

MAP3

Universal 3-bar Manifold Pressure Sensor

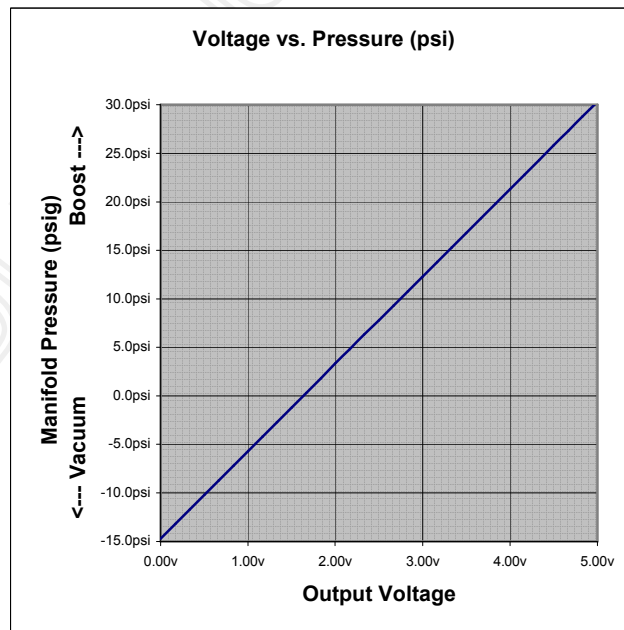
The **MAP3** is a true universal 3-bar manifold pressure sensor for automotive engines. The **MAP3** can operate on either 5volt sensor power or 12volt vehicle power. The output of the **MAP3** swings from 0volts to 5volts over the full 3 bar (-30"Hg to 29.4psi) pressure range, independent of the power source.

The **MAP3** is completely sealed (except for the pressure port) in solid, super-tough polypropylene. However, even given that, it is advisable to avoid mounting the sensor near high heat sources such as exhaust headers and turbochargers.

The **MAP3** pressure port will accept a standard rubber vacuum line with $\frac{1}{4}$ " inside diameter or, a hard plastic line with a $\frac{1}{8}$ " outside diameter.

The **MAP3** does not require a special 5volt power source to operate. It will function equally well whether powered by a 5volt source or, by the vehicle's 12volt power system. In either case, the output of the MAP3 will swing from 0volts to 5volts over the full 3 bar (-30"Hg to 29.4psig) pressure range. If powering the **MAP3** from the vehicle's power system. Be sure to connect it to a source, which is only powered while the engine is running. Connecting the **MAP3** directly to the vehicle's battery may cause the battery to drain, if the vehicle is left in a non-running state for an extended length of time.

Note: Some systems, which provide their own 5volt sensor power line, may display greater noise immunity if the sensor is powered by that 5volt line.



Nominal output voltage at standard temperature/pressure (0psi @ sea level) is approximately 1.67v

Vacuum / Pressure line connections



Standard 1/4" vacuum line



1/8" Hard plastic "Gage line"



OEM Style 90° angled connection

The MAP3 connects directly to 1/4" vacuum line or, OEM style 90 degree connector boots. It also will accept the standard 1/8" hard plastic line which is used with most automotive pressure and vacuum gages.

1/8" hard plastic line must be firmly inserted/pressed into the sensor's pressure port until it seats on the hard stop. The stop is approximately 1/4" into the pressure port.

Do NOT connect oil, fuel, or water lines to the MAP3. The sensor is not designed to work with liquids of any kind.

Electrical connections

The MAP3 is provided with 3 feet (~ 1 meter) of 3-conductor cable. The ends are terminated in plain, stripped 22-gage stranded wire. It may be soldered to an existing connector. Or, connected directly to the input of the recording/display/control device. Connections are as follows:

