



CONVERTER/UPS SYSTEM 30 KVA/60HZ

This efficient and compact Converter / UPS System Model 4079 is designed for use on front line Naval combatants.

The equipment was designed and developed for use by thyssenkrupp Marine Systems on their latest generation of MEKO® -200A type general purpose vessel for which it converts and maintains power on essential equipment for up to 1 minute at 100% load. The Converter takes 440 VAC / 60 Hz 3-phase and outputs a secure 115 VAC / 60 Hz 3-phase supply.

For Naval Surface Vessel

Standard Features

- Compact size
- High efficiency
- High reliability
- 19" modular design
- STANAG 1008 /DNV/GL

Application

- Naval Surface Vessel

Support Service

- Complete integrated Logistic Support (ILS)



Key Features

- Technology based on pulse width modulation (PWM)
- 3-phase IGBT power stage
- Soft start circuit
- Start / stop / local / remote - management
- 3-phase voltage sense with active rectifier and averager
- Automatic bypass
- Aux supplies for +/-15 V, 5 V and 24 V
- Design according to DNV, GL, STANAG 1008
- 36 kW battery capacity
- 10 years battery lifetime

Electrical Specifications

Input

Voltage..... 440 V, 3-phase acc. to STANAG 1008 e8
 Frequency 60Hz +/- 5%
 Power factor > 0,9

Output

Output specification..... STANAG 1008 e8
 Voltage..... 115 VAC, 3-phase +/- 5% adjustable
 Frequency 60 Hz with $\pm 0,1\%$ tolerance
 Power 30 kVA
 Cooling requirement 700 m³ /h
 Overload 30 % for 10 min.
 Short circuit current 300 % of nom. current for 3sec.
 Power factor 1,0-0,8 ind
 Distortion (THD)..... < 5%
 Efficiency $\geq 90\%$ at full load

Battery

Type..... Hermetically sealed lead acid battery
 Qty. of batteries..... 17, each 12 VDC
 Capacity of one cell..... 352 W / 2 min.
 Capacity battery bank... 36 kW / 2min.
 Lifetime..... min. 10 Years

Environmental Specifications

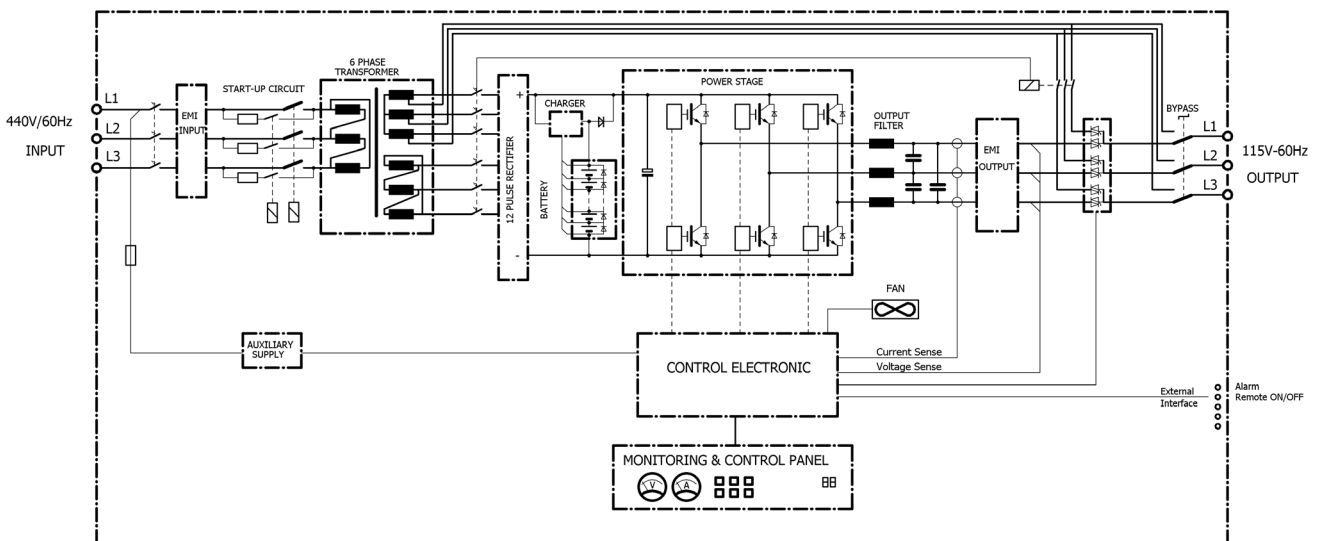
Temperature range..... -5° C to 50° C
 Storage temperature..... -20° C to +70° C
 Humidity nom. 85%
 max. 100% for 1 h .non condensing
 Shock Acc. to BV 0430
 RFi / EMI..... Acc. to EN55011 and EN61000
 Noise < 65 db(A) 20 uPa in 1 m distance
 Insulation class..... Acc. to VDE 0110, Part 1
 Protection..... IP 23

Physical Characteristics

Dimensions..... D = 610 mm
 W = 1020 mm
 H = 1400 mm
 Weight..... 790 kg +/- 5%

Design Characteristics

Design..... Modular
 MTBF..... 18,000 h
 MTTR < 20 min.
 Design standard..... DNV, respectively
 GL, Electrical
 GL III-1-3a
 Failure system..... Fault detection, fault analysing and display
 Control & monitoring
 - Input voltage
 - Charging voltage
 - Output voltage
 - Over load
 - Temperature
 - 24V aux voltage
 - Fan



Converter / UPS System block diagram

