

GPE ITALY

General Power Equipment

Hydrus Series

High performance 3 phase
power protection designed
for maximum flexibility



ONLINE UPS
10-600kVA
Three Phase / Three Phase



- True On Line-Double Conversion Technology
- IGBT PWM Rectifier & Inverter Technology
- DSP Control
- Low Input Current THD (<3%)
- High Input Power Factor (>0.99)
- High Efficiency up to 93%
- Optional Dual Input
- Wide Input Voltage Range
- Advanced Battery Management
- Short Circuit and Overload Protection
- Unlimited Number of Parallellable Modules
- Selectable Number of Batteries
- 500 Real Time Event Log with Detailed Parameters
- Static&Manual Bypass Operation
- Overload and Short Circuit Protection
- Small Footprint and Easy Maintenance
- Advanced Communication Capabilities
- Perfect Generator Compatibility
- Customizable as Frequency Converter

10kVA • 15kVA • 20kVA • 30kVA • 40kVA • 60kVA • 80kVA • 100kVA • 120kVA • 160kVA • 200kVA • 250kVA • 300kVA • 400kVA • 500kVA • 600kVA

The Hydrus Series An Advanced UPS Technology

Hydrus Series is a true Online Double Conversion, new generation fully digital controlled UPS. Its highly flexible design meets high efficiency and high availability power needs of a wide variety of critical applications and delivers an advanced power solution with low cost of ownership.

High Performance Power Protection Designed for Maximum Efficiency and Flexibility

Equipped with its new IGBT rectifier Hydrus series keeps your critical loads protected while its space-saving compact design and front access for maintenance successfully reduce mean time to repair (MTTR).

Thanks to the wide variety of accessories and options Hydrus Series presents maximum flexibility advantage to users and optimizes total cost of ownership.

◎ DSP Power Factor Corrected IGBT Rectifier

IGBT based power factor correction technology provides Input Power Factor close to 1 (≥ 0.99) and keeps Input Current Total Harmonic Distortion (THDi) less than 3%, that helps to avoid the disturbance.

◎ Low Input Current THD

(THDi) less than 3% avoids the disturbance to connected loads

◎ Digital Control System

All of the control functions for Hydrus Series UPS including power-on, start-up control, input stage power factor control, battery charging and boosting control, output stage ac voltage regulation and shut-down control, can be realized by using a single DSP control board.

◎ High Input Power Factor

0,99 Input power factor ensures clean and sinusoidal input current. The high input power leads to reduced electricity pay-out, minimizes cable, switchboard, fuse and generator requirements, thus reducing investment cost.

◎ High Efficiency & Low Total Cost of Ownership

With its high efficiency up to 93% Hydrus Series UPS consumes less energy to supply the loads. Thanks to this high efficiency rate, the percentage of energy that is produced as heat is reduced to a minimum. As a result of decreased heat emission users can reduce their electricity usage and air condition requirements.

◎ Static & Manual (Maintenance) Bypass

HydrusSeries includes standard static and manual bypass. Static bypass provides safe failure to mains if the UPS is overloaded or develops a fault condition. Where EMI filters are used to help to neutralize spikes and electrical noise, the load may be routed through bypass to provide further protection. Manual bypass function is intended only for maintenance work, this bypass supply is incorporated into the Hydrus UPS design. Manual bypass is used to power down the UPS without interrupting the power to the load. With this feature it is completely safe for the technical personnel to work on the faulty UPS.

◎ Flexibility

Is compatible with wide range of application. Flexibility achieved through many choices, including type of battery, single or multi-unit configuration, accessories and options.

- ◎ Frequency converter mode
- ◎ Optional temperature sensor for external battery cabinets (to assist the recharge voltage compensation)
- ◎ Additional battery chargers to optimize charge time
- ◎ Optional separated bypass
- ◎ Isolation transformers to vary neutral connectivity in the event of separate power sources or for galvanic isolation between input and output
- ◎ Battery cabinets of different sizes and capacities, for providing extended runtimes.



	THD	Power Factor
Hydrus with IGBT Rectifier	<3%	<0.99
Traditional UPS with Input Filter	<10%	<0.95
UPS without Input Filter	<25%	<0.85

Auto Restart

When the main and bypass sources fail, the UPS draws power from the battery system to supply the load until the batteries are depleted.

When UPS will reach its end of discharge, it will shut down.

The UPS will automatically restart and enable output power:

- After utility power is restored
- After the "Auto Start Delay Time" is expired (the default delay is 5 minutes) .

Perfect Generator Compatibility

Hydrus Series is perfectly compatible with diverse sources, especially with generators. When generator power is used, thanks to its robust IGBT rectifier, it ensures clean, uninterrupted power to protected equipment.

With high input power factor performance of Hydrus Ups series it is enough to choose generator with power only %20 higher rated than the UPS.

Hydrus Series has the ability to adjust power walk-in from 5 to 15 seconds, along with reduced input current distortion.

