




## MAF Conversion Kit for E30 325i Using PSC1-004

### Installation Instructions

 **WARNING!** Not designed to work with 1987 vehicles built before 09/86

#### Parts Included:


Split Second PSC1-004  
Split Second ARM1  
MAF Sensor  
MAF Reducer  
Wiring Harness

#### Parts installation:

- 1) Remove the air filter housing and air flow meter.
- 2) Attach the MAF Reducer to MAF Sensor.
- 3) Install the MAF assembly in place of the air flow meter. This will involve cutting a larger opening in the top of the air box and drilling new mounting holes.
- 4) Route the harness along the firewall and pass it through the grommet on the passenger side into the area below the DME. The DME is the Motronic control unit just above the glove box. To access the DME, open the glove box and lower the black vinyl cover at the top of the glove box area. The DME is the silver box with the large connector along its left hand side. Push a piece of heavy gauge solid wire through the grommet in the firewall from the inside of the car. Tape the bundle of wires to the solid wire. Spray some WD-40 on the end of the bundle to make it easier to pull through.
- 5) Determine a suitable location for the PSC1. Popular spots are under the dash left of the steering column, along the right side of the center console or the roof of the glove box compartment.
- 6) Mount the PSC1.
- 7) Thread the wires from the PSC1 to the open area to the left of the DME above the glove box.
- 8) Determine a suitable location for the ARM1. Popular spots are on the steering column or in the glove box.
- 9) Mount the ARM1 with the velcro provided. Note that one of the screws on the bottom of the ARM1 is tied to +12V. Be sure those screws do not contact chassis ground.
- 10) Thread the wires from the ARM1 to the open area to the left of the DME above the glove box. Thread the **ORANGE** wire through the firewall grommet to the engine bay.

#### Wiring Instructions:

For the highest reliability, use solder connections. Crimp connectors are provided for your convenience.

 **WARNING!** Disconnect the negative terminal of the battery before connecting the **RED** and **BLACK** leads. Be sure you know the anti-theft radio code before disconnecting the battery.

- 1) Remove the excess wire jacket so that the PSC1, ARM1 and harness wires can be accessed next to the DME. Secure the end of the wire jacket with heat shrink tubing or a zip tie so it does not fray.

- 2) Crimp the **BLACK** wires from the PSC1 and ARM1 together on one side of a butt splice connector. Crimp a 1 foot length of left over **BLACK** wire and the harness **BLACK** wire together on the other side of the butt connector. Tie the loose **BLACK** wire to signal ground at the **BROWN** wire leading to the DME connector pin 14.
- 3) Connect the **BROWN** wire from the ARM1 to one of the **BLACK** wires using an instant splice connector.
- 4) Crimp the **RED** wires from the PSC1 and ARM1 together on one side of a butt splice connector. Crimp a 1 foot length of left over **RED** wire and the harness **RED** wire together on the other side of the butt connector. Tie the loose **RED** wire to the **RED/BLUE** wire on the DME harness leading to pin 37 using an instant splice connector. This will provide a switched +12V.
- 5) Connect the **YELLOW/BLACK** wire to the **BLACK** wire in the bundle leading to the DME connector pin 6 using an instant splice connector. This wire provides the RPM input to the PSC1.
- 6) Connect the **VIOLET** wire to the **GRAY/YELLOW** wire at the DME connector pin 7 using an instant splice connector. This wire provides the air flow input to the DME. **NOTE: If the stock air flow meter is reconnected, the VIOLET and GRAY wires must be disconnected using the in-line connectors in the PSC1 wiring harness.**
- 7) Connect the **GRAY** wire to the **GRAY/ VIOLET** wire at the DME connector pin 44 using an instant splice connector. This wire provides the temp signal to the DME. The **GRAY** wire has an in-line connector for the same reason as the **VIOLET** wire. You may choose to run a dedicated IAT sensor. If so, connect it to the **GRAY/VIOLET** wire and leave the GRAY wire from the PSC1 disconnected.
- 8) Connect the **GREEN** wire in the harness to the GREEN wire from the PSC1 using a butt splice connector.
- 9) Locate the connector for the oxygen sensor. It is a three wire connector located along the side of the engine. The connector has two **WHITE** wires and one **BLACK**. Connect the **ORANGE** wire from the ARM1 to the **BLACK** wire on the side of the connector that leads to the DME using an instant splice connector. You can also make the connection at the DME if you prefer. The oxygen sensor signal is on the DME connector pin 28.
- 10) Connect the **WHITE** wire on the ARM1 to the **GRAY/RED** wire leading to the ash tray light using an instant splice connector. When the headlights are turned on, this wire provides the +12V for the ash tray light. This voltage causes the panel illumination of the ARC2 and ARM1 to dim.
- 11) If your PSC1 has the E option, cut the BLACK oxygen sensor wire leading to the DME connector pin 28. Connect the **PINK** wire to the side leading to the oxygen sensor. Connect the **PINK/BLUE** to the side leading to the DME. Program the threshold for the "E" function using output B in the R4 software.
- 12) Reconnect the negative terminal of the battery.
- 13) Plug the harness connector into the MAF sensor.
- 14) Program per the instructions for the PSC1 and R4 software.

If you have any difficulty with installation, please call us at (949)863-1359 for assistance. We hope you enjoy the precise, filtered operation of your new PSC1 air/fuel ratio calibrator and increased horsepower of your E30 325i.

**THANK YOU FOR CHOOSING SPLIT SECOND**