500kVA till 4000kVA Frequency Converter

- IGBT PWM Rectifier or 6 Puls or 12 Pulse or 3 Level Inverter Technology
- 500 Real Time Event Log with 180 Detailed Parameters “Excel Output”
- User Friendly LCD Screen with Log Details and Real Time Records
- True On Line-Double Conversion Technology (Class VFI-SS-111)
- Easy Give Service and Updates and 15 Years Life Time Design
- Newest Technology High Efficient %96 & Eco Mode %99
- %30 Small Dimensions Footprint & Easy Maintenance
- Input 0.99PF and Output = 0.8 or 0.9 or 1.0PF Possible
- Perfect Sinus Output & Precisely Electrical Protection
- Wide Input Voltage Range & Optional Dual Input
- Perfect Generator Compatibility & Auto Soft-start
- Wide Input Voltage Range & Optional Dula Input
- Industrial & Commercial & Marine Application
- Optional 50Hz / 60Hz / 400Hz Input & Output
- Optional Project & Client Oriented New Designs
- Optional Controllable Output Voltage from Screen 208V till 520V
- Optional SNMP & Dry Contact & Modbus & GSM & Network Manager
- Optional N+1 easy to build various redundancy till 8+1 & Load Sharing
- Optional Battery Connection Possibility & Optional Isolation Transformer
- Optional IP20 till IP65, Indoor or with Airconditioner & Cabinet or Container

On Board Marine

Harbor Power Supply

Industrial Zone

www.germarel.de - sales@germarel.de

Technical Advantages of FC-GER

The FC-GER Series An Advanced Converter Technology

FC-GER Series is a true Online Double Conversion, new generation fully digital controlled converter. It is designed with high efficiency and robust comply high availability power needs of a wide variety of critical applications and delivers advanced power solution with low cost of ownership.

High Performance Power Protection Designed for Maximum Efficiency and Flexibility

Equipped with its new IGBT rectifier or Pulse technology series keeps your critical loads protected while its space-saving compact design . and front access for maintenance successfully reduce mean time to repair (MTTR).
Thanks to the wide variety of accessories and options FC-GER Series presents maximum flexibility advantage to users and optimizes total cost of ownership.

DSP Power Factor Corrected IGBT Rectifier

IGBT based power factor correction technology provides Input Power Factor close to 1 (≥0.99) and keeps Input Current Total Harmonic Distortion (THDi) less than 3%, that helps to avoid the disturbance.

Low Input Current THD

(THDi) less than 3% avoids the disturbance to connected loads

Digital Control System

All of the control functions for FC Industrial Series Converter including power-on, start-up control, input stage power factor control, If needed battery charging and boosting control, output stage ac voltage regulation and shut-down control, can be realized by using a single DSP control board.

High Input Power Factor

0,99 Input power factor ensures clean and sinusoidal input current. The high input power leads to reduced electricity pay-out, minimizes cable, switchboard, fuse and generator requirements, thus reducing investment cost.

High Efficiency & Low Total Cost of Ownership

With its high efficiency up to 95% FC Series Converter consumes less energy to supply the loads. Thanks to this high efficiency rate, the percentage of energy that is produced as heat is reduced to a miminum. As a result of decreased heat emission users can reduce their electricity usage and air conditioning requirements.

Flexibility of The Converter

FC is compatible with wide range of application. Flexibility achieved through many choices, if needed battery, single or multi-unit configuration, accessories and options.

Isolation transformers to vary neutral connectivity in the event of separate power sources or for galvanic isolation between input and output

