

# Single Phase Static Frequency Converters

## Low Power Range - SFC 2000 Series



- Models from 1 to 5KVA
- Models to Convert from 50/60/400Hz to 50/60/400Hz, in any combination.
- Continuous Duty Device
- Single Phase Input, Single Phase Output
- Power Factor Corrected Input (PFC)
- Universal, Wide Range Input Option
- Sinusoidal, Galvanically Isolated Output
- Simple Controls With Output Load Meter
- Very Low Acoustic Noise
- Extremely Compact, With Low Weight

### Cost-Effective, Compact and Dependable:

SFC 2000 series static frequency converters offer the most cost-effective and flexible way of providing dependable and accurate frequency and voltage conversion for low power single phase applications. By using the most advanced electronic design, SFC 2000 models are not only remarkably compact for their respective power ratings but also extremely quiet. This means that personnel may work in close proximity to them without the tiring noise often associated with static frequency converters.

### Unity Input Power Factor:

An advanced front-end design ensures that the input power factor to all models is near unity. This means that there are almost no rejected harmonics, input power consumption is minimised and overall converter efficiency is maximised.



The Simple Display Makes for Minimal Operator Training.

### Simplicity in Operation:

Plug and socket connections and 'Two Button' operation means minimal Operator training. An LED load meter (on 3KVA+ models an analogue ammeter) indicates the output load level.

### Pure, Sinusoidal Output Waveform:

The output waveform is a pure sinusoid with a typical total harmonic distortion figure of less than 2%. Thus SFC 2000 converters are able to drive even the most difficult and sensitive types of load without a problem.

### Continuous Duty Operation and Universal Input Option:

All SFC converters are designed for continuous duty applications, and may be left 'On' all the times if required. Generous overload margins take care of loads with high in-rush currents. If the 'Universal Input' option is selected then the unit will operate from any input in the range 44-440Hz & 95-270VAC, while always retaining the same fixed output voltage and frequency required.

### Applications:

SFC 2000 series machines are suitable for applications ranging from production-line testing through to research and development laboratories and workshops. Marine variants are also available for both military and commercial naval applications (including recreational vessels - see 'Yacht Converters').

### High Reliability:

An oversized rectifier and robust IGBT based inverter offer high reliability, while modular construction and a simple lay-out means that access for maintenance and repair is very straight forward.

### Technical Specification:

See overleaf.

**Powertek**

# SFC 2000 - Technical Specifications

## INPUT:

- Input Voltage..... 115V or 230V +/-15% 1ph or Universal 95-270V, 44-440Hz
- Input Frequency..... 50 or 60Hz or 400Hz, +/- 6%
- Input Current Harmonics..... IEC 1000-3-4
- Input Power Factor..... >0.98
- Rectifier Inrush..... 10 second walk-in, max current < In x 1.2
- Input Connections..... IEC or EN60309/2 connectors
- Input Protection..... Circuit breaker, rear panel

## OUTPUT:

- Output Voltage..... 115V or 230V, single phase
- Output Voltage Regulation..... Steady-state: +/-2%, dynamic 0-100% step load: +/-5% re-covering to steady-state within 10mS
- Total Harmonic Distortion..... <3% linear load
- Output Frequency..... 50Hz or 60Hz or 400Hz +/- 0.1%, quartz generated
- Permissible Load Power Factor..... -0.6 to 1
- Output is galvanically isolated from input - the output neutral may be bonded to earth.

## SECURITY:

- Permissible Overload..... 110% @ 10 min, 150% @ 10 s, 200% @ 1 s
- Output Overvoltage Cutout..... Nominal voltage +15%
- Output Undervoltage Cutout..... Nominal voltage -15%
- Thermal Overload..... Thermal sensors located in rectifier, inverter and output transformer.

## ENVIRONMENT & EQUIPMENT:

- Ambient Temperature Range..... -10 to 40 deg C
- Humidity..... <90%, non-condensing
- Altitude..... All specifications quoted at < 2000m above sea level
- Acoustic Noise..... < 45dBA @ 1m
- Overall Efficiency..... 85 to 91% model dependant
- EMC..... Better than EN55-022B
- Cabinet..... Zinc plated steel, powder coated RAL 7032
- Cabinet Protection..... IP31
- Meters..... LED load meter, 3KVA+ models DIN96 ammeter
- CE marked

## CONNECTIONS:

Up to 3KVA models, IEC input, 3 x IEC output. 3KVA+ models have a 2m input lead, with correct EN30906/2 output socket.

## DIMENSIONS:

- 1 to 2KVA..... H280 W185 D380mm
- 3 to 5KVA..... H380 W300 D500mm

## OPTIONS:

- Other input and output voltages and frequencies
- Military variants
- Marine variants

Model Power	2100 1KVA	2150 1.5KVA	2200 2KVA	2300 3KVA	2400 4KVA	2500 5KVA	2600 6KVA
Weight Kg	12	15	20	28	40	48	Contact