

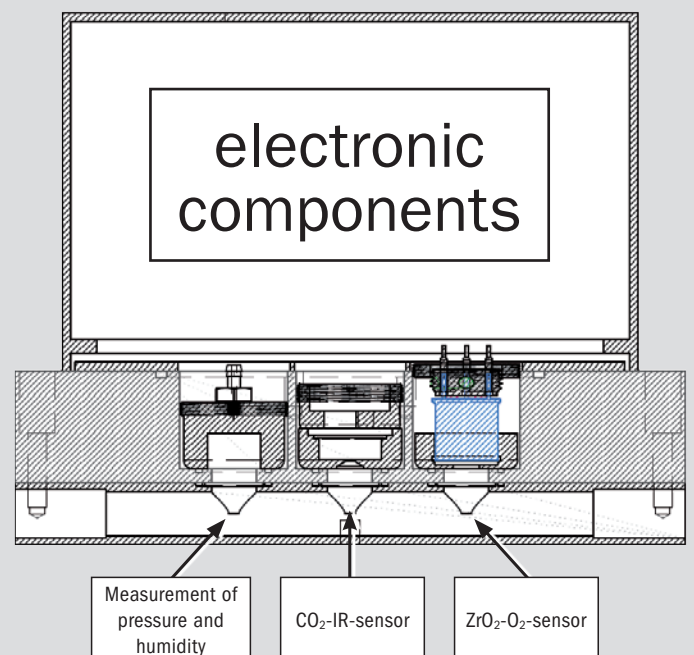
## Advantages

- > parallel measurement of O<sub>2</sub> and CO<sub>2</sub>
- > compact stainless steel housing
- > PAT conform in-situ- measurement
- > auto compensated humidity and pressure
- > no gas cooler, pumps or valves needed
- > connectable to any hose/tube or pipe
- > status display by luminous pushbuttons



## Application areas

- > online fermentation monitoring
- > real time process optimization
- > from lab to industrial scale



## Concentration ranges

0 - 10 Vol.% CO <sub>2</sub> , 0.1 - 25 Vol.% O <sub>2</sub>
0 - 25 Vol.% CO <sub>2</sub> , 0.1 - 25 Vol.% O <sub>2</sub>
0 - 10 Vol.% CO <sub>2</sub> , 1 - 50 Vol.% O <sub>2</sub>
0 - 25 Vol.% CO <sub>2</sub> , 1 - 50 Vol.% O <sub>2</sub>

## O<sub>2</sub> sensor unit

Gas	O <sub>2</sub>
Measuring principle	Zirconium dioxide
Accuracy	< 0,2% FS* ± 3% value
Drift	< ± 2% value / year
Lifetime of sensor element	Approx. 15 000 operating hours
Temperature inside of the sensor unit	580°C / 1076°F

## CO<sub>2</sub> sensor unit

Gas	CO <sub>2</sub>
Measuring principle	Infrared: dual wavelength
Accuracy	< 0,2% FS* ± 3% value
Drift	< ± 2% value / year
Lifetime of optical components	approx. 3 years
Temperature inside of the sensor unit	3°C / 5.4°F higher than process temperature

## General

Temperature range	15 - 40°C / 59°F - 104°F
Pressure range	0,8 - 1,3 bar / 11.6 - 18.85 psi
Operating humidity	0 - 100% RH, integrated humidity compensation
Housing	Stainless steel, IP65
Dimension (WxLxH) / weight	170 x 150 x 120 mm (6.69" x 5.91" x 4.72") ** / 3 kg (6.61 lb)
Mechanical connection	¼" - 1¼" ***
Materials in contact with process gas	steel 1.4571, viton, sapphire, PTFE, Polymer H.L., nitrile, tygon
Filters	PTFE 0,22 µm, PTFE 5 µm
Power supply	24V 1A

## Electronic connections

Power supply	8 pin M12 male
Output connection	8 pin M12 female
Electronic Output	Active output, maximum 500 Ohm at 24V power supply RS232, RS485, USB, Ethernet (with BACCom), Modbus
Storage temperature	0 - +60°C / 32- 140°F ; < 75% RH non-condensing
Maintenance	One point calibration with ambient air (0,04 Vol.% CO <sub>2</sub> , 20,97 Vol.% O <sub>2</sub> ) once a month (other conditions possible) Optional factory calibration once a year
CE/FCC/ICES	EN61326-1:2006 / FCC 15:2009 Subpart 107/109, ICES-001:2006
Remarks	Don't use in explosive atmosphere, in anoxic atmosphere, in gases with polymers or silicon components or in gases with halogens (F, Cl, Br, etc.), CFC or SO <sub>x</sub> and H <sub>2</sub> S

\* FS= full scale \*\* depends on flow adapter dimension \*\*\*others on request