

GB Electronics (UK) Ltd

ME Frequency Converter range - datasheet



50-60Hz, 60-50Hz and 50/60Hz - 400Hz Static Frequency Converters

The ME range of 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. These flexible solutions also have the option for a 400Hz output as well.

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. The option to add variable voltage inputs and outputs is also available.

The ME Range of Static Frequency Converters (Solid-state) have no moving parts, except for the fans to cool the systems down, and are highly efficient units (up to 95% efficiency). The High frequency IGBT Technology (Rectifier and inverter) guarantees a perfect sinewave input current with low THDi (THDi<1.5%) and unitary power factor (PF=1), perfect for all sorts of extreme electrical conditions (compatible with Genset output).

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 (Extras)

- > 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 ME range

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
Voltage distortion w/linear load:	<3%
Voltage distortion w/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 & Alarms

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

Operational Environment

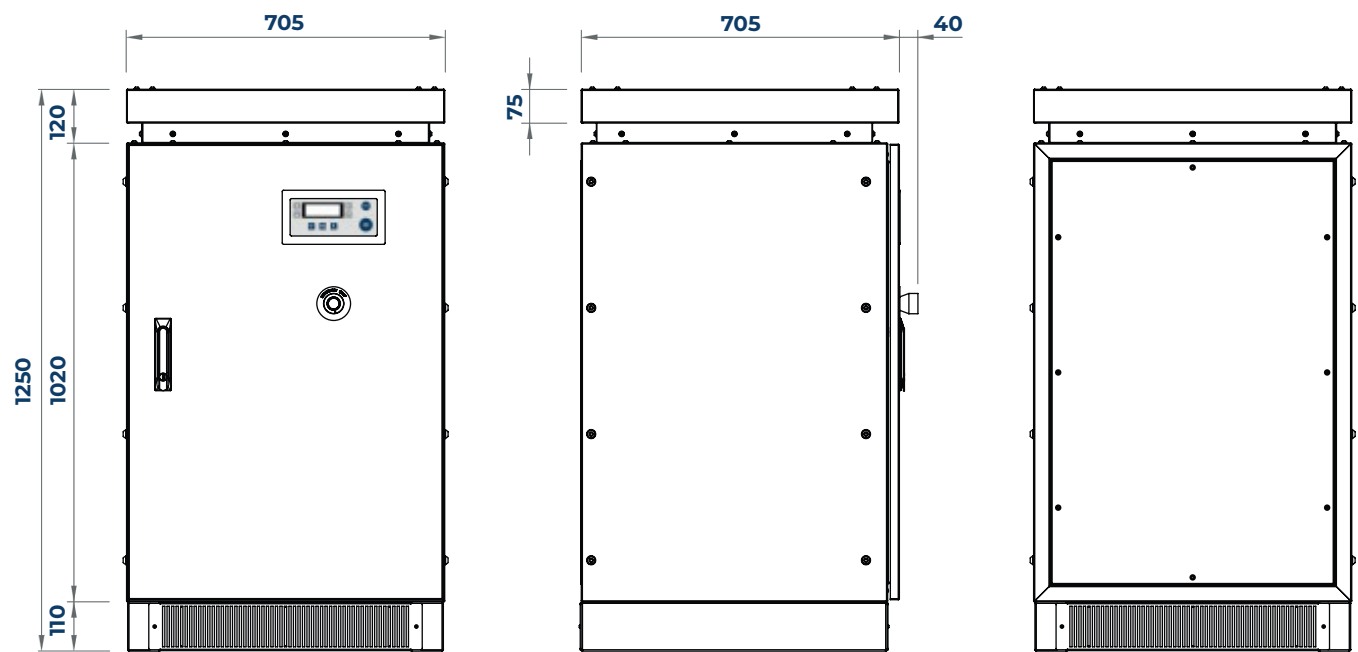
Noise level:	<60 dBA at 1m
Operating ambient temperature:	0 °C to 40 °C, Operation in an ambient temperature of 50°,the converter output is reduced by 25%
Relative humidity:	<95% non--condensing
Ingress protection rating:	IP20 as standard, options of, IP31, IP42 and IP54
Available colour:	Light grey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

