Programmable DC Power Supplies

TDK Corporation announced that the new TDK-Lambda Z+ Series of programmable DC power supplies are now available. 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+400 provide 400-watts of output power with an output voltage range from 0 to 100Vdc and output currents up to 40A. The Z+400 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, 200W, 600W and 800W models with the exact same dimensions will be added to the Z+ Series.

The Z+ programmable power supply has 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 current displays are provided along with function/status LEDs, pushbuttons for output preview, output on/off, fine/coarse and other features.

The Z+ Series offers arbitrary function generation and up to 6 pre-programmed functions can be stored which make it ideal for automotive or laser simulation tasks. Z+ power supplies feature a very fast command processing time, output sequencing and two programmable output pins that, for example, could be used to control isolation relays.

All models within the Z+400 Series can operate in either 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+400 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+400 conducted and radiated EMI conforms to EN55022-B, FCC part-15-B, 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
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