CF CUBE4

Frequency converter from 7.5 to 80 kVA

CF CUBE4: Maximum energy efficiency in advanced electrical protection

The **CF CUBE4** series from Salicru is a range of frequency converters featuring three-level online technology and a four-core DSP control system, designed to deliver a stable, high-quality power supply while achieving significant energy and financial savings both within the installation itself and in operational costs.

Regarding the input supply, they stand out for their power factor (PF > 0.99) and very low distortion —THDi < 3%—, parameters that effectively reduce operating and infrastructure expenses and help improve overall power network quality.

As for output performance, they offer a power factor of (PF = 1), ensuring ideal electrical protection for modern IT systems, together with minimal harmonic distortion (7.5–20 kVA: ≤ 2% linear load / < 4.0% non-linear load; 30–80 kVA: ≤ 1% linear load / < 4.0% non-linear load), allowing any type of load —inductive, resistive, capacitive, or mixed— to be supplied with complete reliability.

At the same time, their efficiency of up to 96%(1) provides a substantial reduction in energy consumption and cooling requirements. To deliver a comprehensive solution, the **CF CUBE4** series offers excellent adaptability thanks to its wide range of communication options. Finally, their optimised weight and dimensions simplify installation and allow for significant space savings.

Applications: Designed to protect any type of environment

The high electrical performance, together with its notable adaptability (options, voltage and frequency configurations, communications, etc.), positions the **CF CUBE4** series as the ideal solution to ensure compatibility, protection, and operational continuity for equipment designed to operate at frequencies different from the local grid. This solution is suitable for environments requiring reliable and safe operation, such as imported industrial machinery, test benches and laboratories, marine and port facilities, airport applications, critical infrastructures, technological integration centres, or any installation that needs to operate reliably between 50- and 60-Hz systems.

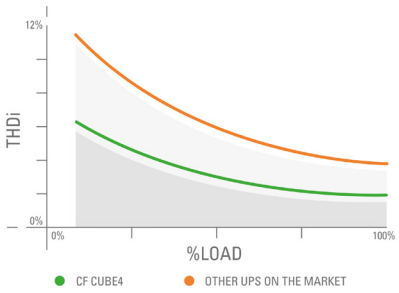
Performances

· On-line double-conversion technology with 3-level topology
· State-of-the-art 4-core DSP control
· Output power factor 1 (kVA = kW)
· Input power factor > 0,99
· Input current distortion (THDi) < 3%
· Optional Nimbus IoT connection for monitoring via the NIMBUS APP and web portal
· High energy efficiency, above 96% in On-line mode
· Unlimited parallel system [1] for redundancy or capacity
· Battery management and care with Batt-Watch, if required
· Option to install batteries
· Compatible with generator sets
· 5" touchscreen for all models
· USB, RS-232, RS-485 interfaces and relays
· Wide range of available options
· SLC Greenergy solution

(1) For models up to 20 kVA, maximum 4 units in parallel

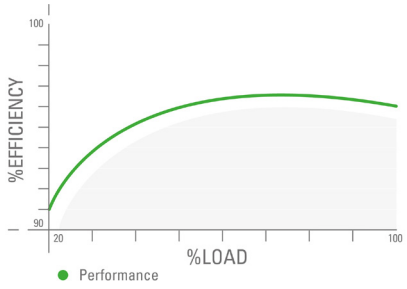
Low harmonic distortion

The **CF CUBE4** has inherited the exceptional performance of the **SLC CUBE4**, offering the same level of excellence and boasting the lowest THDi on the market. More harmonic distortion means increased current consumption and an even greater percentage of current loss in the conductors.



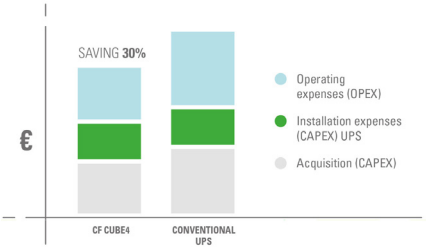
High efficiency

Another of the outstanding features of the **CF CUBE4** is its efficiency, which reaches truly exceptional levels from 50% load onwards. As energy efficiency is one of the most important factors in terms of caring for the environment, the **CF CUBE4** occupies a well-deserved position within our cross-cutting range of GREENERGY SOLUTIONS products.



