Power Supplies

Introducing AC programmable power with the launch of the new GENESYS™ AC and GENESYS™ AC PRO

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TDK Corporation (TSE 6762) announces the introduction of the TDK-Lambda brand GENESYS™ AC (GAC) and GENESYS™ AC PRO (GAC-PRO) series of 2kVA and 3kVA rated programmable AC power sources. These latest products represent a significant expansion in test and measurement capability to the current GENESYS™ series of 750W to 90kW programmable DC power supplies. With a 1U chassis height, the GAC and GAC-PRO provide the highest power density for a fully featured programmable AC power source.

The GENESYS™ AC PRO models (GAC-PRO) offer a higher level of DC functionality with the ability to allow AC, DC, or combined AC+DC operation. The models allow full-rated power and current in DC modes, and advanced functions such as waveform generation and harmonics analysis as standard. The GENESYS™ AC PRO also includes real-time analog control functionality necessary for more complex test scenarios, such as hardware in the loop (HIL). Other applications for the GENESYS™ AC PRO include automated test equipment, avionics airborne equipment, aircraft electrical power, defence (RTCA, Boeing, Airbus Standards), automotive, e-mobility, and power source testing.

TDK-Lambda's advanced parallel system provides characteristics comparable with that of a single power supply. 2kVA and 3kVA units may be user-combined for additional power and to provide multiple phase outputs. The front panel controls can be made through the use of a capacitive touch display, providing increased robustness over mechanical switches. Multiple languages are catered for, including, Chinese, English, French, German, Japanese, Korean, and Spanish.

As standard, LAN, USB, RS232, RS485, and Analog Programming / Monitoring are provided, with optional IEEE / GPIB. The included remote GUI software allows the user full control, sequence programming, plus the option to use pre-programmed test standards for common IEC, aerospace, and marine tests. These standards will dramatically improve consistency while reducing test time and labour cost compared to traditional manual set-ups.

Dimensions of the GAC02 and GAC03 are 423mm wide, 544.5mm deep, and 43.6mm high, and the weight is less than 8kg. The five-year warranty series is safety-certified to IEC/EN/UL 61010-1 with CE and UKCA marking to the Low Voltage, EMC, and RoHS Directives.

In the next few months, TDK-Lambda will expand the GENESYS™ AC line with additional power levels of 6/9kVA.

Further information on the GAC02 and GAC03 series can be found at GENESYS™ AC Series Datasheet (tdk.com)

Main applications

- Automated test equipment, avionics (airborne equipment, aircraft electrical power), defence (RTCA, Boeing, Airbus Standards), automotive on-board chargers, e-mobility, and power source testing

Main features and benefits

- 1U high, providing very high power density for a full featured AC source
- Intuitive full colour touch panel interface

- LAN, USB, RS232, RS485, and Isolated Analogue Interfaces as standard
- Parallel capable for higher power and multiple phases
- Remote GUI software included
- Five year warranty

Key data

Model		GAC02	GAC03
Output power	VA	2000	3000
Output voltage	V	0 - 350Vac, ±500Vdc (GAC-PRO)	
Output current	A (rms)	20	30
Output frequency	Hz	16 - 1200 (16 - 5000 GAC-PRO)	
Input voltage range	Vac	100 - 240, three-phase 200 and 480	
Efficiency	%	Up to 82.5	
Safety certifications	-	IEC/EN/CSA/UL 61010-1	
Size (W x D x H)	mm	423 x 544.5 x 43.6	
Other standard features	-	LAN, USB, RS232, RS485 and Isolated Analogue	
Warranty	-	Five years	

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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