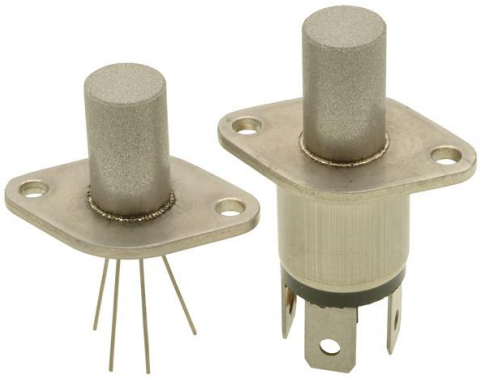
Honeywell

KGZ-10 Series

Oxygen Sensors



DESCRIPTION

The KGZ-10 is a high-accuracy, zirconia-based oxygen sensor. The ability of the sensor to operate without any reference gas makes it ideal for potential applications such as combustion control or aircraft oxygen generation systems.

The sensor employs two ZrO_2 discs with a small hermetically sealed chamber in between. One of the discs functions as a reversible oxygen pump, which is used to successively fill and empty the chamber. The second disc measures the ratio of the partial pressure difference and generates a corresponding sense voltage.

A heat element produces the 700 °C [1292 °F]required for the ZrO_2 to operate as an O_2 pump. The time taken for the pump to achieve specific minimum and maximum pressures within this chamber is a measure of the partial oxygen pressure of the environment.

The KGZ-10 has to be operated by an electronic measuring circuit that controls the sensor operation and signal processing. This circuit can either be incorporated into the customer's own electronics, or be purchased as a separate interface board from Honeywell.

FEATURES

- High-accuracy measurement
- Low power consumption
- No reference gas required
- Linear output signal
- No need for temperature stabilization
- Function testing and calibration in ambient air
- Long life

POTENTIAL APPLICATIONS

- Boiler combustion controls
- Aircraft oxygen generation systems

KGZ-10 Series

Table 1. Technical Specifications

Characteristic	Parameter
Sensor voltage levels (recommended)	45-64-85 mV
Pump current (recommended)	40 uA
Heater supply,	4.0 V (1.7 A)
Heater supply (stand by)	2.0 V
Pump resistance at 700 °C [1292 °F]: dc ac	 1 kOhm, typ. 1 kHz, 120 Ohm, typ.
Oxygen pressure range	2 mbar to 3 bar
Operational temperature	700 °C [1292 °F]
Stand by temperature	500 °C [932 °F], typ.
Sensitivity	1.05 ms/mbar
Accuracy	<5 mbar
Response time	<4 s
Warm up time	<100 s
Warm up time (from stand by)	<20 s
Permissible gas temperature	-100 °C/250 °C [-148 °F/482 °F]
Gas flow rate	0 m/s to 10 m/s
Repetitive permissible acceleration	5 g
Incidental permissible acceleration	30 g

Figure 1. KGZ-10 Dimensions (For reference only: mm/in.)

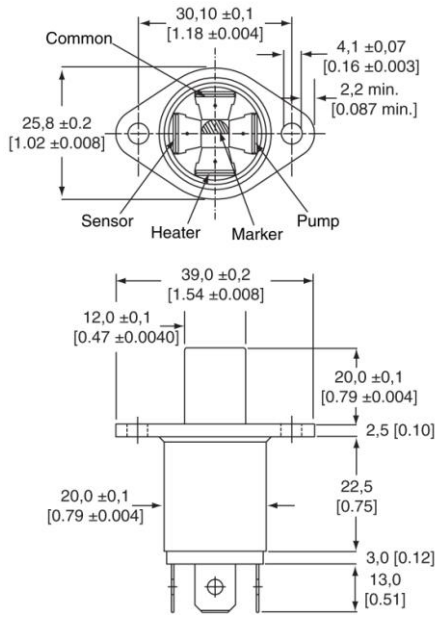
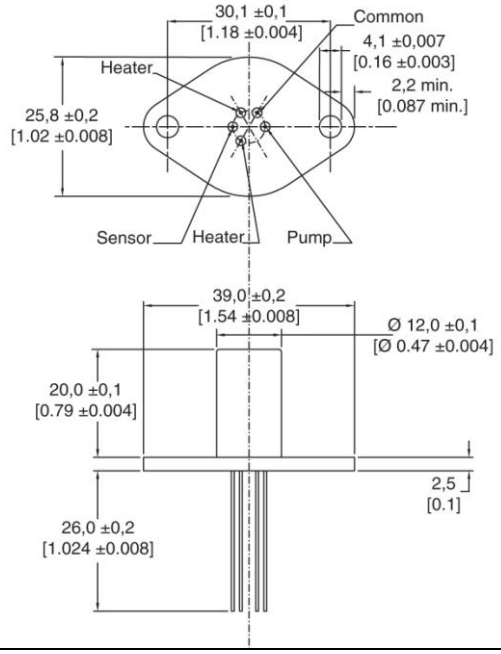


Figure 2. KGZ-10SP Dimensions (For reference only: mm/in.)



Order Guide

Catalog Listing	Description
KGZ-10	Oxygen sensor, flange mount with tabs
KGZ-10SP	Oxygen sensor, flange mount with pins

⚠ WARNING

PERSONAL INJURY

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

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

WARRANTY/REMEDY

Honeywell warrants goods of its manufacture as being free of defective materials and faulty workmanship. Honeywell's standard product warranty applies unless agreed to otherwise by Honeywell in writing; please refer to your order acknowledgement 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 it 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 we provide application assistance personally, through our literature and the Honeywell web site, it is up to the customer 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 printing. However, we assume 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.

SALES AND SERVICE

Honeywell serves its customers through a worldwide network of sales offices, representatives and distributors. For application assistance, current specifications, pricing or name of the nearest Authorized Distributor, contact your local sales office or:

E-mail: info.sc@honeywell.com

Internet: www.honeywell.com/sensing

Phone and Fax:

Asia Pacific	+65 6355-2828
	+65 6445-3033 Fax
Europe	+44 (0) 1698 481481
	+44 (0) 1698 481676 Fax
Latin America	+1-305-805-8188
	+1-305-883-8257 Fax
USA/Canada	+1-800-537-6945
	+1-815-235-6847
	+1-815-235-6545 Fax

Sensing and Control
Honeywell
1985 Douglas Drive North
Golden Valley, MN 55422
www.honeywell.com/sensing

Honeywell

100458-3-EN IL50 GLO Printed in USA
February 2011
Copyright © 2011 Honeywell International Inc. All rights reserved.

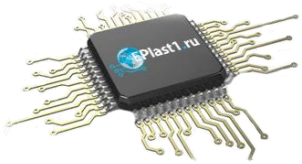
Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits,General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)
Факс: 8 (812) 320-02-42
Электронная почта: org@eplast1.ru
Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.