Very low TCO

The total cost of ownership (TCO) for an **CF CUBE4** has been carefully calculated in order to obtain a very low investment ratio over the operational lifetime of the UPS, leading to a saving of 30%..

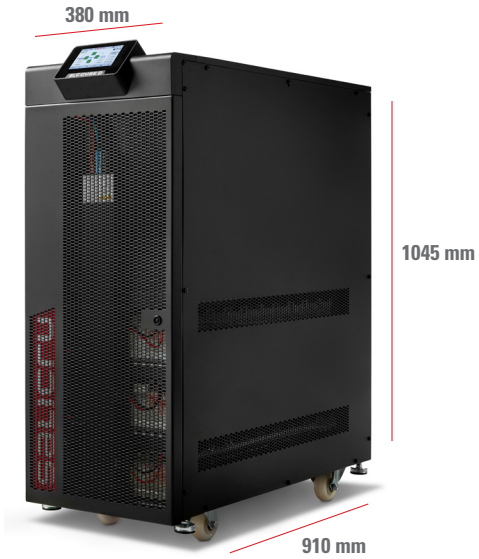


Range **CF CUBE4**

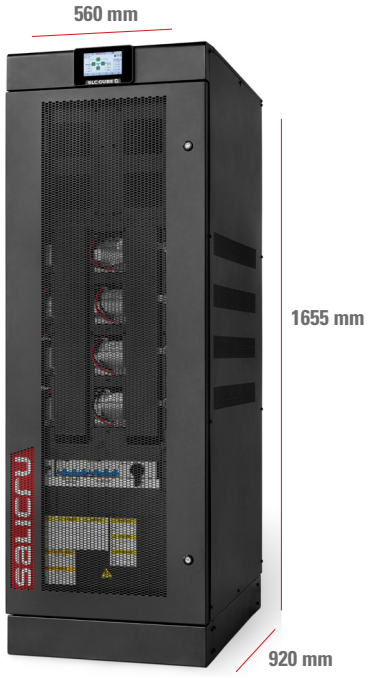
MODEL	CODE	POWER (VA / W)	DIMENSIONS (D × W × H mm)	WEIGHT (Kg)
CF-7,5-CUBE4 60/50HZ	6B3DB000004	7500 / 7500	689 × 250 × 827	48
CF-7,5-CUBE4 50/60HZ	6B3DB000005	7500 / 7500	689 × 250 × 827	48
CF-10-CUBE4 60/50HZ	6B3DB000002	10000 / 10000	689 × 250 × 827	50
CF-10-CUBE4 50/60HZ	6B3DB000006	10000 / 10000	689 × 250 × 827	50
CF-15-CUBE4 50/60HZ	6B3DB000007	15000 / 15000	689 × 250 × 827	55
CF-15-CUBE4 60/50HZ	6B3DB000008	15000 / 15000	689 × 250 × 827	55
CF-20-CUBE4 50/60HZ	6B3DB000003	20000 / 20000	689 × 250 × 827	60
CF-20-CUBE4 60/50HZ	6B3DB000009	20000 / 20000	689 × 250 × 827	60
CF-30-CUBE4 50/60HZ	6B3DB000010	30000 / 30000	910 × 380 × 1045	119
CF-30-CUBE4 60/50HZ	6B3DB000011	30000 / 30000	910 × 380 × 1045	119
CF-40-CUBE4 50/60HZ	6B3DB000012	40000 / 40000	910 × 380 × 1045	120
CF-40-CUBE4 60/50HZ	6B3DB000013	40000 / 40000	910 × 380 × 1045	120
CF-50-CUBE4 50/60HZ	6B3DB000014	50000 / 50000	920 × 560 × 1655	225
CF-50-CUBE4 60/50HZ	6B3DB000015	50000 / 50000	920 × 560 × 1655	225
CF-60-CUBE4 50/60HZ	6B3DB000016	60000 / 60000	920 × 560 × 1655	228
CF-60-CUBE4 60/50HZ	6B3DB000017	60000 / 60000	920 × 560 × 1655	228
CF-80-CUBE4 50/60HZ	6B3DB000018	80000 / 80000	920 × 560 × 1655	230
CF-80-CUBE4 60/50HZ	6B3DB000019	80000 / 80000	920 × 560 × 1655	230

