This solid-state 400 Hz Converter is built acc. to most advanced technology. Unique design with modular configuration covers versatile application with shipborne or land base operation. Self-contained monitoring, built-in synchronising control, load-share facilities and switch gear devices allow either single, redundant or no-break operation with two or more remotely installed converters. The input mains are unregulated rectified by autotransformer and 18 pulse rectifier. The Converter is controlled by central electronic with synthetic sine generation and monitoring device, feeding several power units acc. to required power rating. The DC-voltage is separated into phase shifted PWM-signals by power transistor switches, while each power transistor is switched by multi-pulse-train which contains the synthetic sine. With this multi-pulse technique a very fast response to any load step or input voltage step is achieved within one half cycle. Further smoothing of switched sine curve is achieved by small L/C filter network. Voltage matching and galvanic separation is achieved by special low loss output transformer. For suppression of radiated and conducted emission the equipment is fitted with specially designed EMC devices. The Built-In Test Equipment (BITE) is realized by integrated Fault Detection and Location (FDL) system. The Converter fulfills all applicable MIL-STDs and is fully qualified for extreme load and network requirements with most advanced radar and sonar systems.
**Electrical Specifications**

**Input**
- Voltage: 440 V, 3-ph
- Frequency: 60 Hz, ± 5%
- Quality of Mains: Acc. to STANAG 1008, Edition 8

**Output**
- Voltage: 440 V, 3-ph
- Static Tolerance: ± 1%
- Frequency: 400 Hz
- Frequency Tolerance: ± 0.1 Hz (or better)
- Power: 187.5 kVA/150 kW
- Overload: 130 % for 5 min
- Power Factor: 0.8 lagging to 1
- Efficiency: > 92% at 100% load
- Recovery time to 50% load step: < 20ms

**Environmental Specification**
- Temperature Range: 0°C to +50°C (operation), -30°C to +70°C (storage)
- Humidity: ≤ 98%, non condensing
- Airborne Noise: ≤ 68 dB (A)
- Shock: Acc. to BV 043 aerea II, Class A
- Vibration: Acc. to BV 044
- EMC: Acc. to MIL-STD 461 C, CE 01, CE 03, RE 02
- Protection: IP 23 acc. to DIN 40050

**Physical Characteristics**
- Dimensions: 1620 x 1811 x 605 (HxWxD) mm without shock mounts
- Weight: 1,550 kg, ± 5%

**Design Characteristics**
- Controls: Start/Stop, Lamp test, Remote Start/Stop
- Monitoring: Output Voltage, Output Current, Time counter, Input present
  Input out of range, Output overcurrent, Overtemperature,
  Air flow fault, Failure display
- Cooling: Self-cooling by fans, Anti-Condensation heating integrated
- MTBF: >20,000 h
- MTTR: Up to 30 minutes