

50 to 60Hz or 60 to 50Hz Frequency Converters

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

The frequency converter design is based upon the standard rectifier and inverter sub-assemblies and the logic as used in our SPSFC 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.

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.



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



Technical Data SPSFCSeries 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: 40ms	+/- 5% with recovery time to +/- 2% within
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 signaling 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	60kVA	454
15kVA	150	80kVA	495
20kVA	211	100kVA	564
30kVA	235	120kVA	730
40kVA	345	150kVA	828
50kVA	414		

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--2 class A Classification as per IEC 62040--3
(Voltage Frequency Independent) VFI --- SS --- 111

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