

Static Frequency Converter 187.5 kVA

For Naval Application



Standard Features

- High efficiency
- Low noise
- High reliability
- Modular design
- Remote control

Application

- Weapon systems
- Combat systems
- Navigation
- Communication

Support Service

- Complete Integrated Logistic Support (ILS)

EUROATLAS 187,5 kVA Static Frequency Converter, Model 4058

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, $\pm 5\%$
Quality of Mains.....	Acc. to STANAG 1008, Edition 8

Output

Voltage.....	440 V, 3-ph
Static Tolerance.....	$\pm 1\%$
Frequency.....	400 Hz
Frequency Tolerance.....	$\pm 0,1$ 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.....	$\leq 98\%$, 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, $\pm 5\%$

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

Specification subject to change without notice



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