

# Oxygen analyser Oxystem 1800

## High temperature version

Evaluation unit



Probe



### Features:

- In situ measurement directly in the gas duct
- Fast response
- No gas treatment required
- Easy to operate

### Application

Combustion control and control of the furnace atmosphere at high temperatures in furnaces used in the ceramics and aluminium manufacturing industries. Measurements taken directly in the gas with short response times.

### Description

The sensor of the probe is based on the principle of solid electrolytes (zirconium dioxide). The free oxygen ion movement begins at temperatures of more 500 °C (solid electrolyte potentiometric method). The probe is heated by the gas atmosphere, it does not have its own heating. The oxygen concentration is calculated from the cell voltage and the temperature according to Nernst's law.

The analyser consists of two components, the probe and the evaluation unit. The probe is mounted either horizontally or vertically (at temperatures of more than 1,200 °C). The evaluation unit and the probe are connected by a 2-core screened cable and a screened thermo compensation wire, type S (Pt/PtRh10). The maximum length is 20 m.

Operation via keypad and display. The display shows the current oxygen concentration in percent or ppm and the temperature of the measuring cell. The ranges automatically switch from % by vol. to ppm and to e xx % by vol. O<sub>2</sub>.

### Technical specifications

#### Probe

#### Operating temperature range

Medium: +700/+1,450 °C  
Ambient: -15/ +70 °C

#### Permissible reference throughput

Not required, in special cases  
0.5 to 5 l/h

#### Supply voltage

AC 42 V

#### Power consumption

160 VA

#### Dimensions (Ø x L)

25 x 600 mm,  
other lengths on request

#### Protection

IP 55 (EN 60529)

#### Weight

2.5 kg

#### Evaluation unit

#### Operating temperature range

Ambient: 5/50 °C

#### Display

4-line alphanumeric LCD display (temperature, oxygen concentration % by vol.). Range can be selected as required between 21 % by volume and 0.1 ppm O<sub>2</sub>. Operation via keypad and menus.

#### Supply voltage

AC 110–230 V, 50–60 Hz

#### Power consumption

20 VA continuous operation

#### Analogue output

0–20 mA oder 4–20 mA (selectable)

#### Relay outputs

Relay contacts: 3 voltage-free  
changeover contacts  
Contact rating: 0.5 A

#### Housing (with connection box)

W x H x D: 310 x 270 x 220 mm

#### Protection

IP 55 (EN 60529)

#### Weight

4.5 kg

DG: E	Part no.	Price €
Meas. probe 600 mm	69562	
Extension to 1 m	69563	
Evaluation unit	69564	
2 limit control contacts	69454	
Wall duct	69455	
Thermal compensation wire	69565	
2-core measuring cable	69566	