

Power Supplies

480W and 960W three-phase AC-DC DIN rail power supplies offer a +50% boost power rating and screw or push-in connector models

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TDK Corporation (TSE 6762) announces the addition of higher power, three-phase AC input models to the TDK-Lambda DRB series of DIN rail mount power supplies. With 24V, 48V and 72V outputs, the products are rated for continuous operation at 480W or 960W and can deliver a boost of 720W and 1440W respectively for up to seven seconds. This, and a constant current overload characteristic, enables operation with capacitive and inductive loads. These power supplies also feature a very low energy inrush current upon initial start-up, reducing nuisance tripping of input circuit breakers. The DRB three-phase series can be used in a wide range of applications, including conventional switch cabinets, stand-alone machinery and industrial systems, as well as information and communications technology.

The units have a wide input range of 350 to 575Vac and are housed in a rugged metal enclosure with dimensions of 65mm (width) x 129mm (height) x 159.3mm (depth) for the 480W models and 100mm (width) x 129mm (height) x 171.9mm (depth) for the 960W. This saves space on the DIN rail for other components and reduces cost. A choice of screw terminals or push-in connectors are available for the input and output wiring. The DRB480 and 960 models have a high operating efficiency of up to 96.3% and a low stand-by power consumption of <2.3W when using the remote on-off function (inhibit). This reduces energy usage and contributes to a lower CO₂ footprint of the entire system. Lower losses also reduce internal heating inside the power supplies, preventing electrolytic capacitor dry-out for long field life.

For higher power or redundant systems, the front panel DIP switch enables droop mode current sharing for parallel operation. These new models have a wide adjustment range of 22.5 to 29V (24V nominal), 45 to 56V (48V nominal) and 70 to 85V (72V nominal) to allow compensation for cable drops, ORing FETs or setting to non-standard output voltages. In addition to two LED indicators, a DC OK relay contact is available for remote monitoring and remote on/off is possible by applying an external voltage to the inhibit relay contact.

Input to output isolation is 3,510Vac, input to ground 2,210Vac and output to ground is 1,390Vac. The DRB models are convection cooled and rated for operation in -25 to +70°C ambient temperatures, with derating above 55°C.

The units are certified to IEC/EN/UL/CSA 62368-1, 61010-1, 61010-2-201 and are CE / UKCA marked to the Low Voltage, EMC and RoHS Directives. They meet EN 55011-B and CISPR11-B radiated and conducted emissions. The series also complies with EN 61000-3-2 (Class A) harmonic currents and IEC/EN 61000-6-2 immunity standards.

Further information on the products can be found at [DRB120-3 - DRB960-3 Series Datasheet \(tdk.com\)](https://www.tdk.com/en/lambda/drb120-3-drb960-3-series-datasheet)

Main applications

- Conventional switch cabinets, stand-alone machinery and industrial systems, plus information and communications technology.

Main features and benefits

- +50% boost power capability for up to 7 seconds
- Low inrush current energy levels
- High efficiency, up to 96.3%
- Narrow case widths
- Long E-capacitor life

Key data

Model		DRB480-xx-3-Ax	DRB960-xx-3-Ax
Input voltage range	Vac	3-phase 350 - 575	
Output voltages	Vdc	24, 48 or 72	
Output power	W	480	960
Boost Power	W	720 for 7s	1,440 for 7s
Efficiency	%	Up to 96.3	
Size (W x H x D)	mm	65 x 129 x 159	100 x 129 x 171
Safety Certifications	-	IEC/EN/UL/CSA 62368-1, 61010-1-2-201	

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 2023, TDK posted total sales of USD 16.1 billion and employed about 103,000 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/

Contacts for regional media

Region	Contact		Phone	Mail
Americas	Tom Tillman	TDK-Lambda Americas	+1 619-575-4400	tom.tillman@tdk.com
EMEA	Hannah Owen	TDK-Lambda UK	+44 (0)1271 856667	tlu.powersolutions@tdk.com
	Danielle Burness	Publitek	+44 (0)7581 024101	danielle.burness@publitek.com
Other Asia	BK Neo	TDK-Lambda Singapore Pte Ltd.	+65 6251 7211	tls.marketing@tdk.com
Greater China	Helen Van	TDK-Lambda (China) Electronics Co., Ltd.	+86 21 64850777 *209	helen.van@tdk.com
Japan	Mr. Daiki Ito	TDK Corporation	+813 6778-1055	TDK.PR@tdk.com