Orbisphere 510 Multichannel Gas and Dissolved Gas Analyzer

Applications
- Food and Beverage
- Industrial Water
- Pure Water Applications
- Power (non-nuclear)

Precise, Powerful Process monitoring

The Orbisphere 510 is a multichannel gas and dissolved gas analyser. Connect up to 3 Orbisphere high quality Luminescent Dissolved Oxygen sensors to measure O_2, Electrochemical sensors to measure O_2, O_3, or low levels of H_2 and Thermal Conductivity sensors for selective measurement of CO_2, N_2 or H_2. These instruments provide accurate, repeatable trace level gas analysis and an impressive level of data management.

Maximum Accuracy

Multiple point monitoring with up to three sensor inputs. High level of measurement accuracy and rapid response time means reliable and effective process monitoring. Common interference effects due to CO_2, H_2S, H_2, N_2, humidity, salinity and chlorinity can be eliminated during the configuration process.

Intuitive to Use

With an easy to use, intuitive software navigation it is simple to use for line operators and flexible enough for the needs of technical personnel.

Digital Communication

Orbisphere 510 instruments are fully compatible with all Orbisphere electrochemical sensors including Smart sensors. Smart sensors can be calibrated in the laboratory before installing on-line and store their own calibration information. Simple transfer of product list and global configuration settings between instruments using USB-client or USB-host.

Minimal Maintenance

Internal diagnostics simplify trouble-shooting and issue reminders for maintenance and calibration. Adjustable alarms and outputs provide assurance that any out of specification events are appropriately registered.

Data Storage & Security

Data storage of up to 10,000 measurements, last 1,000 operator actions and details of last 50 calibrations. Software password protection offers 5 levels of control access, minimising the risk of errors in operation or configuration.

Be Right™

Technical Data*

Measurements	Resolution, accuracy and response time are determined by sensor
Sensor	Up to 3 Orbisphere sensors (with a maximum of 2 TC sensors) Orbisphere Luminescent Dissolved Oxygen sensor for O_2 and in combination with TC CO_2 measurements Orbisphere Electrochemical sensor for O_2, H_2, low level, O_3 measurements Orbisphere Thermal conductivity sensor for CO_2, N_2 measurements
Units	Gas concentration: configurable for gas or liquid phase with multiple unit options Pressure: external and barometric pressure with multiple unit options Temperature: sample temperature with unit options (K, °C, °F)
Operating Conditions	-5 - 50 °C / 0 - 95% non-condensing relative humidity, for 1 channel -5 - 45 °C / 0 - 95% non-condensing relative humidity, for 2 channels -5 - 40 °C / 0 - 95% non-condensing relative humidity, for 3 channels
Thermal Cut-off	Configurable thermal cut-off for sensor protection
Interference Correction	EC sensor: Chlorinity/salinity/CO_2 insensitivity/H_2S insensitivity/H_2 for O_2
Compensation Options	O_2 / N_2 compensation for electronics applications
Communication	RS485 Profibus DP (optional) Ethernet USB-client to download data from a computer USB-host to download data with a USB memory stick
Analog Outputs	3 smart 0/4-20 mA (500 ohms), programmable as linear or tri-liniear, configurable to send diagnostics information
Relays	3 measurement alarm relays (2A to 30 VAC or 0.5 A to 50 VDC); configurable to send diagnostics information 1 system alarm relay (2 A to 30 VAC or 0.5 A to 50 VDC)
Password Protection	5 levels of authorised access to configuration and data management
Data Storage	Rolling buffer or store once mode for up to 10,000 measurements and 1000 operator actions Holds calibration records for last 50 calibrations
Display	Color TFT touch-screen display
User Interface	Touch-screen panel displays: concentration, trend graph, diagnostics, alarm status, historical data
Compliance Certifications	EMC: EN61326-1:2006 CE: EN61010-1:2010 ETL, conforming to UL 61010-1 and CSA 22.2 No. 61010-1

Mounting Options	**Panel mount version**	**Wall and pipe version**	**Portable version**
Power	Universal 100/240 VAC @ 50/60 Hz, 25 VA; or 10 - 36 VDC, 25 W	Universal 100/240 VAC @ 50/60 Hz, 25 VA; or 10 - 36 VDC, 25 W	5 V supplied through external 85 - 264 VAC @ 50/60 Hz, with optional 4 hours duration battery pack
Material	Aluminum	Stainless steel	Aluminum
Enclosure Rating	IP65	IP65 / NEMA 4X	IP65
Dimensions (H x W x D)	156 mm x 220 mm x 253.5 mm	230.5 mm x 250 mm x 160 mm	225 mm x 250 mm x 219 mm
Weight	2.9 kg	3.8 kg	3.8 kg

Subject to change without notice.

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Several controller configurations depending on parameter/sensor, mounting, communications, and power options are available. Please contact Hach for more details.

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