

## 600-V Input DC-DC Converters Deliver 5 kW

[ABSOPULSE Electronics'](#) HVI 5K-3U7 series high-input-voltage industrial dc-dc converters deliver up to 5 kW of output power. A built-in redundancy diode allows for parallel connection of a number of 5-kW converter units to create a 10-kW, 15-kW, or higher dc-power solution and N+1 operation. The output separation diode also makes the units suitable for battery charging applications (see the figure).

The HVI 5K-3U7 converters accept a nominal 600-V input voltage (400-V to 800-V range). Output options include 24 V, 48 V, 110 V, 125 V or custom value. Output regulation is  $\pm 1\%$  combined across all input line and load conditions, including output separation diode. Efficiency is a minimum of 85% at full load depending on the input/output configuration required.

To ensure high reliability and long operating life, all critical components on the primary side are designed and tested for corona inception levels that are significantly higher than the operating voltages. The design is verified for 5600-Vdc input-to-output isolation and production-level testing is 4300 Vdc input-to-output.

The converters are equipped with heavy filtering on the input and output for low noise. The input meets EN 55032 Class A with wide margins, with Class B available as an option. The converters comply with the requirements of EN/IEC 61010-1 and related standards. The units have reverse-polarity protection, inrush and output current limiting, short-circuit protection and self-resetting thermal shutdown in the case of insufficient airflow.

High-quality built-in fans provide sufficient airflow for operation within a 0°C to 50°C temperature range without derating. The fans draw air into the unit, and exhaust at the terminal side of the unit. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness. The HVI 5K-3U7 chassis-mount units measure 132 x 432 x 407 mm (5.2 in. x 17 in. x 16 in.). In addition, 19-in. rack mounting is also available on request.

The HVI 5K-3U7 dc-dc converters are typically employed in power utility, industrial control, automotive, marine and telecommunications environments. Contact the company for pricing and delivery at 613-836-3511 or see [www.absopulse.com](http://www.absopulse.com).



*Figure. The HVI 5K-3U7 converters accept a 600-V nominal input voltage (or a 400-V to 800-V input range) and deliver up to 5-kW output at 24 V, 48 V, 110 V, 125 V or a custom value. A built-in redundancy diode allows paralleling of multiple converter units for higher power output or N+1 redundancy.*