Customized dimensions if needed for your projects till IP66

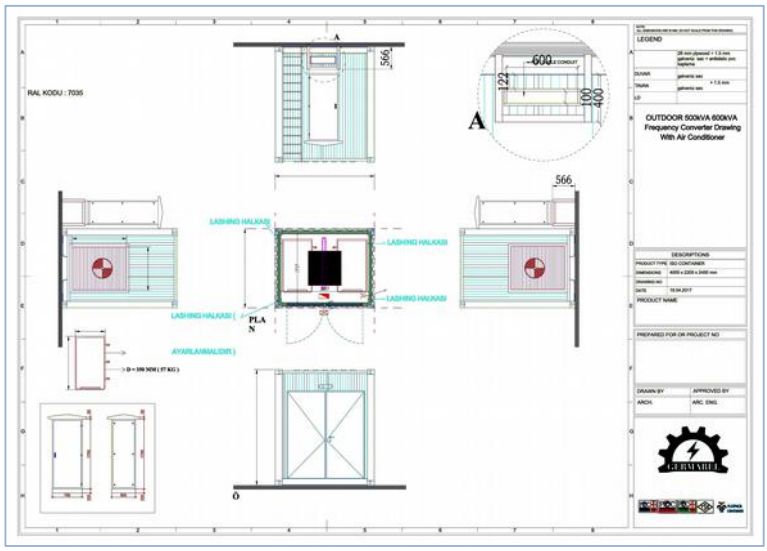
Technical Advantages of FC-GER

Auto Restart

When Converter will reach its end of discharge or with-out energy, So the converter will shut down.

The Converter will automatically restart and enable output power:

- After utility power is restored
- After the “Auto Start Delay Time” is expired (the default delay is 5 minutes) .

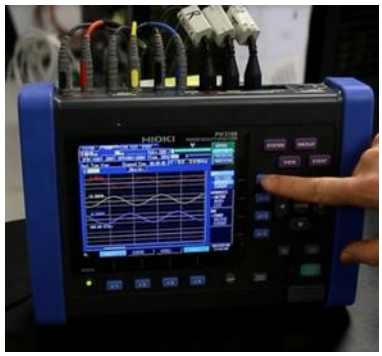


EPO(Emergency Power Off)

EPO function is designed to switch off the converter in emergency conditions (fire, flood, etc.). The system will turn off the rectifier, inverter and will stop powering the load immediately (including the inverter and busbar).

Reverse Energy for Regenerative Loads

The FC-Industrial Converter can be used with regenerative loads, such as synchronous motors. The regenerative loads pump the energy back to mains, traditional systems burn this feedback energy and this causes lower efficiency. FC-GER Series with IGBT rectifier are able to absorb intermittent load generated power. Additionally, this reverse power tolerance permits execution of important system operations like closed transition transfers of the Converter load directly to an engine generator Source if connected.



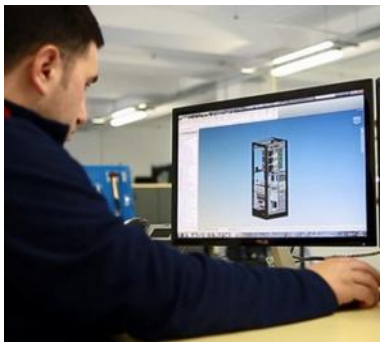
Advanced User Interface

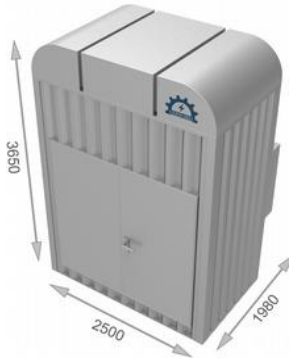
The Converter has Large and user-friendly 320x240 LCD display that provides operating information in four different languages. Thanks to this advanced LCD display all parameters of working device can be monitored and controlled. Converter Is capable of recording up to 500 events and 180 Parameters / event.

Optional Parallel Operation

Conv-Mak FC Industrial Series features easy and simple scalability and redundancy. It is ready to grow with your business demands. Different power rated units and any Number of converters can be connected in parallel. Power Increase.

The converter's can be connected in parallel or one solution waits and the othe one to increase total capacity of the system. If one of the devices goes out of order, the other machine will take over the load immediately or as optional as well the critical loads are transferred to loads with contro to other converters.





Optional Parallel Operation Features :

- Internal standard parallel microprocessor for all models.
- Up to 16 units parallel able as customized.
- Parallel connection with ring cable
- Auto-sensing disconnected parallel cable
- Equal current share with DSP control
- Optional power upgrade with 30milisecond interruption or without any interruption
- All parallel systems can be controlled from the front panel of one unit
- Full synchronization of parallel units
- Isolated parallel operation card
- The power increasing solution with transfer contactors