

## Power Supply Products

# New Generation Full-Rack 1U AC/DC Programmable Power Supply Series Delivers 5kW Output Power with Advanced Features/Functions

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TDK Corporation announces the introduction of the TDK-Lambda high power density [1U Full-Rack GENESYS™ 5kW AC/DC Programmable Power Supply Series](#). This air-cooled product, which is the first to be offered in a new generation platform, brings a higher level of performance to the TDK-Lambda AC/DC Programmable Power Supply product portfolio at a competitive price.

Utilizing embedded microprocessor technology, the **GENESYS™** next-generation product platform provides advanced performance and functionality well suited for the Laboratory/R&D environment and addresses broad market segments including Aerospace Test & Measurement, Automotive Component, Module and System Test, Semiconductor Fabrication & Component Test, Industrial and Renewable/Alternative Energy.

Carrying a five (5) year warranty and built into a 1U (1.75”) high, 19” (483mm) wide, and 17.5” (444.5mm) deep rack-mount mechanical profile, the **GENESYS™** 5kW Power Supply Series offers the highest power density (35% higher) and, at 15.4lbs (7kg), the lightest weight in the industry (less than half that of comparable products).

Five models are currently available from 10V to 600V with outputs of 10V/500A, 20V/250A, 30V/170A, 300V/17A and 600V/8.5A with conversion efficiencies up to 93%. These units can operate in *Constant-Current* (CC), *Constant-Voltage* (CV) as well as the newly offered *Constant-Power* (CP) and *internal resistance* simulation. Three-phase AC Input options include 208VAC (170~265VAC), 400VAC (342~460VAC) or a wide-range 480VAC (342~528VAC) and have built-in active Power Factor Correction (0.94 typical) with cooling fan speed control (for reduced audible noise and extended life).

In addition to doubling the power density over the existing [2U Genesys™ 5kW Programmable Power Supply Series](#), the **GENESYS™** 5kW platform offers other significant advancements. These include a high contrast, wide viewing angle multi-segment front panel LCD display (with user controllable brightness and dimming functions for improved readability) that has five embedded multi-functional Power Supply Setup menus that address Digital Communication, Protective Functions, Operating Configuration, System Configuration, and System Triggering. These embedded menus offer new adjustable user-selectable functions including internal resistance simulation, Constant-Power operation and Slew-Rate control of Output Voltage/Current. Arbitrary waveform profiles, such as vehicle battery start-up simulation, of up to 100 steps can also be generated and stored in four on-board memory cells and can be recalled and activated via the front panel display embedded menus or Remote Digital communication.

Standard safety features include user-selectable Safe-Start/Auto Re-Start, Last Setting Memory and various built-in protective functions. With Safe-Start configured, the power supply returns to its last operational settings after a power interruption but with the output disabled. With Auto Re-Start, the power supply returns to the last used operation settings after a power interruption. Last Setting Memory retains settings such as the Output voltage/current, Output ON/OFF, Output OVP/UVL/UVP level, Fold-Back (CV or CC), Output Over-Current Limit (OCL) and Start-Up mode (SAFE or AUTO) at each AC input turn-off sequence. Built-in protective functions include Output Over-Voltage Protection (OVP), Output Under-Voltage Limit (UVL), Output Under-Voltage Protection (UVP), Fold-Back protection (FOLD) for CV or CC mode, Output Over-Current Limit (OCL) and Over-Temperature protection (OTP).

A new **Advanced Parallel** Master/Slave system, unique to TDK-Lambda, allows for improved multi-unit system performance (Output ripple/noise and dynamic response) where up to four **GENESYS™** units can be connected in parallel and automatically configured by detection of the parallel data-link cable connections between units, with the Master unit being the single point for programming, measurement and status of system load current.

All model functions can be programmed locally via the menu-driven front panel display or remotely using one of the **three** built-in standard SCPI-compliant Multi-Drop Remote Digital communication interfaces (where up to 31 units may be controlled in an addressed RS-485 Multi-Drop configuration). These interfaces include the **LAN (LXI 1.5)**, **USB (2.0)** and **RS-232/RS-485** and an optional SCPI-compliant Multi-Drop **GPIB (IEEE 488.2)** Remote Digital communication interface (all of whose communication protocols and signals are compatible with the entire TDK-Lambda [Genesys™ Series](#)). Also included is a full selection of software instrument drivers, a *Waveform-Creator* and an *Advanced Virtual Front Panel* GUI.

A built-in standard Remote Isolated Analog Program/Monitor/Control Interface (with 600V isolation) is also provided with new functions such as Output control pins (for activation of external devices for polarity reversal/load disconnect), Trigger-In/Trigger-Out pins (for synchronization), Enable control (with user-selectable polarity) and higher accuracy Program/Monitor signals.

Two new **GENESYS™** mechanical options are a *Blank Front Panel* and a *Dust Cover*. The *Blank Front Panel* is available for applications where the front panel display and controls are not required and only remote interfacing (Digital/Analog) is needed. The *Dust Cover* has a removable snap-in filter (for easy maintenance) and is provided for dusty air environment applications.

The **GENESYS™** 5kW Power Supply Series has Safety certifications to IEC/EN/UL/cUL 60950-1 with CE marking in accordance with the Low Voltage, EMC (IEC/EN61204-3; industrial environment) and RoHS2.

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For more information about the TDK-Lambda 1U Full-Rack **GENESYS™** 5kW AC/DC Programmable Power Supply Series, please visit the TDK-Lambda Americas Programmable & High Voltage website and fill out an online Information Request @ [http://www.us.tdk-lambda.com/hp/request\\_genplus5.htm](http://www.us.tdk-lambda.com/hp/request_genplus5.htm)

A wide range of other TDK-Lambda Americas Programmable & High Voltage power supplies can be viewed from the website at <http://www.us.tdk-lambda.com/hp>

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## 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 includes electronic components, modules and systems\* which are marketed under the product brands TDK and EPCOS, power supplies, magnetic application products as well as energy devices, flash memory application devices, and others. TDK focuses on demanding markets in the areas of information and communication technology and consumer, automotive and industrial 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 2016, TDK posted total sales of USD 10.2 billion and employed about 92,000 people worldwide.

\* The product portfolio includes ceramic, aluminium electrolytic and film capacitors, ferrites, inductors, high-frequency components and modules, piezo and protection components, and sensors.

## 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 <http://www.tdk-lambda.com/>

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