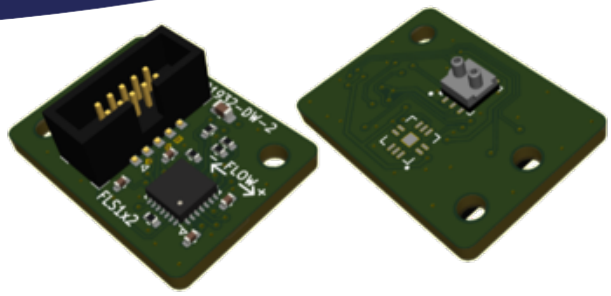
Gas Flow, Differential Pressure, and Temperature Sensing Solutions



Product information

FSE-112 Sensor Electronics Modules

Gas Flow, Differential Pressure and Temperature sensing

The FSE-112 Sensor Electronics Modules, developed by Flusso, use Flusso's proprietary MEMS-based sensor technology, which has the ability to detect bidirectional gas flow, differential pressure and temperature.

These modules incorporate Flusso's firmware, which is hosted in a microprocessor that drives the sensor and provides calibratable measurements.

By combining the advanced FLS112 sensor with Flusso's reference electronics design, these modules offer optimal functionality and sensing performance.

Additionally, the FSE-112 modules are designed for easy mechanical integration into the final product, simplifying the route to market for manufacturers. Flusso provides comprehensive support to optimise the fluidics fixture performance for mechanical integration.

Key benefits

- Proprietary MEMS-based technology
- Reference electronics for optimal sensing functionality
- Flexible calibration
- Easy mechanical and fluidic integration into final product
- Comprehensive support from Flusso

Applications

Consumer appliances

Industrial systems

Health & medical

Smart buildings

Product information

Features

- Silicon-MEMS Sensor measurements
- Reference electronics design with hosted Flusso firmware
- Fully temperature-compensated readings
- SDK available to modify the application layer and make use of spare microcontroller resources
- Retrieval of Pressure sensor readings via I^2C for volumetric gas flow and differential pressure
- 10-pin host interface connections with I^2C interface
- Fully compatible with Flusso's GUI for quick evaluation

FSE-112 Sensor Electronics Module specifications

Parameter		ST module	Nuvoton module
Footprint		22 mm x 16 mm	22 mm x 24 mm
Measurement Range	Differential Pressure	0.5 Pa full scale	
	Mass Flow *	-200 to 200 sccm full scale	
	Temperature	-20 to +85 °C	
Max Accuracy	Differential Pressure	0.5 Pa (equivalent to 0.1 % of full scale)	
	Mass Flow	1 sccm (equivalent to 0.5 % of full scale)	
	Temperature	±2-3 °C	
Power Consumption	Continuous Mode	20 mW **	25 mW **
	Idle Mode	3.3 µW	50 µW
Operating Conditions	Temperature	-20 to +85 °C	
	Humidity	0 to 90 %RH	
Output signal		I^2C (bidirectional)	
Input Voltage		3.3 V	3.3 – 5 V

* Volumetric flow rate available

** Derated if in single shot reading

Ordering guide

Type no	Packing type	Part no
FSE112	Sensor Electronics Module using STM32 microprocessor	FSE-112-O- STM32-R
	Sensor Electronics Module using Nuvoton microprocessor	FSE-112-O- M0A23-R

For further application information please contact **sales@flussoltd.com**