

Power Supplies

1/16th brick pin-out, 750W step-down DC-DC converter has an output range of 3.3 to 18V and weighs just 25g

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TDK Corporation (TSE 6762) announces the introduction of the 750W rated i7A non-isolated DC-DC converters. Capable of operating from an input voltage of 18V to 32V, the step-down converters deliver an output voltage that can be adjusted from 3.3 to 18V with an output current of up to 45A. The series has been optimized for a 24V nominal input and weighing just 25g, is intended for use in a wide range of applications including robotics, drones, medical, communications, industrial, test, measurement and battery powered equipment.

The i7A 45A models utilize the industry standard 1/16th "brick" pinout, potentially offering cost reduction and efficiency improvements over isolated converters. They can be used in conjunction with a single output 24V AC-DC power supply to generate multiple additional regulated outputs, with or without battery back-up.

Operating efficiencies are up to 98.5%, minimizing power losses and allowing operation in harsh ambient temperatures of -40°C to +125°C even under low airflow conditions. With low output ripple and an excellent dynamic response, the i7A's design reduces the number of required external components, saving both cost and board space.

The converters measure 34mm x 36.8mm and follow the industry standard 1/16th brick pin-out. Three mechanical configurations are available - a low 11.5mm high open frame model, a baseplate construction for conduction cooling or with an integral heat sink for convection or forced air cooled environments. The i7A has an output voltage adjustment pin, positive or negative logic remote on-off, positive remote sense, plus input under-voltage, over-current and thermal protection.

All models are certified to IEC/UL/CSA/EN 62368-1 and carry the CE mark for the Low Voltage and RoHS Directives.

More information on the i7A 45A rated model, including distributor inventory and evaluation boards, can be obtained from the TDK-Lambda Americas website at <https://www.us.lambda.tdk.com>.

Main applications

- Medical, communications, industrial, test, measurement and battery powered equipment

Main features and benefits

- Up to 750W in a 1/16th brick pin-out
- Up to 98.5% efficient.
- Wide 3.3 to 18V output adjustment
- Wide 18 to 32Vdc input range
- Weights as low as 25g
- Low airflow with minimal derating requirements

Key data

Model		i7A4W045A033V
Input voltage range	Vdc	18 to 32
Output voltage	Vdc	3.3 to 18
Maximum output power	W	750
Efficiency	%	Up to 98.5
Safety Certifications	-	IEC/UL/CSA/EN 62368-1, CE Marked to the LV & RoHS Directives
Size (W x H x L)	mm	34 x 36.8 x 11.5 (open frame models)
Construction / Weight	9	Open frame (25g), baseplate (50g) or integral finned heatsink (70g)

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 2020, TDK posted total sales of USD 12.5 billion and employed about 107,000 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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