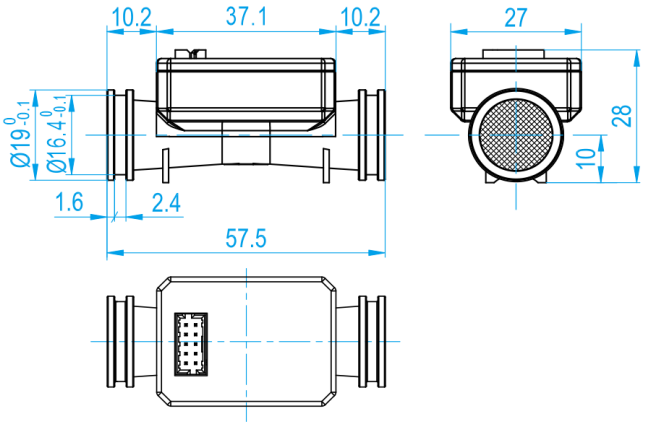
# MEMS mass flow sensors

## With Thermal-D sensing technology

FS1100 Series

**FS1100 series mass flow sensors** are manufactured with Siargo's proprietary MEMS (micro-electro-mechanical systems) calorimetry with diffusivity sensing technologies (***Thermal-D*** ®) that measures the calorimetry and diffusivity of the flow medium. This technology compared to conventional calorimetric sensing offers much better linearity in the full dynamic range, removes gas sensitivities for gases that have similar thermal diffusivities, and increases the measurement accuracy when used with a gas conversion factor. It also simultaneously outputs the instant flow medium temperature data and improves the temperature performance of the thermal sensing approach.

## Dimensions

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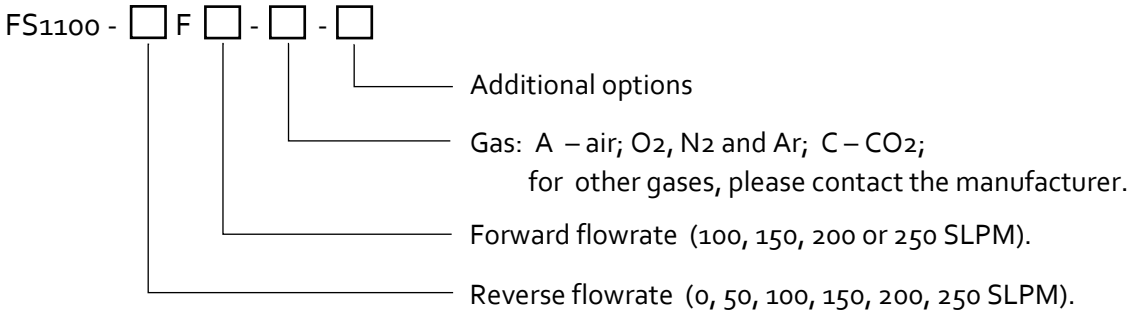
## Specifications

| | | |
|---|---|---|
| Flow range | -250 ~ +250 | SLPM |
| Accuracy (total error band) | ±(2.0+0.5FS) | % |
| Repeatability | 0.5 | % |
| Response time | 5 | msec |
| Temperature range | -20 ~ +80 | °C |
| Temperature accuracy (0 ~ 50 °C) | ±2.5 | °C |
| Power supply | 5 (± 5%) | Vdc |
| Output | Linear, Analog: 0.5 ~ 2.5Vdc / Digital: I²C | |
| Working temperature | -10 ~ +55 | °C |
| Temperature coefficient | ±0.12 | %/°C |
| Pressure rating | 0.2 | MPa |
| Warm-up time | 500 | msec |
| Humidity | <95 (no condensation) | %RH |
| Analog null shift | ±30 | mVdc |
| Maximum overflow | 300 | SLPM |
| Maximum flow change | 40 | SLPM/sec |

**Note**: Parameters specified at the calibration conditions: 20°C, 101.325kPa.

## Product selection




**Note** 1. The default unit of the flow rate is SLPM. For other ranges, please contact the manufacturer.

2. Example: FS1100-50F250-A is a sensor that measures mass flow rate from reverse 50 to forward 250SLPM, air.