Orbisphere 410
Process Gas Monitors

Dissolved Gas

Features and Benefits

- *Easy to use, intuitive software using clear, monochrome touch-screen*

- *Internal diagnostics and reminders for maintenance and calibration*

- *IP65 stainless steel enclosure for harsh industrial environments*

- *Multiple communication options including USB, Ethernet, and Profibus*

The Orbisphere 410 offers precise, process monitoring capability. Designed to complement the Orbisphere high quality oxygen and ozone sensors these instruments provide accurate, repeatable trace level measurements and an impressive level of data management. These process monitoring instruments are designed for applications in the power generation, electronics, life sciences, beverage, chemical and water treatment industries.

Easy to use, reliable, and flexible air particle counter

All functions of Orbisphere 410 instruments are accessed through the monochrome touch screen. This screen acts as display and keyboard.

Orbisphere 410 instruments are designed for ease of use. After simple installation, the system is measuring your process in minutes. The main measurement window continuously displays real time process readings, graphed sensor trends (user selectable from last 1 minute to last 1 hour), alarm limits, temperature and event occurrence. Sensor life can be extended during CIP cleaning and other high temperature procedures through automatic isolation of the sensor above a pre-selectable level. Common interference effects due to CO_2, H_2S, salinity and chlorinity can be eliminated during the configuration process. Measurement, configuration, calibration and standard service routines are called up using the simple-to-follow menus on screen. Access levels are password protected, supporting regulatory compliance to standards such as ISO and 21 CFR Part 11, ensuring problem free audits and reducing compliance costs.

The Orbisphere 410 software defines the step-by-step process for calibration of both measured gas and interferences. Orbisphere's unique Air Cal or direct value calibration may be used. A report generated following each calibration ensures traceability. A log file containing details of the previous 10 calibrations further supports traceability. Barometric pressure calibration for the instrument's internal sensor may be carried out simply by comparison with a precision-certified barometer.

Digital communication uses industry standard protocols including Profibus DP, USB, and Ethernet in addition to traditional analog outputs and alarm relays. These may all be configured in terms of function, content and behavior. Orbisphere 410 instruments are compatible with Orbisphere O_2 and O_3 electrochemical sensors including Smart sensors. Smart sensors can be calibrated in the laboratory before installing on-line; they store their own calibration information, so allowing laboratory precision calibration and minimizing process downtime.

To ensure continuous high performance and simplify maintenance, Orbisphere 410 instruments offer a number of diagnostic features including:

- *Notification that calibration is due—ensures QC procedural compliance*

- *Notification that a sensor service is due—optimal preventative maintenance planning*

- *Sensor service diagnostics—minimizes downtime*

- *System alarms transmitted through analog output—continuous status indication*

PW

IW

FB

HACH ®

Be Right™

Specifications*

Versions
Wall and pipe version
Panel mount version

Measurement
Resolution: 0.1 ppb oxygen
Accuracy and response time:
determined by sensor

Sensor Options
Orbisphere 311XX electrochemical
oxygen sensors
Orbisphere 313XX electrochemical
ozone sensors
Orbisphere 31XXXs oxygen
or ozone Smart sensors

Units
Gas concentration: Configurable for gas
or liquid phase with multiple unit options
Temperature: Sample temperature with
unit options (K, °C, °F)
Pressure: Barometric pressure with
multiple unit options

Sample Frequency
Continuous measurement

Interference Correction
Chlorinity correction
Salinity correction
CO_2 insensitivity
H_2S insensitivity

Communications
RS485, USB client, USB Host, Ethernet,
Profibus DP (optional)

Analog Output
Three smart 4-20 mA or 0-20 mA
(software configurable),
R maximum 600Ω

Relays
Three measurement alarm relays
(2A-30 Vdc or 0.5A-50 Vac)
One instrument system alarm relay
(2A-30 Vac or 0.5A-50 Vdc)

CE Certification
Electromagnetic compatibility standards:
EN 61326-1- A1 & A2
Safety standard: EN 61010-1

Calibration Data
Holds calibration records for last
10 calibrations

Data Storage
Rolling or store once mode for up to
1,000 measurements and 1,000 last
operator actions

Password Protection
Five levels of authorized access to
configuration and data management

Power Requirements
Mains units: Universal 85-264 Vac
@50/60 Hz, 25 VA; or 10-36 Vdc, 25 W

Power Consumption
Maximum 6 W

Operating Limits
-5 to 50°C, 0 to 95% non-condensing
relative humidity

Thermal Cut-off
Configurable thermal cut-off for
sensor protection

Enclosure
Wall/Pipe: Stainless steel, IP65
Panel: Aluminum, IP65

Display
Monochrome STN 320 x 240 pixels
with LED backlight

Keypad
Touch-screen panel

Languages
5 major European languages are
available as standard, Chinese (C),
Japanese (J) or Korean (K) versions
can be ordered specifically

Dimensions
Wall/Pipe
Height: 230.5 mm (9.08 in)
Depth: 160 mm (6.29 in)
Width: 250 mm (9.84 in)
Panel
Height: fascia - 156 mm (6.14 in),
enclosure - 123 mm (4.84 in)
Depth: 250 mm (9.84 in)
Width: fascia - 220 mm (8.66 in),
enclosure - 214 mm (8.43 in)

Weight
Wall/Pipe: 3.4 kg (7.50 lb)
Panel: 2.9 kg (6.39 lb)

CE

*Specifications subject to change without notice.

At Hach, it's about learning from our customers and providing the right answers. It's more than ensuring the quality of water—it's about ensuring the quality of life. When it comes to the things that touch our lives...

Keep it pure.

Make it simple.

Be right.

For current price information, technical support, and ordering assistance, contact the Hach office or distributor serving your area.

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