





SINEPOWER manufacture a variety of Static Frequency Converters. Static Frequency Converters convert the source power with a specific input voltage and frequency in to a different output voltage and frequency depending on what the client requires.

SINE SFC units can be used in a variety of applications:

- Civil and Military Aviation
- Aeronautical industry
- Maritime/Nautical Industry
- · Manufacturing sector.



- State of the art semiconductor technology (IGBT) Rectifier
- Power Factor Correction (PF=1)
- 95% efficiency
- 4 Quadrant Operation (better response of the system and safer operation for NBPT)
- Low input harmonics (<1.5% THDi), to comply with the strictest regulations @ any load.



## **OUTPUT**

- 4 Quadrant Operation (better response of the system and safer operation
- · Vector control Inverter for better response and higher efficiency.



# **EFFICIENCY**

- Up to 95%
- No load losses: <2% of full Load.



# **TECHNOLOGY**

- Enclosure Protection class up to IP54
- Over/under voltage at output
- · Overload capability designed for:
  - Power stage 150% Continuous
  - Magnetics 120% Continuous
- Overload protections set at:
  - 120% for 600seconds
  - 150% for 60 seconds
  - 200% for 5 seconds
- Variable fan speed for internal temperature control
- Over temperature protection
- Short circuit proof by electric current limiting and shutdown.



# **OPTIONS**

- Communications
  - MODBUS Rs485
  - Remote control box



# **NORMS AND STANDARDS**

- **EMC** EN61000-6-4 Electromagnectic compatibility -Generic emission standard
  - EN61000-6-2 Generic immunity standard
- **SAFETY** IEC 60529 Degrees of protection provided by enclosures (IP Code)
  - IEC 62477-1 Safety requirements for power electronic converter systems and equipment
- **ENVIRONMENTAL** Dry heat test (steady state) IEC 60068-2-2 subclause 5.3
  - Damp heat test IEC 60068-2-78 subclause 6
  - Vibration test IEC 60068-2-6 subclause 6
  - Salt mist test IEC 60068-2-52 subclause 6
  - Dust and sand test Test Lc1 of IEC 60068-2-68

#### **INPUT**

- 3 phase 400V/415V AC | ±10%\*
- **50/60Hz** | ±10%
- Input current harmonics | <2% @ Full Load

#### **OUTPUT**

- 3 phase 200VAC / 400VAC / 480VAC | ±1%\*
- Overall Efficiency | up to 93%
- Max. Crest Factor | 1.4:1

#### **RECTIFIER**

- 4 Quadrant Operation
- AC Voltage Range | -25% +15%
- Efficiency | up to 97%
- Overload Capacity | 120% Continuous
- Inrush Current | None
- Overall current limit | 150%
- \* Other voltages and frequencies available on request
- \* Other Electronic Overload limits available on request

### **INVERTER**

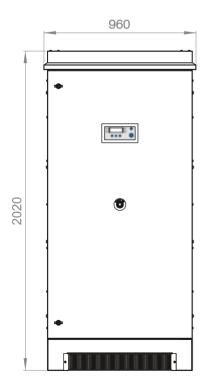
- Static Regulation 0 100% load  $\mid$   $\pm$  1%
- Dynamic regulation 100% | 5%,recovering to 1% within 40ms
- Total harmonic distortion | < 2% (Linear Load)
- Electronic Limit Overload | 120%@600s; 150%@60s; 200%@5s\*
- Overload Capacity (IGBTs) | 150% Continuous
- Frequency stability | ±0.01% Crystal Controlled
- Load power factor | 0-1
- Efficiency | up to 97%
- Short circuit proof by electric current limiting and shutdown

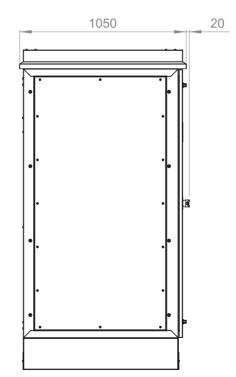
#### **ENVIRONMENTAL CONDITIONS**

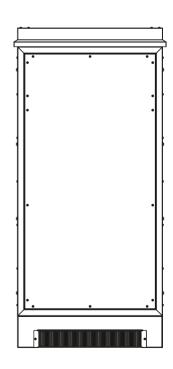
- Coolant temperature (max) | Forced air up to 40°C
- Ambient temperature (min/max) | -40°C to +40°C
- Relative humidity (min/max) | 0% to 90% without condensation
- Pollution degree | 2
- OVC (Overvoltage Category) | 3
- Altitude | Up to 2000m



# **TECHNICAL DRAWING**









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