Output Power Factor 1

IN-DSP SERIES
20 KVA/KW - 400 KVA/KW
THREE PHASE

- Modular Design
- Redundant UPS System

PanEuropean CE Approved RoHS Compliant

EN50091 (1,2,3); IEC62040 (1,2,3); IEC/EN/AS60950; (IEC/EN/AS60146 series); IEC/EN/ AS61000 series and 60950

COMPUTER POWER®

The Next Level in Digital Convergence®

Modular UPS System
20 KVA/KW up to 400 KVA/KW

Models For: 200 / 208 / 220 VAC / 60 Hz

- **The UPS that grows with your business.**
  (Grows up to 600 KVA/KW with Three 200 KVA/KW System Cabinets)
- **Ideal for Industrial Applications**

Features:

- Modular Design N+X.
- Hot Swap Plug-In Electronic Module.
- True On-Line.
- Parallel Capability.
- Redundant Capability.
- Double-conversion Three Level Inverter Topology.
- Green and clean power.
- High efficiency.
- High Input power factor (> 0.99).
- Low input THDi (< 3%).
- Strong load adaptability for linear and non linear load.
- Intelligent module and system protection design.
- Very low noise system design.
- Double DSP controller for individual power module.
- Digital control for all parts including: rectifier, inverter, charger and discharger.
- IGBT modules are applied in the power module.
- Battery cold start function.
- Inbuilt switch for cabinet input, output and maintenance connection.
- Large touch screen LCD with plenty information.
- Independent charger for batteries, intelligent battery management system.
- Digital paralleling technology, very low circulating current between modules.
- Totally front access, top and bottom cable connection.
- Each individual module is configured with independent controller, to avoid single point of failure risk.
- Friendly generator interface.

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Modular UPS System
Grows from 20 KVA/KW up to 400 KVA/KW

With Three 200 KVA/KW System Cabinets grows up to 600 KVA/KW

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Computer Power is a modular and online double conversion UPS designed for sensitive equipments. The power rating ranges from 20 KVA to 400 KVA which delivers the best combination of reliability, functionality, flexibility and features, hot-swappable and flexibility at a competitive price. It is designed specially for datacenters, computer systems or critical equipments. As the result of state of art design, this innovative and reliable power system absolutely meets the market requirements.

Computer Power modular UPS combines latest IGBT three-level technology together with DSP control. Along with high input power factor, low THDi and high system efficiency, this product achieves very high adaptability for all kinds of loads. The modular design ensures reliable and trouble free operation for critical loads. Power expansion is very easy to achieve by adding modules to the system to reach 400 KVA power in a single frame. It is possible to connect three 200 KVA/KW frames in parallel in order to reach maximum 600 KVA.

Modular Construction Design

Each power module is designed to be hot swappable which makes the power expansion and system maintenance easier. Each module is independently self controlled, thus avoiding single point failure risk. If any module fails or disconnects, the system keeps operating and supplying power without interruption. It ensures a high level of reliability and protection.

Intelligent Battery Management

Each UPS module is built in with a super charger and the charging power reaches 4000 W.
With 10 installed UPS modules, the total charging power rating is 40 KW. The charger is controlled by DSP with intelligent digital arithmetic to prolong the lifespan of the batteries.

Easy Operation and Installation

This products offers flexibility during installation time. Consequently, it is very easy to maintain and control which provides the highest reliability and best protection for supplying power. With the large touch screen LCD panel, the user can easily access information of the power modules and system.

Intelligent Protection System

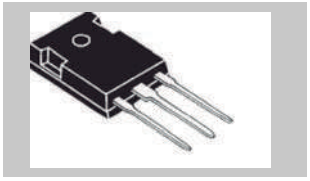
All the power modules and the system are protected simultaneously by hardware and software. All kinds of protection functions are included: under and over current and voltage, temperature, overload, short circuit.
The reliability of the power module and the system reaches an incredible high level through all of these technologies.

High Reliability Design

The Integrated IGBT Modules used in the Electronic Power Modules of the IN-DSP product line, (shown in the drawing), is a great technical improvement compared with Discrete Chips (shown in the drawing), because of the component reliability and manufacture consistency. Among other technical benefits, important Low-Loss integrated three-level IGBTs modules help increase system efficiency, plus reliability is increased due to lower temperatures on IGBTs and their heatsinks.

In the case of Discrete IGBTs, more chips need to be paralleled to obtain high current ratings. In those cases, Clamped Diodes have to be placed around IGBTs which brings risks, due to voltage/current stresses and difficulty perils in the manufacturing process.

