



EASY HOT SWAP DESIGN

The innovative Design Hot Swap and the complete independence of each module allow a simple and quick maintenance and possible expansions of power and autonomy.

FLEXIBLE MODULAR DESIGN

Scalable architecture allow to easily increase power (from 20KVA to 300KVA), redundancy level (N+1 or N+X) and Back-Up time by simply additional UPS and Battery modules. All this allows to optimize the investment.

NO-DOWNTIME SYSTEM

The Redundance configuration and Hot Swap Design ensure always full power also in case of failure and replacement of module or scheduled maintenance. All this features guarantee low MTTR (Mean Time To Repair).

N+1 OR N+X REDUNDANCE PARALLELABLE SYSTEM

The **redundant modular design** of the EVO DSP PLUS MODULAR HE UPS allows getting high levels of reliability without the need to buy other 2 or more products for the redundancy, as it is the case with a standard UPS. This also results in significant savings.

The EVO DSP PLUS MODULAR HE UPS also makes it possible to configure the level of redundancy desired via a front interface, a 10" touch LCD display, so that the protection degree necessary for the device the UPS protects is always attained. This **redundant modular design** helps decide whether one (N+1) or several (N+X) Power Modules need to be set up as a reserve for the main modules.

EASE OF INSTALLATION AND MAINTENANCE

- 1 Built-in maintenance bypass assures continuous power to critical loads during UPS maintenance.
- 2 Easy installation and maintenance, panel control and connectors with frontal accessibility.



FULL ADVANCED COMMUNICATION SYSTEM

All the cabinets for the EVO DSP PLUS MODULAR HE UPS come equipped with a full communication interface system: USB, RS232, EPO (emergency power off) and a smart slot to integrate optional interface boards such as RS485, SNMP or Dry Contact.

An Extra Communication Slot may be added with programmable input/output contacts, connections for temperature detecting sensors for any external Battery Cabinets, and another smart slot to install any additional RS485, SNMP or Dry Contact interface boards.

FLEXIBLE BACK-UP TIME CONFIGURATION

Battery box with scalable architecture and Hot Swap design to increase Back-Up time and for easy battery maintenance.



Battery module





- 1 10" touch LCD display
- 2 Input/Output Switches and Maintenance Bypass
- 3 STS Module and Communication Ports
- 4 Power Module
- 5 Battery Module

POWER
FACTOR

1



Display touch LCD 10"

REDUNDANT
POWER SUPPLY IN STS
NO RISK
OF SHUTDOWN**Main Specifications**

- For Data Centers, Local Area Network (LAN), Industrial equipment, Electromedical equipment
- 10" touch LCD display
- Compatible with Generators
- Power Factor 1
- Frequency converter
- Shared Battery Modules
- Battery module up to 120 KVa contained in the same cabinet
- High MTBF and low MTTR
- UPS Management Software compatible with Windows, Mac OS X, Unix, Linux, etc.

HIGH
EFFICIENCY
96,5%**Power Module**

UPS 20KVA Module



UPS 30KVA Module

	MODULE for UPS EVO DSP PLUS MODULAR HE	
Code	FGCEVDPM20TT	FGCEVDPM30TT
Nominal power	20KVA	30KVA
Active power	20KW	30KW
Dimension WxHxD	44x13,2x65 cm (3U)	
Input		
Nominal voltage	360Vac/380Vac/400Vac/415Vac (3Ph+N)	
Output		
Nominal voltage	360Vac/380Vac/400Vac/415Vac (3Ph+N)	
Battery		
Nominal voltage	+/- 240Vdc (12Vdc x 40 pz)	
Maximum Charging Current	6A	8A

