

Three-Phase 5-kW Power Supplies With Active PFC For Industrial Applications

[ABSOPULSE Electronics'](#) PFH 5K-A3P/XX-3U7 series ac-dc power supplies with three-phase active PFC-input are designed for heavy-duty 5-kW industrial applications. The units operate from a three-phase input of 208 Vac (197 to 264-Vac operating range) and deliver any single dc output from 24 V to 400 V. A similar version that operates from 400-Vac three-phase sources is also available. Efficiency is typically 84% at full load, depending on the required input/output configuration.

Several PFH 5K-A3P/XX-3U7 power supplies can be configured in parallel to create a 10-kW, 15-kW, or higher dc-power solution. The 5-kW ac-dc power supply system also functions as a redundant power supply, ensuring high reliability in critical applications. It is built with six PFH 65 internal modules that are connected parallel via internal redundancy diodes. This modular construction provides inherent redundancy; if one internal module fails, the system will remain operational at 4000 W of output power.

The PFH 5K-A3P/XX-3U7 power supply system complies with EN61000-3-2 and EN61000-3-12 directives for low input harmonic distortion. Power factor is better than 0.97 at full load for the entire input range. It is designed for compliance with EN/UL60950-1 and equivalent safety standards. The input meets EN55032 Class A with wide margins; Class B is available as an option.

Electronic protection includes 4300-Vdc input-to-output isolation, inrush current limiting, output current limiting with short-circuit protection, output overvoltage protection and thermal shutdown with automatic reset in case of insufficient airflow.

Cooling is achieved by high quality built-in fans that provide sufficient cooling for operation over a 0°C to +50°C temperature range for full specification. The power supplies are ruggedized for immunity to shock and vibration.

The power supply is available in a 3U x 19-in. rack-mount chassis (132 x 483 x 407 mm, see the figure) as well as a 3U chassis mount unit (132 x 432 x 407 mm). Contact [ABSOPULSE Electronics](#) for further information, pricing and delivery or call 613-836-3511.



Figure. The PFH 5K-A3P/XX-3U7 series 5-kW ac-dc power supplies with three-phase active PFC-input operate from a three-phase input of 208 Vac (197 to 264-Vac operating range) and deliver any single dc output from 24 V to 400V. A similar version that operates from 400-Vac three-phase sources is also available. The power supplies comply with EN61000-3-2 and EN61000-3-12 directives for low input harmonic distortion. Power factor is better than 0.97 at full load for the entire input range