

 Press Information

Power Supplies

TDK expands cost-effective series of DIN-rail mount power supplies to include 12, 48, and 72 V output models

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TDK Corporation (TSE:6762) announces the expansion of the TDK-Lambda D1SE series of cost-effective DIN-rail mount power supplies with 12, 48, and 72 V output models. Initially launched with 120, 240 and 480 W 24 V versions, the series offering has now been broadened to better support the needs of various applications, such as PLCs, sensors, robotic arms and security applications for the 12 V model. The 48 V output option was also designed to aid engineers in the industrial networking and power over Ethernet (PoE) markets, with the 72 V model for DC motors and drives.

With efficiencies of over 95%, internal losses are reduced, lowering the temperature of heat sensitive components like electrolytic capacitors to enhance long-term product reliability, and lessen energy consumption. These new models can operate within a wide range of 85 – 264 Vac, as well as DC input ranges of 93 – 300 V. Safety certification to the international standards have been obtained for both input voltage types, providing a high degree of flexibility to the user for operating from an AC source, a DC bus, or a battery.

The D1SE series is equipped with reliable push-in wire terminations, shortening installation times and facilitating automated robotic insertion of wiring harnesses. A protective board coating option (A5) has now been made available and includes a DC OK closed contact relay. Its compact size may benefit engineers designing applications such as powering control cabinets, machinery, and a wide variety of production systems.

The space saving rugged metal enclosure has a width of 38 mm for the 120 W models, 44 mm for the 240 W, and 60 mm for the 480 W, allowing additional components to be fitted on the DIN-rail.

The D1SE series is certified to IEC/EN/UL/CSA 61010-1, 61010-2-201, 62368-1 (Ed.3) and IS 13252-1 standards and is CE and UKCA marked to the Low Voltage, EMC and RoHS Directives. It also meets EN 55011-B and CISPR11-B radiated and conducted emissions with a very large margin compared to many industrial power supplies. The series complies with EN 61000-3-2 (Class A) harmonic currents and IEC/EN 61000-6-2 immunity standards. The IEC/EN 61000-4-5 asymmetrical surge voltage rating (L-PE) is 4 k Vac.

Input-to-output isolation is 5000 Vdc, input-to-ground 3100 Vdc, and output-to-ground is 750 Vdc. The D1SE models are convention-cooled and rated for operation in -25 to +70 °C ambient temperatures, with derating above 55 °C.

Main applications

- Conventional switch cabinets, stand-alone machinery and industrial systems, information and communications technology, power over Ethernet technology (PoE), industrial networking applications, renewable energy systems, and EV charging applications.

Main features and benefits

- Boost power capability up to 150 %
- Push-in wiring terminations
- High efficiency, up to 96 %
- Narrow case widths
- Long E-capacitor and field life

Type		D1SE120-12-Ax	D1SE240-48-Ax	D1SE480-48-Ax	D1SE480-72-Ax
Nominal input voltage	Vac	100 - 240			
Input voltage	Vdc	93 - 300			
Output voltages	Vdc	12	48	48	72
Adjustment range	V	11.4 - 15	45 - 57 V	45 - 57 V	70 - 85 V
Output power	W	120	240	480	480
Boost power	W	180 for 80s	312 for 10s	600 for 200s	600 for 200s
Efficiency	%	Up to 93	Up to 94.1	Up to 96	Up to 95.3
Size (W x D x H)	mm	38 x 110 x 125	44 x 127 x 125	60 x 129 x 125	60 x 129 x 125
Safety certifications		IEC/EN/UL/CSA 61010-1, 61010-2-201, 62368-1 (Ed.3), IS 13252-1			

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.

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/

Further information on the D1SE series can be found at <https://product.tdk.com/en/power/d1se>

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