



Aircraft Ground Service Supplies: 400Hz Static Frequency Converter

Features:

- Mil-Std-704E / BS2G-219 compliant design
- High quality, closely regulated 400Hz supply; performance specified at aircraft terminals, using line drop compensation
- Active Front End draws sinusoidal current: very low distortion of input supply
- Fully EMI-compliant to Mil-Std-461F
- Flexible, programmable controller
- Input-Output transformer isolation
- Auxiliary low-voltage DC Output

The AGSS provide onboard electrical power for the servicing and maintenance of embarked aircraft. EMS offers AGSS power converters for both 400Hz 3-phase AC supply, and for 270V DC supply. These converters are installed on the UK's "Queen Elizabeth II" aircraft carriers.

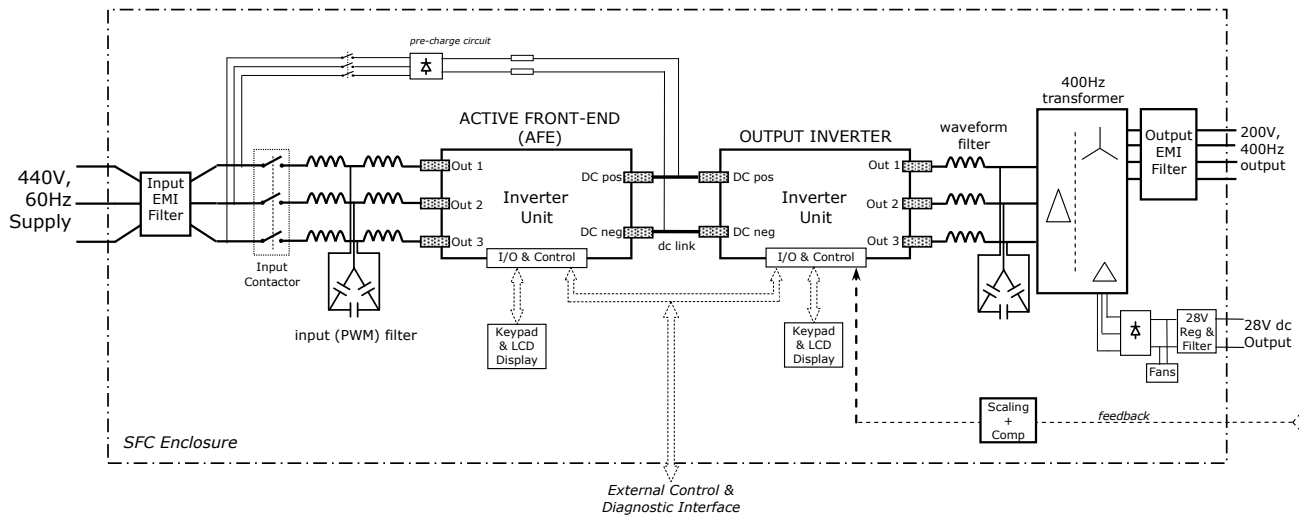
The 400Hz Static Frequency Converters generate a high-quality 3-phase 4-wire 400Hz AC supply from the ship's 3-phase, 60Hz supply. The high bandwidth, closed-loop control of the output ensures the exacting tolerance, distortion and transient response requirements are met and exceeded.

The 400Hz SFC's incorporate a PWM active front end to ensure that the converter draws a near-sinusoidal current, at unity power factor, from the ship's supply.

Transformer isolation between the 60Hz input supply and the four-wire 400Hz output makes converter operation tolerant to ground-faults on the un-earthed input supply, or offers options for input and output supply grounding. The converter features a scaleable/configurable auxiliary low voltage dc supply, local and remote controls and indications in a forced-air cooled enclosure.

The solution is achieved by combining custom magnetics and an advanced EMI filter strategy with high-performance marine commercial ac drive modules. The result is a flexible, programmable converter which is suitable for naval installations.

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Technical Specifications:

Dimensions:	Height = 47.5" (56.7" including shock mounts) Width = 26.75" Depth = 36.3" (43" including shock mounts)
Weight:	947 lb
Electrical Interface:	Bottom cable entry
Input Supply Voltage:	440VAC, 60Hz, 3-phase, 3-wire, ungrounded
Output power	200V line-line (115V line-neutral), 3-phase 4-wire, 400 Hz, 104 Amp full load, 0.8 – 1.0 PF 150% Overload Rating
Input Supply Current Harmonics:	Less than 5% THD
Enclosure:	IP24
Operating Temperature:	10 to 45°C ambient
Humidity:	0 to 95% RH
Cooling Interface:	Forced air cooled
Shock:	BR8470 Grade C
Vibration:	BR8470, Figure 25.2
Electromagnetic Interference:	Mil-Std 461-F, Surface Ships



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