



-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.

Temperature Range:

-40°C to 1000°C

Protective Tube Material:

Mat. No. 2.4816 INCONEL ALLOY 600

Sensor Thread:

M14 x 6H – iso 965-2

Sensor Element:

Platinum sensor in thin film technology

Nominal Resistance of Element:

200Ω at 0°C

Accuracy:

Including ageing (500 hr @ 950°C), not including electronics.

- From -40°C to 200°C: ± 3°C

- From 200°C to 1000°C: ± 1.5°C

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.
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Instruction Part Number: 10-361, © 2006 Advanced Engine Management, Inc.

AEM Electronics Warranty

Advanced Engine Management Inc. warrants to the consumer that all AEM Electronics products will be free from defects in material and workmanship for a period of twelve months from date of the original purchase. Products that fail within this 12-month warranty period will be repaired or replaced when determined by AEM that the product failed due to defects in material or workmanship. This warranty is limited to the repair or replacement of the AEM part. In no event shall this warranty exceed the original purchase price of the AEM part nor shall AEM be responsible for special, incidental or consequential damages or cost incurred due to the failure of this product. Warranty claims to AEM must be transportation prepaid and accompanied with dated proof of purchase. This warranty applies only to the original purchaser of product and is non-transferable. All implied warranties shall be limited in duration to the said 12-month warranty period. Improper use or installation, accident, abuse, unauthorized repairs or alterations voids this warranty. AEM disclaims any liability for consequential damages due to breach of any written or implied warranty on all products manufactured by AEM. Warranty returns will only be accepted by AEM when accompanied by a valid Return Merchandise Authorization (RMA) number. Product must be received by AEM within 30 days of the date the RMA is issued.

Please note that before AEM can issue an RMA for any electronic product, it is first necessary for the installer or end user to contact the tech line at 1-800-423-0046 to discuss the problem. Most issues can be resolved over the phone. Under no circumstances should a system be returned or a RMA requested before the above process transpires.

AEM will not be responsible for electronic products that are installed incorrectly, installed in a non approved application, misused, or tampered with.

Any AEM electronics product can be returned for repair if it is out of the warranty period. There is a minimum charge of \$50.00 for inspection and diagnosis of AEM electronic parts. Parts used in the repair of AEM electronic components will be extra. AEM will provide an estimate of repairs and receive written or electronic authorization before repairs are made to the product.