

400 kPa MAP SENSOR

Description

The Ecumaster 400kPa MAP (Manifold Absolute Pressure) sensor is an automotive-grade pressure sensor that is not only cost-effective but also delivers precise performance. It functions by converting absolute pressure into an electrical voltage signal.

This versatile sensor can accurately measure a range of pressures, from vacuum conditions to "boost" pressures up to 300kPa, making it an ideal choice for various automotive applications.

For the efficient operation of this sensor, you will require a 5.0V power supply. The transfer function, or the relationship between the output voltage (V_{out}) and the pressure (P) in kPa, is as follows:

$$V_{out} = 5.0 * (0.002421 * P - 0.00842)$$

Here, ' V_{out} ' represents the sensor's output voltage, and ' P ' refers to the measured pressure in kPa.

With this transfer function, you can calculate the sensor output for any given pressure value, aiding in the accurate interpretation of sensor readings.

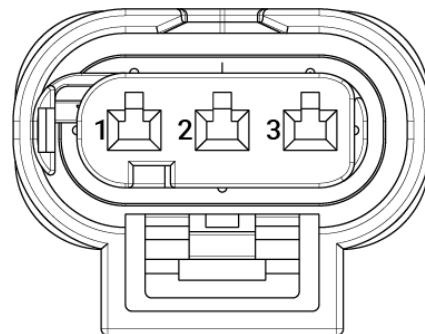
Please note that for the proper installation and best performance of the Ecumaster 400kPa MAP sensor, it's recommended to follow all guidelines provided in the installation manual.

Pressure (kPa)	20	100	200	300	400
Voltage (V)	0.20	1.17	2.38	3.59	4.80



Installation

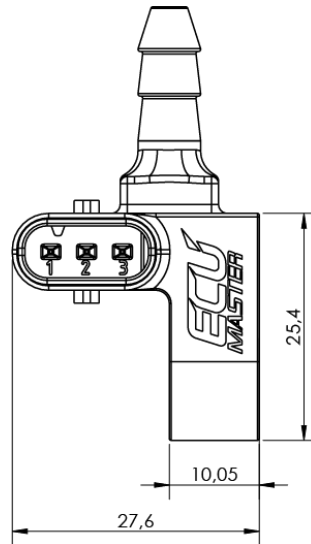
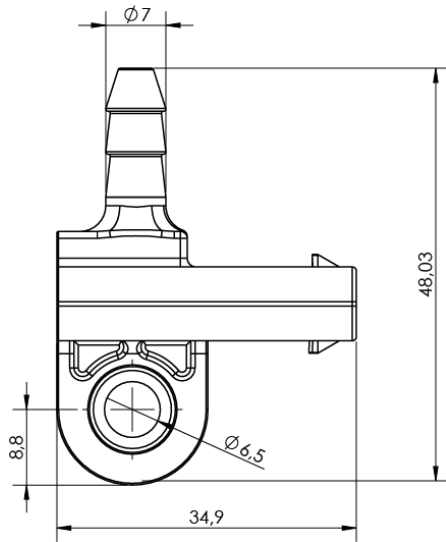
The Ecumaster 400kPa MAP sensor features three terminals: +5V (1), MAP out (2), and Ground (3). For proper connection, the Ground terminal (3) should be linked to the ECU sensor ground. Descriptions for each of the terminals are stamped on the sensor housing for easy identification.



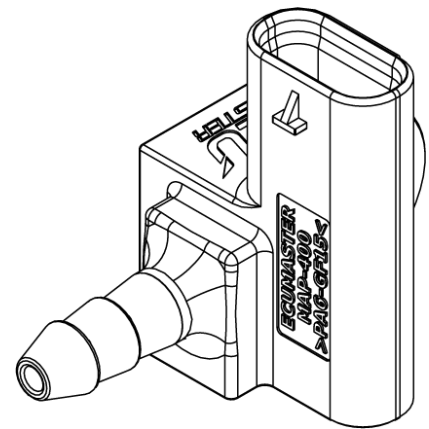
1	+5V
2	OUT
3	GND

Ensure that the MAP sensor is securely connected to the inlet manifold using a short vacuum hose (6mm nipple diameter). The sensor should always be installed above the level of the intake manifold. This positioning helps protect it against the accumulation of fluids like fuel and oil that can collect in

the manifold.



Dimensions in mm



Please note: the Ecumaster 400kPa MAP sensor is not designed for use with fluids!

Connector and terminals:

Terminals part number: 7-1452656-3

Connector part number: 1-1670917-1

Characteristic

Supply voltage	5.0 V
Supply current	< 10mA
Pressure range	20 to 400 kPa
Full scale span	4.6V
Sensitivity	12.1 mV/ kPa
Operating temperature	25C to 125C
Accuracy	+/- 1.5%
Enclosure	PA6-GF15 plastic mold, IP67

Absolute maximum ratings

Maximum pressure	1600 kPa (232 psi)
Maximum supply voltage	5.5 V
Maximum load current	+/- 0.5mA