Standards Compliance

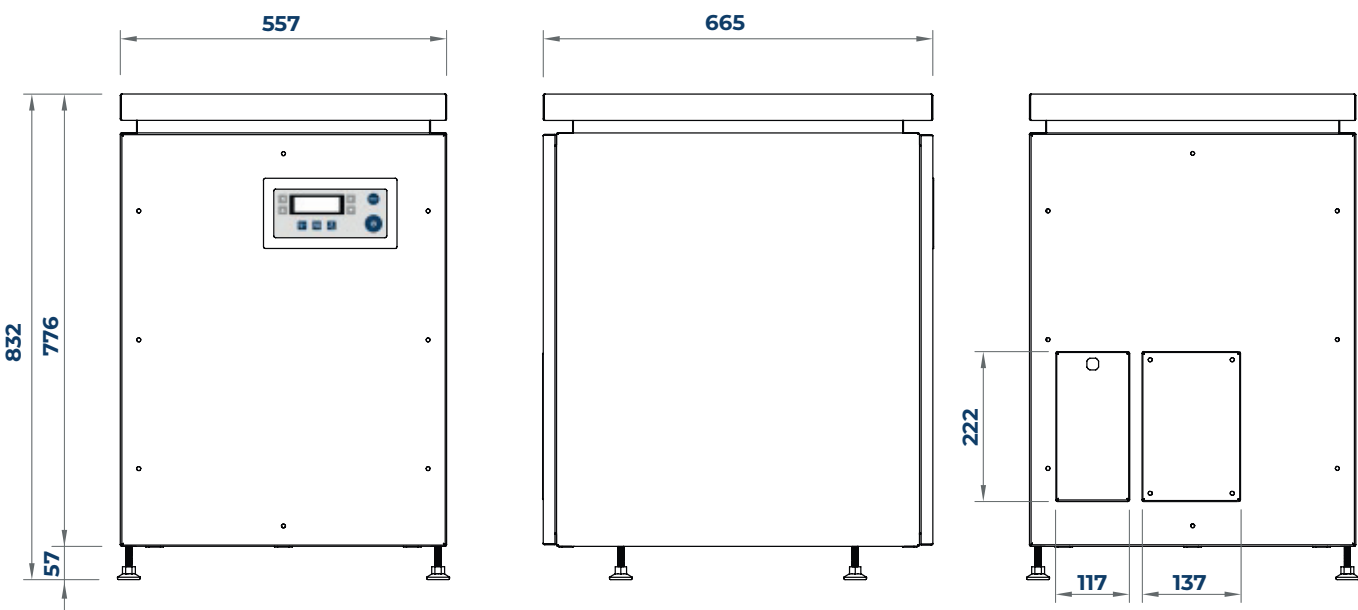
EN 50091 -- 1EN50091--2 class A Classification as per IEC62040--3 (Voltage Frequency Independent) VFI -- SS -- 111

