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For Immediate Release

Martek Power Targets Aviation with New MW75S Power Supply

Active Power Factor Correction (PFC) offers cleaner power and reduced electrical system weight

Martek Power's MW75S 75-watt AC-DC power module targets aviation.

TORRANCE, Calif., – June 15, 2011 – Martek Power, a world leader in the power supply industry, today announced the release of its new MW75S 75 watt AC-DC front end power supply which meets the most rigorous specifications for military and commercial aviation applications. The MW75S is part of the MW Series product line which features active power factor correction (PFC) and offers aircraft electrical system designers plug-and-play power solutions.

Modern military aircraft are equipped with multiple radars, sensors, weapon systems, and sophisticated cockpit displays that require large amounts of electricity to operate. Commercial airliners also need substantial power for environmental systems, galley equipment, cockpit displays, communication gear, weather radar, and in-flight entertainment systems.

“The demand for electrical power onboard aircraft will only increase. For example, we see a growing trend in the use of electrical power to drive aircraft systems and sub-systems that were previously driven by hydraulic, pneumatic, and mechanical systems,” said Fred Lewis, VP of Sales and Marketing at Martek Power. In an effort

to develop systems that are more efficient and environmental friendly, the aircraft industry is advancing its More Electric Aircraft (MEA) initiative. MEA promotes the use of electrical power as opposed to hydraulic, pneumatic, and mechanical power. Doing so eliminates the need for gearboxes and transmissions since the power transmission is through electrical rather than mechanical means. This in turn would reduce the weight of the aircraft, increase fuel efficiency, and enhance reliability. Ultimately, only electrical power would be distributed across the airframe.

“Our goal with the new MW Series,” said Lewis, “is to provide system designers a full range of off-the-shelf solutions for complex power requirements that eliminate the need for costly custom implementations.” Aircraft are equipped with a number of electrical power generation systems including both primary and redundant backup systems. Primary power is usually provided by AC generators that are driven by the same engines used to propel the plane. Aircraft electrical components operate on many different voltages both AC and DC.

A key feature of the MW75S is active power factor correction (PFC). Power Factor Correction improves the efficiency of an electrical system by reducing harmonic content, and/or aligning the phase angle of incoming current so that it is in phase with the line voltage. The Power Factor (PF) is expressed as the ratio of Real Power (Watts) divided by Apparent Power (Volt x Ampere). A load with a low power factor draws more current than a load with a high power factor for the same amount of useful power transferred. The higher currents increase the energy lost in the distribution system and require larger wires and additional equipment. With its active power correction, the MW75S can deliver up to 30% more usable power than other power supplies with passive PFC and up to 50% more than those without PFC.

The MW75S uses active PFC circuitry to greatly reduce distortion in the wave shape of the current drawn from the source. This is important for a number of reasons. First, the MW75S reduces the overall generator loading and copper cross sectional area required. This results in lower currents which allow the use of smaller and lighter electrical wiring. The savings in wiring cost and weight can be significant considering that a large commercial transport aircraft such as the 747 uses approximately 750,000 feet of wire weighing about 3,500 pounds. Second, the MW75S reduces harmonic distortion and electromagnetic emissions. This is important because harmonically rich waveforms increase system stress and can result in overheating, fires, and equipment failures. The MW75S meets harmonic requirements of MIL-STD 1399 without modification.

With active PFC and a built-in EMI filter that eliminates the need for external filters and shielding, the MW75S is a complete plug and play power supply solution. It provides a fully rated 75 watts of output power from a universal single phase wide input range from 90 - 265VAC at 47-440 Hz. The converter provides isolated 2VDC, 3.3VDC, 5VDC, 12VDC, 15VDC, or 28VDC outputs. The MW75S boasts a Power Factor of 0.99 and efficiency of 80% at full load.

The MW75S meets all related military specification for aircraft use and has been independently certified by a third-party testing service. Packaged in a five-sided

continuous steel case measuring 3.44 x 5.16 x 0.85 inches, the new unit meets CE101 and CE102 of MIL-STD-461 for conducted EMI without requiring any external filtering. Line harmonics meet MIL-STD-1399 for 60Hz or 400Hz. The MW75S also meets MIL-STD-704E and MIL-STD-810.

Standard features include remote turn on/off (TTL control), output voltage trim, overvoltage protection, overcurrent protection, AC Good TTL signal, DC Good TTL Signal, fixed frequency conversion with synchronization input.

Installation of the MW75S is straightforward and does not require specialized power supply expertise. The product is manufactured in the US at Martek Power's facility in Torrance, CA.

Availability

The MW75S is available now with delivery from stock to 12 weeks ARO. For more information, please call: 310.202.8820 or visit www.martekpower.com. For full specs for this product, visit: http://www.martekpower.com/products/en/mw75s-ac-dc-modules.html.

About Martek Power

Martek Power is recognized as a leader in the design and production of standard and custom AC/DC power supplies, DC/DC power converters and DC/AC power inverters for Military, Aerospace, Railway, Medical, Automotive, Computing, Data Storage, Telecom, Networking, Laser, Lamp, Instrumentation, and industrial applications.

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