



Product information

FSE-112 Sensor Electronics Modules

Gas Flow, Differential Pressure and Temperature Sensing

Accelerate time to market by enabling rapid integration of proven FLS112 Flow Sensor Flusso electronics reference designs.

Flusso's FSE-112 Sensor Electronics Modules utilise proprietary MEMS-based sensor technology for bidirectional gas flow, differential pressure, and temperature measurement.

The modules include Flusso's firmware, a microcontroller, and a design that optimises 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 offers a collaborative approach aimed at optimising the performance of fluidic fixtures for mechanical integration.

Key benefits

- Proprietary MEMS-based technology
- Bidirectional gas flow measurement
- Flusso's reference electronics for optimal sensing functionality
- Simple I²C host interface
- Flexible in-system calibration to optimise measurement accuracy for product requirements
- Easy mechanical and fluidic integration into final product

Applications



Consumer appliances



HVAC and ventilation systems



Health and medical



Comfort and safety in 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 I²C for volumetric gas flow and differential pressure
- 10-pin host interface connections with I²C interface
- Fully compatible with Flusso's GUI for quick evaluation

FSE-112 Sensor Electronics Module specifications

Parameter		ST1 type	NU1 type
Footprint		22 mm x 16 mm	22 mm x 24 mm
Measurement range	Differential Pressure	±500 Pa full scale	
	Flow Rate *	Through-flow	±200 sccm full scale
		Bypass	±500 SLM 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 to 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 ² C (bidirectional)	
Input Voltage		3.3 V	

* Volumetric and mass flow rate available

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

Ordering guide

Type no	Packing type	Part no
FSE-112	Sensor Electronics Module using ST microcontroller	FSE-112-0001-O-ST1-S-10-I2C
	Sensor Electronics Module using NU microcontroller	FSE-112-0001-O-NU1-S-10-I2C



For further application information please contact sales@flussoltd.com