

**SFC****Static Frequency Converters**

The **SFC** series frequency converters are designed to supply 3 phase AC critical loads with high stability frequency from a 50Hz Input source to 60Hz or vice versa. An option exists for a 400Hz output as well.

The frequency converter design is based upon the standard rectifier and inverter subassemblies and the logic as used in our **SFC** Series of backup systems. This compact dimensioned product range is ideally suited for industrial applications in military and civil aviation, shore to ship services, avionics workshops and where USA market products have to operate from 50Hz power supplies with high performance and reliability. As an option we can add variable voltage inputs and outputs.

Batteries can be added to this frequency converter to provide autonomy and power security for the users who need continuous power at times when there is the risk of input mains degradation or failure. A mimic status and alarm panel with either digital or analogue metering is provided on the front door of the frequency converter. A remote alarm signal interface facility is available as an optional feature.

**OPTIONS**

- Analogue supplementary metering
- Single or three phase options in and out
- 50Hz or 60Hz input frequency
- 50, 60 or 400Hz flexible cable
- Remote monitoring by interface PCB
- RS485 remote monitoring by computer
- Ingress protection from IP20 up to IP54
- Special paint colours and finish, available upon request

**APPLICATIONS**

- Civil Aviation
- Nautical Industry
- Military Aviation
- Navy



## THE BASIC MECHANICAL CONSTRUCTION

The basic mechanical construction is in vertical format with ingress protection IP20 with optional IP20, IP42 and IP54, there is a horizontal version available for mounting on a mobile trolley, trailer or on floor stands. Variable input and output voltage and frequency converters can be added as an option. These can auto select voltage and Frequency, or they can be manually changed.

## TECHNICAL DATA SFC SERIES 50 & 60HZ FREQUENCY CONVERTERS

### RECTIFIER

Nominal input voltage	70 to 230 VAC one-phase, Voltage tolerance +10% or -15%
Phase in:	Single or Three Phase
Frequency:	45 to 65 Hz
Current harmonic distortion:	<1% linear load, <5% with non-linear load CF=3

### INVERTER

Rated output power:	(kVA) 10, 15, 20, 30, 40, 50, 60, 80, 100, 120
Nominal output voltage :	230 VAC 1 Phase N+E 50 Hz
Phase out:	Single or Three Phase
Dynamic stability:	+/- 5% with recovery time to +/-2% within 40ms
40ms Voltage distortion with linear load:	<3% Voltage distortion with non-linear load :<4%
Frequency :	50, 60 or 400Hz
Overload:	In. x 1.1 for 60minutes, In. x 1.5 for 50 seconds, In. x 1.25 for 10 minutes, In. x 2.0 for 1 second

### METERING, STATUS, SIGNALLING AND ALARMS.

Digital metering by LCD panel  
Menu and keypad for diagnostics and data logging Remote signalling Voltage-free contacts  
Communication via RS232 or RS485

### DIMENSIONS AND WEIGHT, IP20

#### Dimensions, (w x d x h) (mm)

10, 15, 20kVA	555 x 665 x 830
30, 40, 50kVA	750 x 705 x 1,250
60, 80kVA	800 x 705 x 1,575
100, 120, 150kVA	1,000 x 950 x 2,000

#### Weight (kg) Approx.

10kVA	132
15kVA	150
20kVA	211
30kVA	235
40kVA	345
50kVA	414
60kVA	454
80kVA	495
100kVA	564
120kVA	730
150kVA	828

### Other Power on Request

Weights and Dimensions are based on three phase in and out. Single phase and 400Hz sizes may vary

### OPERATIONAL ENVIRONMENT

Noise level :	<60 dBA at 1 m
Operating ambient temperature	0 °C to 40 °C, Operation in an ambient temperature of 50°, the converter output is reduced by 25%
Relative humidity :	<95% non-condensing
Ingress protection degree	IP20 as standard, options of, IP31, IP42 and IP54
available Colour :	Light grey (RAL 1013) Finish, light textured

### STANDARDS COMPLIANCE

EN 50091 -1EN50091-02 class A Classification as per IEC62040-3 (Voltage Frequency Independent) VFI-SS-111



SATRON Power Solutions  
Approach your local SATRON Power Solutions  
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Contact details can be found on:  
[www.satronpower.com](http://www.satronpower.com)