POWERTRONIX
Uninterruptible Power Supply

powertronix.it

SUPERNOVA 160÷300 kVA

ECO FRIENDLY

CLIMASYSTEM®

Supernova UPS is built for rugged reliability in critical applications. It delivers efficient power conversion and strong resilience against grid disturbances. Its **liquid-cooling system** ensures superior thermal stability, reduced component stress, and longer service life—enhancing reliability under continuous heavy-duty operation!

100% made in Italy

The **SUPERNOVA** series by Powertronix is designed for demanding sites and represents a rugged, highly appreciated solution by customers world-wide. Its robust rectifier input, proven resilient to grid disturbances, is paired with a refined and reliable IGBT inverter output. This architecture ensures top-tier reliability and performance. SUPERNOVA features the **ClimaSystem** to reduce HVAC demand and operating costs. Thanks to optional input filter configurations to limit input harmonics, it can be effectively deployed in virtually any operating context, especially in the most critical environments.

TYPICAL APPLICATION:

- Offices & IT;
- Telecommunications;
- Servers/ Datacenter;
- Medical/ Hospitals;
- Broadcasting;
- Industry;

SPECIAL APPLICATION:

- EN 50171
- Critical electrical environments

VFI-SS-111	3-3	160kVA-300kVA

POWERTRONIX | Via Abruzzi 1, 20056 Grezzago MI Italy | +39 02 9096 8648

SUPERNOVA

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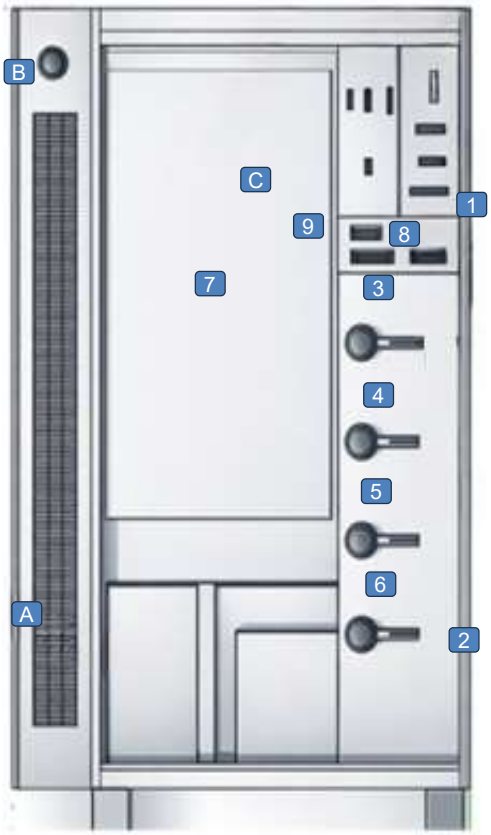
UPS MODEL	SuperNova 160	SuperNova 200	SuperNova 250	SuperNova 300
UPS NOMINAL RATING	160 kVA	200 kVA	250 kVA	300 kVA
UPS ACTIVE POWER	144 kW	180 kW	225 kW	270 kW
UPS PART NUMBER	SN160-000	SN200-000	SN250-000	SN300-000



- A HEAT EXCHANGER
- B H2O INSPECTION
- C EPO BUTTON*
- 1 CABLE ENTRY**
- 2 BATTERY CONNECTION**
- 3 INPUT SWITCH
- 4 INPUT RESERVE SWITCH
- 5 MANUAL BYPASS
- 6 OUTPUT SWITCH
- 7 MAINTENANCE AND CONTROL ACCESS PANEL
- 8 RS-232/ RS485*
- 9 SMART SLOT*

* Accessible from the front
** Accessible from the side

General:

UPS TOPOLOGY	VFI On-Line, double conversion, with pure sine-wave output
INPUT/AC-DC	Three-phase fully controlled bridge (SCR) with HF boost converter
OUTPUT/DC-AC	HF IGBT switching, transformerless design
STATIC SWITCH	Electronic static transfer switch (SCR)
COOLING SYSTEM	LIQUID-COOLED (optional remote radiators) + AIR-COOLED with adaptive fan speed

Input:

INPUT NOMINAL VOLTAGE	3P+N 380/400/415VAC			
INPUT VOLTAGE TOLERANCE	340÷460VAC 100% load - Factory setting ±10% nominal voltage			
INPUT NOMINAL FREQUENCY	50/60Hz			
INPUT FREQUENCY TOLERANCE	40 ÷ 70 Hz			
INPUT POWER FACTOR	0.99			
MAX ABSORBED CURRENT	305A	369A	449A	530A
INPUT THDI	For SN xxx-000< 30% // w/+D option <10% //w/+DF option <5%			

