Product information

FSE-122 Sensor Electronics Modules
Gas Velocity and Temperature sensing

The FSE-122 Sensor Electronics Modules use Flusso's proprietary MEMS-based sensor technology for gas velocity and temperature measurements.

Two form factors are available to suit a variety of different applications.

The optimal functionality and sensing performance of the FSE-122 modules are achieved through the combination of the advanced FLS122 sensor, Flusso's firmware, and reference electronics design.

Designed with a small footprint, these modules can be easily integrated into final products. Flusso offers a collaborative approach aimed at optimising the performance of fludic fixtures for mechanical integration.

Key benefits

- In-situ gas velocity measurements
- Proprietary MEMS-based technology
- Bidirectional gas velocity measurement
- Reference electronics for optimal sensing functionality
- Simple I^{2}C host interface
- Application-specific custom calibration available

Applications

Temperature and climatic chamber air circulation management

Energy management, ventilation control and filter monitoring

Consumer appliances

Gaming PC and server thermal management

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
- 10-pin host interface connections with I^2C interface
- Fully compatible with Flusso's GUI for quick evaluation

FSE-122 Sensor Electronics Module specifications

Parameter			Reduced size module *(Smaller flow paths)*	Extended module *(Larger ducts)*	
				Adapter PCB	Extended PCB
Footprint			22 mm x 16 mm	44 mm x 40 mm	36 mm x 15 mm
Measurement Range	Velocity		±20 ms^{-1}		
	Temperature		-20 to +85 °C		
Max accuracy	Flow Velocity	Zero flow	±0.1 ms^{-1} (equivalent to 0.5% of full scale)		
		Span	±5 % of measured value		
	Temperature		±2 to 3 °C		
Power Consumption	Continuous Mode		20 mW *		
	Idle Mode		3.3 µW		
Operating Conditions	Temperature		-20 to +85 °C		
	Humidity		0 to 90 %RH		
Output signal			I^2C (bidirectional)		
Input Voltage			3.3 V		

* Reduced by the duty cycle factor in single shot reading mode

Ordering guide

Type no	Packing type	Part no
FSE-122	Standard Air Velocity Sensor Electronics Module	FSE-122-0001-O-ST1-S-10-I2C
	Extended Air Velocity Sensor Electronics Module	FSE-122-0001-O-ST1-X-10-I2C

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