

ORBISPHERE 3650/55

O_2



**Selective
gas measurement**
Portable system



EXCELLENCE IN PROCESS ANALYTICS

O₂

ORBISPHERE 3650/55

The ORBISPHERE 3650/3655 offers a robust portable system solution for oxygen measurement.

Designed to be used with ORBISPHERE high quality oxygen sensors, these instruments provide accurate and quick measurements in both the dissolved and gas phases.

These portable instruments are designed for the harsh environment of breweries and are also perfectly adapted for laboratory or verification purposes in the power generation, electronics, life sciences and other beverage industries.

Sensor

The exclusive guard ring oxygen sensor technology reduces residual signals to negligible levels, eliminating the need for zero point calibration. The O₂ 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 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.

Membrane selection

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

Display

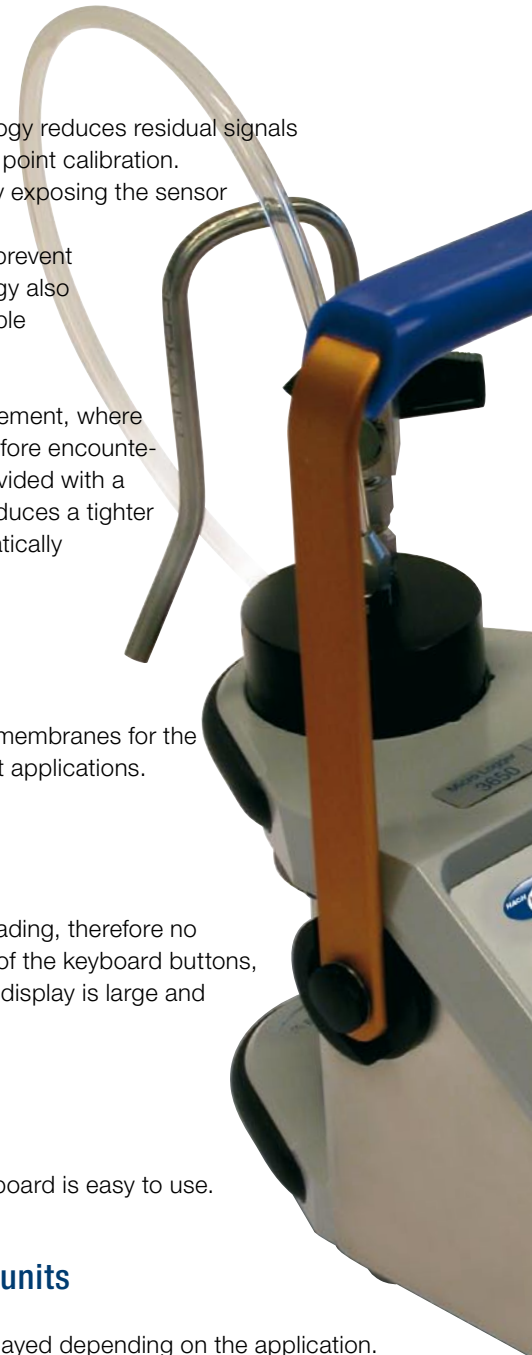
The display gives a continuous concentration reading, therefore no conversion tables are needed. By pressing one of the keyboard buttons, the temperature of the sample is displayed. The display is large and easy to read.

Keyboard

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

Gas concentration and temperature units

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



- *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*

Handle

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

Flow chamber

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

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.

