NOVA

10-40 kVA

STAND ALONE THREEPHASE UPS

3:3

The ideal solution for:

- ✓ *IT SYSTEMS*
- ✓ *SMALL/MEDIUM ENTERPRISES*
- ✓ *HOSPITALS*
- ✓ *COMMERCIAL FACILITIES*
- ✓ *TRANSPORTS*

GTEC
Smart Energy Solutions

OVERVIEW

NOVA is the latest generation stand-alone UPS, characterised by cutting-edge architecture that allows **quick and easy access to all of the main components**, whilst also integrating an extensive number of battery strings directly into the machine.

Available in 5 power sizes, up to 40 kVA, NOVA offers top-class performance including **Power Factor 1** and over 96% efficiency in Normal Mode.

ADVANTAGES

INSTALLATION

NOVA's design was conceived with the objective of simplifying the positioning and installation operations as much as possible. For both sizes available, the cabinet is compact and has **minimal bulk** compared to other threephase UPS systems with a set-up for internal batteries.

Through the **LCD Touch Screen**, it is possible to complete the initial installation of the system directly, even with the door closed and without the need to utilise any auxiliary device.

PERFORMANCE

Amongst the threephase UPS with small-to-medium power, NOVA stands out for its excellent performance.

Power Factor 1 and **up to 96% efficiency in Normal Mode** represent parameters of excellence for the category and allow energy losses to be minimised, thus limiting operating costs.

What's more, the possibility of installing up to 4 internal battery strings guarantees **greater autonomy** than most UPS devices in the same range, without the need to integrate any external battery cabinet.

RELIABILITY

Each internal NOVA component is perfectly sized to ensure that the system always works at maximum capacity, in any operating condition.

Then there are many specific features suach as **coated PCBs**, the **digital battery charger** or the **speed-controlled fans**, integrated as standard in order to ensure the maximum reliability of the UPS.

5" **TOUCH SCREEN** display

Parallel up to **4 UNITS**

HOT SWAP battery trays

PRODUCT RANGE

NOVA 10/15/20 KVA

System up to 20 kVA power with Power Factor 1.

Up to 3 internal battery strings can be installed in this configuration.

NOVA 30/40 KVA

System up to 40 kVA power with Power Factor 1.

Up to 4 internal battery strings can be installed in this configuration.

TECHNOLOGY

Similarly to that which occurs with all threephase GTEC models, the NOVA series also integrates **the best technology available** on the UPS market today. Despite being a UPS with limited power dimensions, the system is actually made with state-of-the-art components and avant-garde technology, including:

- **IGBT rectifier** with Power Factor Correction (PFC)
- **Inverter with 3-level IGBT technology** to optimise energy consumption
- **Microprocessor-based digital control** with the latest generation DSP, both on the rectifier and on the inverter
- **Digital charger** with the possibility of setting from 32 to 44 batteries for a single string
- **Double input** available as standard, to connect the system to two power sources simultaneously
- **Emergency Power Off** (EPO) system

BATTERY MANAGEMENT

Particular attention was paid to the design of the battery compartment of the NOVA series which, for both the cabinet versions, offers the possibility to mount a large number of internal strings, positioned in the lower part of the cabinet and directly accessible from the front.

MAXIMUM AUTONOMY

NOVA has been designed to guarantee the **utmost autonomy available** in the threephase stand-alone UPS sector. Indeed, it is possible to integrate up to 3 internal battery strings in the 10/15/20 kVA version and even up to 4 internal strings in the 30/40 kVA version.

The UPS has also been designed for expansion via external battery cabinets, so as to be able to satisfy the autonomy requirements of each specific user.

FRONT ACCESS

The battery compartment features an **entirely Hot Swap design** and is directly accessible from the front of the UPS. In this way, any operation on the battery drawers can be carried out easily, quickly and in complete safety.

Thanks to the **Anderson connectors**, replacement operations are even faster and can be performed with the UPS running, without the need to switch to Bypass Mode.

