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 circuit
- 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.
- 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
- Short circuit protection Shutdown at I out > 1.600 A
- Efficiency: > 80%

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**Environmental Specifications:**

**Temperature Range:**
- 0°C to 50°C
- -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

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**Physical Characteristics:**

**Dimensions:**
- D = 580 mm
- W = 610 mm
- H = 1612 mm

**Weight:** 630kg +/- 5%

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**Design Characteristics:**

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

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Specification subject to change without notice

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**Combi Converter block diagram**

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WÄRTSILÄ JOVYATLAS EUROATLAS GmbH
Zum Panrepel 2
28307 Bremen
Germany

Phone +49-421-486930
Fax +49-421-4869341
info@euroatlas.de
www.euroatlas.de