ORBISPHERE 366X EX ATEX ANALYSER SYSTEM

Applications

- Food & Beverage
- Drinking Water
- Power
- Industrial Water



Precise process monitoring.

- Wide range of gas analyses without interferences
- Verifiable calibration in air, liquid, or gas standard with negligible drift
- Easy installation

Intrinsically safe operation

The ORBISPHERE 366X EX family of instruments measures oxygen (O_2) and hydrogen (H_2) in areas where hazardous and flammable conditions are possible.

This instrument measures in aqueous or non-aqueous samples such as organics, olefins, fuels, monomers, aromatics, specialty chemicals, water and other liquids and gases.

ATEX certification

ORBISPHERE 3662 EX: Instrument and sensor in the hazardous area have ATEX certification: II 1 G Ex ia IIC T6 Ga.

ORBISPHERE 3660 EX: Instrument in the safe area and the sensor in the hazardous area, have the ATEX certification: II (1)/1 G Ex [ia]ia IIC T6 Ga.

Operation

When coupled with a choice of membrane covered electrochemical sensors, the ORBISPHERE 366X EX is suitable for sampling and measuring dissolved concentrations from trace ppb to super saturation and gaseous concentrations from vppm to percent (%) levels. These sensors can be constructed from a variety of chemically resistant materials and use an assortment of membranes with permeability and chemical resistance to optimise long-term measurement performance.

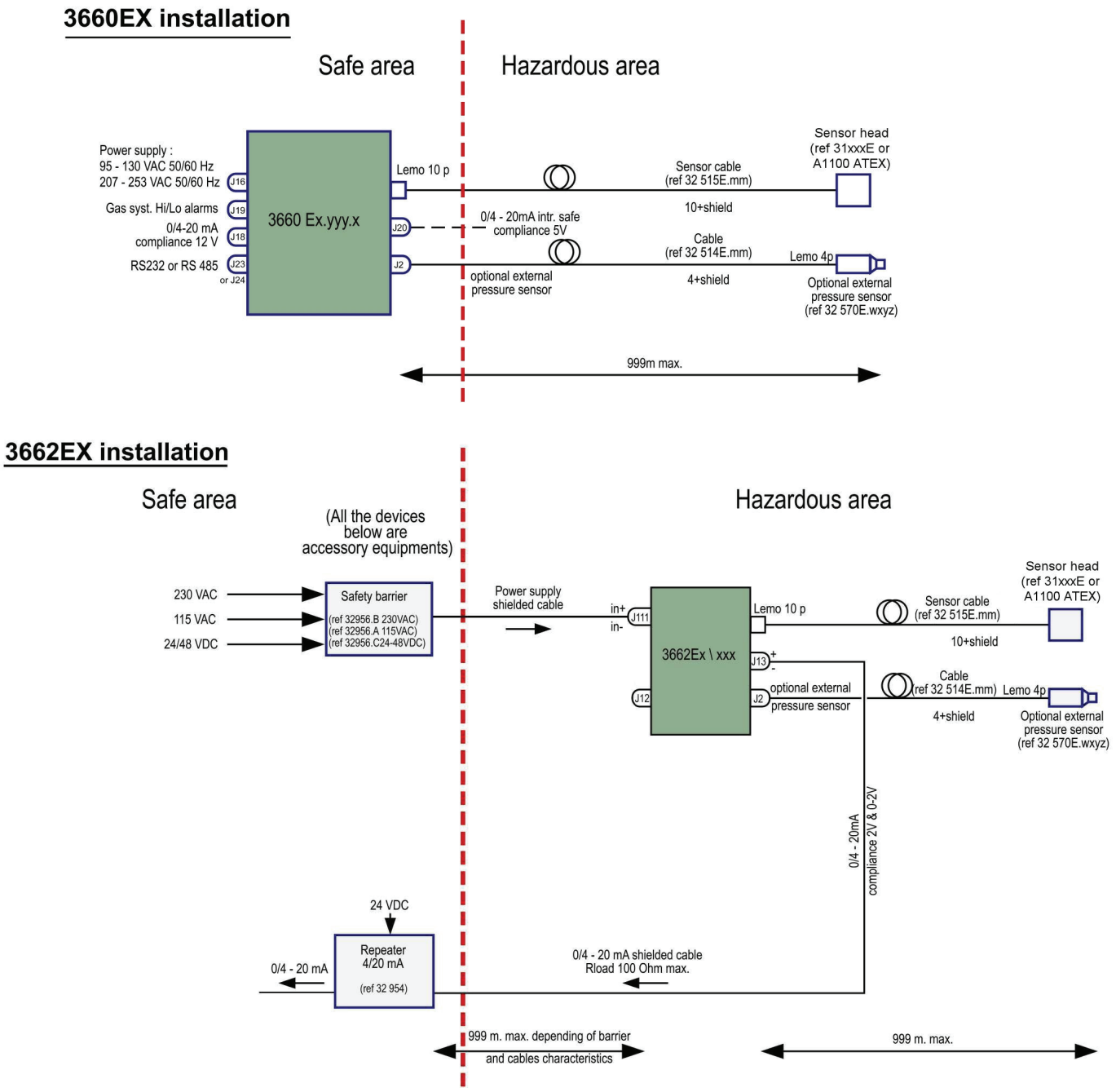
The ORBISPHERE 3662 EX comes into its own when it is necessary to mount both sensor and instrument inside a hazardous area. The complete system is designed to prevent any form of spark. It has current, voltage and RS485 outputs that should be connected to an isolated repeater to send the signal to the safe area.

