

ENERWAVE SFC

5kVA to 300kVA

THREE PHASE

Reliable and Efficient
Frequency Conversion



Answering All Power Needs



EnerTech
Answering All Power Needs

www.enertechups.com

30 Years Experience In Manufacturing And Development In Cutting Edge Inverter And Converter Technology.

About Us



Enertech® UPS Pvt. Ltd is industry leading electrical and power electronic product designer and manufacturer since over 30Years.

Enertech® provides complete Power Management solutions for Renewable & Power continuity to meet your needs of continuous Power with its Cutting-edge Inverter, Converter Technology

The Enertech® products cover main

Application : Industrial and commercial energy storage with renewable integration Solar PCU, Industrial UPSs, Battery Charger and Static Frequency Converter

The Enertech® Product are design with 100% Indigenous technology using the in-house R&D setup strive for constant success in leveraging technological innovation are manufactured at our Pune India.

DESIGN

QUALITY

SERVICES

VALUE



ABOUT ENERWAVE SERIES

SureWave Static Frequency Converters are commonly is designed to change conventional **50 Hz or 60 Hz or 400Hz electrical** energy to virtually any other frequency.

Feature-Loaded SFC

- Compatible with both 50Hz and 60Hz power supply network.
- **110VAC, 400VAC, 50HZ 60HZ, 400HZ with voltage and frequency Conversion. (optional)**
- Single and three phase models, some with phase conversion
- DSP Based Processor designed with IGBT technology and Inbuilt Isolation Transformer for Isolated output
- Suitable for unbalance loads, every single phase can be used independently.
- Suitable to handle reactive loads.
- Galvanically isolated, low harmonic distortion. Pure sine wave, sinusoidal output.
- Display real-time data: voltage, current, frequency and power.
- Industrial grade design Enclosure IP-20 (Optional up to 51)

The EnerWave SFC combines Enertech's years of experience with market trends and knowledge and has driven the need to create the next generation Static Frequency Converter – Enertech's EnerWave SFC.

Additionally, the EnerWave SFC is integrate IGBT and combines with DSP microprocessor and PLC control design with Inbuilt Isolation Transformer stabilize the frequency to allow the correct operation of sensitive equipment when the supply is not sufficiently regulated.

Also, the EnerWave SFC can convert the supply voltage to a different voltage to match the requirement.

How it works

The system functions by converting the input AC power through a sine-wave rectifier to a DC link and then through an AC sine-wave inverter to produce a clean, full sine-wave output at the new frequency and voltage.

The EnerWave SFC is extremely flexible in terms of paralleling with other voltage sources, either generators.

PRODUCT APPLICATION

- Aviation
- Shipping
- Textile
- Healthcare



FREQUENCY CONVERTORS

50HZ / 60HZ / 400HZ

For Aviation & Special purpose power supply

Highly reliable custom-built frequency converters

- Tight voltage and frequency regulation.
- Active boost topology for low noise.
- Capable to handle reactive loads.
- Fully DSP controlled
- Industrial grade design
- Power saving (up to 70%)
- Longer service life of mechanical and electrical parts
- Reduction of repair costs

Input

Any voltage & frequency

AC/DC

1 ϕ /3 ϕ

Output

Any voltage & frequency

1 ϕ /3 ϕ



110VAC, 400VAC, 50HZ 60HZ, 400HZ with voltage and frequency Conversion.



1 ϕ & 3 ϕ

400HZ
For Aviation



60HZ
For Special Purpose Equipment

SPECIFICATION OF STATIC FREQUENCY CONVERTER

[illegible]

| INPUT |
|-------|
|-------|

| | |
|-------------------------|-------------------------------------|
| Voltage Range | 400VAC \pm 10 % , 3 Phase , 4Wire |
| Input Nominal Frequency | 50 Hz \pm 3 % |
| Input Power Factor | 0.8 |