Dimensions

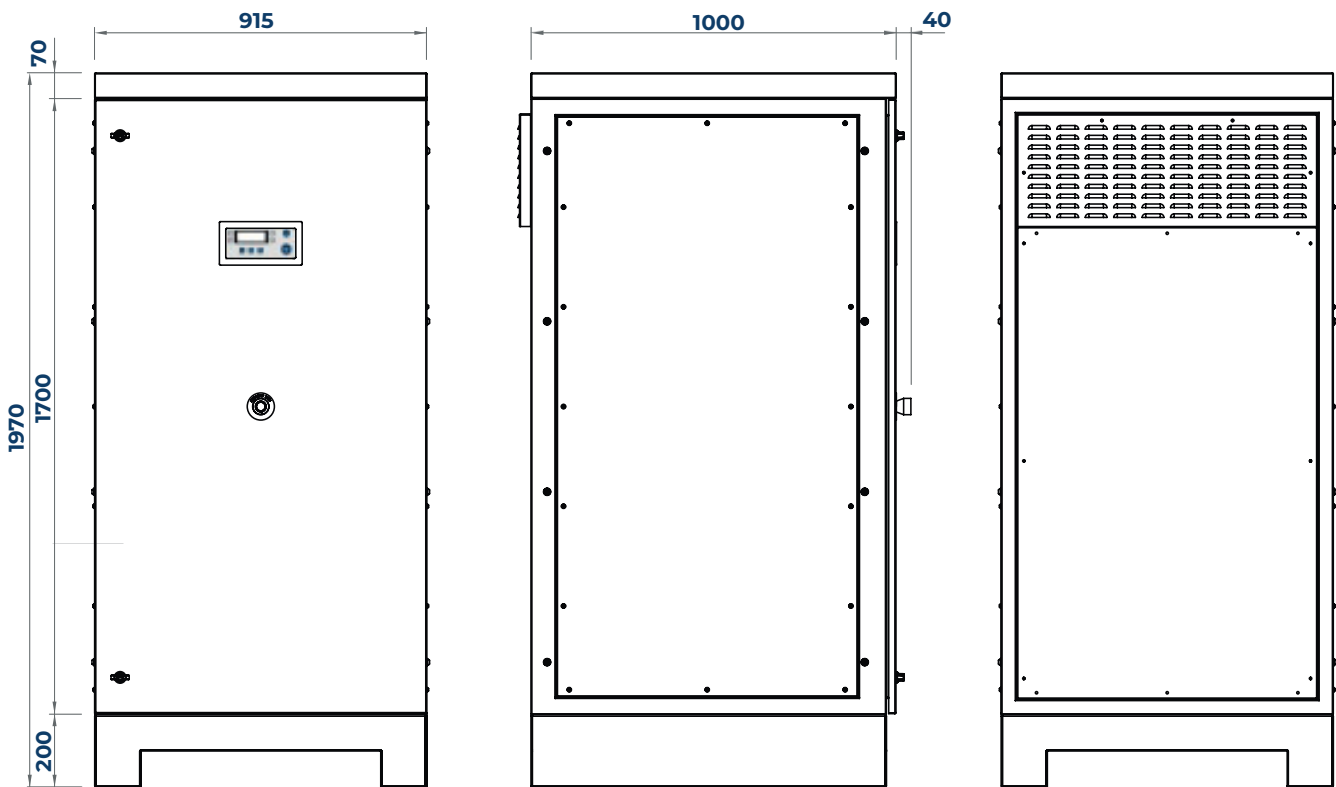
50-80 kW- 50 or 60 Hz



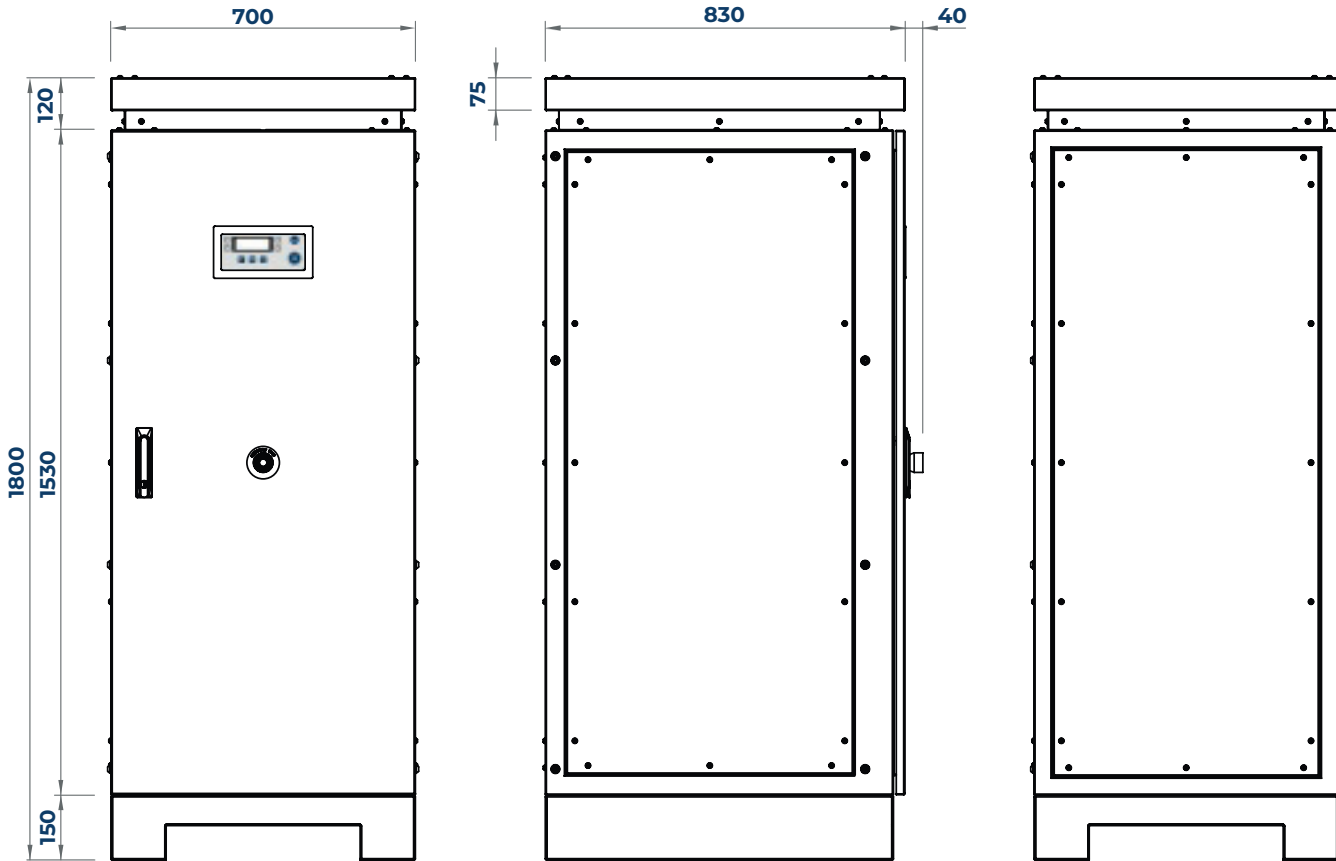
10-15kW - 50 Or 60Hz



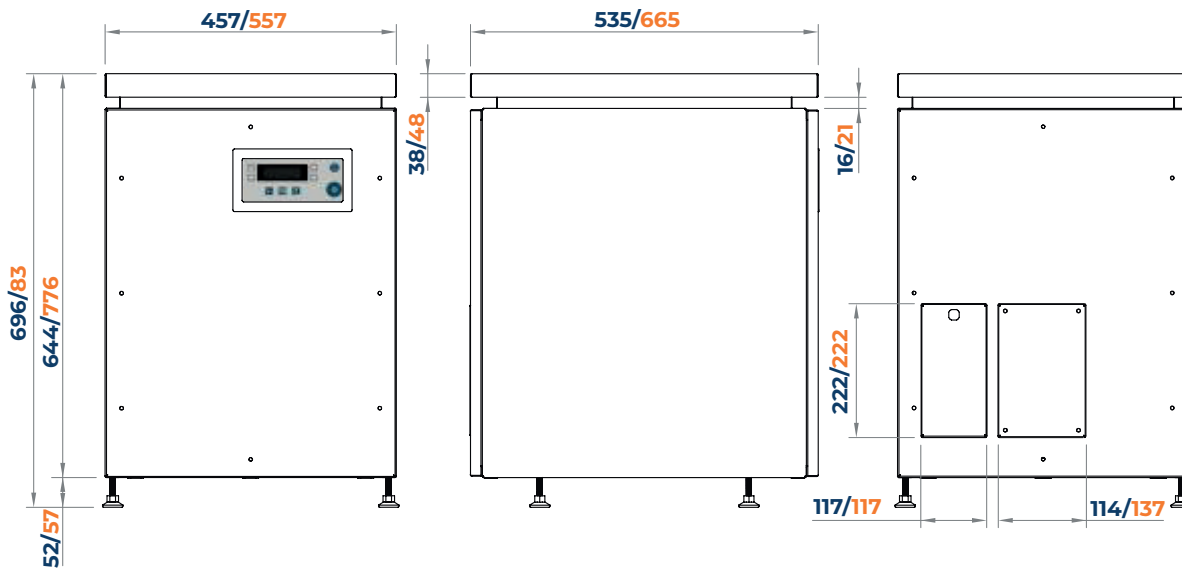
200-300 kVA 400Hz



30-80 kVA 400Hz



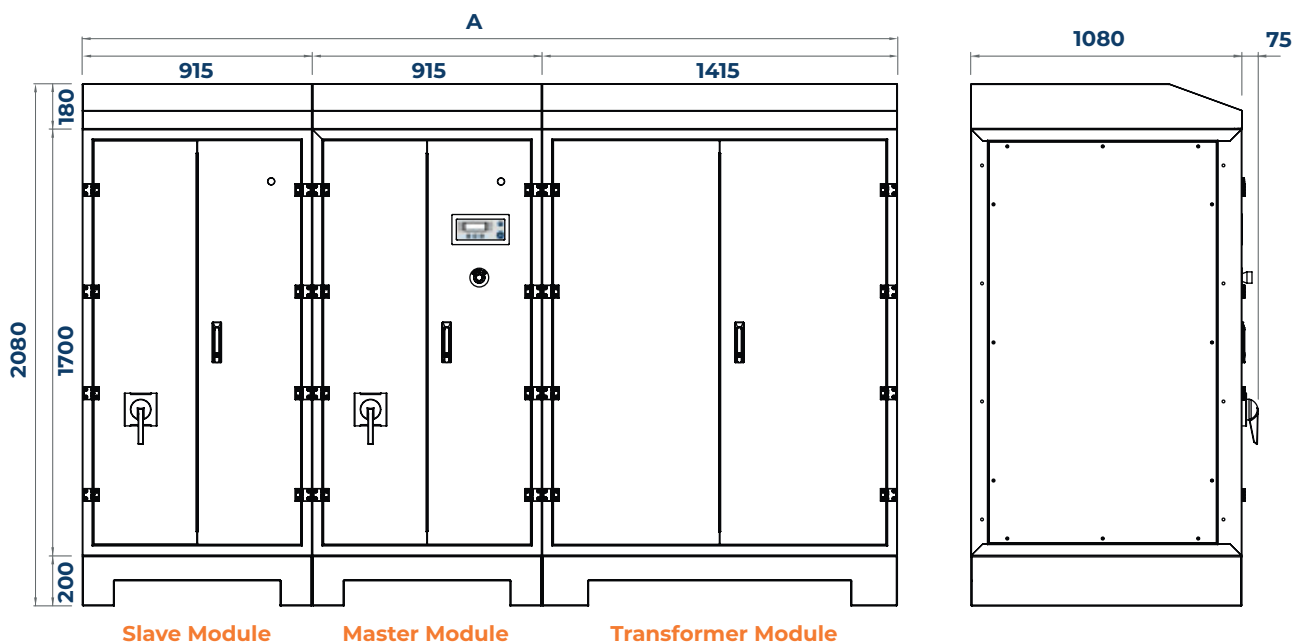
10-30 kVA 400Hz



Dimensions for 450 enclosure
• 10-15kVA (output 400Hz)

Dimensions for 500 enclosure
• 10-30kVA (output 50 or 60Hz)

Modular



• 500kVA | 600kVA - A= 2745mm (Transformer Module (same size as slave module) + Master Module + Slave Module)

• 800kVA | 900kVA - A= 3245mm (Transformer Module + Master Module + Slave Module)

• 1000kVA | 1200kVA - A= 2615mm (Transformer Module + Master Module + Slave Module (2X))

• 1600 kVA - A= 5075mm (Transformer Module + Master Module + Slave Module (3X))

• 2000 kVA - A= 5990mm (Transformer Module + Master Module + Slave Module (4X))

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