The ORBISPHERE 3660 EX is suitable for installation outside of the hazardous area. This instrument receives a signal from a sensor which is installed in the hazardous area up to 1 km away.

The instrument has an intrinsically safe current output to stay in the hazardous area and current, alarms and serial outputs (RS232 or RS485) for connection in the safe area.

Benefits

- Sampling with in-line and sidestream accessories
- Wide range of gas analyses without interferences from pressure, fl ow, moisture or other gases



ATEX directive CENELEC marking explanation

Ex II (1)/1G ATEX marking: Surface apparatus withpermanent explosive gas presence. Equipment (sensor) to be used in the explosive area and safety device to be used in the safe area.

Ex II 1G ATEX marking: Surface apparatus with permanent explosive gas presence. Equipment (sensor) and safety device to be used in the explosive area.

1G Category: Equipment may be used with the presence of ignitable gases, vapors, and mist (excluding dusts) up to zone 0. In zone 0 the ignitable concentration of flammable gases, vapors and liquids can existcontinuously under normal operating conditions.

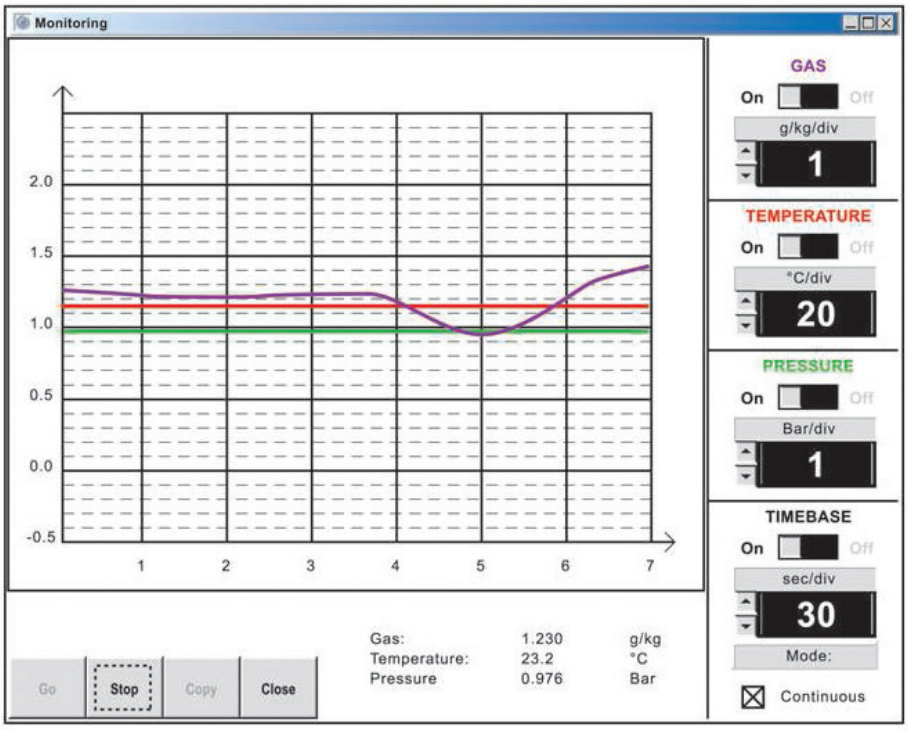
Ex Intrinsincally safe apparatus built to CENELECEuropean standards.

ia Type of protection: intrinsically safe, the highestcategory, based on a safety factor 1.5 on two faults. No combination of two faults in the analyser canproduce a spark or heating, eliminating risk ofignition in an explosive atmosphere.

