

## Programmable DC Power Supplies



TDK Corporation announced the expansion of TDK-Lambda's Z+ Series of programmable power supplies, which now include 200-watt models in addition to the previously released 400-watt models. These high-density, high efficiency, 2U format, bench-top and rack mountable power supplies are designed to meet the demands of a wide variety of ATE, Laboratory and OEM applications, including: Test & Measurement, Semiconductor Burn-in, Component Test, LED/Laser Test, RF Amplifiers, Electromagnetic, and Electrochemical applications.

TDK-Lambda's Z+200 provide 200-watts of output power with an output voltage range from 0 to 100Vdc and output currents up to 20A. The Z+200 are 33% smaller and 40% lighter than the previous generation (ZUP series) and similar products, thus providing a 49% increase in power density. The standard models are only 3.27" high by 2.76" wide, so up to 6 units can be installed in the optional 19" rack housing and blanking plates are available for unused slots. Options for front panel output-jacks and multiple-unit housings are available for bench-top applications. Later this year, 600W and 800W models with the exact same dimensions will be added to the Z+ Series.

Both the Z+ 200W and Z+ 400W programmable power supplies have comprehensive front panel controls with individual rotary encoders for output current and voltage, and access to power supply settings such as OVP level, start-up modes, remote control and monitoring parameters. Separate 4-digit volt and

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current displays are provided along with function/status LEDs, pushbuttons for output preview, output on/off, fine/coarse and other features.

The Z+ Series includes built-in arbitrary waveform generation and storage for up to 4 pre-programmed functions; making them ideal for test and simulation tasks in the Automotive, Solar Panel and LED/Laser industries, to name a few. These power supplies feature very fast command processing times, output sequencing and two programmable output pins that, for example, can be used to control isolation relays. Up to 12 voltage or current values can be programmed using the waveform creator software provided and 4 waveforms can be stored in the Z+ unit's memory. More complex waveforms can be created using LabView®. These waveforms can be either repetitive or single-shot and injected into the system under test. The results can be analyzed confirming the proper or faulty operation of the powered device or system.

All models within the Z+ Series can operate in a constant-current or constant-voltage mode from a wide 85 to 265Vac input. They feature active power factor correction, variable speed fans and extensive safety features including user-selectable Safe-Start and Auto-Re-Start. With Safe-Start, the power supply returns to the last used settings after a power interruption, but with the output disabled. With Auto-Re-Start, the supply resumes normal operation without intervention after a power interruption, thereby meeting typical requirements for unattended use.

Common to all Z+ models are the built-in USB, RS232 and RS485 interfaces. Using the standard serial RS485 interface between units enables daisy chain control of up to 31 power supplies on the same bus.

Analog remote programming and monitoring is user selectable from 0-5V or 0-10V. Other digital and isolated analog interfaces are optional. The GPIB interface is IEEE-488.2 SCPI compliant and multi-drop (only one unit needs the IEEE interface, which can then feed the commands to others via RS485). LabView® and LabWindows® drivers are also available. Isolated analog programming and monitoring options include either 0-5V or 0-10V, and 4-20mA control. An LXI Class C compliant LAN interface is also available.

Higher power systems can be achieved by connecting up to 6 identical units in parallel with active current sharing. When connected as a master/slave parallel configuration, the master unit reports total system output current, which means that up to 6 units appear as a single power supply to the remote controller, thereby simplifying operations. Up to 2 units may be connected in series to increase the output voltage or to provide a bipolar output. CE marked in accordance with the Low Voltage Directive, the Z+ Series conform to the conducted and radiated EMI specs per EN55022-B, FCC part-15-B, and VCCI-B. Safety certifications include UL-, EN- and IEC61010-1, plus these units are designed to meet UL/EN60950-1. All models carry a five (5) year warranty.

### **TDK-Lambda Americas**

800-526-2324; [www.us.tdk-lambda.com](http://www.us.tdk-lambda.com) [1]

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[1] <http://www.us.tdk-lambda.com>