

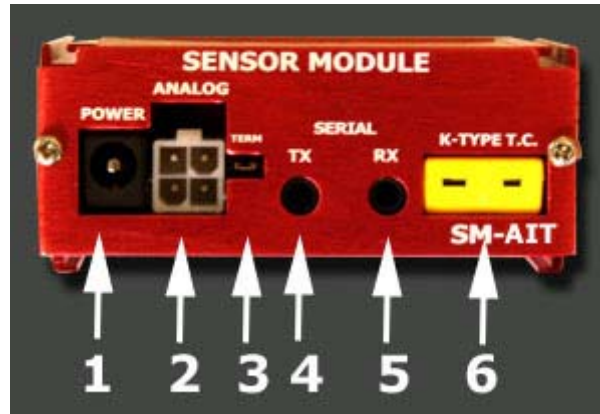


## iMFD Sensor Module SM-AIT

**\*Please read the instructions completely through at least once before proceeding with the installation to minimize errors.**

**\*Double check polarity of power before powering it on for the first time.**

### Overview:



(Figure 1)

1. Connects to 12V-18V power source.
2. Analog outputs (3.3V, 0-5V analog output, ground)
3. Termination jumper. Closed for first SM in daisy chain.
4. Connects to next SM in daisy chain or to first DM
5. Connects to previous SM or unconnected if first SM in daisy chain
6. Connects to AIT probe K-Type Thermocouple

### Install the Exhaust Gas Temperature Sensor:

1. The PLX AIT K Type thermo coupler probe screws into a 1/8 NPT tap.
2. Mate the AIT probe with the SM-AIT module where indicated K-Type T.C.

### Connecting Power to the Unit:

**CAUTION! CONNECTING THE SM-AIT IN REVERSE POLARITY WILL DAMAGE THE UNIT! CHECK CONNECTIONS BEFORE POWERING ON.**

1. The SM-AIT accepts 12-18V DC for power. Connect the negative wire (black) to your vehicle's ground. This is usually the negative terminal of your automobile's battery. Connect the positive wire (red) to your vehicle's ignition power. This power is only supplied when your key is turned passed a specific position and is off when your key is removed. Your power connection must be capable of supplying at least 1 amp of current. A 5 Amp fuse is recommended for safety.

\*If you plan to integrate the SM-AIT with other aftermarket devices by utilizing the analog output signal wire. Make sure that the negative wire (black) is connected as close as possible to your device's ground. This guarantees that both devices "see" the same

reference ground and a more accurate interpretation of the output voltages will be achieved. Please refer to the PLXApp notes online for more information.

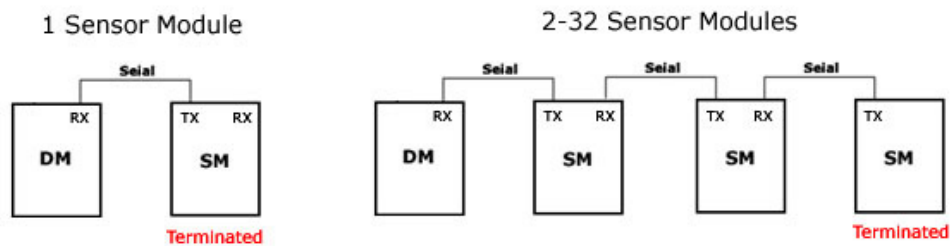
2. Locate the 2.1mm Power plug. Unscrew the plastic cover and insert it into the red/black power wires.
3. Solder or crimp the red power wire to the **CENTER** of the connector. (12-18V)
4. Solder or crimp the black power wire to the **SHIELD** of the connector. (GROUND)



(Figure 2)

### Using the Sensor Module in the iMFD Chain:

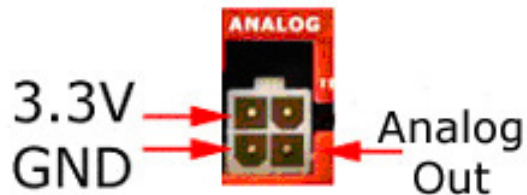
1. If the SM-AIT is the only sensor module or last sensor module in the iMFD chain, be sure to have the termination jumper installed. Otherwise, remove the jumper. Please refer to (Figure 1) for the location of the termination jumper.
2. Connect the supplied 1ft serial cable according to the diagram below (Figure 3).



(Figure 3)

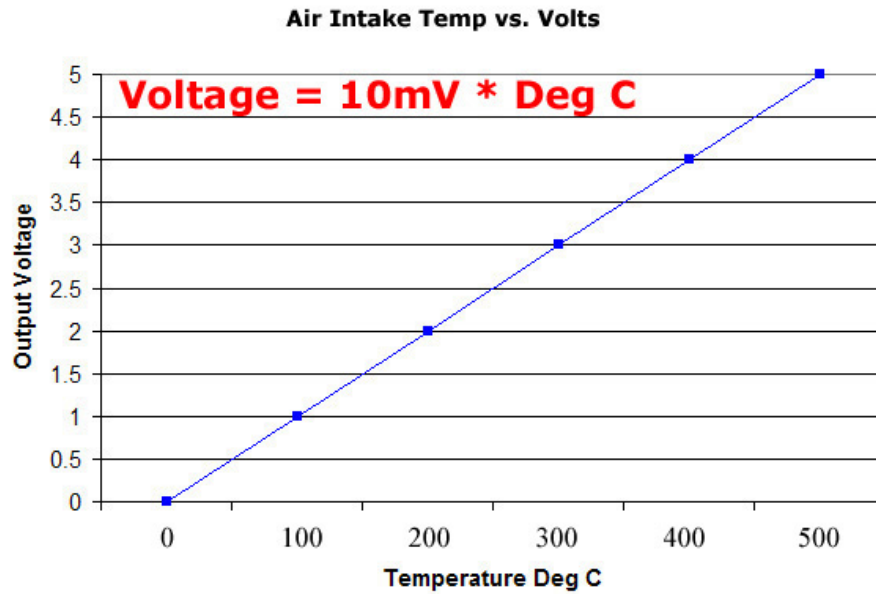
### Using the Sensor Module Analog Output:

1. The SM-AIT has one 0-5V analog output designed to be interfaced with a number of aftermarket products such as engine management systems, data loggers and tuning electronics. It is not mandatory for you to use this output for your unit to properly function.



(Figure 4)

## Linear Analog Output (0-5V)



\*Output is capped at 3.3V maximum

(Figure 5)

### Recommended Accessory:



(Figure 6) DM-5 AIT 52mm Gauge. Ideal for affordable AIT monitoring from your SM-AIT

### Included Items:

1. SM-AIT main unit
2. 4ft red power wire
3. 4ft black ground wire
4. 4ft analog gray wire
5. Molex 4 pin white connector with 3 terminals
6. 2.1mm connector for power
7. 1ft Serial Cable
8. Termination jumper
9. Users guide
10. K-Type T.C (available separately)

**Specifications:**

Physical Dimensions	2" x 2.875" x 1.125" (52mm x 75mm x 28mm) L x W x H
Accuracy	+ - 0.5 Deg C (+ - ~1 Deg F)
Measurement Range	0-333 Deg C (32-631 Deg F)
Analog Outputs	Linear 0-5V (Driving Current 20mA) *Output is capped at 3.3V
Operating Voltage	8V-18V
Power Consumption	0.3 Watts
Operating Temperature	0 - 85 Deg C
Sensor	One K-Type Thermocouple
Enclosure	Extruded Aluminum