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Module 20/30 KW Cabinet



	UPS EVO DSP PLUS MODULAR HE CABINET (20/30 KVA Module)					
Code	FGCEVDPM30B90K	FGCEVDPM30B120K	FGCEVDPM30B180K	FGCEVDPM42B120K	FGCEVDPM42B210K	FGCEVDPM42B300K
Height	30U	30U	30U	42U	42U	42U
STS Power	90KW	120KW	180KW	120KW	210KW	300KW
Type of installable UPS Module	30KW or 20KW					
Max. number of installable UPS Module	3	4	6	4	8	10
Battery Modules layers (4 Battery Modules each layer)	3 (12 Modules)	-	-	5 (20 Modules)	-	-
Max. capacity of installing 20KVA Module	20-60KW	20-80KW	20-120KW	20-80KW	20-160KW	20-200KW
Max. capacity of installing 30KVA Module	30-90KW	30-120KW	30-180KW	30-120KW	30-210KW (if 8 pcs are installed, 1 is ridondant)	30-300KW
Power factor	1					
Technology	On-Line Double Conversion transformerless (VFI-SS-111)					
Dimension (UPS) WxHxD	60x147,5x110			60x201x110		
Weight	260Kg	200Kg	230Kg	274Kg	273Kg	275Kg
Input						
Number of phases	3Ph+N					
Nominal power	380 / 400 / 415 Vac (220 / 230 / 240 Vac Ph-N) (selectable)					
Input voltage range	305V - 478V (176V - 276V Ph-N) at 100% load - 208V - 478V (120V - 276V Ph-N) at 70% load					
Nominal frequency	50/60 Hz (automatic selection)					
Input frequency range	40Hz - 70Hz					
Frequency Sync range	± 1Hz, ± 2Hz, ± 4Hz (selectable)					
Input current harmonic distortion (THDi)	< 3% at 100% load					
Input power factor	≥ 0.99 at 100% load					
Output						
Number of phases	3Ph+N					
Nominal voltage	380 / 400 / 415 Vac (220 / 230 / 240 Vac F-N) (selectable)					
Voltage Regulation (On-Line and Battery mode)	≤ 1% Typical (linear load); ≤ 2% Typical (distorting load)					
Inverter waveform	Sinewave					
Nominal frequency	50/60 Hz (selectable)					
Frequency stability	50 Hz ± 0.1% - 60 Hz ± 0.1%					
Voltage Harmonic Distortion (THD)	≤ 2% (100% linear load); ≤ 4% (distorting load)					
Crest factor	3:1 max					
Overload capability (On-line mode)	105 ~110% for 1 hour, 111~125% for 10 minutes, 126~150% for 1 minute, >150% for 200ms					
Overload capability (Battery mode)	105 ~110% for 1 hour, 111~125% for 10 minutes, 126~150% for 1 minute, >150% for 200ms					
Transfer time	0 ms (Line <--> Batteria) 0 ms (Batteria <--> Bypass)					
Efficiency	96,5% calculated in double conversion mode at 100% load according to standard 62040-3					
Bypass input						
Number of phases	3Ph+N					
Nominal power	380 / 400 / 415 Vac (220 / 230 / 240 Vac Ph-N) (selectable)					
Maximum voltage threshold	+10% / +15% / +20%					
Manimum voltage threshold	-10% / -20% / -30%					
Nominal frequency	50/60 Hz (automatic selection)					
Frequency Sync range	± 1Hz, ± 2Hz, ± 4Hz (selectable)					
Overload capability	105 ~110% for 1 hour, 111~125% for 10 minutes, 126~150% for 1 minute, >150% for 200ms					
Transfer time	≤ 20ms (Bypass <--> Inverter)					
Batteries						
Type	Lead acid, sealed, maintenance free					
Elements number	40 elements					
Nominal battery voltage	± 240 Vdc					
Charging time	6-8 hours (typical)					
Maximum charging current	8A each 30KVA module; 6A each 20KVA module					
Environmental specification						
Working temperature	From 0 to 55°C (recommended from 20 to 25 °C, for longer battery life)					
Humidity	< 95% without condensation					
Maximum altitude	3000 m					
IP protection	IP20					
Noise	< 73 dBA (to 1 meter)					
Certifications	CE (Standards: Low Voltage Directive IEC EN 62040-1; EMC Directive IEC EN 62040-2; classification IEC EN 62040-3)					
Interfaces						
Communication ports	1 RS232 port and 1 USB port					
Software	Tecnomanager UPS Management Software, compatible con Windows, Linux, Unix, etc.					
SNMP Interface	Optional					
EPO (Emergency Power OFF)	Included					
Dry Contact Interface	Optional					
Parallel mode	Optional (2 UPS)					

