



Use

Local Area Network (LAN), Data Centers

Protection

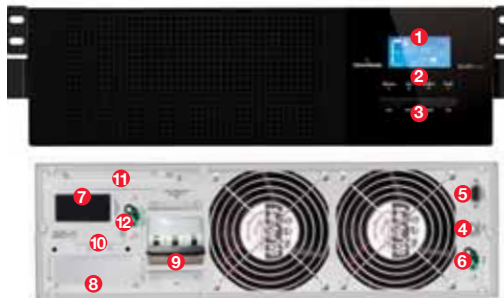
- Blackout
- Dynamic Undervoltage
- Dynamic Overvoltage
- Undervoltage
- Overvoltage
- Lightning (UPS + surge discharger upstream)
- Voltage Surge
- Frequency Variation
- Voltage Distortion
- Voltage Harmonic

Main specifications

- Multifunctional LCD Display
- On-Line Double Conversion Technology without transformer (VFI-SS-111)
- Rectifier realized by IGBT technology
- Active PFC Circuit (0.99)
- Wide input voltage tolerance
- Compatible with Generators
- EPO (Emergency Power Off)
- Output voltage and frequency can be regulated from the front panel
- Battery charging system controlled by microprocessor
- Static Bypass
- RS232 and USB communication port
- Intelligent slot for SNMP or Dry Contact card
- Expandable up to 3 units in parallel
- High efficiency and low operating cost
- UPS Management Software TecnoManager compatible with Windows, Mac OS X (up to version 10.8), Unix, Linux, ecc



Details



- 1 - LCD Display
- 2 - LED status indicators
- 3 - Multifunction button
- 4 - USB port
- 5 - RS232 port
- 6 - EPO connector
- 7 - Slot for SNMP or Dry Contact
- 8 - Input/output Terminal Box
- 9 - Mains switch
- 10 - Battery Box connector
- 11 - Parallel interface (optional)
- 12 - External Bypass connector

UPS EVO DSP TM 12.0 HE

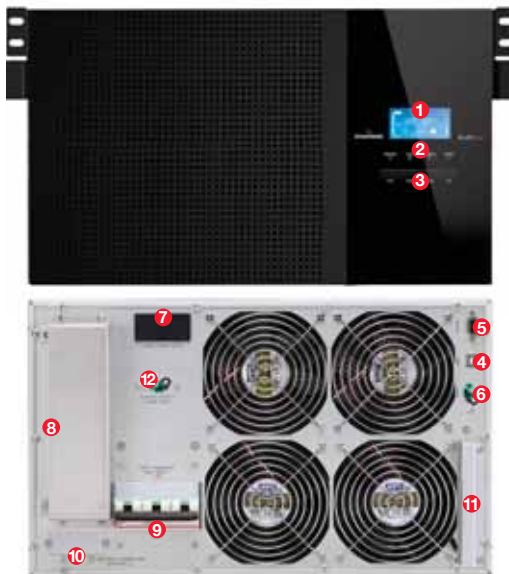
HE UPS high efficiency, calculated mode double conversion 100% of load, according to standard 62040-3: 2011

DSP

The UPS EVO DSP are controlled by Digital Signal Processor (DSP) which optimizes the machine operation in any conditions permitting a complete and easy programming.

ECO POWER SYSTEM

The UPS range EVO DSP is designed in accordance with the highest environment protection standards. The high efficiency and low harmonic inputs guarantee the uppermost respect for the environment.



