

Power Supply Product

3-Phase 4080W 24V Industrial Power Supply Operates From 400/440/480Vac Delta and Wye Inputs

December 2019

TDK Corporation (TSE 6762) announces the introduction of the TDK-Lambda brand TPS4000-24 power supply, extending the existing 3000W rated TPS series. Delivering up to 4080W output power (24V at 170A) in a 2U high package, the TPS series operates from a wide range Delta or Wye 350 - 528Vac three phase input. This industrial power supply is ideal for use in many applications including test and measurement equipment, semiconductor fabrication, additive manufacturing, printers, lasers and RF power amplifiers. The high voltage, three-phase input avoids the requirement for costly step down transformers and assists phase load current balancing.

The TPS4000-24 is fully featured with isolated AC Fail, DC Good and dropped phase signals, remote on/off, remote sense and a 12V 0.3A standby supply. A PMBus™ communications interface allows remote monitoring of the output voltage, output current, internal temperature, status signals and fan speed. In addition, the output voltage, over current limit and the remote on/off can be programmed by the PMBus™. The output voltage can also be adjusted from 19.2 to 28.5V and the current limit point by 70-105% using front panel potentiometers or an analog 0-5Vdc voltage. Up to eight units can be connected in parallel for higher power and internal ORing FETs allow redundant operation.

The 92% efficient unit can operate at full load in ambient temperatures of up to 50°C, and deliver up to 55% load at 70°C. Cooling is provided by an internal temperature controlled fan to reduce acoustical noise. The case measures 107 x 84.4 x 335mm, making it suitable for 2U high racking systems. The weight of the product is just 4kg.

The power supply has 3kVac input to output, 2kVac input to ground and 500Vdc output to ground isolation. All TPS models are certified to IEC/EN/UL/CSA 60950-1, (62368-1 pending) and carry the CE mark for the Low Voltage, EMC and RoHS Directives. The TPS4000 also complies with EN55032-A (conducted and radiated emissions), SEMI F47-0706 (line dips), IEC 61000-3-2 (harmonics), IEC 61000-4 (immunity), and is designed to meet the MIL-STD-461F/G CS101, CS114 (Army Ground), CS115, CS116 immunity standard.

More information can be obtained at the following TDK-Lambda Americas website, <https://www.us.tdk-lambda.com/lp/products/tps-series.htm>, or by calling 800-LAMBDA-4. Product availability for the TPS4000-24 power supply can be found via the link to TDK-Lambda's distributor network (see "Check Distributor Stock") at <https://www.us.tdk-lambda.com/lp/>.

Major applications

Test and measurement equipment, semiconductor fabrication, additive manufacturing, printers, lasers, RF power amplifiers

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Main features and benefits

- Suitable for 400/440/480Vac 3-phase Delta and Wye inputs
- Compact 2U high package size
- Fully featured
- 92% efficient
- PMBus™ communications interface for remote programming and monitoring

Major specifications

Model		TPS4000-24
Input voltage range	Vac	350 - 528VAC, Delta or Wye 3 phase
Output voltage	Vdc	24V, adjustable from 19.2 – 28.5V
Maximum output power	W	4080W
Efficiency 400/480VAC input	%	92%
Communications	-	PMBus™ interface
Safety Certifications	-	IEC / UL / CSA / EN 60950-1 (62368-1 pending)
Size (W x H x L)	mm	107 x 84.4 x 335mm (excluding output busbars)
Warranty	-	Three years

About TDK Corporation

TDK Corporation is a leading electronics company based in Tokyo, Japan. It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's portfolio features passive components such as ceramic, aluminium electrolytic and film capacitors, and 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 the areas of information and communication technology and automotive, industrial and consumer electronics. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2019, TDK posted total sales of USD 12.5 billion and employed about 105,000 people worldwide.

About TDK-Lambda Corporation

TDK-Lambda Corporation, a group company of TDK Corporation, is a leading global power supply company providing highly reliable power supplies for industrial equipment worldwide. TDK-Lambda Corporation meets the various needs of customers with our entire range of activities, from research and

development through to manufacturing, sales, and service with bases in five key areas, covering Japan, Europe, America, China, and Asia.
For more details, please pay a visit to <https://www.tdk-lambda.com/>

Contacts for regional media

Region	Contact	Phone	Mail
Americas	Tom Tillman TDK-Lambda Americas	(619) 575 4400	tom.tillman@us.tdk-lambda.com