# UNINTERRUPTIBLE POWER SUPPLY

THE POWER IS ON

TECHNOLOGY: **TRUE ON LINE Double Conversion**

CLASSIFICATION: **VFI-SS-111** (EN 62040-3)

POWER RANGE: **1 – 3 kVA**

No. OF PHASES: **1:1**


## APPLICATIONS

- Servers
- Working stations
- Lighting
- Laboratory equipment
- Security systems
- Automation and control systems

## SPECIFICATION

Technology True On-Line Double Conversion Technology provides perfect output voltage parameters, regardless of the input voltage and the load.

Automatic bypass provides continuous load supply in critical conditions, such as overheating or inverter failure.

Communication:
USB, RS232 for UPS and load supervision and control.
TVSS to protect tele information equipment.
Smart slot allows connect SNMP card to manage UPS throw network or AS400 card with potential free contactors.

LCD control panel displays UPS and power parameters as well as hundreds of useful information.

Small dimensions only 2U provides minimum space in rack to install.

High efficiency up to 95% in online mode to minimizes energy consumption and reduces heat emissions, which makes cooling of rooms cheaper.

ECO-Mode allows 99% efficiency and additional energy savings.

CVCF Frequency converter mode allows UPF to operate in the 50 Hz or 60 Hz to supply non-standard receivers.

Automatic diagnostics guarantee full device performance, control of components and operating parameters without user intervention.

The high value of input power factor restricts the current value of the device from professional network.

Wide input voltage range for normal mode ensures that batteries are used only if necessary – in fact, only when the input voltage is completely lost.

The ability to extend the backup time by adding battery modules allows you to precisely adjust the required autonomy time.

The high output power factor PF=1 guarantees up to 30% more active power compared to other power supplies in this class.

Wide input frequency range for normal mode makes possible to freely use the power supply in a mixed network of city-generator.

Auto restart guarantees maintenance-free operation in case of long power failure.

Cold start provides possibility to launch UPS without main voltage.

Advanced battery management guarantees optimum battery charging and usage. The 3-stage charging process extends their service life up to 50% and reduces operating costs.

Excellent voltage quality achieved by using the IGBT (3L) inverter and high frequency PWM modulation ensures that the voltage is delivered in extremely stable parameters, regardless of power interference and the type of power supply.

Overload resistance is reliable power supply with transient states and high fault tolerance.

Advanced software gives the user complete control over the device and the power receivers.

EPO connector provides the ability to remotely switch off the power supply in the case of fire.

Programmable output sockets allows you to manage the presence of output voltage during battery operation.

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| Power | 900W<br>1000VA | 1800W<br>2000VA | 2700W<br>3000VA |
|---|---|---|---|
| No. Of phases IN : OUT | 1:1 | | |
| **Input** | | | |
| Nominal voltage | 208 / 220 / 230 / 240 Vac | | |
| Voltage range | -30% ÷ +30% @ 100% ≥ obc. > 80%<br>-40% ÷ +30% @ 80% ≥ obc. > 70%<br>-48% ÷ +30% @ 70% ≥ obc. > 60%<br>-52% ÷ +30% @ 60% ≥ obc. > 0% | | |
| Frequency | 50 / 60 Hz | | |
| Frequency range | -20% ÷ +20% | | |
| THDi | <3% | | |
| Input power factor | ≥0,99 | | |
| **Output** | | | |
| Nominal voltage | 208 / 220 / 230 / 240 Vac | | |
| Output power factor | 0,9 | | |
| Voltage regulation static/dynamic | ±1% / ±3% | | |
| Frequency | 50 / 60 ± 0,05 Hz | | |
| Overload capacity inverter | 110% - no limit, 130% - 5 min, 140% - 30 sec.,<br>>140% - 1,5 sec. | | |
| Efficiency on line mode | >92% | | |
| Efficiency eco mode | 99% | | |
| Controlled socket groups | 1 x 4 psc. | 1 x 4 psc. | 1 x 4 psc. |
| Type and number of sockets | IEC320-C13 x8 | IEC320-C13 x8 | IEC320-C13 x8 IEC320-C19 x1 |
| Creast factor | 3:1 | | |
| **Batteries** | | | |
| Amount of internal batteries | 3 x 7/9Ah | 4 x 7/9Ah | 6 x 7/ 9Ah |
| Cold start | yes | | |
| Connector for external batteries | yes | | |
| Charging time | 4 hours up to 90% of capacity | | |
| **Dimensions and weight** | | | |
| Dimensions of UPS (W x D x H) [mm] | 438 x 410 x 88 (2U) | 438 x 510 x 88 (2U) | 438 x 630 x 88 (2U) |
| Weight of UPS [kg] | 14,2 kg | 19,5 kg | 27,4 kg |
| Dimensions of battery module (W x D x H) [mm] | 438 x 410 x 88 (2U) | 438 x 510 x 88 (2U) | 438 x 630 x 88 (2U) |
| Weight of battery module [kg] | 21,3 kg | 28,5 kg | 40,8 kg |
| **Communications** | | | |
| Working indicator | LCD panel + sound alarm | | |
| Communications | Standard: RS232, USB, TVSS, SNMP Slot, REPO<br>Optional: AS-400 card, SNMP card | | |
| **Environmental** | | | |
| Noise level | <45 dB | | |
| Operating temperature for UPS | 0°C ÷ 45°C | | |
| Recommended operating temperature for UPS | 15°C ÷ 25°C | | |
| Storage temperaturę | -25°C ÷ 55°C | | |
| Humidity | 0 ÷ 95% (without condensing) | | |
| **Certification** | | | |
| Standards | EN 62040-2:2006 | | |
| Safety | EN 62040-1:2008 + A1:2013, CE, EN 62040-3 :2001, EN 60950-1, EN61000-3-2 :2014 | | |
| **Options** | | | |
| - SNMP adapter<br>- Environmental sensor (EMD)<br>- REPO | - Additional battery module<br>- Rail Kit 19''<br>- AS-400 (Relay Card) | | |