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1-kVA Frequency Converters Feature Universal Input And Split-Phase Output

[ABSOPULSE Electronics'](#) FCP 1K-F7W series compact, ac-ac frequency converters are designed for rugged industrial applications that require universal ac-input voltage and split-phase ac-output with pure sine-wave output voltage. The frequency converters use field proven, microprocessor-controlled FCP1000 technology to generate 1000-VA continuous output power with pure sine wave output voltage. High-frequency conversion enables compact construction, low weight and high efficiency (see the figure).

The FCP 1K-F7W units provide a split-phase ac-output stage for various configurations. The units can be configured to provide 115-Vac split phase/60-Hz each, which emulates North American ac-outlet utility voltage. Other available output options include single-phase 115 V/400 Hz or 230 Vac/50 Hz. A high ac-output voltage version which generates 400- to 450-Vac single phase is also available. The frequency converters operate from a power factor corrected universal input range of 95 to 264 Vac, 47 to 63 Hz; 400-Hz frequency is available on request.

Cooling is by high-quality built-in fans and by additional conduction via the baseplate. Conformal coating provides protection against humidity and airborne contaminants. To ensure immunity to the high levels of shock and vibration encountered in harsh environments, the internal boards are ruggedized.

All models in the series comply with the EN61000-3-2 directive for low input harmonic distortion and with C22.2 No. 107.1-01, UL 458 and EN/UL60950-1 and equivalent industrial safety standards. They have filtering on the input and output for low noise. The input meets EN55032 Class A with wide margins; Class B is available on request. Efficiency is typically 80% at full load.

Electronic protection features include 3000-Vdc input-to-output isolation, overvoltage and short circuit protection with thermal shutdown with automatic recovery in case of insufficient cooling. Contact the ABSOPULSE factory for further information, price and delivery by calling 613-836-3511 or see the [website](#).



Figure. The microprocessor-controlled FCP 1K-F7W ac-ac frequency converters provide a split-phase ac-output stage for various configurations including 115-Vac split phase/60-Hz each and single-phase 115 Vac/400 Hz or 230 Vac/50 Hz. In addition, a high-voltage version which generates 400- to 450-Vac single phase is also available. The frequency converters operate from a power factor corrected universal input range of 95 to 264 Vac, 47 to 63 Hz. In addition, 400-Hz input operation is available on request.