



TEMPERATURE SENSOR

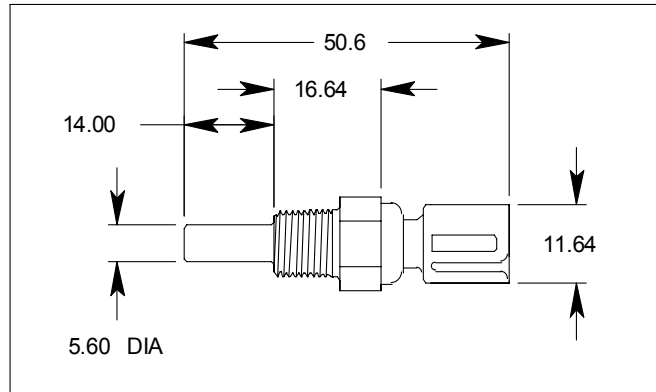
PRODUCT DATA

TEMPERATURE SENSOR

PART NUMBER 30-2012

FEATURES:

- Design for Manufacturability
- Cost Effective
- Robust Design
- Few Components
- Few Assembly Processes
- Thermistor Technology
- 100% Calibration Certified



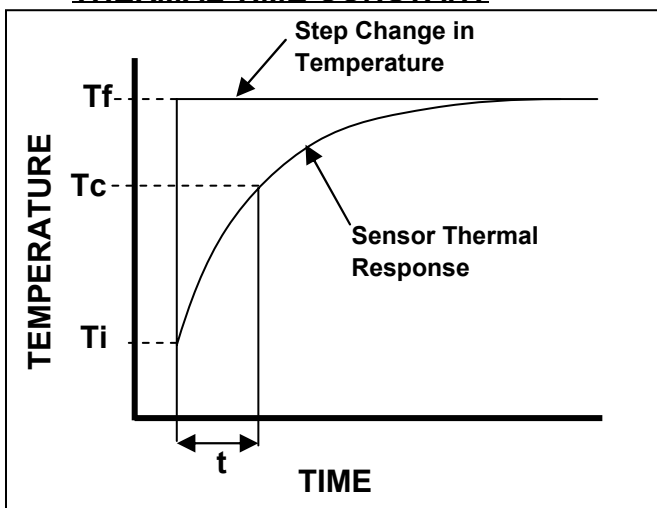
THERMAL & ELECTRICAL PROPERTIES

Typical Voltage Supply: **5V DC**
 Operating Temperature:
 Sensor Tip: **-40°C to 200°C**
 Connector: **-40°C to 150°C**
 Resistive Range (Ohms): **See Table**
 Dissipation Constant: * **12 mW/°C**
 Thermal Time Constant: ** **10 seconds**
 Accuracy: **See Table**

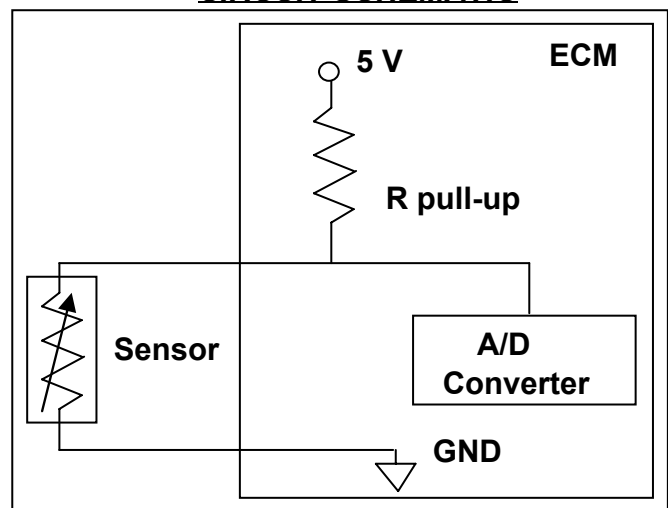
MECHANICAL PROPERTIES

Sensor Body Material: **Brass**
 Connector: **PA66**
 Hex Size: **12.70 mm (1/2")**
 Thread Size: **1/8" - 27 PTF**
 Mating Connector: **12047662**
 Overall Weight: **12.2 g**

