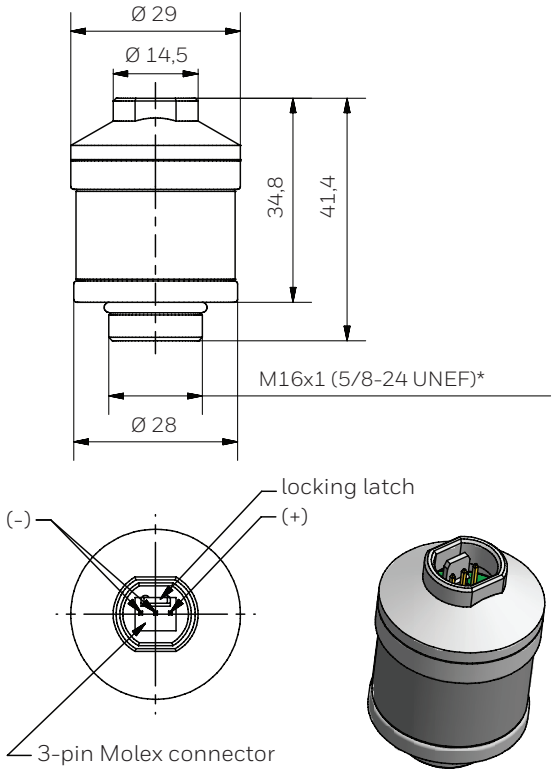
HONEYWELL HEALTHCARE SOLUTIONS GMBH GAS SENSORS
OOMLF102

TABLE 1. TECHNICAL SPECIFICATIONS	
Characteristic	**Measure**
Measurement principle	galvanic fuel cell
Measurement range	0 % ... 100 % oxygen (at atmospheric pressure)
Nominal sensor lifetime	> 700,000 % volume oxygen hours
Initial output signal range in ambient air	9 mV...14 mV
Electrical interface	3-pin (Molex® 22-11-1031)
Accuracy	meets ISO 80601-2-55 requirements
Repeatability	< 1 % volume O_2 at constant temperature and pressure
Linearity error	< 3 % relative
Response time	< 12 s to 90 % of final value
Zero offset voltage	< 0.5 % volume O_2 in 100 % N_2, applied for five minutes
Cross interference	meets ISO 80601-2-55 requirements (Nitrous Oxide, Helium, Isoflurane, Desflurane, Sevoflurane, and Xenon tested)
Influence of humidity	-0.03 % rel. per %RH at 25°C
Pressure range	0.6 bar ... 2 bar (ppO_2 0 ... 1250 mbar O_2)
Influence of pressure	proportional to change in oxygen partial pressure
Influence of mechanical shock	< 1 % relative after a fall from 1 m
Operating temperature	0°C ... 50°C
Temperature compensation	built-in NTC compensation
Effect of temperature compensation (steady state)	between 25°C and 40°C: 3 % relative error between 0°C and 50°C: 8 % relative error
Operating humidity	0 % ... 99 %RH non-condensing
Long-term output drift	< 1 % vol. oxygen per month in air averaged about 12 months
Storage temperature	-20°C ... 50°C
Recommended storage	5°C ... 15°C
Recommended load	≥ 100 kOhm
Warm-up time	< 30 minutes, after replacement of sensor
Weight	approximately 23 grams
Expected operating lifetime	>3 years
Restriction of hazardous substances	compliant to EU RoHS Directive 2011/65/EU as amended by Directive 2015/863
Part number	E1002523

All specifications are applicable at standard conditions: 1013 hPa, 25°C dry ambient air
Technical information is subject to change without notice.

Product Dimensions

All dimensions in mm



General tolerances ISO 2768-c
*Intermediate thread: Metric/Unified Extra Fine

For suitable accessories and sensors, please refer to https://sps.honeywell.com/gb/en/support/advanced-sensing-technologies/cross-reference-list

For more information

Honeywell Sensing & 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 sps.honeywell.com/ast or call:

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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 available for download on the Honeywell website.

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

SAFETY NOTE

This sensor is designed to be used in safety critical 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.

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001-33-Datasheet_OOMLF102 | 3 | 07/23

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