

 Press Information

High-Voltage Contactors

TDK launches 1000 V and 1500 V contactors for xEVs, DC fast-charging, and AI data center infrastructure

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TDK Corporation (TSE: 6762) has introduced the HVC28 and HVC29 series of gas-filled, high-voltage DC contactors with optional mechanical auxiliary contact. Both series are available with continuous current ratings of 300 A, 400 A, 500 A, and 600 A. The HVC28 is designed primarily for automotive systems with operating DC voltages of up to 1000 V and high short-circuit currents. Meanwhile, the HVC29 is built for industrial power systems that require operating DC voltages of up to 1500 V.

The HVC28 has a continuous-current capability of up to 600 A and a short-circuit current handling capability of 16 kA for 5 ms. Under specified resistive-load test conditions, the contactor can perform one maximum cut-off operation at 1600 A and 1000 V. Therefore, it is particularly useful for xEV battery disconnect units, high-voltage junction boxes, traction battery systems, commercial vehicles, and DC fast-charging stations.

The HVC29 can handle maximum operating voltages of 1500 V and continuous currents of up to 600 A. It has a short-circuit current handling capability of 6 kA for 5 ms. Typical industrial applications include energy storage systems, solid-state transformers, uninterruptible power supplies, and DC fast-charging stations. In AI data centers, these contactors can support the upcoming 800 VDC power architectures.

Both series use a ceramic, gas-filled arc chamber to quickly and reliably interrupt DC currents. Their polarity-free main terminals enable bidirectional current flow, supporting applications in which power can flow in either direction. An integrated connector simplifies low-voltage connections and system installation.

For mechanically linked feedback on the state of the main contact, a normally closed mirror contact is available as an optional accessory. This auxiliary contact complies with IEC 60947-4-1 and can be used to determine whether the main contact has opened or closed. It supports switching-state monitoring in safety-relevant automotive and industrial systems.

Both the HVC28 and the HVC29 are available with 12 V or 24 V single coils. Each coil consumes 6 W at the nominal voltage. Both models measure 95.5 x 96 x 49 mm (H x W x D). The HVC28 weighs about 640 g, while the HVC29 is slightly less at about 630 g. They operate within a temperature range of -40 °C to +85 °C. The components are CE- and UKCA-compliant, as well as certified to UL 60947-4-1. CCC certification is pending.

Main applications

HVC28

- Battery disconnect units and high-voltage junction boxes
- Traction battery systems in passenger and commercial vehicles
- xEV high-voltage power systems
- DC fast-charging stations

HVC29

- Energy storage systems
- Solid-state transformers
- Uninterruptible power supplies
- AI data-center power systems
- DC fast-charging stations

Main features and benefits

- Continuous-current versions from 300 to 600 A
- Maximum DC operating voltage 1000 V (HVC28) and 1500 V (HVC29)
- Short-circuit current handling capability of 16 kA for 5 ms (HVC28)
- Optional normally closed mirror contact according to IEC 60947-4-1
- Gas-filled ceramic arc chamber for fast and reliable current interruption
- Polarity-free main terminals for bidirectional operation
- Integrated connector for easy installation
- 12 V and 24 V single-coil versions
- Operating temperature range from -40 °C to +85 °C
- RoHS compatible

Type	Operating DC voltage (max.) [V]	Continuous currents [A]	Short-circuit capability (5 ms) [kA]
HVC28	1000	300 ... 600	16
HVC29	1500	300 ... 600	6

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.

You can download this text and associated images from www.tdk-electronics.tdk.com/en/261028.
Further information on the products can be found at www.tdk-electronics.tdk.com/en/hvc_presentation.

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