IIC Gas group: corresponds to the most flammablegases, including acethylene and hydrogen.

T6 Temperature class: maximum surface temperature of 85 °C for an ambient temperature of 45 °C.

Ga Equipment Protection Level: very high for Gas, Mist, Vapor



ATEX 3660 Software

Technical Data*

3662 EX

Power requirements	6.5 to 13.5 VAC @ 50 mA, 0.8 W through a Zener barrier
Serial link	RS485 **(Only with the instrument located in safe area)**
Current output (hazardous area)	0/4 to 20 mA, software adjustable, non-isolated, Rmax=100 **(Requires 32954 isolator/repeater to send the signal to the safe area)**
Alarm output	Available in 0 to 4 mA current output range
Voltage output (hazardous area)	0 to 2 V, software adjustable, non-isolated, Rmin=100k **(Requires ATEX galvanic isolation to send the signal to the safe area)**
CE Certification	EMC Standards: EN 61326 Ex Standards: EN 60079-0, EN 60079-11
Intrinsically safe conformity	Ex II 1 G Ex ia IIC T6 under EU type Examination Certificate number LCIE 03 ATEX 6004 X for the 3662 EX

3660 EX

Power requirements	95 to 130 VAC/207 to 253 VAC ±10%, 50/60 Hz/20 VA
Serial link	RS232 or RS485
Current output	0/4 to 20 mA, software adjustable, non-isolated, Rmax=500
Alarm output	3 relays: high and low limits, system alarm, NO and NC contacts, current 1 A, voltage 24 VDC, power 24 W, hysteresis: ±1% of high or low limit
CE Certification	EMC Standards: EN 61326 Ex Standards: EN 60079-0, EN 60079-11
Intrinsically safe conformity	Ex II (1)/1 G Ex [ia]ia IIC T6 under EC type Examination Certificate number LCIE 03 ATEX 6354

Instrument Configurations

Model	Gas	Phase	Concentration Units
ORBISPHERE 366x EX / 1xx	O_2**	Dissolved	ppb/ppm; ppm; mg/L
		Gaseous	Pa/kPa; mbar/bar; %; % sat; ppm/%
ORBISPHERE 366x EX / 2xx	H_2	Dissolved	ppb/ppm; cc/kg
		Gaseous	Pa/kPa; mbar/bar; %

Both Instruments

Dimensions (W × H × D)	200 × 200 × 100 mm
Weight	2.5kg
Sensor cable max length	1km
Operating temperature	0 to 45°C
Enclosure rating	IP 65/NEMA 4, all stainless steel
CE certification	EN 61326

**Subject to change without notice.*
*** = CO_2 and insensitive available. / Note: Temperature units are available in Centigrade (°C) or Fahrenheit (°F) on all models.*
For all information about sensor performances and possible configurations, please refer to the sensor datasheet.

Order Information

Sensors and Accessories

A110E-xxS	Oxygen sensor
312xxE-xx	Hydrogen sensor
29501	Sensor socket pipe weld adapter
32001.xxx	Flow chamber for 0.25" or 6 mm
32003	ProAcc insertion/extraction valve for 1-4" pipe
32301	Electrochemical sensor cleaning and regeneration centre
32514E.mm	External pressure sensor cable (“mm” = length, standard length 3m)
32515E.mm	Sensor cable, (“mm” = length)
32538 RS-232	Cable for 32959 converter
32570E.Axxx	External pressure sensor, 0-3.5 bar (50 psia)
32696	ATEX 3660 Windows programme software
32954	Isolator repeater for 4/20mA output, installed in safe area if 4/20mA is used (for 3662 EX)
32956.x	Power supply safety barrier for 3662 EX (X = A: 115 VAC, B: 230 VAC, C: 24/48 VDC)
32959A	RS485/RS232 converter or 3662 EX

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