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Module 20 KW Cabinet



	CABINET UPS EVO DSP PLUS MODULAR HE (Modulo 20 KVA)		
	FGCEVDPM30A80K	FGCEVDPM30A120K	FGCEVDPM42A200K
Code	30U	30U	42U
Height	80KW	120KW	200KW
STS Power		20KW	
Type of installable UPS Module			
Max. number of installable UPS Module	4	6	10
Battery Modules layers (4 Battery Modules each layer)		-	
Max. capacity of installing 20KVA Module	20-80KW	20-120KW	20-200KW
Power factor		1	
Technology	On-Line Double Conversion transformerless (VFI-SS-111)		
Dimension (UPS) WxHxD		60x147,5x110	
Weight	197Kg	230,5Kg	270Kg
Input			
Number of phases	3Ph+N		
Nominal power	380 / 400 / 415 Vac (220 / 230 / 240 Vac Ph-N) (selectable)		
Input voltage range	305V - 478V (176V - 276V Ph-N) at 100% load - 208V - 478V (120V - 276V Ph-N) at 70% load		
Nominal frequency	50/60 Hz (automatic selection)		
Input frequency range	40Hz - 70Hz		
Frequency Sync range	± 1Hz, ± 2Hz, ± 4Hz (selectable)		
Input current harmonic distortion (THDi)	< 3% at 100% load		
Input power factor	≥ 0.99 at 100% load		
Output			
Number of phases	3Ph+N		
Nominal voltage	380 / 400 / 415 Vac (220 / 230 / 240 Vac Ph-N) (selectable)		
Voltage Regulation (On-Line and Battery mode)	≤ 1% Typical (linear load); ≤ 2% Tipico (distorting load))		
Inverter waveform	Sinewave		
Nominal frequency	50/60 Hz (selectable)		
Frequency stability	50 Hz ± 0.1% - 60 Hz ± 0.1%		
Voltage Harmonic Distortion (THD)	≤ 2% (100% linear load); ≤ 4% (100% distorting load)		
Crest factor	3:1 max		
Overload capability (On-line mode)	105 ~110% for 1 hour 111~125% for 10 minutes, 126~150% for 1 minute, >150% for 200ms		
Overload capability (Battery mode)	105 ~110% for 1 hour, 111~125% for 10 minutes, 126~150% for 1 minute, >150% for 200ms		
Transfer time	0 ms (Line <--> Battery) 0 ms (Battery <--> Bypass)		
Efficiency	96,5% calculated in double conversion mode at 100% load according to standard 62040-3		
Bypass input			
Number of phases	3Ph+N		
Nominal power	380 / 400 / 415 Vac (220 / 230 / 240 Vac Ph-N) (selectable)		
Maximum voltage threshold	+10% / +15% / +20%		
Minimum voltage threshold	-10% / -20% / -30%		
Nominal frequency	50/60 Hz (automatic selection)		
Frequency Sync range	± 1Hz, ± 2Hz, ± 4Hz (selectable)		
Overload capability	105 ~110% for 1 hour, 111~125% for 10 minutes, 126~150% for 1 minute, >150% for 200ms		
Transfer time	≤ 20ms (Bypass <--> Inverter)		
Batteries			
Type	Lead acid, sealed, maintenance free		
Elements number	40 elements		
Nominal battery voltage	± 240 Vdc		
Charging time	6-8 hours (typical)		
Maximum charging current	6A each 20KVA module		
Environmental specification			
Working temperature	From 0 to 55°C (recommended from 20 to 25 °C, for longer battery life)		
Humidity	< 95% without condensation		
Maximum altitude	3000 m		
IP protection	IP20		
Noise	< 73 dBA (to 1 meter)		
Certifications	CE (Standards: Low Voltage Directive IEC EN 62040-1; EMC Directive IEC EN 62040-2; classification IEC EN 62040-3)		
Interfaces			
Communication ports	1 RS232 port and 1 USB port		
Software	Tecnomanager UPS Management Software, compatible con Windows, Linux, Unix, etc.		
SNMP Interface	Optional		
EPO (Emergency Power OFF)	Included		
Dry Contact Interface	Optional		
Parallel mode	Optional (2 UPS)		

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Battery Cabinet



Code	FBBEVDPM30U480A	FBBEVDPM42U480A	FBBEVDPM42U480B
Height	30U	42U	42U
Max. number of installable Battery Module	28 (to order separately)	40 (to order separately)	-
Battery type and number	-	-	40 x 12V 100Ah (to order separately)
Dimensions WxHxD	60x147,5x110 cm	60x201x110 cm	64,7x201x110 cm
Weight	135 Kg (without battery module)	200 Kg (without battery module)	221 Kg (without battery)

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Battery module



Battery module

Code	FBBEVDPM120/07	FBBEVDPM120/09	FBBEVDPM120/11
Battery number		10 pz	
Battery type	12V 7,2Ah	12V 9Ah	12V 11Ah
Dimensions WxHxD		10,7x15,5x73,5 cm	
Weight	22 Kg	26 Kg	31 Kg

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