

The mass air flow (MAF) sensor is located in vehicles before the intake manifold and after the air filter. Its role is to measure the mass of air that the engine is drawing in at each moment and to report it to the control unit via a variable voltage signal.

The MAF sensor plays a fundamental role in reducing environmental impact during the combustion process. The signal it sends to the Engine Control Unit (ECU), along with the signals it receives from other sensors, is necessary for calculating the amount of injected fuel.

References

**+50**

Applications

**+10k**

VIO

**+200M**

**Your best option for**

- > Original Equipment Quality
- > High precision air mass flow measurement
- > Product range expansion

Ref. 69001



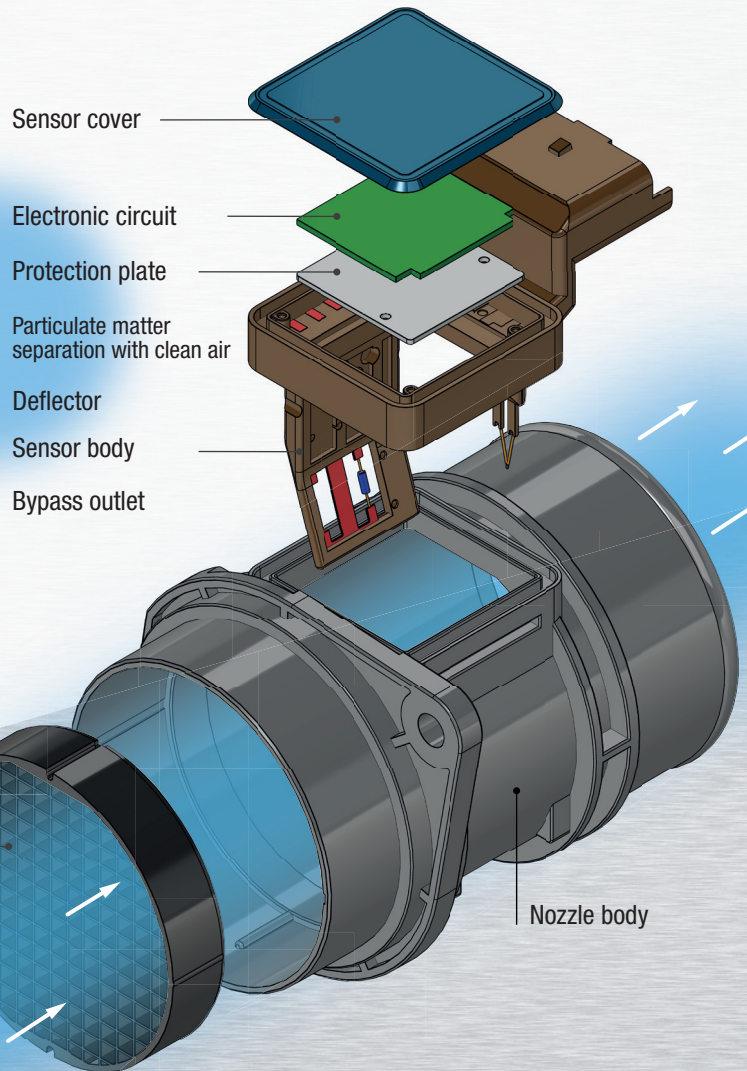
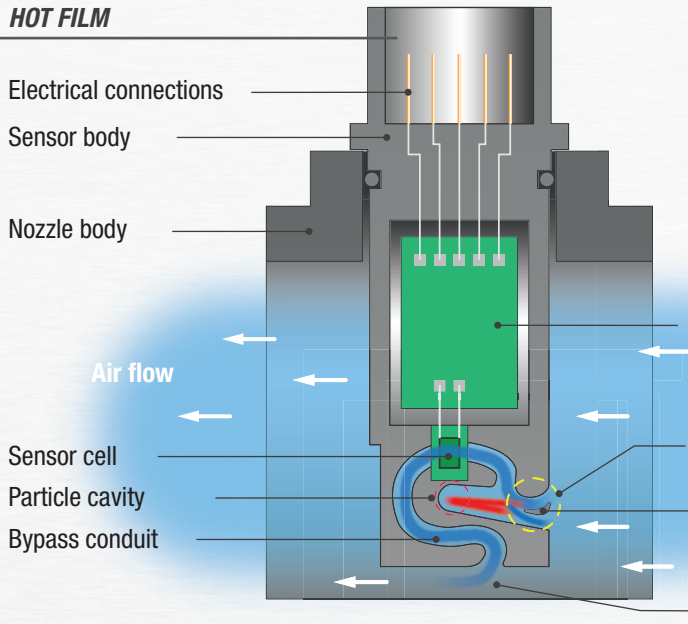
Ref. 69008



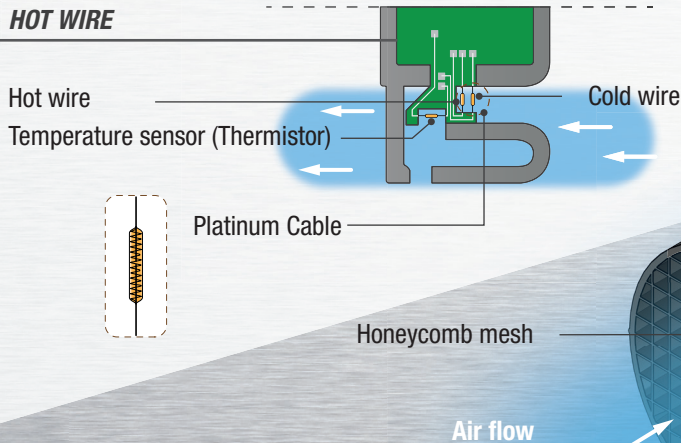
Ref. 69036



### HOT FILM



### HOT WIRE



### Advantages of FAE's MAF:

- High accuracy in the measurement of the incoming air mass.
- It responds quickly to changes in air flow, providing real-time data to the ECU to quickly adjust the air/fuel mixture.
- It operates efficiently over a wide range of air flows, from idle to full throttle.
- It incorporates temperature compensation to ensure accurate measurements under various environmental conditions.
- It is compatible with both gasoline and diesel engines.
- It is less sensitive to location and orientation.
- It is durable, as it has no moving parts.
- It eliminates the need for separate pressure and temperature sensors to determine air mass.
- It has a simple, compact and economical design.

### Types of MAFs:

Currently, there are two types of mass air flow sensors.

- The **hot wire sensor** has two platinum wires suspended inside the main conduit of the sensor body: a hot wire and a compensation wire, which measures the temperature of the intake air.
- The **hot film sensor** has a thermal resistor, a semiconductor film deposited on a ceramic plate encapsulated in plastic.

These two technologies can be divided according to the sensor's exposure to the air flow:

- An exposed measurement point
- A bypass conduit

### Signs of a malfunctioning MAF sensors:

Signs that may indicate failures in dirty or faulty mass air flow sensors include:

- Irregular start-up: Initial combustion is incomplete.
- Oscillation at idle: Variations in idle speed, such as high speed, low speed or instability.
- Driving problems: Variations during acceleration, premature ignition (backfiring) of the engine, abnormal detonation or emission of black smoke.
- Engine stall: It occurs immediately after starting, when the accelerator is depressed or released.
- Emission of black smoke.
- Deficient power.
- Emergency mode.