

270 VDC 25kW MILITARY POWER SUPPLY

MSUPH-3PH-270-25K-A01

MSUPH-3PH-270-25K is a high-performance power conversion unit designed for radar and electronic warfare systems. It operates within a wide input voltage range of 225–457 Vrms and supports an input frequency range of 47–63 Hz. The unit offers a high efficiency of 96% at full load, a power factor of over 0.99, and low total harmonic distortion. It features comprehensive protection mechanisms, including thermal fuses and surge protection, and provides a stable DC output of 270V \pm 2% with minimal ripple and voltage spikes. Equipped with a TCP/IP Ethernet interface, the converter allows for remote monitoring and control, making it a reliable and advanced solution for demanding defense applications.

- 96% Efficiency at Full Load
- > 0.99 Power Factor at Full Load
- IEC 61000-4-5, L-N: 2kV, L/N-PE: 4kV
- TCP/IP Ethernet Interface
- Web Server GUI Interface
- 19" 3U Rack Mount Form Factor
- Emergency Shutdown
- Adjustable Output Voltage (250VDC–300VDC)
- 5" Control and Monitoring Display
- Compliant with MIL-STD-810G & MIL-STD-461F



MSUPH-3PH-270-25K is an advanced power conversion solution designed for demanding applications in radar and electronic warfare systems. It operates within an input voltage range of 225-457 Vrms across three phases and delivers a substantial 25kW power at $270V \pm 2\%$, adjustable within a range of 250-300V. The converter's design includes comprehensive protection features such as thermal fuses for overcurrent and short-circuit protection, and an auto-recovery function that reactivates the unit post-fault.



The nominal output current limit is set at $100 \pm 5A$, with overcurrent protection mechanisms that limit the output at $250VDC \pm 2\%$. It features both thermal and electronic protections, including a "hiccup mode" during overload condition. For enhanced operational oversight, the converter is equipped with a TCP/IP Ethernet interface, allowing full software updates, remote on/off control, status monitoring, and real-time access to crucial operational data such as input/output voltages, currents, frequencies for each phase, and internal temperatures. It includes a logging feature for operational events and errors, accessible via the Ethernet interface for diagnostics and maintenance.