Sample flow rate adjustment valve

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

Chassis

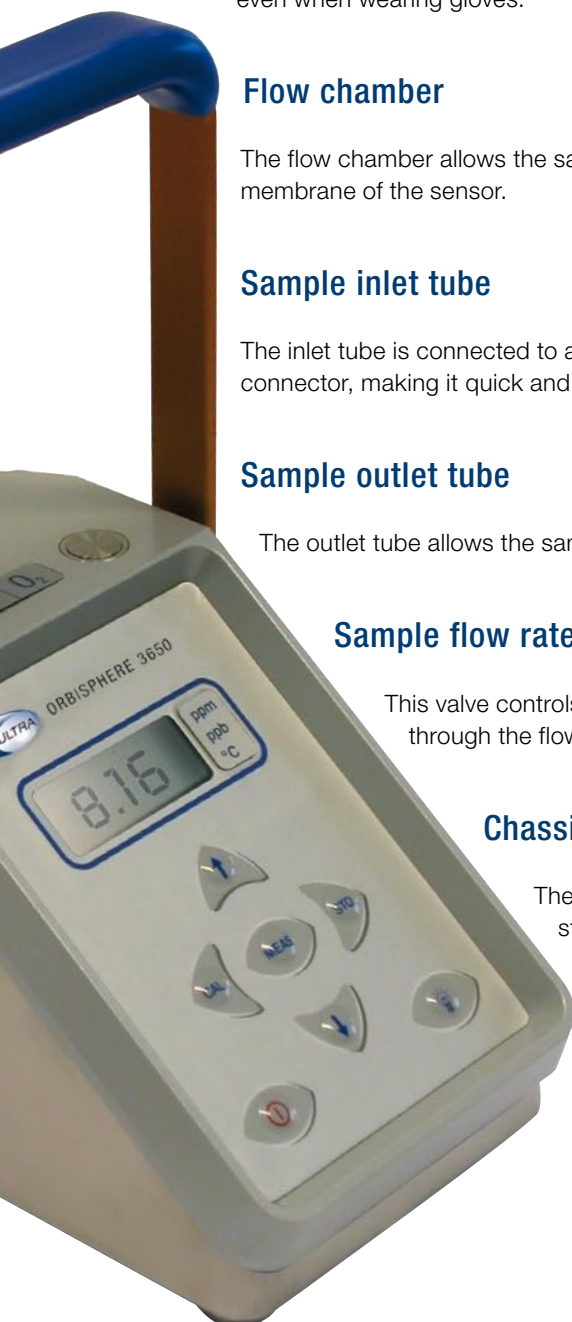
The chassis is made from stainless steel making it strong and robust to handle harsh plant environments. It is waterproof and corrosion protected.

RS-232 and DC power connection

By using the RS-232 connection, stored measurements can simply be 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 ORBISPHERE 3650/55 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.



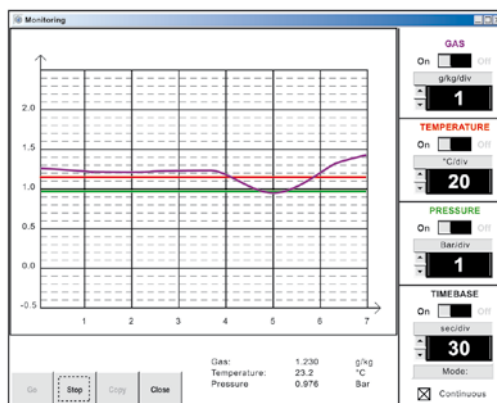
Performance Specifications

Instrument Description

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

Instrument configurations

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



"Stored data allows sample concentration and temperature to be monitored"

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

Measurement limits

Membrane model	2952A	2956A	2958A	29552A	2995A
Response time	38 sec	7.2 sec	9.5 sec	90 sec	80 sec
Dissolved O ₂ measurement range	1 ppb-80 ppm	0.1 ppb-20 ppm	1 ppb-40 ppm	2 ppb-80 ppm	50 ppb-2000 ppm
Gaseous O ₂ measurement range	5 Pa-200 kPa	0.25 Pa-50 kPa	2 Pa-100 kPa	5 Pa-200 kPa	100 Pa-5000 kPa
Minimum liquid flow rate	50 ml/min	180 ml/min	120 ml/min	50 ml/min	5 ml/min
Minimum gaseous flow rate	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

Global Headquarters

6, route de Compois - CP 212
1222 Vésénaz - Geneva - Switzerland
Tel ++ 41 (0)22 594 64 00
Fax ++ 41 (0)22 594 64 99

Americas Headquarters

481 California Avenue
Grants Pass - Oregon 97526 - USA
Tel 1 800 866 7889 / 1 541 472 6500
Fax 1 541 479 3057

