



# INSTALLATION INSTRUCTIONS

## 2 1/16" WIDEBAND AIR/FUEL RATIO MONITOR - ANALOG



### Installation

1. Disconnect the negative (-) battery cable.
2. Gauge can be mounted in a 2 1/16" hole with brackets supplied. Gauge can also be mounted in Auto Meter Mounting Cup, or in Auto Meter Gauge Works Pods.
3. Wire gauge as shown.

#### Red Wire (Power):

Connect to a fused and switched 12V positive source that is turned on and off with the ignition switch. Place a 3 amp automotive fuse (available commercially) in line with this connection to protect your gauge. It is recommended that vehicles without alternators connect this wire to a separate switch or direct to the vehicle's master cutoff switch. (See Heater Control Mode Section).

When power is applied to the gauge the pointer will move counter clockwise to the stop pin, where it will remain until voltage exceeds 12.5 v or voltage is applied to the brown wire. **Once the gauge sees 12.5 volts, it will begin heating the sensor and the pointer will move back and forth between 8.0 and 9.0 on the dial.** When

the sensor is heated to the proper operating temperature the gauge will begin reading air/fuel ratio in real-time.

#### Black Wire (Ground):

Connect to good engine ground.

#### White Wire (Lighting):

Connect to dash lighting dimmer control.

#### Brown Wire (Heater Override for applications that provide less than 12.5 volts with engine running):

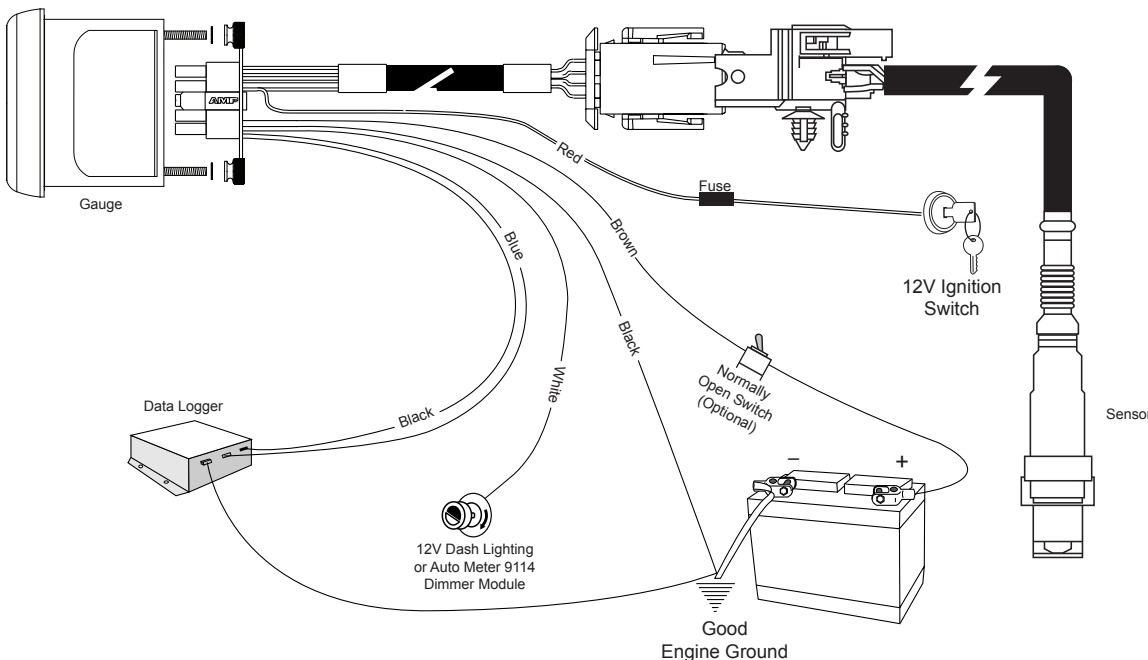
Connect to a normally open switch. Connect the other switch terminal to battery positive (+).

#### Blue Wire (Optional Data Logger Signal Output):

Connect to signal input(+) or Engine Management System or Data Acquisition unit.

#### Black Wire (Optional Data Logger Signal Ground):

Connect to signal input(-) on Engine Management system or Data Acquisition Unit.



The white wire on LED lit instruments can also be wired into a 12V key on ignition, like the red wire, for an "always on" illumination. Some styles, like Chrono Series, were designed with an "always on" illumination for the best results. The 9114 Dimmer Module can also be used with either configuration.

**WARNING**  
Sender Will Get Very Hot During Operation.

### Mounting Sensor

The heated oxygen sensor comes with a stainless steel weld-in bung, plug, and wiring harness. The oxygen sensor should be installed as close to the cylinder head as is reasonably possible so that the sensor reaches operating temperature quickly. If long tube headers are used, the oxygen sensor should be installed in the collector. If cast iron manifold(s) or shorty headers are used, install the sensor in the pipe just below the manifold. In multi-bank applications mounting in the left or right side is acceptable. Turbocharged applications should have sensor installed 4-5" after turbo on the down pipe.

#### Auto Meter recommends welding supplied stainless steel bung with a TIG welder.

1. The exhaust pipe in front of the sensor should not contain any pockets, projections, protrusions, edges, flex-tubes etc. to avoid accumulation of condensation. A downwards slope of the pipe is recommended. If the exhaust pipe is parallel to the ground, the sensor must be installed in the top half of the pipe to avoid damage to due to condensation
2. Tightening torque: 30-44 ft lbs.
3. Avoid excessive heating of the sensor cable. Route sensor cable away from exhaust pipe.
4. The maximum temperature of the sensor on the outside of the exhaust fitting should not exceed 900° F.

The Air/Fuel Ratio Monitor is intended for use with **unleaded gasoline only**.

**NOTE:** OK for use with Nitrous Oxide.

**NOTE:** Stoichiometric Air / Fuel Ratio is the chemically correct ratio where theoretically all of the oxygen and all of the fuel are consumed. The mixture is neither rich or lean.

