

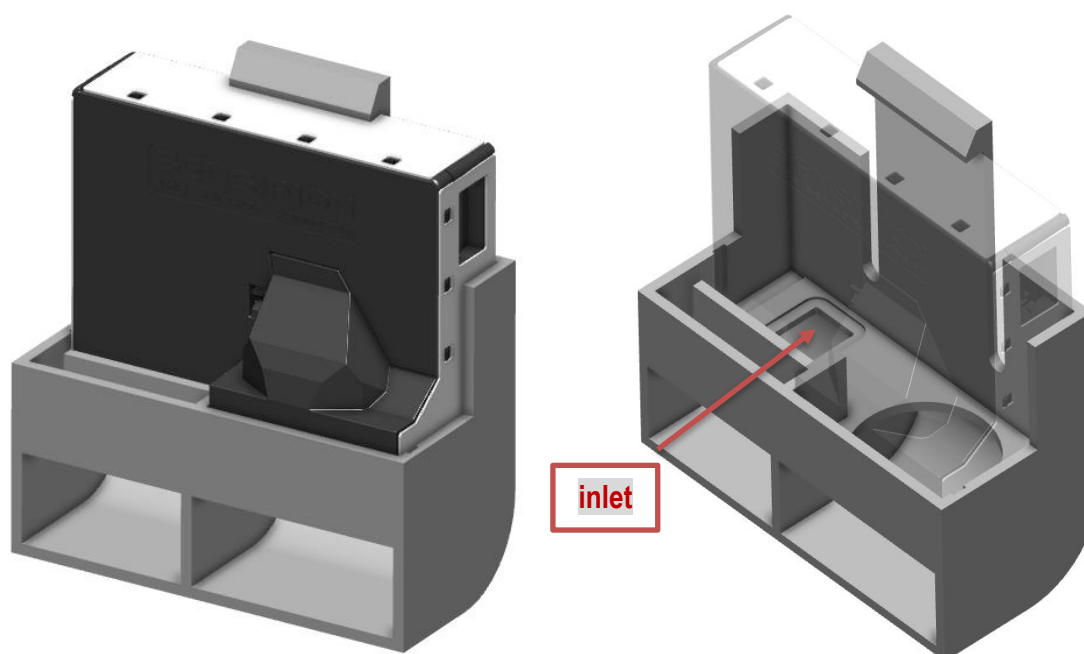
Mechanical design-in example for SEN5x & SPS50

Environmental node consisting of SPS, SGP and SHT sensors

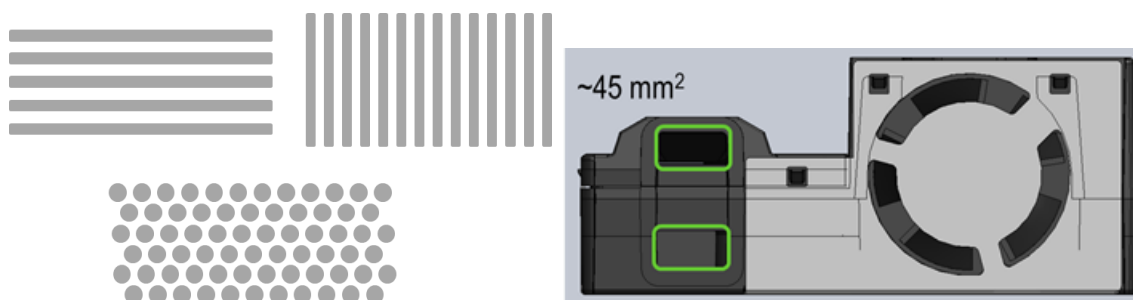
Preface

The SEN5x combo sensor is designed to simplify the design-in into your product. This following mechanical design-in example provides a concrete proposal how to mount SPS50/SEN5x in the product

The corresponding CAD file provides a complete design-in example. The orientation of the sensor in this example is chosen to be vertical with the sensor openings facing downwards (please compare the corresponding design-in guide). Another important design feature is that the inlet and outlet (fan opening) of the sensor are isolated from each other. The most crucial aspect is the interface between sensor and mount. This specific design ensures a proper sealing between sensor and mount (indicated by red arrow)¹. Sensirion recommends adapting this design if needed. Other design features such as the rounding can be modified freely or removed altogether.



The customer has the full flexibility in the interface design of the product housing. The following image shows various potential geometries (slits and holes).



An important requirement is that the openings in the housing do not restrict the air flow through the sensor.

¹ See «SEN5x Mechanical Design and Assembly Guidelines» for general design guidelines.

A simple guideline to fulfill this requirement is that the opening area (per inlet and outlet separately) exceeds the area of the inlet of the sensor (~45 mm²).

Revision History

Date	Revision	Changes
15. June 2021	1.0	Initial revision

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