

Oxygen Concentrators

Application Note



Overview

Flusso flow sensors offer a comprehensive solution for oxygen concentrator applications: with an unrivalled combination of high accuracy, fast response time, exceptional durability, tiny size, and a reliable supply chain.

Inaccurate flow measurements in oxygen concentrators can have significant consequences for patients. Insufficient oxygen delivery can lead to health complications and reduced quality of life, while excessive oxygen can result in toxicity.

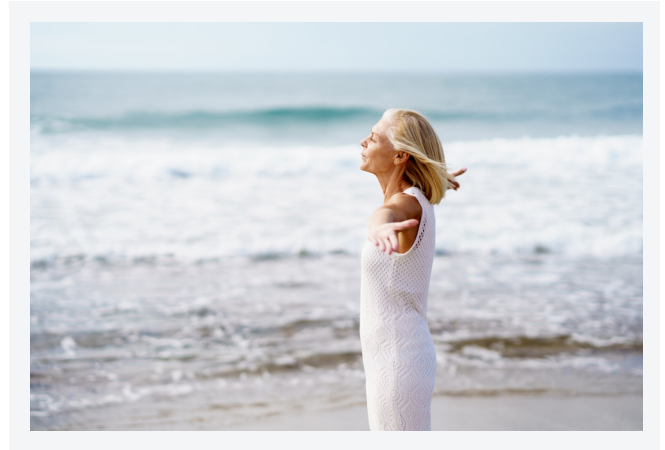
In addition, inaccurate flow measurements can increase wear and tear on the concentrator, reduce its lifespan and increase maintenance requirements.

Importance of gas flow measurement

Accurate gas flow measurement is essential for oxygen concentrators, ensuring patients receive the correct amount of oxygen. These systems extract oxygen from ambient air using a series of filters and sieves, then deliver it through a nasal cannula or mask. The flow sensors within the system measure the oxygen flow rate to regulate oxygen delivery to the patient.

Accurate flow measurements are essential to prevent complications such as hypoxemia (low blood oxygen) and oxygen toxicity (excess oxygen), which can be life threatening if not promptly treated.

Proper flow measurement can also help to extend the lifespan of the oxygen concentrator by reducing wear and tear on the device.



Flusso FLS110 flow sensor is perfect for use in compact, portable, and battery-powered oxygen concentrator applications.

If the flow measurement reading is too high or too low, the system may be working harder than necessary. Leading to more frequent maintenance and repair needs, reduced system lifespan and increased operational costs.

Accurate flow measurement is especially important for patients with COPD and other respiratory conditions requiring long-term oxygen therapy. In these cases, inaccurate flow measurement can have a significant impact on an individual's health and quality of life.

In summary, gas flow measurement is crucial for safe and effective oxygen therapy.

Accurate flow measurements help to prevent health complications, reduce system wear and tear and operational costs, and extend the lifespan of the oxygen concentrator.



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How Flusso can help?

Flusso gas flow sensors offer several compelling benefits to help improve system performance and reduce the cost of oxygen concentrator applications. Features include:

High accuracy: Because the thermal conductivity of gases is well-characterised and predictable, Flusso sensors provide accurate and reliable measurements of gas flow rates.

Low power consumption: Flusso sensors are well-suited for portable and battery-powered oxygen concentrator applications.

Small size: The FLS110 sensor has a market leading footprint of 3.5 x 3.5 mm while the FSE-112 module has a footprint of just 16 x 22 mm. This small size minimises the space required for installation reducing system size and weight.

Durability: Flusso gas flow sensors are exceptionally robust and designed for use in products and systems that must operate for extended periods of time. This can help to reduce maintenance and repair costs and extend product lifespans.





Production scalability: Flusso gas flow sensors are manufactured using standard semiconductor processing techniques, making them the ideal solution for high-volume production.



Scan QR Code for more information or to order a flow sensor evaluation kit

Flusso Ltd

Deanland House, 160 Cowley Rd
Cambridge, CB4 0DL, UK
Email: sales@flussoftd.com
www.flussoftd.com

Gas flow sensors	Gas flow modules
FLS110 3.5 x 3.5 mm 1% Repeatability 3% Accuracy  Differential pressure Mass/Volumetric flow Flow temperature Manifold installation	FSE-112 16 x 22 mm 1% Repeatability 3% Accuracy  Differential pressure Bi-dir. Mass/Vol flow Flow temperature Manifold installation
FLS110 3.5 x 3.5 mm 1% Repeatability 3% Accuracy  Bi-dir. gas flow velocity Mass/Volumetric flow Flow temperature In situ installation	FSE-122 15 x 36 mm 1% Repeatability 3% Accuracy  Bi-dir. gas flow velocity Mass/Volumetric flow Flow temperature In situ installation

Evaluation Kit

Evaluation kits are available for all gas flow sensor products and contain everything you'll need to assess Flusso's flow sensors in your application. Kits are supplied with a fluidic fixture (to fit your flow range), push-fit connectors and a USB adapter to connect the sensor module directly to your PC.

Once you have everything connected together, you can easily recalibrate the sensor to take account of your complete system.



Using our evaluation kits, you can be measuring flow within minutes