



Oxygen Sensors

Construction and Function:

The ceramic part of the Oxygen Sensor (Solid electrolytes) has the design of a one-side-closed pipe. The surface, inside and outside, of the probe-ceramic is covered with a microporous plating layer (electrode). The catalytically effect of the plating influences the characteristic of the probe.

On the gas-measuring-side of the probe, porous ceramic is over the plating layer. These protections layer prevents an erosive influence residue in the measuring gas and on the catalytically effect from the plating layer. The probe receives therefore a high longtime stability.

The ceramic heating element heats up the active probe ceramic (ZrO_2) inside, independent of the process temperature.

The ceramic heating element possess PTC characteristic, and serve to rapid heating and mark off the performance consumption. The heating elements connections are ease from the probe signal voltage ($R \geq 30M\text{-}\Omega$).

Area of application:

Measuring of Oxygen / wood / pellet/ boiler/ biomass /Endo

Technical Data:

Probe

Installation length of probe	approx. 28 mm
Total length	82 mm (probe with cable bushing)

Measurement chamber

Dimensions	60 x 60 x 24 mm
Connections	(over a 30 CM lead): Heating voltage: plug Probe signal: socket

Electrical Data:

Heating element

Power supply	12 V
Heating power	approx. 18 W
Heating current	
Warm-up phase:	approx. 3,0 A
Steady condition:	approx. 1,4 A

Probe

Output	1300 mV
Probe internal resistance	$\leq 150 \text{ ohm}$
Response time	approx. 2 s
Ready for control	approx. 70 s after switching on the heating element (guideline)