# UPS EVO DSP PLUS MM
## 1.0-1.5-3.0-4.5

## Use

For Local Area Network (LAN),
Electromedical equipment,
Industrial processes, Virtual server,
Pellet stove, Home heating system

## Protection

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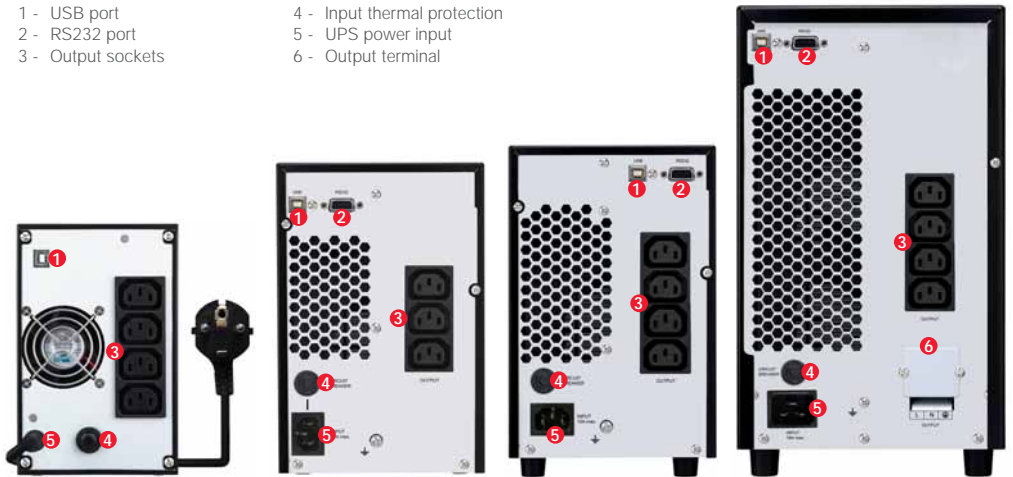- Voltage Distortion
- Voltage Harmonic

## Main specifications

- 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
- Output voltage and frequency can be regulated from the front panel
- Battery charging system controlled by microprocessor
- Static Bypass
- RS232 (only for Evo Dsp Plus MM 1.5, 3.0 e 4.5) and USB communication port
- UPS Management Software TecnoManager compatible with Windows, Mac OS X (up to version 10.8), Unix, Linux, ecc
- High efficiency and low operating cost
- Easy installation and maintenance

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

**DSP**

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



**HE** HIGH EFFICIENCY

**INDUSTRY 4.0 READY**

Alta Qualità Italiana

**TECNOManager** UPS Management Software

REFURBISHED COMPONENTS

RoHS COMPLIANT

CE

## Details

1 - USB port
2 - RS232 port
3 - Output sockets
4 - Input thermal protection
5 - UPS power input
6 - Output terminal



UPS Evo Dsp Plus MM 1.0       UPS Evo Dsp Plus MM 1.5     UPS Evo Dsp Plus MM 3.0       UPS Evo Dsp Plus MM 4.5

