



# -40C to +1000C EGT SENSOR AEM P/N 30-2050

This RTD Style EGT sensor is specifically designed to monitor high temperature environments in the automotive applications.

The **30-2050** kits contains:

- One RTD temperature sensor with male connector and male thread.
- One mating connector assembly.
- One weld-on bung w/female thread.

<b>Temperature Range:</b>	-40°C to 1000°C
<b>Protective Tube Material:</b>	Mat. No. 2.4816 INCONEL ALLOY 600
<b>Sensor Thread:</b>	M14 x 6H – iso 965-2
<b>Sensor Element:</b>	Platinum sensor in thin film technology
<b>Nominal Resistance of Element:</b>	200Ω at 0°C
<b>Accuracy:</b>	Including ageing (500 hr @ 950°C), not including electronics. <ul style="list-style-type: none"> <li>• From -40°C to 200°C: ± 3°C</li> <li>• From 200°C to 1000°C: ± 1.5°C</li> </ul>

**Characteristic Curve:** Almost linear from -40°C to 1000°C

Temp	0°C	100°C	200°C	300°C	400°C	500°C	600°C	700°C	800°C	900°C	1000°C
Ohms	200	275	348	419	488	554	617	679	738	794	849

**Disturbances:** Very insensitive to external disturbances (gas flow, splash water...) due to good thermal decoupling of measurement element.

**Response time:**

Initial Temperature	23 °C	23 °C	300 °C	300 °C
Final Temperature	205 °C	300 °C	600 °C	600 °C
Response Time $t_{0.63}$	7.5 s	5 s	6.5 s	4.5 s
Gas Velocity	3.5 m/s (7.83 mph)	11 m/s (24.61 mph)	10-16 m/s (22.37 – 35.79 mph)	20-30 m/s (44.74 – 67.12 mph)

**Installation Suggestion:**

**Turbocharged engines:** 1.5" upstream of the Turbine inlet with sensor axis in the vertical Plane and sensor end down.

**Naturally aspirated:** 1.5" downstream of the collector or end of exhaust manifold in the same configuration as for turbocharged applications.

**Wiring:** The wiring for the unit is simple and consists of only 2 wires. Polarity is not important. For the 30-1000, 30-1001, 30-1002, 30-1010, 30-1012, 30-1020, 30-1100, and 30-1101 units, connect 1 wire to 5 volts and the other to an open EGT input channel on the EMS. On all other EMS units, connect 1 wire to a good ground and the other to an open EGT input channel on the EMS.

**AEM EMS Calibration**

Use the Wizard in AEMPro to insert the proper values in your calibration file.

**ADVANCED ENGINE MANAGEMENT INC.**

This product is legal in California for racing vehicles only and should never be used on public highways.  
Advanced Engine Management, 2205 126<sup>th</sup> Street Unit A Hawthorne, CA. 90250, Phone: (310) 484-2322 Fax: (310) 484-0152  
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