

## MAP SENSORS

### Purpose and Function.

Manifold Absolute Pressure Sensors, or MAP Sensors as they are more commonly known, are used to measure inlet manifold "pressure" to give an indication of engine load.

These sensors are generally used in "Speed/Density" or "Manifold Pressure Controlled" engine management systems that do not use an Air Flow/Mass Sensor.

The MAP sensor measures "Absolute" pressure not "Gauge" pressure, so normal atmospheric pressure is a value of 1 bar. If used on a turbocharged vehicle where manifold pressure can be higher than atmospheric pressure, a sensor that measures up to 2 bar or more may be required, dependent on boost pressure developed.

The diagram below visually represents range requirements of the sensor to suit certain applications. For example a normally aspirated engine would not require anything higher than 1 bar.

A turbocharged engine with 0.5 bar boost would require a 2 bar sensor. Evolution of the MAP Sensor by Bosch has seen the creation of an integrated temperature and MAP Sensor referred to as a "T-MAP" sensor. These sensors allow the engine management system to accurately detect both manifold pressure and inlet air temperature within one sensor in order to make an accurate assessment of the weight or mass of air being inducted by the engine.

For more detailed information about these products refer to our website

[www.bosch.com.au](http://www.bosch.com.au)



## MAP SENSOR TECHNICAL DATA

Part Number	Measurement Range [bar]	Supply Voltage	Operating Current @ 5v	Connector Details	Figure	Comment
0 261 230 004	0.2 - 1.05	5.0	< 10 mA	1 237 000 039	A	Hose Connection
0 281 002 119	0.2 - 2.5	5.0	< 10 mA	1 237 000 039	A	Hose Connection
0 281 002 437	0.2 - 3.0	5.0	6.0 - 12.5 mA	Ref "A"	B	T-MAP Sensor
0 281 002 456	0.5 - 3.5	5.0	6.0 - 12.5 mA	Ref "A"	B	T-MAP Sensor
0 281 002 576	0.5 - 4.0	5.0	6.0 - 12.5 mA	Ref "A"	B	T-MAP Sensor

"A" = Connector 1 928 403 736, Terminal 1 928 498 060, Seal 1 928 300 599

Absolute Pressure	0 bar	1 bar	2 bar	3 bar
Normally Aspirated Engine				
Turbo engine with 0.5 bar boost [7 psi]				
Turbo engine with 1 bar boost [15 psi]				
	Atmospheric Pressure			

Fig. A

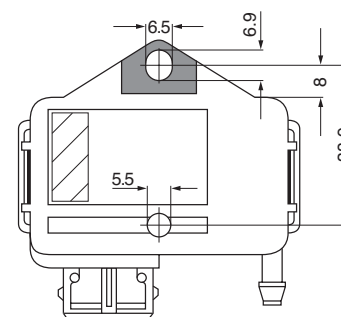


Fig. B

