



## EMI-Protected NTC Thermistors

### Overview

With increasing complexity of electric systems and density of electronic components in modern vehicles, conventional NTC thermistor sensors are vulnerable to stray electromagnetic interference causing self-heating.

Amphenol Thermometrics UK Ltd has developed a noise-immune NTC thermistor with an integrated RF de-coupling function, providing EMI protection at the component level over a wide frequency range.

### Features

- NTC element-level EMI protection
- Drop-in upgrade for existing applications
- Reduced system cost:
  - Retrofit to use existing housing designs
  - Eliminate shielded cables
- EMC-tested to GMW3097 / ISO11452
- Range of conformal coatings available
- Fast time response

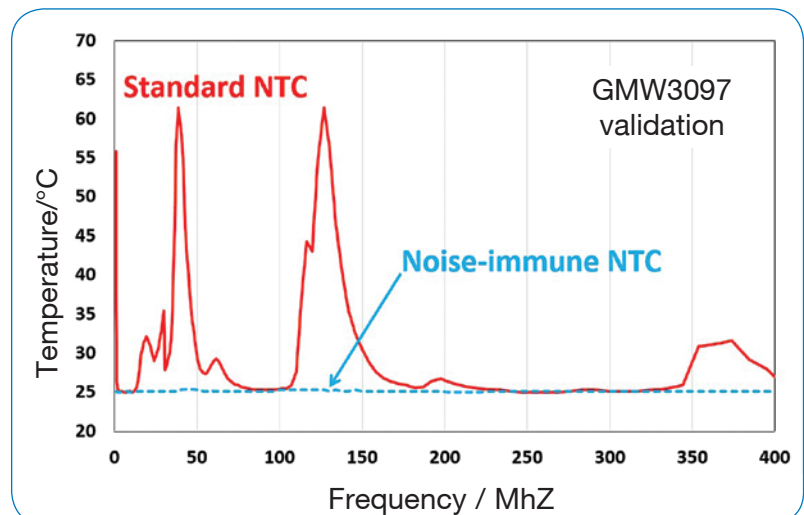
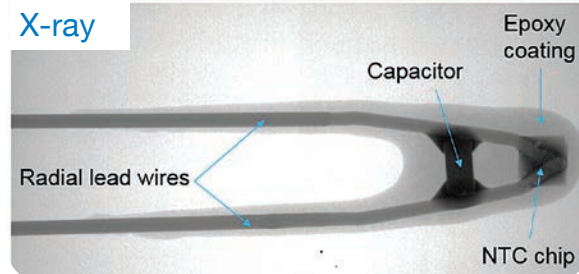
### Applications

- EV/HEV/PHEV markets
- Battery temperature sensing
- Existing automotive - upgrade
- Drive systems
- HVAC
- Air intake / coolant

### Epoxy-coated noise-immune NTC



#### X-ray



## Numerous Automotive Applications

The noise-immune NTC thermistor can be used in numerous applications. Below are some examples of automotive applications where it could be applied to prevent self-heating of the NTC thermistor due to EMI effects within an automobile.

### EV/HEV/PHEV – Battery Temperature



Inverter Temperature



Motor Coil Temperature



Coolant Temperature



Battery Cell Temperature

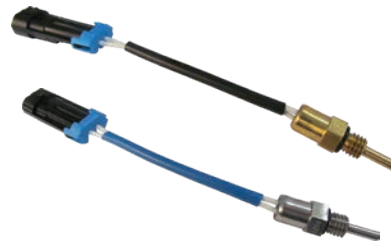
### Engine Management Sensors



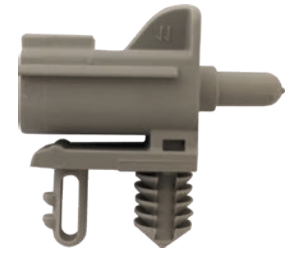
Combo Pressure and Temperature



Coolant / Oil Temperature

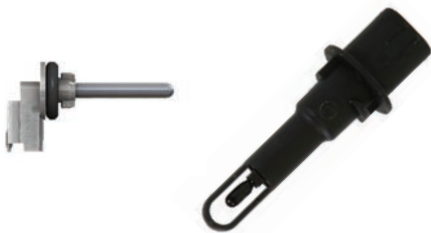


Engine Temperature



Outside Air Temperature

### HVAC



Discharge / Evaporator Air Temperature



Automatic Defog Sensor

**Amphenol**  
Advanced Sensors

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