

Power Supplies

1.4 to 3W DC-DC converters operate from a 12V input and provide very low noise output voltages of up to 2,000V

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TDK Corporation (TSE 6762) announces the introduction of the high voltage output CHVM series of DC-DC converters. Capable of operating from a nominal 12V input, these non-isolated converters deliver output voltages ranging from 180V to 2,000V. Low output ripple and noise is achieved through the use of a metallic case that provides five-sided shielding to reduce radiated emissions. The CHVM has been designed for use in noise sensitive applications, including photomultiplier tubes, photodiodes, scanning electron microscopes, X-ray fluorescence spectrometers, mass spectrometers and ultrasonic probes.

The series comprises of twenty parts, with positive or negative polarity output voltages of 180, 300, 350, 470, 1,000, 1,500 and 2,000V. The maximum output ripple and noise level is just 150mV and typical measurements are between 5 and 50mV. The output voltage can be adjusted over a 0.5% to 100% range through the use of an external voltage or resistor or inhibited using the remote on/off function. The input voltage is 11 to 13V for the 1.4W and 1.5W models, 10.8 to 16.5V for the 2W and 10.8 to 13.2V for those rated 2.5W or higher.

The compact converters are available in three case sizes. The CHVM1R5 (1.4W and 1.5W) measures 44 x 16 x 30mm (WxLxH), the CHVM2 and CHVM2R6 (2W and 2.6W) 110 x 12 x 19.75mm and the CHVM2R5, CHVM2R7 and CHVM3 (2.5W, 2.7W and 3W) 80 x 12 x 19.75mm.

With a start-up temperature of -20 °C, the operating temperature range is -10 to +50°C for the 1.4 and 1.5W parts and -10 to +60°C, derating linearly to 60% load above +50°C, for the higher power models. All parts have over-current protection, are certified to IEC/UL/CSA/EN 62368-1 safety standards and have the CE mark for the Low Voltage and RoHS Directives.

More information on the CHVM series, including distributor inventory, can be obtained from the TDK-Lambda Americas website at <https://www.us.lambda.tdk.com>.

Main applications

- Photomultiplier tubes, photodiodes, scanning electron microscopes, X-ray fluorescence spectrometers, mass spectrometers and ultrasonic probes

Main features and benefits

- Programmable output voltages (voltage or resistance)
- Compact package sizes
- Five-sided shielding
- Low output ripple and noise
- Safety certified

Key data

Model		CHVM1R5	CHVM2 / CHVM2R6	CHVM2R5, CHVM2R7 & CHVM3
Input voltage range	Vdc	11.0 to 13.0	10.8 to 16.5 / 13.2	10.8 to 13.2
Output voltages	Vdc	(+ or -) 180, 300, 350, 470, 1,000, 1,500 and 2,000		
Output power levels	W	1.4 to 3.0		
Safety Certifications	-	IEC/UL/CSA/EN 62368-1, CE Marked to the LV & RoHS Directives		
Size (W x L x H)	mm	44 x 16 x 30	110 x 12 x 19.75	80 x 12 x 19.75

About TDK Corporation

TDK Corporation is a world leader in electronic solutions for the smart society based in Tokyo, Japan. Built on a foundation of material sciences mastery, TDK welcomes societal transformation by resolutely remaining at the forefront of technological evolution and deliberately “Attracting Tomorrow.” It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK’s comprehensive, innovation-driven portfolio features passive components such as ceramic, aluminum electrolytic and film capacitors, as well as magnetics, high-frequency, and piezo and protection devices. The product spectrum also includes sensors and sensor systems such as temperature and pressure, magnetic, and MEMS sensors. In addition, TDK provides power supplies and energy devices, magnetic heads and more. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK focuses on demanding markets in automotive, industrial and consumer electronics, and information and communication technology. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2021, TDK posted total sales of USD 13.3 billion and employed about 129,000 people worldwide.

About TDK-Lambda Corporation

TDK-Lambda Corporation is a trusted, innovative leader and global supplier of highly reliable power conversion products for industrial and medical equipment worldwide.

TDK-Lambda Corporation is aligned for fast responses to any customer need with R&D, manufacturing, sales and service locations in five key geographic regions, namely Japan, EMEA, Americas, China and ASEAN.

For more details, please pay a visit to: www.jp.lambda.tdk.com/en/

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