

# O<sub>2</sub> and CO<sub>2</sub> Food Package Analyzer

Model 9070

- *Oxygen and CO<sub>2</sub> analysis*
- *Simple and reliable*
- *Low maintenance*

## SIMPLE TO USE

After inserting the sample probe into a package or container, Teledyne's Model 9070 Food Package Analyzer automatically draws a sample and displays the lowest reading of oxygen and the highest reading of carbon dioxide. There is no need to touch a key or button during the analytical process. The 9070 is ideal for spot checking or installation on a packaging machine for continuous measurement of the gas flushing process.

## ACCURACY WITHOUT CALIBRATION CHECKS

The model 9070 uses a robust zirconia oxygen sensor which provides years of accurate, drift-free readings from 1 ppm to 100% with only an occasional reading in air to assure a precise analysis. The new carbon dioxide sensor offers exceptional long term stability and automatically zeroes itself for every reading. The sensor only requires calibration once per week. The recalibration process is a simple keyboard entry. No other maintenance of the sensor or unit is required.

## HEAD SPACE REQUIREMENTS

When testing food packages, the operator pushes a hypodermic sample tube through a self-adhesive septarium - the instrument does the rest. A piercing tool is provided for metal containers and caps. For accurate readings, only 4cc of head space volume is required.

## PRINTER PORT

To print a report, connect a standard printer or personal computer to the 9070 for a complete summary of every test. Alternatively, a personal computer or analog recorder can be connected to the 4-20mA outputs.

## SELF DIAGNOSTICS

The programmable alarm relay can be set at any oxygen or carbon dioxide level or to alert the operator for a variety of other functions. The advanced alarm system continuously monitors the sensors' performance. If a fault is detected, the instrument immediately alerts the operator and displays the fault.



## WORLD LEADER IN OXYGEN ANALYSIS

In addition to the 9070, Teledyne offers a broad range of process trace and percent oxygen analyzers and complete monitoring systems to satisfy unique applications.

## MODEL DESIGNATIONS

Model	Measurement	Pump
9070-1	Oxygen	Yes
9070-2	Oxygen	No
9070-3	Oxygen & CO <sub>2</sub>	Yes

## ADVANTAGES

- Can be used for spot checks or continuous monitoring
- Long-life, maintenance free sensors
- Only 4cc of head space required for a sample
- Programmable alarm relays
- Light weight and portable

## STANDARD FEATURES

- Two isolated, linearized 4-20mADC outputs
- Computer / printer interface for data
- Self diagnostic alarm
- LCD display content options
- One user-programmable alarm relay
- Accessory kit for various applications

 **TELEDYNE ANALYTICAL INSTRUMENTS**

*SENSORS ○ ANALYZERS ○ SYSTEMS ○ SCIENTIFIC SOLUTIONS*

**SPECIFICATIONS**

**Measuring Range:**

- 1ppm to 100% oxygen autoranging
- 0 to 100% CO2
- Sample gas must be free of combustibles, otherwise O2 reading will be low. Ask about available filters.

**Response Time:**

- O2 < 2 seconds with a gas flow of 100cc/min
- CO2 < 4 seconds with a gas flow of 100cc/min
- Add sample tubing purge time to these figures

**Accuracy:** O2 +/-1% of actual reading  
CO2 +/-3% of full scale

**Warm up time:** 7 minutes

**Outputs:**

- Two isolated linearized 4-20mADC outputs into 1000 (omega) load (max)
- RS-232/485 computer/printer interface or data logging for peak oxygen/carbon dioxide value report and alarm functions
- One common alarm relay for self diagnostic alarms
- One user selectable alarm relay

**Power:** 240/110 Vac, 50/60 Hz, 115W

**Gas connection:** 1/8" swagelok tube connector

**Flow rate range:** 100 - 500cc per minute

**Environmental:** 0-125°F (-17 to 51°C) ambient temperature  
0-115°F (-17 to 46°C) ambient temperature when CO2 sensor fitted

**Weight:** 10 lbs (4.536 kg)

**Dimensions:** 10.8" W x 6.5" H x 11" D  
(274mm W x 165mm H x 279mm D)

**Range of Output 1:**

- 1ppm to 100% oxygen with field selectable span and zero (Minimum span is 100ppm oxygen)

**Range of Output 2:**

- 0 to 100% CO2
- Sample oxygen (lowest value of last sample held)

**LCD display options:**

*Any or all of the following can be selected for lower line display of the 32 character, back-lit, LCD*

- Sample oxygen / carbon dioxide
- Balance gas (remaining gas after the O2 and CO2 have been removed)
- Oxygen sensor EMF
- Oxygen sensor temperature
- Oxygen sensor impedance
- Ambient temperature and relative humidity
- Date / time, hours since last service; date of last service

**Relay contacts:** 0.5A - 24Vac, 1A - 36Vdc

**Sampling pump:** Integral diaphragm pump

**Mounting:** Desktop (Also available as a surface mount analyzer with an external oxygen sensor.)

**Accessories:**

- Metal can piercing tool
- Hypodermic syringe for plastic packs
- Septum for sealing plastic packs
- Filters for dry dust, wet dust or hydrocarbons
- Flashback arrester for hazardous applications
- Calibration check gas solenoid valve
- Calibration check flowmeters

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**www.teledyne-ai.com**

**Warranty**

Instrument is warranted for 1 year against defects in material or workmanship

NOTE: Specifications and features will vary with application. The above are established and validated during design, but are not to be construed as test criteria for every product. All specifications and features are subject to change without notice.

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**The 9070 is a CE marked product**



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