

Combi Converter 40 kVA / 9 kW

For Helicopter supply & starter



Standard Features

- Compact dimension
- High efficiency
- High reliability
- 19" Modular design
- STANAG 1008 /DNV /GL

Application

- Helicopter supply
- Helicopter starter

Support Service

- Complete integrated Logistic Support (ILS)

3-phase Converter 440 VAC/ 60 Hz to 200 VAC & 28 VDC, Model: 4080

The Combi Converter is a high efficiency and compact converter designed as a single source supply for powering helicopters operating from ship, offshore and land based installations. The Combi Converter was designed and developed by EUROATLAS for use by Thyssen Krupp Marine Systems on their latest generation MEKO®-200A type general purpose naval combatant. The vessel serve a wide variety of roles and supports two 5t helicopters as well as two UAVs. The Combi Converter converts a standard vessel supply (440 VAC/ 60 Hz) into that required for powering the helicopters and UAV's (200 VAC / 400 Hz 3-phase, 28 VDC) whilst on the vessel.

Key features of the Combi Converter:

- Dual supply (400 Hz & 28 VDC)
- Technology based on pulse width modulation (PWM)
- 3-phase IGBT power stage
- Soft start circuite
- Start / stop management
- Line voltage regulation even at 100% unbalanced load
- build in fault detection
- Overload and short circuit protection via derating of the power stage
- Design according to DNV, GL, STANAG 1008 / MIL-STD 704F



Electrical Specifications:

Input

Voltage..... 440 V, 3-phase acc.
..... to STANAG 1008 e8
Frequency..... 60Hz +/- 5%

Output: 200 VAC / 400 Hz

Output specification acc. MIL-STD 704F
Voltage..... 200VAC , 3-phase
..... adjustable by +/- 5%
Frequency..... 400 Hz with
..... < +/- 0,1% tolerance
Power 40 kVA
Overload 150% for 30 sec.
..... 120% for 10 min.
Power Factor > 0,9
Efficiency > 90 %

Output: 28 VDC

Output specification acc. MIL-STD 704F
Voltage..... nom. 28 VDC
Static tolerance < 5% at I out 0-300 A
..... -15% at I out 1500 A
Ripple < 1,5 Vpp
Power 9 KW
Overload 375 A / 25 sec.
..... 1.000 A / 2 sec.
..... 1.500 A / 1 sec.
Short circuite protection Shutdown at
..... I out > 1.600 A
Efficiency > 80 %

Environmental Specifications:

Temperature Range..... 0° C to 50° C
Storage
Temperature -20° C to +70° C
Humidity..... nom. 85%
..... max. 100% for 1 h
..... non condensing
Shock..... Acc. to BV 0430
RFI / EMI acc. to EN55011
..... and EN61000
Noise < 65 db(A) 20uPa
..... in 1m distance
Insulation Class acc. to VDE 0110,
..... Part 1
Protection IP 43

Physical Characteristics:

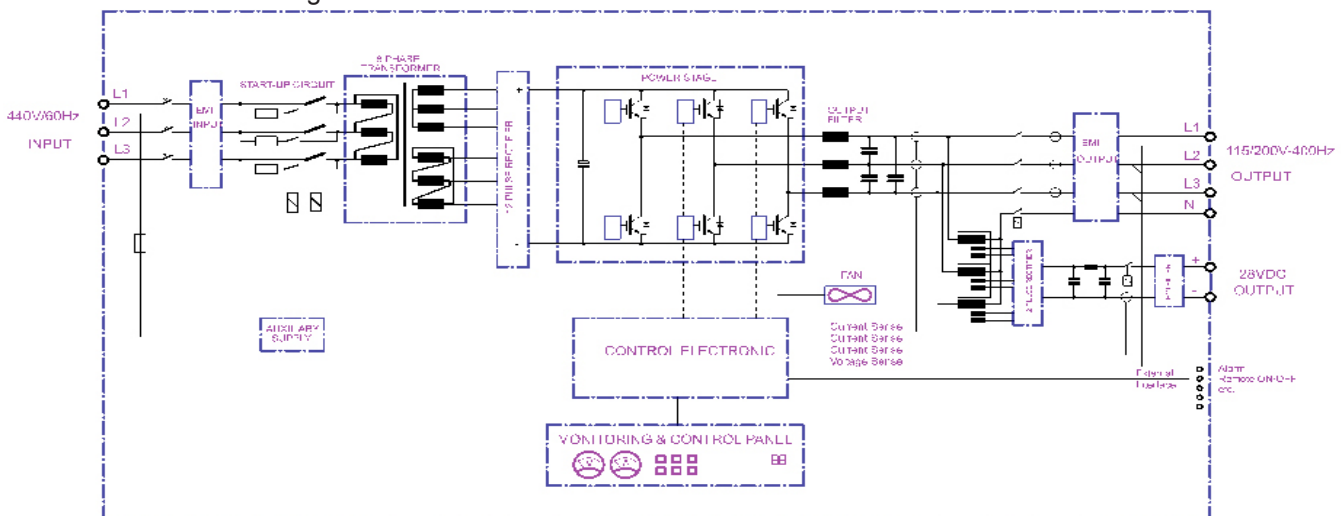
Dimensions D = 580 mm
..... W = 610 mm
..... H = 1612 mm
Weight 630kg +/- 5%

Design Characteristics:

Design Modular
MTBF..... > 18,000 h
MTTR..... < 1 h
Design standard DNV, respectively
..... GL, Electrical
..... GL III-1-3a

Failure System..... Fault detection and fault
..... analysing circuit
Monitoring..... -Input voltage
..... -Internal air temperature
..... -Output voltage
..... -Over load
..... -Power stage temp.
..... -24V aux voltage
..... -Fan
Control -ON/OFF
..... -Warning
Indication -Present input
..... voltage
..... -Inverter ON-LINE
..... -Inverter fault
..... -Overtemperature
..... -General fault

Combi Converter block diagram



Specification subject to change without notice