THERMAL TIME CONSTANT



CIRCUIT SCHEMATIC



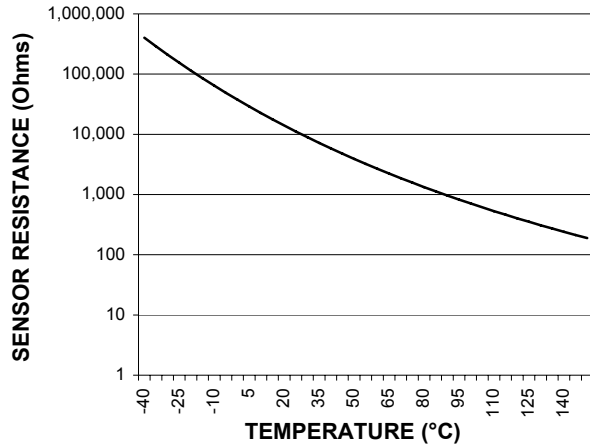
* The ratio, at a specified ambient temperature, of the change in the power dissipation of the sensor to the resultant temperature change of the thermistor. Test medium: silicone oil

** The time required for the sensor to achieve 63.2% of its steady state value when subjected to a step change in ambient temperature [$T_c = (T_f - T_i) * 63.2\% + T_i$]. Test medium: silicone oil.

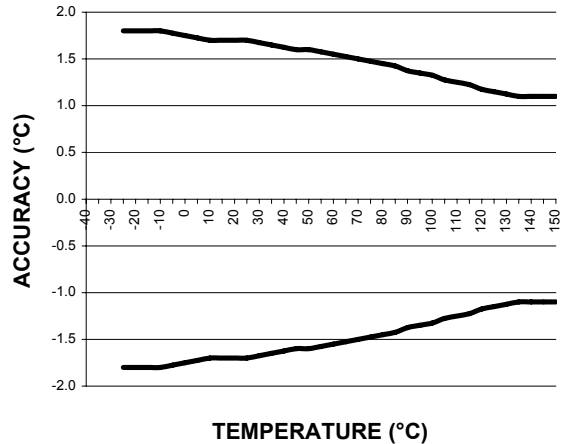


TEMPERATURE SENSOR PRODUCT DATA

**UNLOADED RESISTANCE vs TEMPERATURE
CHARACTERISTIC CHART**



TEMPERATURE ACCURACY CHART



Note: Temperature Sensor Calibration Resistance Guaranteed by 100% Automated Calibration Certification.

Temp (°C)	Res (Ohms)	Res (±%)	Ref Acc (±°C)	Temp (°C)	Res (Ohms)	Res (±%)	Ref Acc (±°C)	Temp (°C)	Res (Ohms)	Res (±%)	Ref Acc (±°C)
-40	402392	12.42	1.80	25	11150	7.45	1.70	90	964.7	4.20	1.30
-35	288981	11.95	1.80	30	8935	7.17	1.60	95	826.2	3.98	1.30
-30	209817	11.49	1.80	35	7204	6.88	1.60	100	710.2	3.85	1.30
-25	153922	11.04	1.80	40	5844	6.60	1.60	105	612.9	3.60	1.20
-20	114026	10.60	1.80	45	4768	6.33	1.60	110	530.9	3.39	1.20
-15	85256	10.17	1.80	50	3911	6.06	1.60	115	461.5	3.20	1.20
-10	64306	9.75	1.80	55	3226	5.81	1.50	120	402.6	3.05	1.10
-5	48910	9.34	1.70	60	2676	5.57	1.50	125	352.3	2.91	1.10
0	37499	8.93	1.70	65	2232	5.34	1.50	130	309.3	2.81	1.10
5	28977	8.63	1.70	70	1870	5.10	1.50	135	272.4	2.72	1.10
10	22572	8.33	1.70	75	1574	4.87	1.40	140	240.6	2.66	1.10
15	17717	8.03	1.70	80	1331	4.64	1.40	145	213.2	2.61	1.10
20	14007	7.74	1.70	85	1131	4.42	1.40	150	189.3	2.61	1.10

Important: The values above are for the unloaded thermistor, as shipped from AEM Performance Electronics, and does not reflect the effects of application system errors and aging.

Notes: Please contact AEM Performance Electronics for the resistance vs temperature curve for your temperature sensor application. Due to self-heating effects of the thermistor, the resistance is dependant upon the application.

Since thermistors are "continuous function devices", resistance vs temperature data is available for numbers beyond those specified above.

For more information contact:

AEM Performance Electronics
2205 126th Street
Hawthorne, CA 90250

Phone: (310) 484-2322
Fax: (310) 484-0152
E-mail: emstech@aempower.com