MSI-PG 03.03

Mass airflow sensor for Daimler-Chrysler

Pierburg-No.:	Replaces:	OE-No.: *
7.22684.07.0	7.22684.00.0	A 611 094 00 48 611 094 00 48

Applications

In gasoline and diesel engines the mass airflow sensor is used to precisely determine the load condition of the engine. It is an essential part in exhaust gas reduction and air mass control.

Technical Data		
Flow rate range:	[kg/h]	7-2.500 [1]
Pressure drop:	[mbar]	7-15 [2]
Temperature range:	[°C]	-30 … +130
Input voltage:	[V]	8 … 16.5
Power consumption:	[mA]	<100
Output voltage:	[V]	0-5

1) Depending on diameter of the air-flow cross-section.
2) At max. mass airflow, depending on condition of intake flow

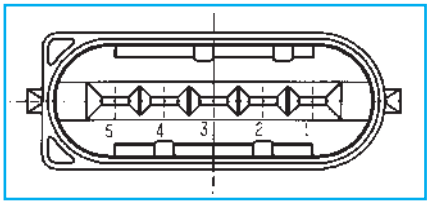
Operating principle

The measuring principle is hot-film anemometry:
The probe is heated to a constant temperature. The incoming air flow cools the probe.

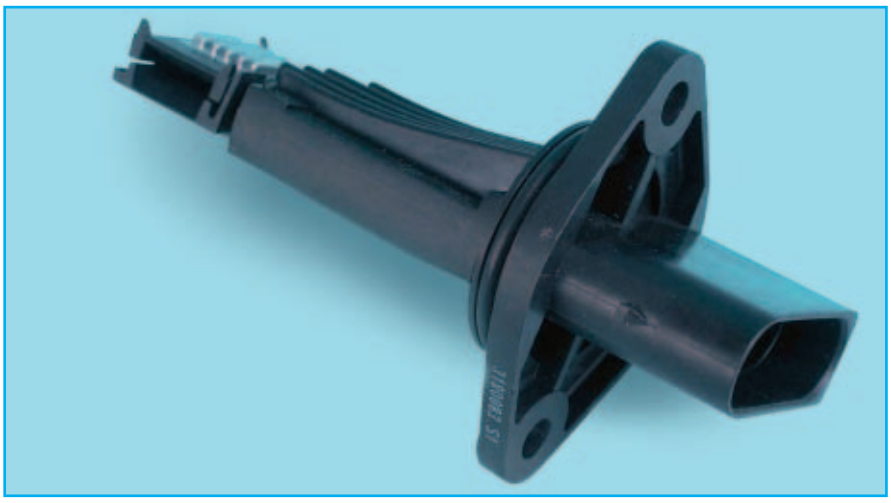
The control electronics balance out the cooling process using a hot air flow. This hot air flow is a measure of the amount of air drawn in.

Two separate resistance-measuring bridges are used to detect the forward and backward flow. The sensor element itself comprises of resistances in the form of half-bridggde networks. The hot-film sensors are located near the front and rear edges of the sensor element assembly. For forward flow the front sensor provides a high signal and for backward flow a correspondingly low signal for backward flow. The rear sensor works in the opposite sense. By simply comparing the signals, the backward flow can be accurately calculated.

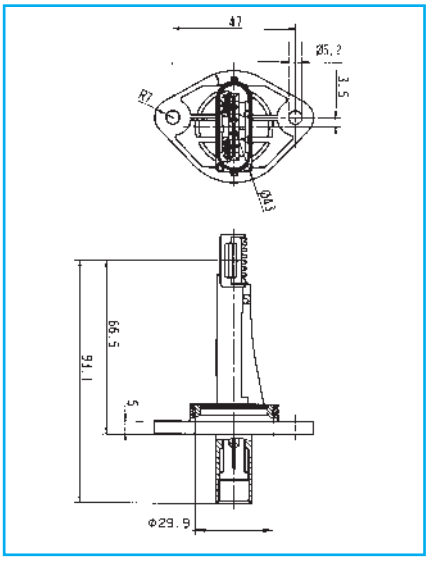
Plug view



Plug view
1 Air temperature signal (optional)
2 Supply voltage 12 V
3 Ground
4 Reference voltage 5 V
5 MAF output signal



Product view



Dimensions in mm

Subject to change of illustrations and text.
* The reference numbers given are for the purposes of comparison only and must not appear on invoices or any other correspondence addressed to the final end-user.

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