

# Dr. Thiedig



## Digox 6

The reference for  
oxygen measurement



# Digox 6

## Accuracy in the trace area

Portable oxygen measuring instrument for process control and quality measurements in the laboratory of the beverage industry. As a supplement for process control, the Digox 6 is the ideal monitoring unit for measurements in the production due to its accuracy and reliability, e.g. after filtration or before filling and to monitor in-built inline probes. Stationary use of the instrument over several hours is also possible in order to monitor process procedure. In the laboratory, the Digox 6 is the ideal instrument for measuring oxygen in freshly filled bottles and cans or for determining the total oxygen because of its fast response time.

### The Thiedig sensor – the intelligent measuring system

The outstanding feature of the Digox 6 is the membrane-free Thiedig sensor with the integrated calibration cell. The measuring electrode of the sensor is in direct contact with the sample and therefore the system reacts extremely fast to changes of the oxygen content.

The response time is < 10 seconds. The sensor has a solidified zero point, which cannot be changed and which is system-related.

### Advantages

- The sensor works drift-free, is reliable and almost maintenance-free.
- The response time is extremely short (< 10 sec).
- The sensor has no zero point drift, which is system-related.
- The sensor's sensitivity can be checked at any time via calibration during the measuring procedure.



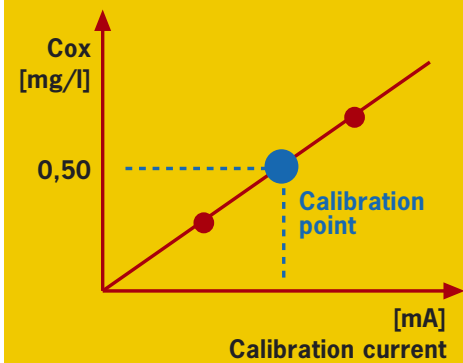


## The Thiedig Active Calibration

With the Thiedig Active Calibration, the sensor can be calibrated at any time without interrupting the measuring procedure. The calibration time is 2 minutes.

### Advantages

- Automatic calibration procedure with fault diagnosis.
- Calibration without interrupting the measuring procedure within 2 minutes.
- Calibration in the medium and during measurement temperature.
- Automatic storage of calibration data.



Linear correlation  
between oxygen  
concentration and  
calibration current





## Digox 6 – the ideal instrument for process control

The Digox 6 possesses everything to stand out as a modern control instrument: a robust and shockproof housing, a reliable and almost maintenance-free measuring system and a user-friendly software for storing and archiving measuring results. Without any preparation, the instrument is ready at all times. Thanks to a powerful battery charger it is suitable for 8 hours operation.

## Digox 6 – Measuring instrument plus intelligent software

The Thiedig touch memory system is a practical accessory for data backup. The system can be used to identify measuring points during operation or to characterize samples, for example types of beer when measuring in the laboratory. The system can save up to 200 individual measurements and 3000 measuring values in serial measurements in two separate data memories. When storing the measuring results, date and time as well as the touch memory information is filed in the data memory. With the DigoxWIN software, the saved data can be transferred to a data processing system and can be displayed as a table or graphics.

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Meßstelle 2	0.000	25.4	0.1	18.03.07 10:10	
Meßstelle 3	0.000	25.4	0.1	18.03.07 10:10	
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Meßstelle 9	0.000	25.4	0.1	18.03.07 10:10	
Meßstelle 10	0.000	25.4	0.1	18.03.07 10:10	
Meßstelle 11	0.000	25.4	0.1	18.03.07 10:10	
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## Digox 6 in the lab - Oxygen measurement in bottles and cans

As a supplement for the Digox 6, we offer a sampling device for the oxygen measurement in filled bottles and cans as well as additional accessory for the total oxygen determination according to the Uhlig method.

The short response time of the instrument also enables it to carry out a determination with small bottles and cans. In addition, the system has a programmable PDA, which contains the calculation algorithms.



# Digox 5 stationary version

## Highest precision in the process

The modified measuring system of the Digox 6 for online use in the process is temperature and compression-proof and unreservedly suitable for CIP. The instrument has everything what is needed for a process measuring instrument, 2 signal outputs, up to 4 limit values and a data interface. The temperature signal allows for monitoring of the process and cleaning temperature. The advantages of the intelligent Thiedig sensor can also be seen in the online operation.

### Advantages

- The fast response time also registers short oxygen peaks and helps to recognize and to stop plant-related oxygen intrusion.
- At any time, the in-built calibration system offers the possibility of checking the sensor within two minutes during the running process. The low in maintenance sensor allows for long maintenance cycles.
- The instrument is installed in the bypass. The sample extraction is carried out via a venturi tube or a sample pump. These components are also unreservedly suitable for CIP. The sample pump is equipped with dry-running protection.



# Technical Data

Analyser	DIGOX 6 EC portable	DIGOX 5 EC stationary
Measuring range	0.001...20.00 mg/l O <sub>2</sub>	0.001...20.00 mg/l O <sub>2</sub>
Display	graphic display	graphic display
Accuracy	± 1% based on the measuring range final value in the lower range 0...1.000 mg/l	± 1% based on the measuring range final value in the lower range 0...1.000 mg/l
Data logger	for 200 individual measurement values and 1000 values as a series, optional: 3000 measuring values	1000 values as a series, optional: 3000 measuring values
Data interfaces	RS 232	RS 232
Alarm output	/	limit values for concentration (min and max)
Fault message	/	common alarm
Analogue output	one output 0(4)...20 mA Concentration: 0...1.000 mg/l 0...20.00 mg/l freely adjustable or with an automatic changeover and measuring range identity	three outputs, each 0(4)...20 mA for concentration, flow and temperature (optional), two measuring ranges with an automatic changeover and measuring range identity for concentration
Response time t <sub>90</sub>	< 10 seconds	< 10 seconds
Ambient temperature	- 5 ... 40 °C	- 5 ... 40 °C
Sample temperature	0 ... 60 °C (compensated up to 50 °C)	0 ... 60 °C (suitable for CIP up to 110 °C)
Sample pressure	max. 8 bar	10 bar, through bypass short-term pressure peaks up to 12 bar are possible
Mounting of measuring system	/	via bypass piping
Sample flow	3 - 18 l/h	3 - 18 l/h, venturi tube or sample pump
Calibration	fully automatic Thiedig Active Calibration with autocheck, error message and report	fully automatic Thiedig Active Calibration with autocheck, error message and report
Power supply	12 V NiMH accumulator for approx. 8 hours operation 100 ... 240 VAC charging unit	100 ... 240 VAC 50/60Hz
Connected load	13 VA	13 VA
Protective system	IP 65	IP 65
Weight	3.8 kg	6.5 kg
Dimensions	27 x 33 x 14 cm	58 x 33 x 13 cm

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