

AIR-COOLED, SOLID-STATE FREQUENCY CONVERTER

The Air-Cooled, Solid-State Frequency Converter (ACSSFC) is the second-generation air-cooled, solid-state frequency converter which supplies precise, reliable, power for the U.S. Navy's most advanced and sophisticated weapon system—AEGIS. A direct descendant of the U.S. Navy's Mk84, liquid-cooled, solid-state frequency converter, the ACSSFC is the class standard on the Arleigh Burke-class DDGs.

Produced by the same production personnel as the Mk84 in the Anaheim facility of L3Harris the ACSSFC guarantees product commonality, known costs, high performance, maintainability and reliability. The ACSSFC is designed and qualified to ensure survivability in the most adverse situations.

In addition to powering the AEGIS Weapons System, the ACSSFC has also been designed as a highly reliable direct replacement for aircraft carrier or fixed-base, central power motor generators. Its light weight makes the ACSSFC easily transportable by air or mobile unit.

The ACSSFC is rated at 288 kW/384 kVA, offers parallel operation (up to six), and provides MILSTD-1399 Type II or III power at unequaled reliability and power levels. The unit has a battle overload capability of 140 percent for 15 minutes and a single unit can support transient loads of up to 520 kW (950 amp) for two seconds.

STANDARD FEATURES

- > Air-cooled, self-contained
- > Modular construction
- > Self-synchronization for parallel operation
- > Built-in diagnostic tests
- > Easy access for trouble shooting
- > Logistics support in place

APPLICATIONS

- > Weapons systems
- > Computers
- > Ground missile launch radar
- > Fire control systems
- > ECM systems
- > Sonar systems
- > Ground, central 400 Hz power distribution systems



ACSSFC 384 KVA

Designed and qualified to ensure survivability in the most adverse situations, the rugged, reliable ACSSFC provides power to some of the U.S. Navy's most advanced systems, including the sophisticated AEGIS weapon system.



INPUT POWER

Voltage/frequency 440 VAC, 60 Hz, 3 ph, 3-wire ungrounded Type I, MIL-STD-1399

OUTPUT POWER

Power Rating

- > Continuous 288 kW/384 kVA
- > Battle load 410 kW/545 kVA or 15 min, 25% duty cycle

Transient Load

- > 600 kW/800 kVA for 100 ms
- > 520 kW/740 kVA for 2 sec

ENVIRONMENTAL CHARACTERISTICS

Operating ambient conditions

- > Temperature 0°-to-50°C
- > Humidity 95% at 50°C

Qualifications

- > EMI MIL-STD-461B
- > Shock MIL-STD-901C, Grade A, Type A
- > Vibration MIL-STD-167, Type I
- > Noise MIL-STD-740B

ELECTRICAL CHARACTERISTICS

- > Nominal user voltage 450 Vrms, 3-wire, delta, ungrounded Type III
- > Optional voltage 115/200 Vrms
- > Output current 493 A @0.75 pf
- > Frequency 400Hz, ±0.1%
- > Frequency modulation ±0.50%
- > Steady state voltage 428-to-472 V
- > Voltage unbalance 1%
- > Voltage modulation 1%
- > Output voltage recovery with a 200 A transient voltage deviation <1%
- > THD 2%
- > Voltage phase difference 119°-to-121°, max
- > Paralleling capability share current with 5% both real and reactive
- > Synchronization self-synchronizing
- > Efficiency 92% at 50% load

MECHANICAL CHARACTERISTICS

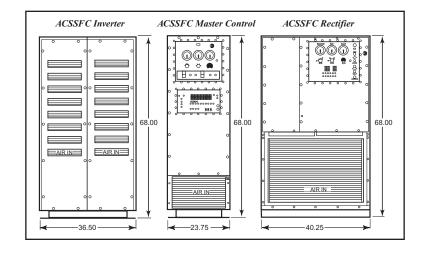
Paralleling

- > Two system paralleling is normal configuration using internal split-bus controller
- > Three through six system paralleling using optional external split bus controller
- > No derating of system is required when operating in parallel

Bus Transfer

> ACSSFCs will transfer to both split-tocommon and common-to-split with no power interruption

Weight 10,250 lbs (4659 kg)



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This sheet has been reviewed in accordance with the International Traffic in Arms Regulations (ITAR), 22 CFR Part 120.11, and the Export Administration Regulations (EAR), 15 CFR 734(3)(b)(3), and may be released without export restrictions.

L3Harris Technologies is an agile global aerospace and defense technology innovator, delivering end-to-end solutions that meet customers' mission-critical needs. The company provides advanced defense and commercial technologies across air, land, sea, space and cyber domains.



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