Dimensions

CF-7,5÷20-CUBE4



CF-30÷40-CUBE4



CF-50÷80-CUBE4

Technical specifications

MODEL		CF CUBE4
TECNOLOGÍA		On-line, double conversion, HF, DSP control
INPUT	Rated voltage	Three-phase 3 × 380 / 3 × 400 / 3 × 415 V (3F + N)(1)
	Voltage range	7,5÷20 kVA: 110 ÷ 300 V (F-N) / 30÷80 kVA: 115 ÷ 265 V (F-N)(2)
	Rated frequency	50 / 60 Hz
	Total harmonic distortion (THDi)	7,5÷20 kVA: <4% / 30÷80 kVA: <3%
	Power factor	1 from 10% load
	Rectifier topology	Three-phase IGBT full wave, soft start, PFC, transformerless
OUTPUT	Rated voltage	Trifásica 3 x 380 / 3 x 400 / 3 x 415 V (3F + N)(1)
	Power factor	1
	Précision dynamique	±10%
	Static accuracy	7,5÷20 kVA: ±1% / 30÷80 kVA: ±0,5%
	Response time accuracy	20 ms for 0%÷100% load jumps and voltage drop up to 5%
	Total Harmonic Distortion (THDv)	7.5-20 kVA: ≤ 2% linear load / < 4.0% non-linear load according to EN62040-3 30-80 kVA: ≤ 1% linear load / < 4.0% non-linear load according to EN62040-3
	Frequency	50 / 60 Hz
	Total performance in On-line mode	>96%
	Admissible overloads	7,5 ÷ 20 kVA: 110% 60 min / 110~125% 10 min / 125~150% 60 s / >150% 1s 30 ÷ 80 kVA: 125% 10 min / 125~135% 5 min / 135~150% 60 s / >150% immediate
	Crest factor	3:1
BATTERY (Optional)	Battery type	Pb-Ca, VRLA, lead acid, gel, Ni-Cd, Li-Ion
	Charging voltage regulation	Batt-Watch
COMMUNICATION	Ports	7,5 ÷ 20 kVA: 1xRS232 + 1xUSB / 30 ÷ 80 kVA: 1xRS232/485 + 1xUSB
	Relay interface	7.5÷20 kVA: 6 relays / 30÷80 kVA: 4 relays (programmable)
	Intelligent slot	NIMBUS, SNMP, RS232, RS485, USB, AS400 or remote battery temperature(3)
	LCD display	5" colour touch screen
GENERALES	Operating temperature	0º C ÷ +40º C (4)
	Relative humidity	Up to 95%, non-condensing
	Maxium operating altitude	2.400 m.s.n.m. (5)
	Acoustic noise at 1 metre	7,5÷20 kVA: <59 dB / 30÷40 kVA: <54 dB / 60÷80 kVA: <61,5 dB
STANDARDS	Safety	IEC/EN 62040-1
	Electromagnetic compatibility (EMC)	IEC/EN 62040-2 C3
	Operation	VFI-SS-11 (EN-62040-3)
	Corporate cerification	ISO 9001, ISO 14001, ISO 45001

(1) Options 1/1 with power degradation and 3/1 (consult)
(2) Power degradation for voltages below 176V
(3) For models 7.5-20 kVA = 1 Slot / For models 30-80 kVA = 2 Slots
(4) Up to 55°C with power degradation
(5) Power reduction for higher altitudes, up to a maximum of 5,000 m.a.s.l.