

Title (en)
MEASURING DEVICE FOR MEASURING THE OXYGEN FRACTION IN RESPIRATORY AIR

Title (de)
MESSGERAT ZUM MESSEN DES SAUERSTOFFANTEILS IN DER ATEMLUFT

Title (fr)
INSTRUMENT DE MESURE MESURANT LA TENEUR EN OXYGÈNE DANS L'AIR RESPIRABLE

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Application
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Abstract (en)
[origin: WO2007085288A1] The invention relates to a measuring device for measuring the oxygen fraction in respiratory air, in particular for the supply of respiratory air in aircraft. Said device has an oxygen sensor (10), to which an electric, analogue, sinusoidal input signal with a fixed base frequency (1f) is fed and which emits an electric analogue output signal containing a useful signal component with a double base frequency (2f) and at least one interference signal component with a base frequency (1f), in addition to an evaluation circuit (26) for determining a measured value as a measurement of the oxygen fraction, the output signal being fed to said circuit. To improve the measuring accuracy of the measuring device, whilst simultaneously reducing fluctuations in the measured values, an adder (14) is located between the oxygen sensor (10) and the evaluation circuit (26). Both the output signal and a sinusoidal reference signal with a base frequency (1f) are fed to said adder. The phase and amplitude of the reference signal are set in such a way that the interference signal component(s) is or are compensated to a great extent in the output signal of the adder (14).

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