

50/60 Hz or 60/50 Hz Frequency converters – CF range

The CF range of converters ensures the frequency and voltage conversion for AC networks.

This new range of frequency converters, designed to work in severe environments, are the result of years of experience in designing on-board electronic systems.

Main applications:

- **Industrial version:** Supplies all types of electrical equipment, frequency tests, motors...
- **Marine version:** On-board network supply in 50 or 60Hz depending on shore supply.



Standard range:

- **CFMM – Input supply single phase 50/60 Hz – User output supply single phase 50/60 Hz**
 - Power range : 700 VA to 20 KVA
 - Input voltage : 230 VAC*
 - Output user voltage : 230 VAC*
- **CFTM – Input supply three phase 50/60 Hz - User output supply three phase 50/60Hz**
 - Power range : 6.5 à 100 KVA
 - Input voltage : 400 VAC*
 - Output user voltage : 230 VAC*
- **CFTT – Input supply three phase 50/60 Hz – User output supply three phase 50/60Hz**
 - Power range : 10 à 300 KVA
 - Input voltage : 400 VAC*
 - Output user voltage : 400 VAC + Neutral*

Advantages:

The technology used in CF converters has the following advantages:

Input power: upstream

- Large input voltage tolerance
- 50 or 60Hz networks accepted without switching
- High efficiency
- Galvanic Isolation (depending on model)
- In-rush current limited
- Functions with distorted networks

Output: downstream

- All voltages from 115 V to 440V single phase or three phase using a transformer or auto transformer
- Accepts unbalanced loads
- « Neutral » - choice
- Can be coupled with two input networks (option)
- Instant power $\geq 150\%$

General technical specifications

Input voltage:

- Single-phase 230 VCA* \pm 10%
- Three-phase 400VCA* \pm 20%
- Frequency: 47 Hz à 63 Hz

Output:

- Single phase : 230 VCA*
- Three phase : 400 VCA*
- Frequency : 50 or 60 Hz
- Static voltage regulation \pm 1%
- Frequency stability \pm 0.1 Hz
- Sine wave. Global level of harmonic distortion < 1% at nominal power and linear load
- Max. overload from 1,25 PN to 1.68 PN depending on model
- Power factor : 0,8
- Typical efficiency \geq 90%
- Power : 700 VA to 20 KVA single phase
10 KVA to 300 KVA three phase

Display:

- Alpha-numeric display and keypad for the following functions :
 - Operating conditions – alarms – on / off
 - Voltage display, current, frequency, power

Mechanical characteristics:

- Metal cabinet
- Shock absorbers/dampers - on option
- RAL 7016*
- IP20*
- Cables accessible on terminal blocks
- Dimensions and weight : please consult us
- Low noise level : < 62 dB

Technology:

- On line double conversion frequency converters

Climatic conditions:

- Ambient temperature (standard) : 0°C à 45°C
- Humidity : 0% to 95% no condensation
- Cooling : forced ventilation

Environmental conditions:

Designed to work in rugged environments (marine range)

- Circuit boards protected by water repellent varnish
- Transformer/choke tropicalisation
- Manufactured to withstand vibration
- Low susceptibility to local distortion (HF and VHF emitters ...)
- Special filters to attenuate conducted and radiated emissions (EMC)

Options:

- Nonstandard input /user voltages.
- Special cabinets
- Specific I.P.
- Ventilation using extraction ducts.
- Permanent insulation monitoring

Rules and standards:

- LV 2006/95/EC _2004/108/EC directive
- EMC IEC: EN 62040-2 & EN 62040-3 standards
- Security: IEC EN 62040-1.
- BV, Llyod's, DNV.... on request

* Other characteristics on request