SINEPOWER manufacture a variety of Static Frequency Converters. Static Frequency Converters convert the source power with a specific input voltage and frequency into 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 and Manufacturing sector.

SINE SFC
STATIC FREQUENCY CONVERTER
10-30kVA 400Hz

SINEPOWER manufacture a variety of Static Frequency Converters. Static Frequency Converters convert the source power with a specific input voltage and frequency into 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 and Manufacturing sector.
SINE Static Frequency Converters (Solid-state) have no moving parts, except for the fans to cool the systems down, and are highly efficient units (up to 95% efficiency).

Our High frequency IGBT Technology (Rectifier and inverter) guarantees a perfect sinewave input current with low THDi (THDi<1.5%) and unitary power factor (PF=1), perfect for all sorts of extreme electrical conditions (compatible with Genset output).

- **CE Mark Certified** - EN61000-6-4 Electromagnetic compatibility - Generic emission standard; EN61000-6-2 Electromagnetic compatibility - Generic immunity standard; Low Voltage Directive (LVD) 2006/95/EC
- **State of the art semiconductor technology** (IGBT)
- **High Efficiency** (up to 95% efficiency)
- **User friendly control panel**
- **Data logging**
- **IP54 enclosures** for outdoor use in extreme environmental conditions
- **Low noise emission** (<65dBA@1m)
POWER QUALITY

INPUT
- 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 for NBPT)
- Vector control Inverter for better response and higher efficiency.

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

PROTECTION AND SAFETY
- 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 600 seconds
  - 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.

INTERFACE AND COMMUNICATIONS
- RS232

OPTIONAL FEATURES
- Communications
  - Monitoring by Web and SNMP
  - MODBUS Rs485
  - MODBUS TC/IP
  - Remote control box

NORMS AND STANDARDS
- IEC 62040-1:2008 Uninterruptible power systems (UPS). Part 1: General and safety requirements for UPS.
- IEC 61558-2-6:2009 Safety of transformers, reactors, power supply units and similar products for supply voltages up to 1100 V. Part 2-6: Particular requirements and tests for safety isolating transformers and power supply units incorporating safety isolating transformers.
### INPUT

- **3 phase 400V/415V AC**
- 45Hz up to 65Hz
- Input current harmonics: <2% @ 100% load

### OUTPUT

- **3 phase 200VAC/ 400VAC/ 440VAC/ 480VAC**
- 400Hz
- Overall Efficiency: ±1%
- Load current limit: 150%

### RECTIFIER

- 4 Quadrant Operation
- AC Voltage Range: -25% +15%
- Efficiency: 95%
- Overload Capacity: 120% Continuous
- Inrush Current: None
- Overall current limit: 150%

### INVERTER

- **Static Regulation 0 - 100% load**
- ±1%
- Dynamic regulation 100% load: 8%, recovering to 4% within 40 milliseconds
- Total harmonic distortion: Better than 3% (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: 95%
- Short circuit proof by electric current limiting and shutdown

### ENVIRONMENTAL CONDITIONS

- Temperature range:
  - Sea Level: -40°C to +40 °C (@100% Load)
  - Above 2000m: 30 °C (@100% Load)
- Relative Humidity: 0%-90% without condensation
- Noise Level: <65 dBA@1 meter
- Altitude: up to 2500 m without de-rating

### TECHNICAL DRAWINGS

Dimensions for 500 enclosure:
- **10-15kVA**

Dimensions for 450 enclosure:
- **20-30kVA**

*Other voltages and frequencies available on request
*Other Electronic Overload limits available on request

---

Environments and decorative details in this catalogue have an informative purpose only. Result of Sinepower investment in research and development, the range can be subject of improvements. Therefore we reserve the right to change features and equipment in this catalogue without notice.