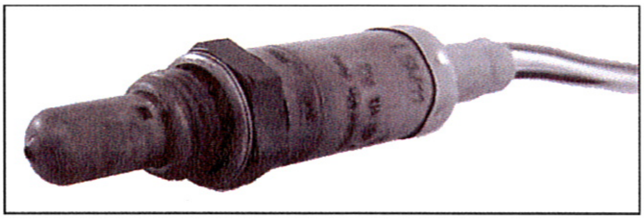
Mesa Meß- und Regeltechnik GmbH - Roggenstraße 49 - 70794 Filderstadt



Lambda – Probe
Model: MF 160.90.200

Design and Function :

The ceramic part of the Lambda-Probe (solid electrolytes) has the design of a pipe closed at one end.
The inside and outside surface of the probe-ceramic is covered with a microporous platin layer (electrode) which has great influence on the probe characteristics via the catalytic effect and which is at the same time needed for contact.

On the gas-measuring-side of the probe ceramic, there is a porous ceramic layer over the platin layer. This protection layer prevents the catalytic platin layer from being damaged by corrosive measuring gas residues and gives the probe a high longtime stability.

A ceramic heating element heats up the active probe ceramic (ZrO2) from inside, independent of the temperature of the measuring gas/ process temperature.

The ceramic heating element possesses a PTC characteristic, which makes for rapid heating and limits the power demand. The connections of the heating element are completely decoupled from the probe signal voltage (R>=30M-Ohm).

Main applications :
- Heating systems
- Industrial processing
- Process engineering
- Gas analysis
- Heat treatment units

Technical Data:

Sensor element:
Zirkoniumdioxide pipe

Fitting thread: M 18

Measuring range:
21...1...10-26 %O2

Reaction time:
approx. 1 sec.

Measuring gas temperature:
< 200 °C

Measuring gas flow rate:
approx.. 20 l/h

Connection (via 2.3 m lead):
Heating voltage: plug
Probe signal: socket

Necessary heating voltage:
12.00 V; ± 20 mV,
approx. 1.5 A (e.g. from
power supply unit type NTV 44)

Climate:
Storage: -40...+100 °C
Operation: 0...+100 °C
5...95 % relative humidity,
condensation-free

– **m**easuring – **c**ontrolling – **a**utomation - **m**easuring – **c**ontrolling – **a**utomation - **m**easuring –

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L-Probe with Measuring Chamber MK 1

Order No. X1258/530-3550

Areas of application:

· **Measuring the oxygen content in gases**
· **Indirect measurement of the carbon content in carbonizing atmospheres**
· **Indirect measurement of the dew point in gases, e.g. in the production of carrier gas for heat treatment plants**

Function:

The **L-probe** is a sensor for measuring oxygen in gas atmospheres. The probe is heated with a constant voltage. It outputs a voltage which can be converted into oxygen, C-potential or dew point in a transmitter.
The **probe** is screwed into the **measuring chamber** and is immersed in the gas flow. Different types of fittings are available which are adapted to the relevant local conditions.

The **measuring chamber** also enables a simple connection as a bypass for burn-off. Systems without gauge pressure are fitted with an extra pump.
Only small volumes of gas are required for measuring. 20-50 l/h are sufficient. A high-precision power supply unit is available as an accessory for supplying the ceramic heating layer in the **probe**.

The **probe** can be installed anywhere. It can be mounted by screwing it into the corresponding thread. The feed lines to the **measuring chamber** must be absolutely leakproof to avoid incorrect measurement of the very small residual values of O_2..

Technical Data:

Probe
Installation length of probe: approx. 28 mm
Total length: 94 mm (probe with cable bushing)

Measuring chamber
Dimensions: 60 x 60 x 24 mm
Weight: 0.9 kgs
Connections:
Measuring gas inlet and outlet and connection for injector pump with G 1/4" screw glands

Electrical Data:

Heating element
Power supply: 12.00 V
Heating power: approx. 18 W
Heating current:
Warm-up phase: approx. 3.0 A
Steady condition: approx. 1.4 A

Probe
Output:
0...1300 mV
Probe internal resistance:
<=150 Ohm

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Amtsgericht Stuttgart
Gerichtsstand und Erfüllungsort ist Stuttgart.

Ust-IdNr. DE 147 794 619 • Steuer-Nr. 99004/00019
Bankverbindungen:

Landesbank BW	Bernhäuser Bank eG	Postgiroamt Stuttgart	Deutsche Bank Stgt.-Vaihingen
Konto 2 290 526	Konto 6 675 000	Konto 250 591 708	Konto 8 801 870
BLZ 600 501 01	BLZ 612 623 45	BLZ 600 100 70	BLZ 600 700 24
IBAN-Nr. DE	IBAN-Nr. DE	IBAN-Nr. DE	IBAN-Nr. DE
48 6005 0101 0002 2905 26	51 6126 2345 0006 6750 00	31 6001 0070 0250 5917 08	14 6007 0024 0880 1870 00