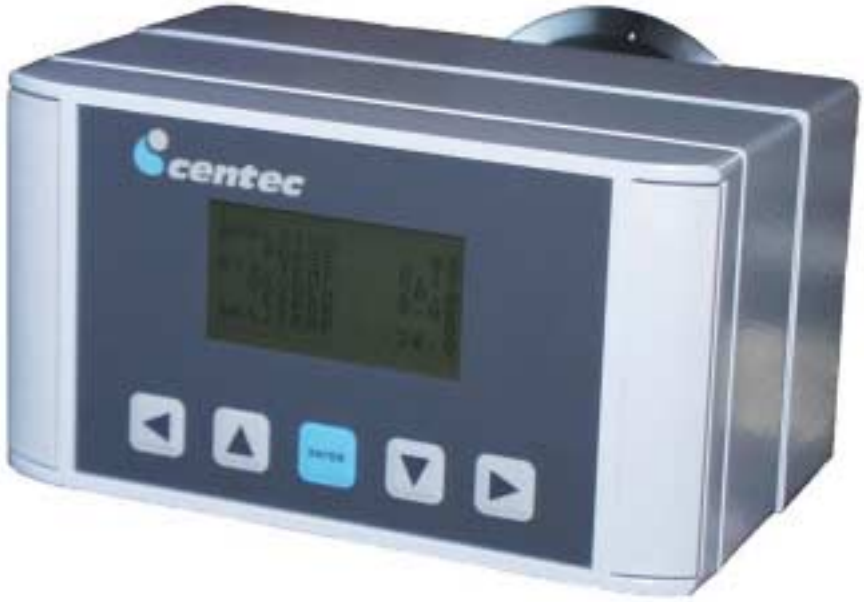
B-R Controls Pty Ltd

OXYTEC TR

Optical O_2-Sensor



- **Process measurement instrument for precise and immediate determination of oxygen (O_2)**
- **Optical measurement principle, no membrane or electrolyte required**
- **Compact Transmitter version with local display**
- **Analogue and digital In- and Outputs onboard**
- **Direct installation into the product line**
- **Compatible to Varivent®-inline-housings**
- **Longtime stable measuring and short response time**
- **Sanitary design and construction for CIP-compatible processes**

Der O_2-Transmitter Oxytec TR measures selectively and continuously the oxygen concentration in liquids and gases.
Typical applications include the inline quality control in the brewery and beverage industry. Further important installation points are the control of water-de-aeration, fermentation and aeration processes.

The O_2-transmitter Oxytec TR measures continuously and exactly the content of oxygen in liquids and gases. The sensor is especially designed for breweries and further applications with high requirements, e.g. power plants or bioreactors. The optical principle of measurement is based on the effect of dynamic luminescence quenching by molecular oxygen. The indicator layer on the glass installed in the measuring head is illuminated with a blue-green-light. With this, the indicator molecules are transferred into an excited state and emit a red light and detected by the internal detector. If oxygen is in the medium, this luminescence effect is prevented by energy transfer to the oxygen molecule. After the collision with the indicator molecule the oxygen molecule is transferred from its ground state (triplet state) to its excited singlet state. As a result, the indicator molecule does not emit luminescence and the measurable luminescence signal decreases linear to existing oxygen concentration. This decreasement is the basis for the oxygen calculation. The O_2-concentration can be displayed in different units like ppb, ppm, etc.

Technical Data

Measuring range:
1 ppb – 2 ppm or 20 ppb – 40 ppm
Repeatability:
+/- 1% (1 ppb or 20 ppb)
Response time:
t90 = 25 s
Temperature compensation:
Pt 100
Temperature range:
Measurement: -5°C - +100°C (+23°F - +212°F)
Resistance: max. 130 °C (max. 266 °F)
Pressure range:
max. 12 bar
Material of parts in contact with medium:
Stainless steel 1.4404 (316L), EPDM
Process connection:
compatible to Varivent©-Inline-Housings
DN 40 (1,5“) – DN 150 (6“); others on request
Input: - 6x digital (24 VDC)

Output: - 3x digital (24 VDC)
- 2x analog (4-20 mA)

Enclosure rating:
IP 65
Power Supply:
24 VDC

Back view with Measurement Head

Centec provides a modular sensor system for the control of many quality parameters of liquids. Simultaneously various quality parameters, measured by several different sensors, can be monitored and controlled by the Modular Concentration Monitor MCM.

Centec supplies
Sensors for:
-Concentration, Density, Sound velocity
-CO_2-/O_2-/N_2-content
-Colour, Turbidity
-pH-value, Conductivity
-Temperature, Pressure, Flow
Complete systems for:
Water-deaeration, Blending, Carbonation, Decarbonation, Oxygen-reduction, Nitrogenation, Yeast-dosage, Wort-aeration, Flash pasteurisation, Compact Beverage-Analyser
...as well as further customer orientated solutions for process-automation.

Represented by:

B-R Controls Pty Ltd

Unit 3, 95 Hunter Street
PO Box 121
HORNSBY NSW 2077
Australia

Telephone: (+61) (02) 9476 2133
Facsimile: (+61) (02) 9476 2688
E-mail: mail@brcontrols.com.au
Website: www.brcontrols.com.au

Status 11.2006

Centec GmbH, Wilhelm-Röntgen-Str. 10, 63477 Maintal/Frankfurt
Tel.: +49-6181-1878-0, Fax: +49-6181-1878-50
E-mail: info@centec.de **, Internet:** www.centec.de