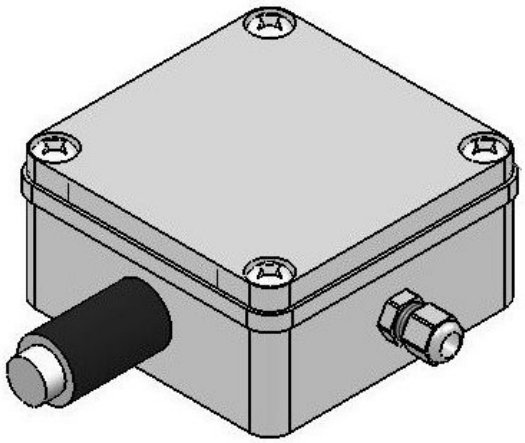
332K25x

Sensor for the measur of Oxygen in air

Mod.332K25x is a galvanic cell for the measure of O_2 in air with long term life expectancy and an excellent chemical durability. The measure is not affected by CO_2.
Typical application of these sensors Mod.332K25A and Mod.332K25B for fixed installation is the O_2 monitoring in bioreactors, oxygen incubators, anesthetic instruments, respirators, oxygen enrichers. Also, the sensors can be used for safety purposes to detect oxygen levels in ambient air.
Mod.332K25C and Mod.332K25D, in conjuntion with the portable O_2 meter Series HANDY 3000, allow to monitor O_2 concentration in tanks, vessels etc.
Mod.332K25E, again in conjuntion with the portable O_2 meter, can be worn by the operator.



Sensor Mod.332K25B, plastic housing, fixed installation

Advantages

- **Sturdy and compact execution, long operating life expectancy, (10 years in air)**
- **Galvanic type measuring system, does not require external power supply**
- **High stability of the generated signal**
- **No warm-up time required**
- **Measuring range: 0 to 100% O_2**
- **Operatimg temperature limits: 5 to 40 °C**
- **Low maintenance requirements**
- **No interference due to CO_2, CO, H_2S, H_2**

Sensor Mod.332K25D with portable O_2 meter series HANDY3000

Cell for the measur of Oxygen in air

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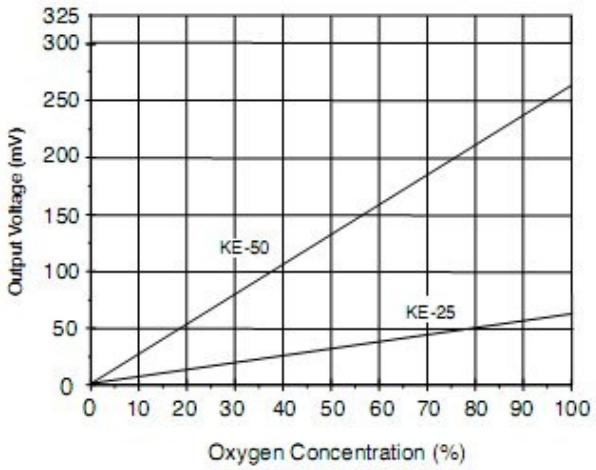
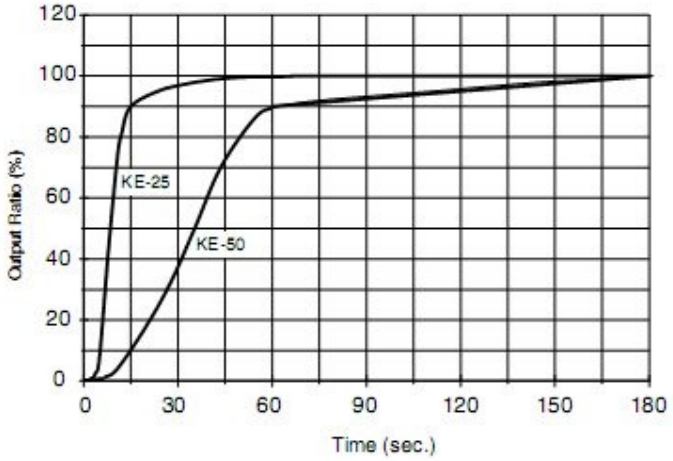
Operating principle and realization

Mod.332K25x is a galvanic cell generating a linear signal (mV) proportional to O_2 concentration in air.



Installation, Maintenance and Calibration

Mod.332K25x cell must be installed or used in a point that is representative of the measure to be carried out.
The sample air exchange on the sensor must be higher than 200 - 300 ml per minute in order to assure the response time as represented in the graph on the side.
Calibration of the measuring chain may be operated on two poinrts: the zero point (0%) is calibrated with nitrogen gas N_2 with the calibration vessel supplied with the sensor, the slope is calibrated in air (21% O_2); it is also allowed to calibrate the slope in air to 100% O_2 value.
The only required maintenance is the periodic control of calibration, at intervals that have to be defined by the operator according to his/her experience and to process requirements.



