

 Press Information

Temperature Sensors

TDK presents robust and easy-to-mount NTC systems for demanding industrial applications with voltages up to 4000 V

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TDK Corporation (TSE: 6762) announces the expansion of its NTC temperature sensor portfolio with the M704 (ordering code: B57704M0103A001) and M705 (ordering code: B57705M0103A001) series, engineered for reliable temperature measurement in high-voltage environments. With voltage ratings of up to 4000 V (AC) for the M704 and 2500 V (AC) for the M705, these probe assemblies enable safe and precise monitoring in demanding applications such as UPS and PSU systems in data centers, charging stations, and PV inverters. By combining electrical robustness with ease of assembly, TDK helps designers achieve safe and efficient system operation.

Both sensors feature an R_{25} of 10 k Ω , a $B_{25/100}$ value of 3988 K (± 1 percent), and a resistance tolerance of ± 2 percent. The M704 is specified for a temperature range from -40 °C to $+125$ °C, while the M705 extends this range up to $+180$ °C. The M704, with its compact plastic case and 3.5 mm lead spacing, supports automated PCB integration and fast assembly. In contrast, the M705 provides a low thermal time constant of approximately 6.2 s on a metal plate, enabling fast thermal response. It also features a metal-tag ring lug design that ensures excellent thermal coupling and flexible screw-on mounting across various mechanical interfaces.

Together, these portfolio extensions provide robust, application-focused temperature sensing solutions for high-voltage systems where safety, reliability, and installation efficiency are paramount.

Main applications

Measuring temperatures in several industrial applications, such as:

- UPS and PSU systems in data centers
- charging stations
- photovoltaic inverters
- power electronics

Main features and benefits

- Easy to mount
- Usable in high-voltage applications up to 4000 V (AC) (M704)
- Automated PCB assembly (M704)
- Excellent thermal coupling via metal tag (M705)
- Operating temperature up to $+180$ °C (M705)

About TDK Corporation

TDK Corporation (TSE:6762) is a global technology company and innovation leader in the electronics industry, based in Tokyo, Japan. With the tagline “In Everything, Better” TDK aims to realize a better future across all aspects of life, industry, and society. For over 90 years, TDK has shaped the world from within; from the pioneering ferrite cores to cassette tapes that defined an era, to powering the digital age with advanced components, sensors, and batteries, leading the way towards a more sustainable future. United by TDK Venture Spirit, a start-up mentality built on visions, courage and mutual trust, TDK’s passionate team members around the globe pursue better—for ourselves, customers, partners, and the world. Today, the state-of-the-art technologies of TDK are in everything, from industrial applications, energy systems, electric vehicles, to smartphones and gaming, at the core of modern life. TDK’s comprehensive, innovative-driven portfolio includes cutting-edge passive components, sensors and sensor systems, power supplies, lithium-ion and solid-state batteries, magnetic heads, AI and enterprise software solutions, and more—featuring numerous market-leading products. These are marketed under the product brands TDK, InvenSense, Micronas, Tronics, TDK-Lambda, TDK SenseEI, and ATL. Positioning the AI ecosystem as a key strategic area, TDK leverages its global network across the automotive, information and communication technology, and industrial equipment sectors to expand its business in a wide range of fields. In fiscal 2026, TDK posted total sales of USD 16.6 billion and employed about 107,000 people worldwide.

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Further information on the products can be found at www.tdk-electronics.tdk.com/en/ntc_systems.

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