| INPUT | OUTPUT |
|-------|--------|
| 1 | 1 |
| 2 | 4 |
| 3 | 9 |
| 4 | 16 |
| 5 | 25 |
| 6 | 36 |
| 7 | 49 |
| 8 | 64 |
| 9 | 81 |
| 10 | 100 |
| 11 | 121 |
| 12 | 144 |
| 13 | 169 |
| 14 | 196 |
| 15 | 225 |
| 16 | 256 |
| 17 | 289 |
| 18 | 324 |
| 19 | 361 |
| 20 | 400 |
| 21 | 441 |
| 22 | 484 |
| 23 | 529 |
| 24 | 576 |
| 25 | 625 |
| 26 | 676 |
| 27 | 729 |
| 28 | 784 |
| 29 | 841 |
| 30 | 900 |
| 31 | 961 |
| 32 | 1024 |
| 33 | 1089 |
| 34 | 1156 |
| 35 | 1225 |
| 36 | 1296 |
| 37 | 1369 |
| 38 | 1444 |
| 39 | 1521 |
| 40 | 1600 |
| 41 | 1681 |
| 42 | 1764 |
| 43 | 1849 |
| 44 | 1936 |
| 45 | 2025 |
| 46 | 2116 |
| 47 | 2209 |
| 48 | 2304 |
| 49 | 2401 |
| 50 | 2500 |
| 51 | 2601 |
| 52 | 2704 |
| 53 | 2809 |
| 54 | 2916 |
| 55 | 3025 |
| 56 | 3136 |
| 57 | 3249 |
| 58 | 3364 |
| 59 | 3481 |
| 60 | 3600 |
| 61 | 3721 |
| 62 | 3844 |
| 63 | 3969 |
| 64 | 4096 |
| 65 | 4225 |
| 66 | 4356 |
| 67 | 4489 |
| 68 | 4624 |
| 69 | 4761 |
| 70 | 4900 |
| 71 | 5041 |
| 72 | 5184 |
| 73 | 5329 |
| 74 | 5476 |
| 75 | 5625 |
| 76 | 5776 |
| 77 | 5929 |
| 78 | 6084 |
| 79 | 6241 |
| 80 | 6400 |
| 81 | 6561 |
| 82 | 6724 |
| 83 | 6889 |
| 84 | 7056 |
| 85 | 7225 |
| 86 | 7396 |
| 87 | 7569 |
| 88 | 7744 |
| 89 | 7921 |
| 90 | 8100 |
| 91 | 8281 |
| 92 | 8464 |
| 93 | 8649 |
| 94 | 8836 |
| 95 | 9025 |
| 96 | 9216 |
| 97 | 9409 |
| 98 | 9604 |
| 99 | 9801 |
| 100 | 10000 |

| | | | | | | | | | | | |
|--------------------------------|--|-------|-------|-------|-------|--------|--------|-------|-------|-------|-------|
| Output Power Capacity (KVA) | 5KVA | 10KVA | 20KVA | 50KVA | 80KVA | 100KVA | 125KVA | 160KV | 200KV | 250KV | 300KV |
| Output Power Capacity (KW) | 4kW | 8kW | 16kW | 40kW | 64kW | 80kW | 100kW | 128kW | 160kW | 200kW | 240kW |
| Output Power Factor | 0.8 | | | | | | | | | | |
| Output Voltage Range | 400VAC ± 1 %, 3 Phase, 4Wire (Option 480VAC ± 1 %, 3 Phase, 4Wire) | | | | | | | | | | |
| Voltage Regulation | ± 1.5 % | | | | | | | | | | |
| Output Frequency | 60 Hz / 400Hz Hz ± 1 % | | | | | | | | | | |
| Total Harmonic Distortion | < 3 % fundamental rms voltage | | | | | | | | | | |
| Overload Capacity | 110% for 60 min., 125% 5min, 150% for 5 sec | | | | | | | | | | |
| Overall Efficiency | > 90% | | | | | | | | | | |
| Response Time | less than 25millisecs | | | | | | | | | | |

CONNECTIVITY

| | |
|---------------|---|
| Communication | RS 232 Standard (Modbus RS485 Optional) |
| Metering | Onboard Programmable LED/LCD Panel Display following parameters : 1. Input Voltage. 2. Input Frequency. 3. Output Voltage 4. Output Frequency 5. Load Percentage |

| | |
|-------------|--|
| Protections | 1. Mains fail, 2. Single Phase Preventer, 3. Input Under / Over Voltage, 4. Over Temperature, 5. Output Over Voltage, 6. Output Under Voltage, 7. Output Short Circuit |
|-------------|--|

| | |
|-------------|--|
| Indications | 1. Input ON, 2. Output ON, 3. Output Over Voltage, 4. Output Under Voltage, 5. Overload, 6. Over Temperature |
| Alarms | Mains fail Warning (Musical Alarm) |

| |
|---------------|
| ENVIRONMENTAL |
|---------------|

| | | |
|-----------------------|-----------------------------------|---------------------|
| Operating Temperature | 0 to 40°C. | |
| Storage Temperature | 0 to 55°C. | |
| Audible Noise | <= 65 dB at 1.0 mtr | <= 80 dB at 1.0 mtr |
| Humidity | 95 % R.H. (Maximum) Noncondensing | |
| Altitude | <1000 Meter above sea level | |
| Cooling | Forced Cooling | |

| | |
|--------------|--|
| CONSTRUCTION | |
|--------------|--|

| | |
|------------------|--|
| Thickness | CRCA Sheet Thickness Frame, All door & covers 1.2mm. |
| Protection Class | Enclosure Protection IP20 |
| Color | RAL 7016 (6070micron) |
| Ventilation | Forced Cooling |
| Cable Entry | Bottom at Front Side |

| STANDARD | |
|----------|--|
|----------|--|

| | | | | | |
|------------------------|---------------|--|--|--|--|
| Quality | ISO 9001:2015 | | | | |
| Performance, EMC / LVD | IEC 620402 | | | | |
| | | | | | * Specifications are subject to change without prior notice. |

Enertech® Highly Reliable And Efficient Products are Backed by a Highly Responsive and Dependable Field and Factory Services

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Our Offering

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