

Oxygen Therapy

Application Note



Overview

Oxygen therapy has become increasingly popular in respiratory care both in and out of hospital, providing improved oxygenation and comfort for patients. The integration of flow sensing technology in these systems offers numerous benefits, ranging from optimising patient outcomes to enhancing device performance and safety. This application note explores the advantages of flow sensing in oxygen delivery devices and highlights how Flusso flow sensing technology can revolutionise respiratory care, improve cost-effectiveness, ensure accurate flow delivery, and mitigate potential risks.

Accurate flow sensing in oxygen therapy is crucial to achieve the best patient outcomes. Flusso flow sensing technology provides feedback to nurses or care workers regarding the flow rate being delivered, enabling them to ensure accurate and appropriate therapy. If the flow rate deviates from the level prescribed, due to twisted or leaking delivery tubing or low oxygen bottle pressure for example, the system can compensate to maintain the correct flow and advise the healthcare professional to check the equipment. This enables more effective oxygenation, minimising potential complications and adverse events associated with inadequate or excessive flow rates and enhances patient comfort and compliance during treatment.



Flusso flow sensing technology plays a crucial role in preventing prolonged oxygen flow after treatment, conserving oxygen and preventing oxygen-related fires.



Flusso flow sensing provides real-time feedback to patients and carers minimising mistakes and ensuring that patients receive the correct oxygen dose.

Flow sensing technology offers significant cost savings and enhances the overall performance of oxygen therapy devices. By ensuring accurate flow delivery, Flusso flow sensing prevents the unnecessary waste of oxygen, optimising its usage and reducing costs associated with oxygen supply. Flusso flow sensing offers industry leading price-performance and is designed for high volume applications.

Flusso flow sensing technology also plays a crucial role in conserving oxygen and mitigating the risk of fire hazards. By accurately measuring the flow rate during oxygen therapy, the flow sensor can detect when the treatment is finished. This allows for the automatic cessation of oxygen delivery, preventing the unnecessary waste of oxygen. Moreover, by eliminating accidental prolonged oxygen flow after treatment, the technology helps minimise the potential for oxygen-related fires which claim hundreds of patient lives each year, enhancing patient safety outside the hospital.

Leveraging Flusso flow sensing technology to integrate real-time digital monitoring of oxygen delivery in oxygen therapy devices offers substantial benefits in terms of patient outcomes, cost-effectiveness, device performance, and patient safety.

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How Flusso can help?

Flusso flow sensors offer several compelling benefits for oxygen therapy applications:

High accuracy: Because the thermal conductivity of air and oxygen is well-characterised and predictable, Flusso sensors provide accurate and reliable measurements of airflow rates.

Low power consumption: Flusso sensors offer industry-leading power consumption both during operation and at idle.

Small size: The FLS110 sensor has a market leading footprint of just 3.5 x 3.5 mm while the FSE112 module has a footprint of just 16 x 22 mm. This small size minimises the space required for installation, reducing system size and cost.

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.

Overall, the combination of high accuracy, low power consumption, small size and durability help to improve system performance and reduce cost in oxygen therapy applications.



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

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Gas flow sensors

FLS110

3.5 x 3.5 mm
1% Repeatability
3% Accuracy
Differential pressure
Mass/Volumetric 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



Gas flow modules

FSE-112

16 x 22 mm
1% Repeatability
3% Accuracy
Differential pressure
Bi-dir. Mass/Vol flow
Flow temperature
Manifold 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 airflow sensor products and contain everything you'll need to assess Flusso's flow sensors in your application. They 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