



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



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.



TECHNOLOGY

- Enclosure Protection class up to IP54
- Over/under voltage at output
- 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 over RS232/RS485
- Remote control box



NORMS AND STANDARDS

- EMC**
- EN61000-6-4 - Electromagnetic 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

SPECIFICATIONS

<p>INPUT</p> <ul style="list-style-type: none"> • 3 phase 380V/400V/415V AC* $\pm 10\%$ • 50/60Hz $\pm 10\%$ • Input current harmonics $< 2\%$ @ Full Load 	<p>INVERTER</p> <ul style="list-style-type: none"> • Static Regulation 0 - 100% load $\pm 1\%$ • Dynamic regulation 100% 5%,recovering to 1% within 40ms • Total harmonic distortion $< 2\%$ (Linear Load) • Electronic Limit Overload 120%@600s; 150%@60s; 200%@5s* • Frequency stability $\pm 0.01\%$ Crystal Controlled • Load power factor 0-1 • Short circuit proof by electric current limiting and shutdown
<p>OUTPUT</p> <ul style="list-style-type: none"> • 3 phase 200VAC / 400VAC / 480VAC* $\pm 1\%$ • Overall Efficiency up to 94% • Max. Crest Factor 1.4:1 	
<p>RECTIFIER</p> <ul style="list-style-type: none"> • 4 Quadrant Operation • AC Voltage Range -25% +15% • Efficiency up to 97% • Inrush Current None 	<p>ENVIRONMENTAL CONDITIONS</p> <ul style="list-style-type: none"> • Cooling 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 • Sound power level $L_w \leq 70\text{dba}$ according to ISO 3747:2010

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



TECHNICAL DRAWING

