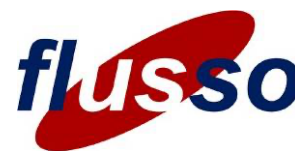


Extraction Ventilation

Application Note



Overview

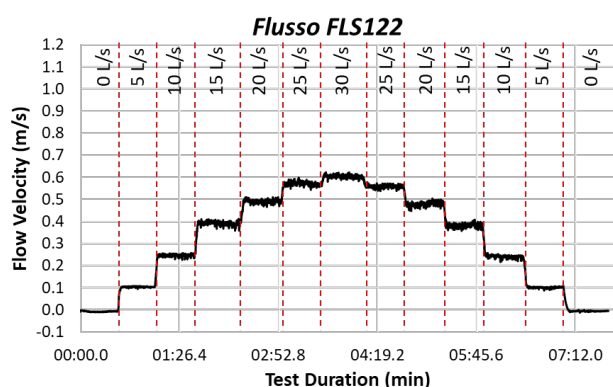
The demand for smarter, more efficient extraction ventilation systems is rapidly growing due to stringent new building regulations worldwide. By leveraging Flusso flow sensing technology, HVAC systems can now achieve optimal efficiency at minimal cost while complying with specific power requirements.

In the UK, from 2025, intermittent fans used in HVAC systems must not exceed 0.5 W/l/s of fan airflow. This regulation aims to promote more energy-efficient ventilation fans, reducing power consumption and environmental impact.

Additionally, standby power will be limited to 0.01 W to prevent energy wastage during idle periods. Flusso flow sensors offer industry-leading low power consumption to meet these requirements.

To achieve peak efficiency in mechanical ventilation, it is crucial to meet the building's airflow requirements accurately and to avoid overventilation. Overventilation increases heat loss, fan energy consumption and shortens product life.

By implementing closed loop control of fan airflow, Flusso flow sensors can maintain the ideal ventilation rate despite changing fan backpressure due to windy weather or internal doors being opened or closed.



Flusso flow sensing offers precise monitoring and control of fan airflow to compensate for changing backpressure due to windy weather improving efficiency.



Flusso flow sensing allows ventilation fans to be calibrated by the installer during installation using normal tools. No technician visits or special equipment are required to comply with regulations.

Traditional fan calibration after installation requires separate visits by skilled technicians, using expensive specialised equipment, to ensure systems comply with regulatory requirements.

However, integrating Flusso flow sensing into ventilation fans enables the installer to verify performance on-site using standard tools, ensuring optimal performance and full regulatory compliance in a single visit. This saves significant time, labour, and equipment costs.

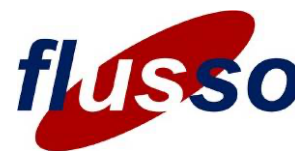
Increasingly stringent building regulations necessitate adopting smarter and more efficient extraction ventilation systems.

Incorporating Flusso flow sensors into these systems ensures compliance with new power requirements, enhances system efficiency, and optimises performance even in challenging conditions. Flusso flow sensing saves time and cost during installation, calibration and over the fan's lifetime.

Our advanced thermal flow measurement technology offers accurate flow sensing for extraction ventilation applications at the lowest system cost, contributing to a greener and more efficient HVAC infrastructure.

Extraction Ventilation

Application Note



How Flusso can help

Flusso flow sensors offer several compelling benefits for extraction ventilation applications including:

High accuracy: Because the thermal conductivity of air 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 helps 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 the cost in ventilator applications.



Scan QR Code for more information or to order an airflow 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



FLS122

3.5 x 3.5 mm
1% Repeatability
3% Accuracy

Bi-dir. airflow velocity
Mass/Volumetric flow
Flow temperature
In situ installation



Gas flow modules

FSE112

16 x 22 mm
1% Repeatability
3% Accuracy

Differential pressure
Bi-dir. Mass/Vol flow
Flow temperature
Manifold installation



FSE122

15 x 36 mm
1% Repeatability
3% Accuracy

Bi-dir. airflow 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 kit you can be measuring flow within minutes.