

ZIROX QE-Probe XS11.QE

Properties

The main part of the QE-probe XS11 is a potentiometric solid electrolyte cell (ZrO_2 sensor). This sensor is continuously provided with a gas sample from the treatment area via heated catalyst (complete decomposition of NH_3). Cell and catalyst have a temperature of $760\text{ }^\circ\text{C}$ to avoid unwanted reaction products (e.g. CH_4).

The designation QE-probe points out that due to the probe signal the quotient of partial pressures of the reactive furnace gases (only with oxygen reacting gases) in equilibrium can be calculated. Water vapour and hydrogen or H_2O+CO_2 und H_2+CO in the water gas equilibrium serve as an example.

The QE-probe is calibration-, drift- and maintenance-free. The use of high-quality components and materials guarantees long-term stability.

Applications

The QE-probe is used in the hardening technique in nitriding and nitrocarburizing processes. It serves the monitoring of the protective gas. By combining the QE-probe and QE-probe signals, the nitriding character K_N or carburizing character K_C , can be adjusted and controlled if necessary considering the unburnt gas mixture.



ZIROX QE-Probe XS11

Sensoren und Elektronik GmbH



Technical Data

Length.....	300...1800 mm
Diameter.....	25 mm
Weight.....	1...3.5 kg
Material.....	1.4841
Dimensions clamp head.....	Approx. 90x90x200 mm
Protection degree.....	IP20
Power supply.....	24 V (DC or AC)
Heater resistance AC / DC.....	20 Ω
Heater current AC / DC.....	1.2 A
Heater power AC / DC.....	30 VA
Range.....	0...1500mV
Accuracy.....	< 5 % rel. error
Sensor temperature (in the probe head).....	760 °C
Offset.....	<10 mV
Thermocouple.....	Type B (800 °C corresponds to 3.2 mV)
Flow measuring gas.....	Max. 1 l/h

Clamp assignment:

1	Ground	AGND
2	Sensor voltage	- V _z
3	Thermal voltage	+ V _t
4	Heater	V _H
5	Heater	V _H

Mounting recommendation: stuffing box or mechanical joint

