

TDK offers Pb-free NTC thermistors for a wide range of automotive and industrial applications

TDK Corporation announces the L862 (B57862L) NTC thermistors with bendable wires and the L871 (B57871L) lead spacing NTC thermistors that can be used in a wide range of automotive and industrial applications. Both series are Pb-free and can measure temperatures between -40 °C and +155 °C with a tolerance of $\pm 1\%$ and $\pm 3\%$ respectively. At room temperature, their maximum power dissipation is 60 mW. Both series are available with different rated resistances between 1 k Ω and 100 k Ω and different R/T characteristics (see tables below and on the next page). After 10,000 h at +70 °C, the deviation of the resistance at room temperature R_{25} is less than 3%.

The sensor element of the L862 that is encapsulated with a black epoxy coating is just 2.6 x 6.5 mm (D x H) in size and has insulated leads of silver-plated nickel wire (AWG 30, d 0.25 mm). The total length of the sensor including the wires is 50 mm, with 6 mm stripped. While the dissipation factor δ_{th} of the sensor is 1.4 mW/K, its thermal cooling time constant τ_c is 14 s.

Also, the sensor element of the L871 is encapsulated with a black epoxy coating. It is just 2.8 x 6.0 mm (D x H) in size and has Cu-clad steel wires (d 0.4 mm) with a spacing of 2.5 mm. While the dissipation factor δ_{th} of the sensor is 3 mW/K, its thermal cooling time constant τ_c is 9 s.

Main applications

Temperature measurement in a wide variety of automotive and industrial applications (e.g., battery packs, power banks, energy storage, drones)

Main features and benefits

- Short response time
- High measuring accuracy
- Different tolerances available