GUARANTEED SAFETY

NOVA is equipped with a**dditional polyurethane safeguards** integrated into the exclusive battery boxes.

These particular trays serve to protect the machine and isolate the battery strings so as to avoid the risk of accidental contacts or acid leaks.

The battery compartment is also equipped with a protection fuse and a **reverse polarity control function** is also available.

THE UTMOST AUTONOMY

Thanks to the possibility of mounting up to 4 strings of internal batteries, NOVA offers significantly greater autonomy than a typical small-to-medium power threephase stand-alone UPS, without the need to integrate an external battery cabinet.

UPS **Size**	**Load** applied	**Autonomy** Typical UPS *	**Autonomy** NOVA
10 kVA	**8** kVA	**38** Min	**60** Min
15 kVA	**12** kVA	**20** Min	**40** Min
20 kVA	**16** kVA	**15** Min	**30** Min
30 kVA	**24** kVA	**8** Min	**30** Min
40 kVA	**32** kVA	**6** Min	**18** Min

* Threephase UPS with 2 internal strings of 40 batteries (12V / 9 Ah)

MAXIMUM SAFETY

The interior of NOVA's innovative cabinet has a special integrated metal wall that clearly separates the electronic section from the battery area.

This guarantees the **maximum isolation of the elements** and consequently, greater safety for the entire system.

ADVANCED CONTROL

NOVA is equipped with professional setting software, common to the most advanced GTEC modular technology Uninterruptible Power Supply units.
The software offers an extensive range of analysis and setting functions, most of which can also be accessed directly via the intuitive colour LCD Touch Screen. The range of information includes:

- **Alarm log and register**, with the ability to record over 400 events, for in-depth fault analysis.
- **A counter showing the battery discharge time and total working time**, for a constant and precise analysis of the state of the batteries.
- **Two-level battery test** to perform quick status verification assessments or extensive discharge tests, which are also programmable.
- **Fan operating time**, with the possibility to set alarms when certain thresholds are reached, so as to be able to programme routine maintenance operations.
- **Operating parameters** including voltage, frequency, power and Power Factor, reported in real time for each input and output phase, along with showing the instantaneous power level measurement of the load in kW, kVA and kVar.

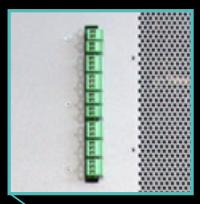
CONNECTIONS AND INTERFACE

PARALLEL KIT

It is possible to connect up to 4 units in parallel, so as to adapt the supplied power to the needs of the load, as well as to avail of the redundancy function

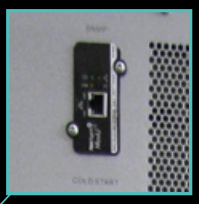
RS232/485 PORTS

The serial communication interface connects the UPS with a computer, in order to manage setting or monitoring operations



DRY CONTACTS

A board is supplied as standard to remotely control the status of the UPS or other selectable events



SNMP CARD

The SNMP card allows to link UPS via Ethernet networks, providing access information and configuration for the UPS

BATTERY BREAKER

The switch allows the internal batteries to be disconnected in order to carry out maintenance operations in total safety

TERMINAL BLOCK

Protected by the special Plexiglas shield, the terminal block is designed for quick connections and comes equipped with bridges for double inputs

