ZIROX Oxygen Measuring Device SGM7

Properties

The compact oxygen measuring device SGM7 is based on the approved, drift-, calibration- and maintenance-free ZIROX zirconia technique. It contains the measuring cell as well the electronics for cell heating control, flow monitoring, integrated pump and signal processing.

Via microprocessor the measuring cell signal is processed according to the NERNST equation. The requested value is given out by display and analog current signal. (Option: digital interface RS232 with software).

Applications

In many technological processes under protective or inert gases oxygen traces are nonconstructively for the product properties. Precondition for detection and prevention of problems is the fast and precious measurement of oxygen respectively the determination of the reducing force of inert gases.

By progressive introduction of quality assurance systems, e.g. according to ISO 9000, a constant monitoring and documentation of quality parameters become more important. With the SGM7 the user gets several possibilities for that.

The SGM7 serves for the continuous measurements of free oxygen in industry and laboratory gases, for the monitoring of protective gases and for the determination of bound oxygen in gas mixtures.

The main applications of the SGM7 are monitoring functions in the soldering and welding technology (e.g. reflow soldering under protective gas).

SGM7

Technical Data

Range .... $2.0 \cdot 10^5 \ldots 1$ Vol.-ppm, $(20{,}6 \ldots 1 \times 10^{-4}$ Vol-%),

up to 10^{-20} Vol.-ppm possible (reducing conditions),

range up to 100 Vol.-% on request

Accuracy .... rel. error < 5%

Gas flow... 5 ... 10 l/h

Max. measuring gas pressure............................. 20 mbar overpressure

Max. measuring gas temperature .... 80°C at gas input

Pressure drop over measuring cell .... approx. 1 kPa (100 mm WS) at 10 l/h

Dimensions (W x H x D).................................... 135 mm x 100 mm x 240 mm

Mass 3kg

Protection degree.. IP 40

Gas input .... Swagelok® 3 mm

Gas output .... tube nipple 3 mm

Working conditions.. 10…45 °C, rel. humidity < 80% at 20 °C

Storage conditions .... -20…60 °C, rel. humidity < 95% at 20 °C

Power supply

    Voltage.. 100 – 240 V AC, 47 – 63 Hz

    Power consumption .... 20 VA

    Heating measuring cell .... 24 V DC, ca. 10 W (controlled internally)

Keyboard and display

    Keyboard .... 3 keys

    Clear text display .... LCD (lighted)

Interface.. RS232

Analog output

    Current output..................................... 0/4…20 mA, galvanically isolated, free scalable, working resistance max. 500 Ω

    Option: Voltage output......................... *0/2…10 V, galvanically isolated, free scalable*