EPO(Emergency Power Off)

EPO function is designed to switch off the UPS in emergency conditions (fire, flood, etc.). The system will turn off the rectifier, inverter and will stop powering the load immediately (including the inverter and bypass) also the battery stops charging or discharging.

Reverse Energy Tolerance for Regenerative Loads

The Hydrus UPS can be used with regenerative loads, such as synchronous motors. The regenerative loads pump the energy back to mains, traditional Ups systems burn this feedback energy and this causes lower efficiency. Hydrus Series Ups with IGBT rectifier are able to absorb intermittent load generated power. Additionally, this reverse power tolerance permits execution of important system operations like closed transition transfers of the UPS load directly to an engine generator source.

Advanced User Interface

Hydrus Series UPS has Large and user-friendly 320x240 LCD display that provides operating information in four different languages. Thanks to this advanced LCD display all parameters of working device can be monitored and controlled. UPS is capable of recording up to 500 events.

Advanced Battery Management

Hydrus Series guarantees enhanced battery life and maximizes battery performance, life span and reliability through intelligent precision charging. Temperature Compensated Battery Charging monitors performing measurement of external and internal battery temperature and adjusting the charge current rate accordingly. Advanced battery management provides real-time information about battery capacity and back up time, this information can be seen on LCD panel. The Ups tests the batteries at adjustable periods without switching off the system, the test periods can be set by users.

Parallel Operation

Hydrus Series features easy and simple scalability and redundancy. It is ready to grow with your business demands. Different power rated units and any number of UPS can be connected in parallel.

Power Increase: The UPS's can be connected in parallel to increase total capacity of the system. If one of the devices goes out of order, the critical loads are transferred to by-pass.

Parallel Operation Features :

- Internal standard parallel microprocessor for all models.
- Up to 16 units parallelable
- Parallel connection with ring cable
- Autosensing disconnected parallel cable
- Equal current share with DSP control
- Easy power upgrade without any interruption
- All parallel systems can be controlled from the front panel of one unit
- Full synchronization of parallel units
- Isolated parallel operation card
- Static by-pass for all units



MODEL																
Capacity	10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	80kVA	100kVA	120kVA	160kVA	200kVA	250kVA	300kVA	400kVA	500kVA	600kVA
Power Watt	9kW	13,5kW	18kW	27kW	36kW	54kW	72kW	90kW	108kW	144kW	180kW	225kW	270kW	360kW	450kW	540kW
INPUT																
Input Voltage Range	220/380VAC -15% +18% 3P+N+PE Optional 220/380VAC -37% +22% 3P+N+PE															
Input Power Factor	At Full Load >0.99															
Input Frequency Range	45 - 65 Hz (Selectable)															
Rectifier	IGBT															
Total Harmonic Distortion (THDi)	<3%															
OUTPUT																
Output Voltage Range	220/380VAC, 230/400VAC and 240/415VAC 3 Phase + N ± 1%															
Recovery	0% - 100% - 0% Load, Maximum Output Tolerance 5%, 1% Back to Band <40ms															
Efficiency	Up to 94%, Eco Mode 98%															
Output Frequency Range	50Hz ±0.5% Synchronous With the Network / 50Hz ±0.01% Battery Mode															
THD (THDv)	Linear Load <2% Non-Linear Load <6%															
Crest Factor (CF)	3:1															
Overload Capacity	At 125% Load 10min, at 150% Load 1min															
BATTERY																
Quantity (12V DC VRLA)	2x31															
Charge Value (C)	Nominal 0,1 C, Adjustable															
Battery Power	25% of The Device Power															
Internal Battery	64 x 7Ah or 9Ah								Not Available							
COMMUNICATION																
Communication Port	RS232 Standart, RS485 ve SNMP Adapter Option															
Dry Contact	Optional															
Protocol	SEC, TELNET															
STANDARDS																
Quality	ISO 9001 - ISO 14001 - ISO 18001															
Performance	EN62040 -3															
EMC/LVD	EN62040 - 2 / EN62040 -1 EN60950															
GENERAL																
Running Temperature	For UPS 0°C~40°C For Battery 0°C~25°C															
Storage Temperature	For UPS 15°C ~45°C For Batteries -10°C~60°C															
Protection Class	IP20															
Chassis	Anti-Static Paint Protection															
Humidity	0-95%															
Altitude	<1000m, Correction Factor 1. <2000m, Correction Factor >0.92, <3000m; Correction Factor >0.84															
Alerts	500 Event Log.															
Parallel Operation	Parallel Power Increase up to 16pcs.															
EPO (Emergency Power Off)	Standard															
Isolation Transformer	Optional															
Net Weight (kg)	115	120	125	150	160	180	300	320	350	550	575	700	750	1250	1600	1800
Dimensions (WxDxH) (mm)	460 x 805 x 1190						880 x 770 x 1660			1055x815x1905			1250 x 815 x 1905			1830x850x2010

* 200-208-220V (Ph-Ph) Version is Available.

* 3 Phase in / 1 Phase Out Version is Available. (10 to 30kVA)

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