UPS EVO DSP TM 18.0-24.0 HE
UPS EVO DSP TT 12.0-18.0-24.0 HE



Multifunction LCD display



UPS EVO DSP TM-TT RM HE

12-18-24

ON LINE TM-TT

Specifications

UPS Model	EVO DSP TM 12.0 RACK MOUNT HE	EVO DSP TM 18.0 RACK MOUNT HE	EVO DSP TM 24.0 RACK MOUNT HE	EVO DSP TT 12.0 RACK MOUNT HE	EVO DSP TT 18.0 RACK MOUNT HE	EVO DSP TT 24.0 RACK MOUNT HE
Code	FGCEVD12TMRM/00	FGCEVD18TMRM/00	FGCEVD24TMRM/00	FGCEVD12TTRM/00	FGCEVD18TTRM/00	FGCEVD24TTRM/00
Nominal power	12 KVA	18 KVA	24 KVA	12 KVA	18 KVA	24 KVA
Active power	9,6 KW	14,4 KW	19,2 KW	9,6 KW	14,4 KW	19,2 KW
Power factor	0,8					
Technology	On-Line Double Conversion transformerless (VFI-SS-111)					
Cooling	Fan cooling					
Audible noise	< 48 dBA to 1 m					
Dimension (UPS) WxHxD	43,8x13,3x66,8 cm (3U)			43,8x26,6x66,8 cm (6U)		
Dimension (with packing) WxHxD	59x26x87,8 cm			59x39,3x87,8 cm		
Weight	22 Kg	45 Kg	47 Kg	42 Kg	46 Kg	48 Kg
Equipped with	1 serial cable, Tecnomanager software and 2 metal handle for 19" Rack cabinet mounting					
Input						
Number of phases	3Ph+N					
Nominal voltage	360Vac/380Vac/400Vac/415Vac					
Input voltage range (Ph-N)	176Vac-276Vac from 50% to 100% load, 110Vac-300Vac from to 50% load					
Nominal frequency	50/60 Hz (selectable)					
Input frequency range On-Line mode	±7%					
Input power factor	0,99					
Output						
Number of phases	1Ph+N			3Ph+N		
Nominal voltage	208Vac/220Vac/230Vac/240Vac			360Vac/380Vac/400Vac/415Vac		
Nominal voltage (Ph-N)	208Vac/220Vac/230Vac/240Vac			208Vac/220Vac/230Vac/240Vac		
Voltage Regulation at %100	±1%					
linear load (On-Line and Battery mode)	±1%					
Voltage THD	<2% (linear load), <5% (non-linear load)					
Crest factor	3:1					
Frequency	50/60 Hz (selectable)					
Frequency stability	±0,1 Hz					
Inverter waveform	Sinewave					
Overload capability (Line mode)	110% for 10 minutes, 130% for 1 minute, >130% for 1 second					
Overload capability (Battery mode)	110% for 30 seconds, 130% for 10 seconds, >130% for 1 second					
Efficiency	94%, calculated in double conversion mode at 100% load according to standard 62040-3: 2011					
Transfer time	0 ms (On-Line)					
Output connections	Terminal block					
Bypass						
Number of phases	1Ph+N			3Ph+N		
Nominal voltage	208Vac/220Vac/230Vac/240Vac			360Vac/380Vac/400Vac/415Vac		
Voltage range (Ph-N)	208Vac/220Vac/230Vac/240Vac			208Vac/220Vac/230Vac/240Vac		
Battery (fitted inside the external Battery Box)						
Number batteries minimum necessary for the operation	20 (inside the external Battery Box)	20+20 (inside two external Battery Box)		20 (inside the external Battery Box)	20+20 (inside two external Battery Box)	
Battery charge time (typical)	6-8 hours					
Nominal voltage	240Vdc					
Extended autonomy	External Battery Box (optional)					
Interfacing						
Interface (communication port)	RS232 and USB					
EPO	Yes					
Dry contact interface	Yes (optional)					
Software	TecnoManager, downloadable free from www.tecnoware.com (compatible with WINDOWS, UNIX, LINUX, Mac OS X up to version 10.8 compatible, ecc.)					
SNMP interface	SNMP internal (compatible with WINDOWS, UNIX, LINUX, ecc.) - optional					
External Bypass interface	Yes					
Parallel configuration						
Parallel interface	Yes (optional)					
Redundant parallel system	Up to 3 units					
Environmental specification						
Storage temperature	From -15 to 40 °C (for UPS with battery inside, see "Storage of batteries in UPS and Battery Box" graphic)					
Working temperature	From 0 to 40 °C (recommended from 20 to 25 °C, for longer battery life see "Battery life in service" graphic)					
Humidity	< 95% without condensation					
Maximum altitude	3000 m					
IP protection	IP20					
Certifications	CE (standards: Low Voltage Directive IEC EN 62040-1; EMC Directive IEC EN 62040-2; classification IEC EN 62040-3)					
Warranty						
Standard	12 months electronic parts - After registration on www.tecnoware.com					
Extensions	Optional					
Customized contracts	Optional					