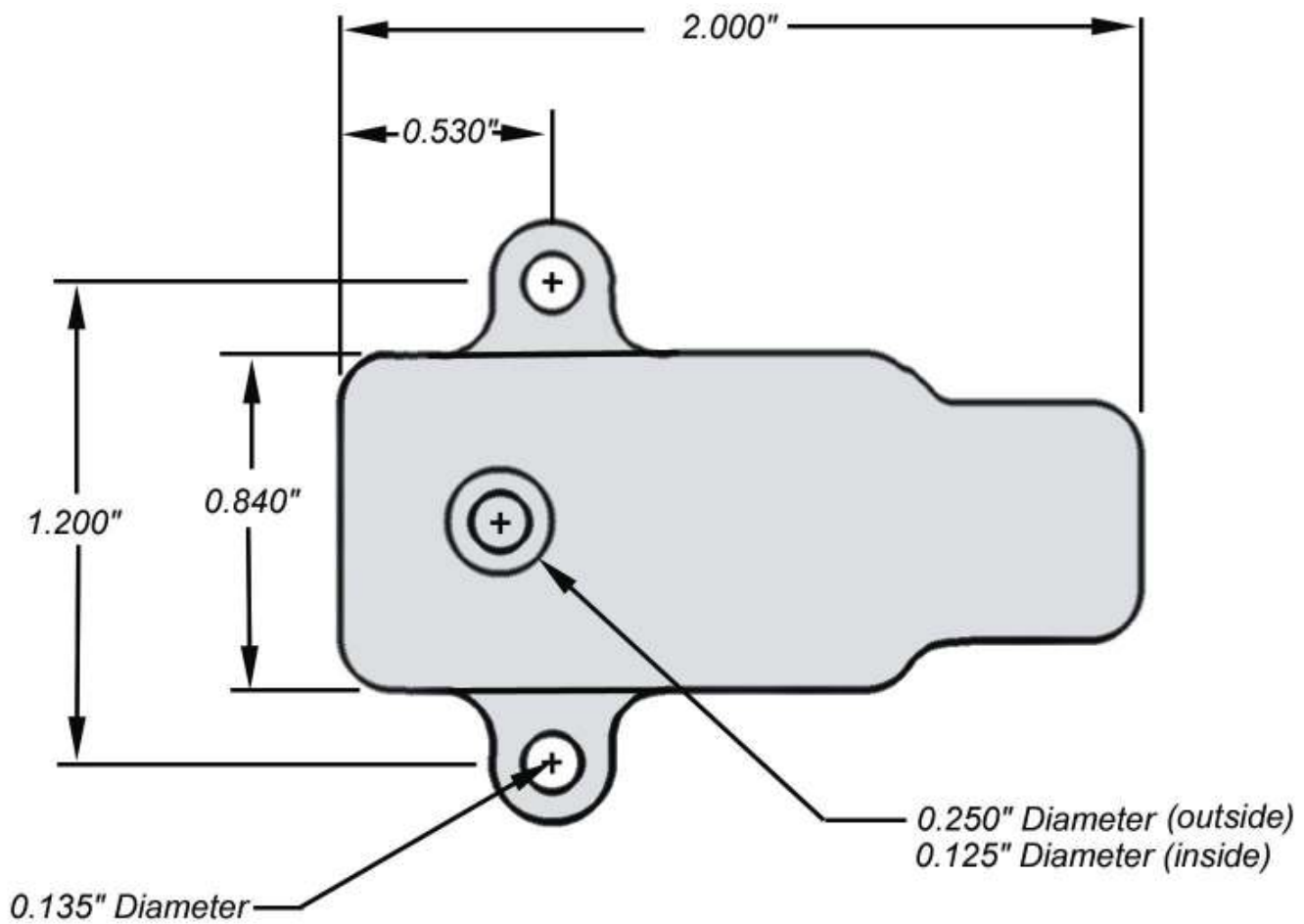
1. The black wire is connected to ground.
2. The red wire is connected to the power source. 5volts or 12volts
3. The green wire is the sensor output. Connects to ECU, Gage, Logger, Etc.

(Output is approximately 1.7v / bar or 0.113v / psia)

Sensor Mounting

The MAP3 should be solidly mounted via its two #6 screw sized mounting ears. See the attached diagram for dimensions. Mount using either #6 self-tapping screws or 6-32 machine screws, as appropriate for your application. Avoid mounting the sensor near high temperature heat sources such as turbochargers and exhaust headers.

MOUNTING PATTERN



Mount using 6-32 machine screw or, #6 self-tapping screw.

Wiring Key

Red	Power (5 - 16vdc)
Black	Ground
Green	Sensor output (0-5vdc)

Recommended Maximum Operating Conditions

Minimum operating voltage	5vdc
Maximum operating voltage	16vdc
Minimum operating temperature	32°F / 0°C
Maximum operating temperature	185°F / 85°C
Maximum operating pressure	4bar / 60psi absolute (~45psig)