Output:

OUTPUT NOMINAL VOLTAGE	3P+N 380/400/415VAC
OUTPUT POWER FACTOR	0.9
OUTPUT THDV	< 3% with linear load & < 5% with non linear load
OVERLOAD	125% for 10 minutes - 150% for 10 seconds
OUTPUT NOMINAL FREQUENCY	50/60Hz ±0.1% stability
SOFT START	Available , 30 Seconds (factory selectable)

Bypass:

BYPASS NOMINAL V&F*	3P+N 380/400/415VAC 50/60Hz
BYPASS VOLTAGE TOLERANCE	±20% - Factory setting ±10%
BYPASS ACCEPTED OVERLOAD	150% 30 min - 1000% 100ms
MANUAL BYPASS	Available, with mechanical security

Battery:

BATTERY CONFIGURATION	480VDC x SN-160/250 // 528 VDC x SN300 - EXTERNAL ONLY
BATTERY CHARGING I&V*	Factory setting 0.1C / 13,5VDC/block charging current selectable 10-50A
BATTERY COMPATIBILITY	VRLA-AGM / VRLA-GEL / NiCd
BATTERY MANAGEMENT	Auto Test/ Equalization / Smart-battery management/ Optional: temperature compensation w/ external sensor

Environment:

DIMENSION	1240x800x1800(h)mm - metal case - IP20 – w/ HeatExchanger 1040x800x1800(h)mm - metal case - IP20 –w/ External HeatExchanger				
WEIGHT (W/O Battery)	STD version	570Kg	600Kg	630Kg	640Kg
	+D version	720Kg	720Kg	870Kg	880Kg
	+DF version	780Kg	780 Kg	990Kg	1000Kg
TEMPERATURE & RH%	0÷40°C – RH% up to 95% non-condensing - 1.000m asl 1% derating every +100Mt up to 2000 asl				

Others:

EUROPEAN DIRECTIVES	LV 2014/35/EU Low Voltage Directive EMC 2014/30/EU Electromagnetic Compatibility Directive / CE marks
STANDARDS	Safety IEC EN 62040-1;IEC EN 62040-2 EMC;RoHS Compliance; IEC EN 62040-3 (Voltage and Frequency Indipendent)VFI-SS-111

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+ CLIMASYSTEM, Liquid Cooling Technology

CLIMASYSTEM® is designed to improve **UPS thermal management** by transferring heat through liquid cooling (cold plate and pump), reducing internal forced airflow typical of standard air-cooling solutions. This approach delivers **measurable benefits** in:

- ✓ **Reliability**: reliability is proven by over 300 installations worldwide, ensuring long-term operation even in harsh conditions.
- ✓ **Components Life-Time**: By maintaining a stable operating temperature, liquid cooling reduces thermal stress on power components, supporting longer service life.
- ✓ **Components Linearity**: A minimal temperature difference of just 5°C helps maximize the linearity and efficiency of power components, improving performance consistency over time.
- ✓ **Cleanliness**: With limited internal airflow, contamination from dust and particles is significantly reduced, minimizing fouling of sensitive internal areas.
- ✓ **Safety**: Reduced contamination and lower maintenance needs in critical internal zones decrease intervention frequency and improve overall operational safety.

CLIMASYSTEM® replaces fan-driven internal airflow with controlled liquid heat transfer, improving thermal stability, reducing contamination, and supporting higher reliability and lower maintenance requirements compared to standard air cooling.

The SUPERNOVA **liquid cooling system** captures the heat generated by the UPS double-conversion process and enables remote heat dissipation, either in a separate room or outdoors. Thanks to the closed supply/return liquid circuit and the optional OSDE1154/39 kit, the heat-exchange unit can be installed up to 25 meters away from the UPS, allowing the heat load to be removed from the technical room.By transferring UPS thermal losses outside the installation area, the solution significantly reduces the HVAC burden, helping maintain optimal room temperature with lower energy consumption—especially in 24/7 applications. The result is a measurable improvement in overall site efficiency and a tangible benefit on Total Cost of Ownership (TCO) through reduced operating costs, improved thermal stability, and greater flexibility in technical-room design.

+ SUPERNOVA ADDITIONAL OPTIONS

0SDE1185	Internal Back Feed Protection for Supernova	0X-MGTCY504	UPS NetAgent SNMP :TCP- IP Card
0SDE1104	Supernova parallel capability (up to 8 Ups)	0SDE1169	External battery Temperature Sensor 5m
0SDE1154	External Heat Exchanger (25 meter)	M223/ 6	Isolation transformer

POWERTRONIX
Secure Power
Innovation That Saves