

Power Supplies

10 to 50W industrial power supply series expanded with new mounting and protection options for increased system flexibility

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TDK Corporation (TSE 6762) announces the introduction of multiple option configurations for the TDK-Lambda brand ZWS-C series of 10, 15, 30, and 50W rated industrial AC-DC power supplies. Initially launched in an open frame configuration, four additional options are now available in the series: a metal L-bracket (with or without a cover), pins for PCB mounting, and two-sided board coating for all voltage and power levels. These options can provide additional operator protection, lower the cost of wiring harnesses, or reduce the impact of dust and contamination in harsh environments.

With electrolytic capacitor lifetimes of up to 15 years, the ZWS-C models can be used in factory automation, robotics, semiconductor fabrication manufacturing, and test and measurement equipment.

The ZWS-C series is available with 5V, 12V, 15V, 24V, and 48V (50W only) output voltages. The ZWS10C and ZWS15C models measure 63.5 x 45.7 x 22.1mm (L x W x H), the ZWS30C 76.2 x 50.8 x 24.2mm, and the ZWS50C 76.2 x 50.8 x 26.7mm. The operating temperature with convection cooling and standard mounting ranges from -10 to 70°C, derating linearly to 50% load between 50 to 70°C. With an external airflow of 0.8m/s, the power supplies can operate at full load. No load power consumption is typically less than 0.3W.

The power supplies have a 3kVac input to output, 2kVac input to ground, and 750Vac output to ground (Class I) isolation. The models meet EN55011/EN55032-B conducted and radiated EMI in either a Class I or Class II (double insulated) construction, without the need for external filtering or shielding.

All models are also certified to the IEC/UL/CSA/EN62368-1 for AV, information and communication equipment standards and EN60335-1 for household electrical equipment. In addition, IEC/EN61558-1, IEC/EN61558-2-16 certifications have been obtained, simplifying system integration. The ZWS-C series also complies with IEC 61000-3-2 (harmonics), IEC 61000-4 (immunity) and carries the CE and UKCA marks for the Low Voltage, EMC and RoHS Directives. The warranty for the series is five years.

Further information on the ZWS-C series can be found at

https://product.tdk.com/system/files/dam/doc/product/power/switching-power/ac-dc-converter/catalog/zws-c_e.pdf

Main applications

- Factory automation, robotics, semiconductor fabrication manufacturing, and test and measurement equipment.

Main features and benefits

- Multiple option configurations
- Up to 15-year electrolytic capacitor lifetimes
- Curve B radiated and conducted EMI
- Can be used in Class I and II installations
- 5-year warranty

Key data

Model		ZWS10C	ZWS15C	ZWS30C	ZWS50C
Input voltage range	Vac	85 – 265			
Output voltage	Vdc	5, 12, 15, 24			5, 12, 15, 24, 48
Output power (100Vac)	W	10 – 12	15 – 16.8	20 – 30	30 – 52.8
Output power (200Vac)	W	10 – 12	15 – 20.4	20 – 35	35 – 60
Operating temperature	°C	-10 to 70 (with derating above 50 to 70)			
Safety certifications	-	IEC/UL/CSA/EN62368-1, EN60335-1, IEC/EN61558-1, IEC/EN61558-2-16. CE and UKCA Marked to the LV, EMC and RoHS Directives			
Option codes	-	L-bracket with and without cover, pins for PCB mounting, 2-sided coating			

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 2024, TDK posted total sales of USD 14.6 billion and employed about 101,000 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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