MODEL	NOVA-10	NOVA-15	NOVA-20	NOVA-30	NOVA-40
Nominal Power	10 kVA / 10 kW	15 kVA / 15 kW	20 kVA / 20 kW*	30 kVA / 30 kW*	40 kVA / 40 kW*
MAIN INPUT					
Grid system	3 Phases + Neutral + Ground				
Rated voltage / Frequency	380/400/415 VAC (Phase-Phase), 50/60 Hz				
Voltage range	304~478 Vac (Phase-Phase), full load; 228V~304 Vac (Phase-Phase), load decreases linearly according to the min phase voltage				
Frequency range	40~70 Hz				
Power factor	>0.99				
Current THDi	<4% (full Linear Load)		<3% (full Linear Load)		
BYPASS INPUT					
Grid system	3 Phases + Neutral + Ground				
Rated voltage / Frequency	380/400/415 VAC (Phase-Phase), 50/60 Hz				
Voltage range	Default: -20% ~ +15% Selectable: -40% ~ +25%				
Frequency range	Selectable, ±1Hz, ±3 Hz, ±5 Hz, default ±2 Hz				
Bypass overload	125% long term operation 125%<load<130%, 10 minutes 130%<load<150%, 1 minute				
OUTPUT					
Rated voltage / Frequency	380/400/415 VAC (Phase-Phase), 50/60 Hz				
Power factor	1		1*		
Voltage THDv	<1% (linear load); <5.5% (non-linear load according to IEC/EN62040-3)		<1% (linear load); <6% (non-linear load according to IEC/EN62040-3)		
Voltage precision	±1.5% (0-100% linear load)				
Transient response	<5% for step load (20-80%; 80-20%)				
Transient recovery	<30ms for step load (20-100%; 100-20%)				
Inverter overload	110%, 60 minutes 125%, 10 minutes 150%, 1 minute >150%, 200 milliseconds				
Frequency regulation	50/60 Hz ±0.1%				
Synchronized range	Selectable, ±0.5 Hz ~ ±5 Hz, default ±3Hz				
Synchronized slew rate	Selectable, 0.5 Hz/s ~ 3 Hz/s, default 2Hz/s				
Crest Factor	3:1				
BATTERIES					
Battery rate voltage	±240 VDC				
Charger voltage precision	1%				
Batteries arrangement	Internal or external **				
Battery type	Pb				
SYSTEM					
Efficiency	Normal operation: 95% Eco Mode operation: 98% Battery operation: 94.5%		Normal operation: >95% Eco Mode operation: 98% Battery operation: >95%		Normal operation: >96% Eco Mode operation: 98% Battery operation: >96%
Display	LED + LCD Touch Screen				
Protection degree	IP20				
Interface	Standard equipment: RS232, RS485, dry contacts Optional: parallel kit, USB, SNMP, dust filter, Cold Start				
ENVIRONMENT					
Operating temperature	0 ~ 40 °C				
Storage temperature	-40 ~ 70 °C				
Relative humidity	0 ~ 95% (no condensing)				
Noise (dBA at 1 meter far)	<58		<65		
Altitude	<1000 m; load derated 1% per 100 m from 1000 ~ 2000 m				
MECHANICAL DATA					
Dimensions W*D*H (mm)	380*840*1400			500*940*1400	
Weight (Kg)	100			140	
Colour	RAL 7021				

Note: technical specifications and data could be changed without notification

* For temperatures over 30°C the output power factor is reduced to 0.9

** In case of internal batteries, the standard is 40 batteries per string

GTEC SERVICE

GTEC supports its customers throughout the whole product life cycle, providing technical assistance and after-sales service at the highest professional standards, so to produce the best partnership experience.

MAINTENANCE is an essential activity in order to guarantee a safe and stable load protection. GTEC shows maximum care about this topic, providing the best service in terms of experience, instrumentation and safety level.

The **TECHNICAL SUPPORT** service, delivered through the dedicated Help Desk platform, guarantees prompt answers to customers' requests and allows them to directly schedule maintenance activities.

The partnership between GTEC and its customers gets consolidated through the **TRAINING SESSIONS** proposal for technical staff, so that each user can operate on the UPSs with maximum consciousness and safety.

Also, in the GTEC Service offers, a **PROJECT CONSULTING** team is available, in order to provide the best solution according to the designer's needs.

GTEC Europe srl
Strada Marosticana, 81/13
36031 Povolaro (VI), Italy
Tel. +39 0444.361321
info@gtec-power.eu

GTEC France
france@gtec-power.eu

www.gtec-power.eu