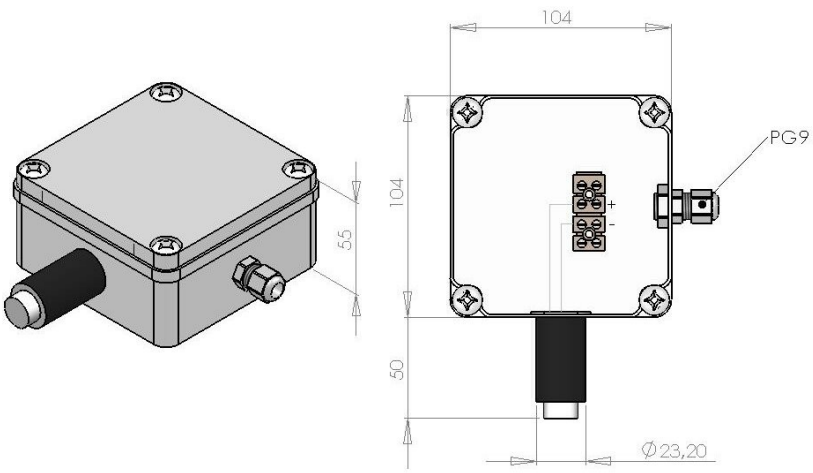
332K25x

Technical Specifications

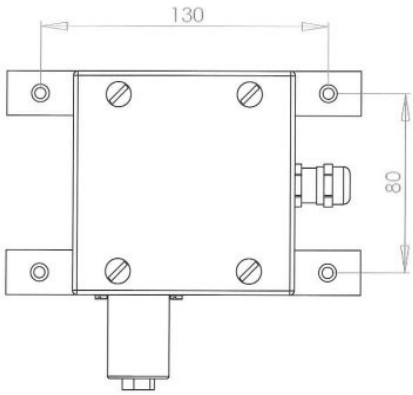
Electrodes:.....2 electrodes galvanic cell
Measuring range:.....0÷100 % O_2
Accuracy:.....±1 % f.s. (when calibrated at both 0% and 100% O_2)
Operating temperature limits:.....from 5 to 40 °C
Operating pressure limits:.....atmospheric
Relative humidity limits:.....10% to 90% non condensing
Sample air exchange on the sensor:.....higher than 200 - 300 ml per minute
Signal generated by a new cell under test conditions:.....10.0 ÷ 15.5 mV
Standard test conditions:.....21% O_2, P = 1013±5 hPa; T = 25°C±1°C; UR 60% ±5%
Linearity:.....$(Va-V_0)/(V_{100}-V_0)$ = 0.21 ±0.02 (Note 1)
Offset:.....$V_0 \leq 0.5$ mV
Temperature characteristics:.....V_H/Va 0,91÷ 1,09; V_L/Va 0,91÷ 1,09 (Note 2)
Dimensions Mod.332K25A and Mod.332K25B: .....154 x 104 x 55 mm (l x p x h)
Dimensions Mod.332K25C and Mod.332K25D: .....Ø32 mm, L 140 mm
Cable Mod.332K25A and Mod.332K25B:.....two cores, shielded, 10 m max.length, supplied with the sensor
Cable Mod.332K25C .....integral, 5 m
Cable Mod.332K25D:.....integral, 10 m
Weight:..... 300 g w/o cable

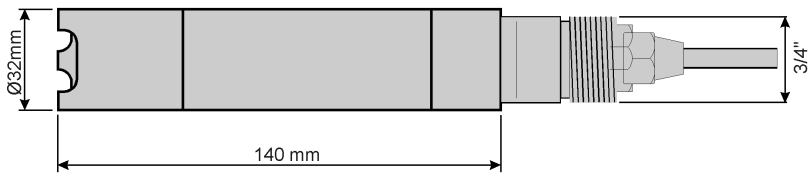
Note 1
Va = voltage generated @ 21% O_2
V_0 = voltage generated @ 0% O_2
V_{100} = voltage generated @ 100% O_2

Note 2
Va = voltage generated @ 25°C
V_H = voltage generated @ 40°C
V_L = voltage generated @ 5°C



Mod.332K25A and Mod.332K25B dimensions for fixed installation





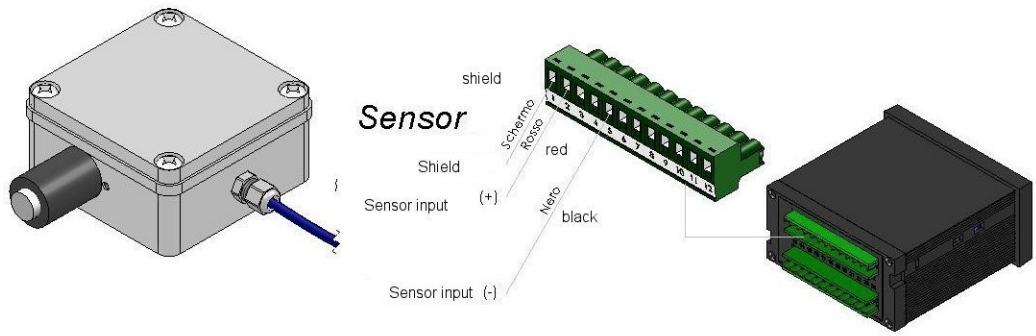
Mod.332K25C and Mod.332K25E for portable O_2 meters

332K25x

Order Code Breakdown

	332K25	x
Cell for the measure of O_2 in air	332K25	
Tipo di custodia		
Stainless steel case AISI 316L		A
Plastic case		B
Ø 32 mm probe, integral cable, 5 m		C
Ø 32 mm probe, integral cable, 10 m		D
Sensor c/w clip		E

WIRING



Wiring, Mod.332K25A and Mod.332K25B in conjunction with electronic unit Mod.uP for fixed installation