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## Specifications

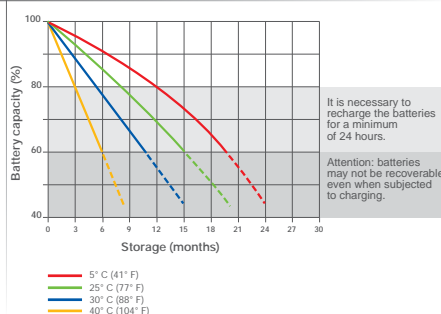| Modello UPS | EVO DSP PLUS MM 1.0 | EVO DSP PLUS MM 1.5 | EVO DSP PLUS MM 3.0 | EVO DSP PLUS MM 4.5 |
|---|---|---|---|---|
| Code | FGCEVDP1000MM | FGCEVDP1500MM | FGCEVDP3000MM | FGCEVDP4500MM |
| Nominal Power | 1.000 VA | 1.500 VA | 3.000 VA | 4.500 VA |
| Active power | 700 W | 1.050W | 2.100 W | 3.150 W |
| Power factor | 0,7 | | | |
| Technology | On-Line Double Conversion transformerless (VFI-SS-111) | | | |
| Cooling | Fan cooling | | | |
| Audible noise | < 45 dBA at 1 m | | | |
| Dimension (UPS) WxHxD | 10x14,5x30 cm | 14,5x22x28,2 cm | 14,5x22x39,7 cm | 19x31,8x42,1 cm |
| Dimension (with packing) WxHxD | 18,5x25,5x38,8 cm | 23x33x37 cm | 23x33x48 cm | 33x46x56 cm |
| Weight | 5 Kg | 10 Kg | 17 Kg | 27 Kg |
| Equipped with | 1 fixed power cable with Schuko plug 2 output cables (IEC type) | 1 power cable with Schuko plug 2 output cables (IEC type) | | |
| **Input** | | | | |
| Number of phases | 1Ph+N | | | |
| Nominal voltage | 208Vac/220Vac/230Vac/240Vac | | | |
| Input voltage range | 160Vac-300Vac from 50% to 100% load, 110Vac-300Vac up 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 | | | |
| Nominal voltage | 208Vac/220Vac/230Vac/240Vac | | | |
| Static voltage Regulation at %100 linear load (On-Line and battery mode) | ±2% | | | |
| Voltage THD at rated linear load | <3% (linear load), <6% (non-linear load) | | | |
| Crest factor | 3:1 | | | |
| Frequency | 50/60 Hz (selectable) | | | |
| Free running frequency | ±0,2 Hz | | | |
| Inverter waveform | Sinewave | | | |
| Overload capability | 110% only audible warning, 110-130% for 30 sec, >130% for 100 ms | | | |
| Efficiency | 94%, calculated in double conversion mode to 100% load according to standard 62040-3: 2011 | | | |
| Transfer time | 0 ms (On-Line) | | | |
| Outputs | 4 (IEC 320 C13 type) | 3 (IEC 320 C13 type) | 4 (IEC 320 C13 type) | 4 (IEC 320 C13 type) + Output terminal |
| **Bypass** | | | | |
| Number of phases | 1Ph+N | | | |
| Nominal voltage | 208Vac/220Vac/230Vac/240Vac | | | |
| Voltage range | Low threshold 170Vac-220Vac (selectable) - High threshold 230Vac-264Vac (selectable) | | | |
| **Battery** | | | | |
| Type | Lead acid, sealed, maintenance free | | | |
| Batteries number | 1 (internal) | 2 (internal) | 4 (internal) | 6 (internal) |
| Battery charge time (typical) | 6-8 hours | | | |
| Nominal battery voltage | 12Vdc | 24Vdc | 48Vdc | 72Vdc |
| Battery specification | 12Vdc - 7,2Ah | 12Vdc - 9Ah | | |
| Backup time (Typical) | 10 min | | | |
| **Interfacing** | | | | |
| Interface (communication port) | USB | RS232 and USB | | |
| 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 external module (compatible with WINDOWS, UNIX, LINUX, ecc.) - optional | | |
| **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 (recommended 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 (Standards: Low Voltage Directive IEC EN 62040-1; EMC Directive IEC EN 62040-2; classification IEC EN 62040-3) | | | |
| **Warranty** | | | | |
| Standard | 24 months electronic parts and 24 months batteries - After registration on **www.tecnoware.com** | | | |
| Extensions | Optional | | | |

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**Available on request with input/output nominal voltage 110Vac or 120Vac and with input plug and output sockets for specific country.**

## Accessories

| Model | Code |
|---|---|
| External SNMP for Evo Dsp MM and Evo Dsp Plus MM | FGCNETAG2 |

### UPS (with batteries) storage



It is necessary to recharge the batteries for a minimum of 24 hours.

Attention: batteries may not be recoverable even when subjected to charging.

- 5° C (41° F)
- 25° C (77° F)
- 30° C (88° F)
- 40° C (104° F)

### UPS Battery life in operating conditions

The higher is the temperature of the environment in which the UPS works, the shorter is the battery life.



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