

### **1-kVA IP66-Rated Sinewave Inverter Is Convection Cooled**

[ABSOPULSE Electronics](#)' CSI 1K-24/230-3XD3-HSF is a 1-kVA addition to the company's line of IP66-rated dc-ac sinewave inverters with pure convection cooling. This 1-kVA inverter is designed for applications where a suitable heatsinking surface is not available and only pure convection cooling is feasible. It is suitable for operation in transportation, heavy industry, mining, military, marine and telecom applications where protection from the ingress of water from powerful jets, sand, metal dust, oil and other contaminants is essential.

The CSI 1K-24/230-3XD3-HSF is built with three power modules packaged in IP66-rated die cast aluminum enclosures. A heatsink assembly is attached to the under surface of each IP66 module, which is attached to a baseplate, providing pure convection cooling. Additional cooling is also achieved by internal conduction to the walls of each IP66 enclosure and convection via the outside surface. This enables operation within a -25°C to +55°C temperature range for full specification without derating. Wider temperature ranges are available on request (see the figure).

The inverter measures 406 x 526 x 94 mm (16 in. x 20.7 in. x 3.7 in.). This excludes the dimensions of the heatsink fins. The unit weighs approx. 20 kg or 44 lbs.

Operating under microprocessor control, this high-frequency PWM inverter converts 24-Vdc nominal (21- to 230-Vdc range) input to 230 Vac continuous at 50 Hz. Typical efficiency is 80% at full load. Custom input/output values are readily available. Input and output are via sealed circular connectors, cable glands or custom connections.

The inverter is equipped with heavy filtering on the input and output, which contributes to low noise and ensures that the inverter can be used in EMI-sensitive environments without additional filtering. The input meets EN55032 Class A with wide margins.

Electronic protection includes 2250-Vdc input-to-output isolation, inrush current limiting and reverse-polarity protection. The unit complies with EN60950-1, UL458 and corresponding international safety standards. Contact the company for pricing and delivery at [www.absopulse.com](http://www.absopulse.com) or call 613-836-3511.



*Figure. This high-frequency 1-kW PWM inverter converts 24-Vdc nominal input to 230-Vac continuous of pure sinewave output at 50 Hz. The inverter is built with three power modules in IP66 D3 size die cast aluminum enclosures. Two CDC 500 modules and one MSI 2300 module are used to generate the required output power. The dc-dc input stage boosts the input voltage to a higher dc voltage, which feeds the dc-ac inverter to generate the required ac output. The heatsink assembly and baseplate shown here provide pure convection cooling with additional cooling achieved by internal conduction to the walls of each enclosure, with additional convection via the outside surface.*