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Accessories

Model	Code
Dry Contact for Evo Dsp MM	FGCEVODSDRY3
SNMP for Ups Evo Dsp MM	FGCNETAG7
Kit for Rack UPS installation	FGCKITEVORT
Parallel Kit for EVO DSP TM 12KVA Rack Mount	FGCKITPAREVDR1
Parallel Kit for EVO DSP TM 18KVA Rack Mount	FGCKITPAREVDR2
Parallel Kit for EVO DSP TM 24KVA Rack Mount	FGCKITPAREVDR3
Parallel Kit for EVO DSP TT 12KVA Rack Mount	FGCKITPAREVDR4
Parallel Kit for EVO DSP TT 18KVA Rack Mount	FGCKITPAREVDR5
Parallel Kit for EVO DSP TT 24KVA Rack Mount	FGCKITPAREVDR6
External Bypass for UPS Three Phase-Single Phase 12-24KVA Rack Mount	FGCBYP24TMRM
External Bypass for UPS Three Phase-Single Phase 12-24KVA Rack Mount	FGCBYP24TTRM



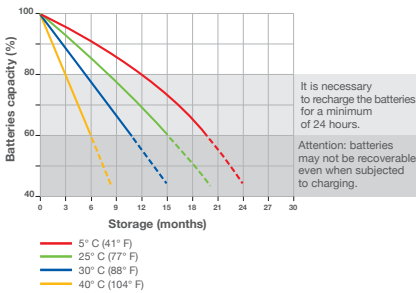
UPS EVO DSP TM-TT RM BATTERY BOX

Main specifications

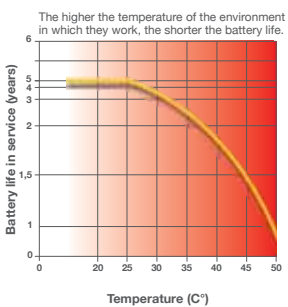
- Internal battery charger on every unit
- Units can be expanded infinitely
- Batteries with thermal circuit protection
- Easy connection to UPS
- Hot Swap batteries
- Rack format 19", height 3U
- Easy maintenance
- Packaging containing separate Battery Box and Battery Pack



Storage of batteries in UPS and Battery Boxes



Battery life in service



Details



- 1 - Thermal protection for battery charger circuit
- 2 - Power socket for the battery charger circuit
- 3 - Thermal switch for battery circuit
- 4 - Connector for the UPS Battery Box connection
- 5 - Extra Battery Box connector



Hot Swap batteries



UPS EVO DSP TM-TT RM

BATTERY BOX

ON LINE TM-TT

Easy installation



The Battery Box and Battery Pack are supplied separately in the packaging for an easy installation
So the total weight is divided into several parts, making it easier to install.



A single operator can easily install the Battery Box inside the UPS and then the battery pack.

Specifications

Model	BATTERY BOX FOR EVO DSP TM-TT 12.0-18.0-24.0 RM		
	FBBEVDR240/07	FBBEVDR240/09	FBBEVDR240/11
Code	FBBEVDR240/07	FBBEVDR240/09	FBBEVDR240/11
Dimension (Box) WxHxD	43,8 x 13,3 x 66,8 cm (3U)		
Dimension (with packing) WxHxD	59 x 26 x 87,5 cm		
Weight	57 Kg	61 Kg	65 Kg
Equipped with	Battery charger power cable, battery cable to connect UPS to Battery Box, 2 metal handle for 19" Rack mounting		
Battery	Lead acid, sealed, maintenance free		
Type	Lead acid, sealed, maintenance free		
Batteries number	20		
Nominal battery voltage	240Vdc		
Battery specification	12Vdc - 7,2Ah	12Vdc - 9Ah	12Vdc - 11Ah
Internal battery charger			
Nominal input voltage	230Vac		
Nominal input frequency	50/60Hz		
Nominal voltage	274Vdc		
Max charging current	0,7A	0,9A	1,1A
Protection	Thermal fuse		
Battery charge input	Magnetothermic switch		
Battery circuit	Magnetothermic switch		
Environmental specification			
Storage temperature	From -15 to 40 °C (for Battery Box with battery inside, see "Storage of batteries in UPS and Battery Box" graphic)		
Working temperature	From 0 to 40 °C (reccommended from 20 to 25 °C, for a correct battery use see "Battery life in service" graphic)		
Humidity	< 95% without condensation		
Maximum altitude	3000 m		
IP protection	IP20		
Certifications	CE		
Warranty			
Standard	12 months electronic parts and 12 months batteries - After registration on www.tecnoware.com		

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