

# Selective gas measurement

# Portable

O<sub>2</sub>

Portable system



# O<sub>2</sub> Portable 3650-3655

**Measures to within 1 ppb for trace level accuracy; high sensitivity  
3655 version measures down to 0.1 ppb.**

**Tough NEMA 4X / IP 67 stainless steel construction, built to last.**

**Very fast first result—typically from saturation to 2 ppb in 3 min.; no “warm up” for accurate measurement.**

**No sample preparation needed; measures gases in both dissolved and gaseous phases.**

**No moving parts means little maintenance - typically every 6 months.**

**Stores up to 500 readings which can be simply downloaded onto a PC for analysis.**

The exclusive guard ring oxygen sensor technology reduces residual signals to negligible levels, eliminating the need for zero point calibration. The O<sub>2</sub> sensor is quickly and easily calibrated by exposing the sensor to air and pressing the “CAL” button three times. (This button can be electronically locked out to prevent inadvertent use.) This patented sensor technology also provides for very fast response times, essential for multiple measurements.

This is particularly important for the first measurement, where the sensor may have been exposed to the air before encountering ppb-level concentrations. The sensor is provided with a stainless steel screw-on protection cap that produces a tighter membrane seal for improved stability and dramatically extended service life.

The analyzer offers the ability to select different membranes for the sensor, optimizing for a wide range of measurement applications.

The display gives a continuous concentration reading, therefore no conversion tables are needed. By pressing one of the keyboard buttons, the temperature of the sample is displayed. The display is large and easy to read.

The chassis is made from stainless steel making it strong and robust to handle harsh plant environments. It is waterproof and corrosion protected.

## **Windows software**

With the instrument comes a Windows software package which enables you to analyze the stored measurements.

## **Cleaning**

The instrument can be simply cleaned by flushing it with warm water.

## **Sensor**

## **Membrane selection**

## **Display**

## **Chassis**



### Sample inlet tube

The inlet tube is connected to a sample point by a simple connector, making it quick and easy to use.

### Sample outlet tube

The outlet tube allows the sample to be drained away.

### Handle

The large handle makes the instrument easy to handle even when wearing gloves.

### RS-232 and DC power connection

By using the RS-232 connection, stored measurements can be simply downloaded onto a PC for analysis. This connection can also be used to supply a DC power supply using an optional AC/DC transformer.

### Battery compartment

The instrument runs off two standard or rechargeable C type, NiCd or alkaline batteries having a total of 2.4 to 3 volts. A "Low battery" message is shown on the display when it is time to change the batteries. It is quick and easy to change the batteries. Stored measurements are not lost during battery change.

### Rubber bumpers

These give additional protection to the instrument.



# O<sub>2</sub>

### Sample flow rate adjustment valve

This valve controls the flow rate of the sample through the flow chamber.

### Flow chamber

The flow chamber allows the sample to flow over the membrane of the sensor.

### Gas concentration and temperature units

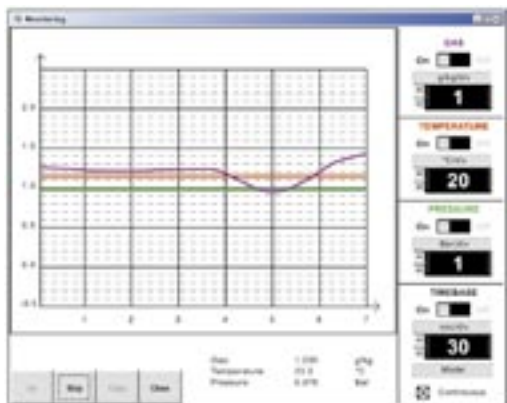
Different gas and temperature units can be displayed depending on the application.

### Keyboard

Due to the layout of the buttons the angled key board is easy to use.



# & safe



“Stored data allows sample concentration and temperature to be monitored”

### Instrument Description

<b>Power supply</b>	Batteries: two C-type cells, NiCd or alkaline, each 26 x 50 mm, 2.4–3 volts total
<b>Power autonomy</b>	40 hours continuous use
<b>Signal drift</b>	0.5% of reading between services
<b>Digital interface</b>	RS-232C
<b>Temp. compensation range</b>	-5 to +60 °C
<b>Instrument operating limits</b>	-5 to +100 °C
<b>Enclosure</b>	IP 67/NEMA 4X, stainless steel
<b>CE certification</b>	Electromagnetic Compatibility Standards: EN50081-1, EN50081-2, and EN50082-1
<b>Dimensions (W x H x D)</b>	115 mm x 150 mm x 220 mm
<b>Weight</b>	2.5 kg

### Instrument configurations

	<b>Model</b>	<b>Display units</b>	<b>Display resolution</b>
<b>Dissolved O<sub>2</sub> Micro Logger</b>	3650/111	ppm/ppb or ppm only	1 ppb or 0.001 ppm
<b>Gas phase O<sub>2</sub> Micro Logger</b>	3650/112	% or ppm	1 ppm
<b>Dual-use (gas/liquid) O<sub>2</sub> Micro Logger</b>	3650/113	ppm (liquid) or % (gaseous)	0.001 ppm or 0.001 %
<b>Dissolved O<sub>2</sub> Power Logger</b>	3655/111	ppm/ppb or ppm only	0.1 ppb or 0.001 ppm

Note: Instruments are user-configured for a particular membrane, depending on application. This determines display resolution and measurement limits.

### Measurement limits

	2935A	2952A	2956A	2958A	29521A	29552A	2995A
<b>Membrane model</b>	2935A	2952A	2956A	2958A	29521A	29552A	2995A
<b>Response time</b>	2.5 min.	38 sec.	7.2 sec.	9.5 sec.	18 min.	90 sec.	80 sec.
<b>Dissolved O<sub>2</sub> measurement range</b>	10 ppb-400 ppm	1 ppb-80 ppm	0.1 ppb-20 ppm	1 ppb-40 ppm	10 ppb-400 ppm	2 ppb-80 ppm	50 ppb-2000 ppm
<b>Gaseous O<sub>2</sub> measurement range</b>	20 Pa-1000 kPa	5 Pa-200 kPa	0.25 Pa-50 kPa	2 Pa-100 kPa	20 Pa-1000 kPa	5 Pa-200 kPa	100 Pa-5000 kPa
<b>Minimum liquid flow rate</b>	25 ml/min.	50 ml/min.	180 ml/min.	120 ml/min.	25 ml/min.	50 ml/min.	5 ml/min.
<b>Minimum gaseous flow rate</b>	0.1 to 3 l/min.	0.1 to 3 l/min.	0.1 to 3 l/min.	0.1 to 3 l/min.	0.1 to 3 l/min.	0.1 to 3 l/min.	0.1 to 3 l/min.



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