Integrated IGBT module used in IN-DSP Series Modular UPS



Discrete IGBT chip used in other modular UPSs

Optional Components

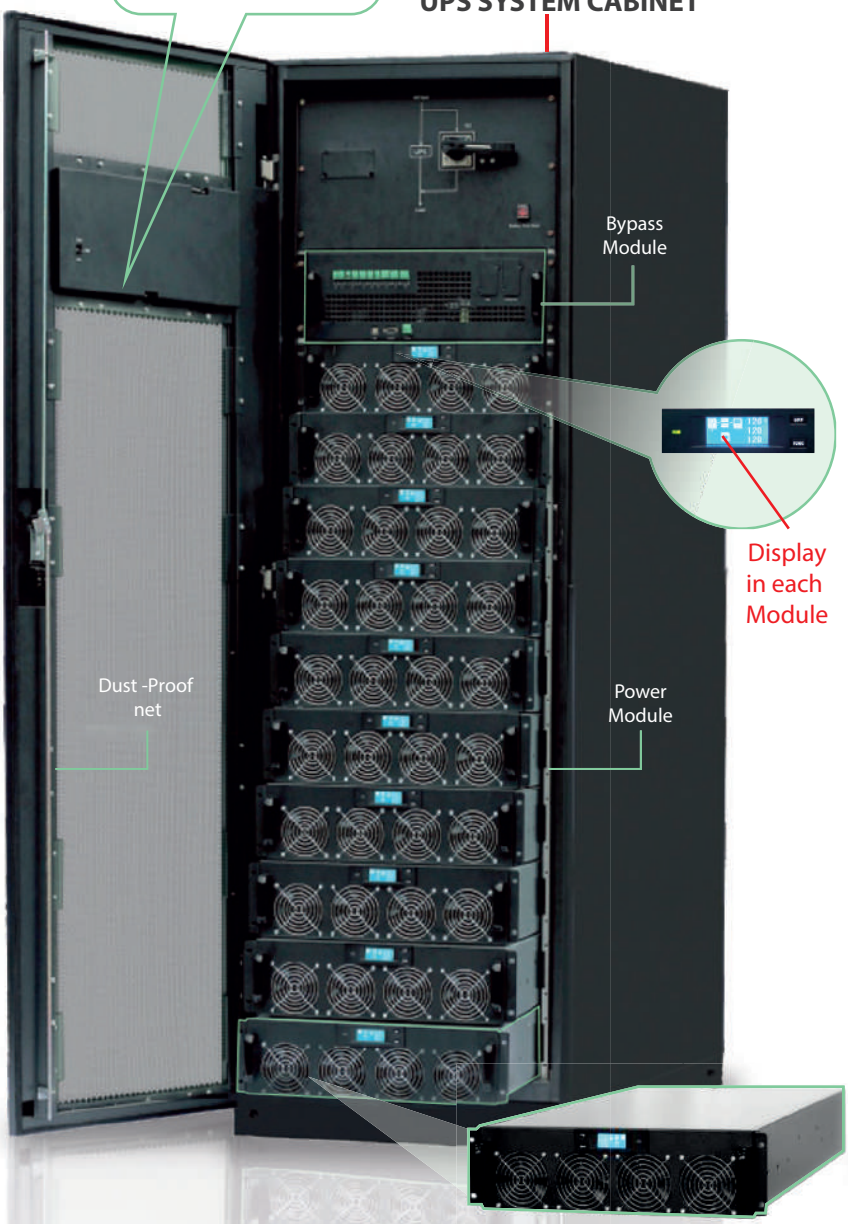
- SNMP / Web communication card
- Battery temperature compensation module
- Dust-Proof net
- Parallel kit for second cabinet
- ModBus

Modular UPS System:

Touch Screen Display

UPS SYSTEM CABINET

STANDARD BATTERY CABINET



TOUCH SCREEN DISPLAY

MONITORING MODULE

In the Standard Battery Cabinet the size and Amp/Hour of the batteries are configured in accordance to the required back up time, in single or preferably in multiple strings.

TECHNICAL SPECIFICATIONS

IN-DSP SERIES - THREE PHASE

IN-DSP SERIES	EACH CABINET SYSTEM GROWS FROM 20 KVA/KW UP TO 400 KVA/KW		
SYSTEM CABINET OPTIONS	**120 KVA/KW**	**200 KVA/KW**	**400 KVA/KW**
Phase	Three Phase + N + G In / Three Phase + N + G Out		
Capacity	Grows from 20 to 400 KVA/KW		
Electronic Power Modules	20 KVA/KW		
Power Factor	Unity (1)		
INPUT			
Input Nominal Voltage	200/208/220 VAC (line to line) 3P + N + G		
Input Voltage Range	- 20% to + 25% (configurable)		
Input Power Factor	At Full Load > 0.99		
Input Frequency Range	40 - 70 Hz		
Rectifier	PWM IGBT Technology PFC		
Total Harmonic Distortion (THDi)	< 3%		
OUTPUT			
Output Nominal Voltage	115/120/127 VAC (L - N), 200/208/220 VAC (L - L) ± 1% (at balanced load) 3P + N + G		
Output Frequency	50 - 60 Hz		
Power Factor	1		
Total Harmonic Distortion (THDv)	Linear Load < 1% ; Non-linear Load < 3%		
Crest Factor (CF)	3 : 1		
Efficiency	up to 93% ; (ECO Mode 98%)		
Transfer Time	Zero		
Inverter	Pure Sinewave Three Level Topology		
Overload Capacity	At 105% Long Time Operation, at 110% Load 60 min, 125% Load 10 min, at 150% Load 1 min; > 150% Load 200ms.		
BATTERY			
Quantity	2 x 10 per string		
Type of Battery	12 VDC Sealed Lead Acid Batteries VRLA		
Nominal Voltage	± 120 VDC		
Charge Power	0-20% of the Device Power (Selectable)		
Backup Time	Standard 10 minutes / Other configurations available		
COMMUNICATION & MANAGEMENT			
Communication Ports	RS-232, RS-485, SNMP, EPO, Generator Interface, ModBus (opt)		
Compatibility	Supports Windows® 2000/2003/XP/Vista/2008, Windows®7, Linux, Unix, and MAC		
Display	Graphic LCD + LED, Color Touch Screen and Keyboard		
Dry Contacts	Included		
GENERAL			
Dimensions UPS Modules & Cabinets (WxDxH)	600 x 1100 x 1600 mm 6 Slots Cabinet	600 x 1100 x 2000 mm 10 Slots Cabinet	2000 x 1100 x 2000 mm 20 Slots Cabinet
	460 x 790 x 134 mm 20 KVA/KW Electronic Module		
Weight UPS Cabinet & UPS Modules	170 Kg	220 Kg	620 Kg
	34 Kg each 20 KVA/KW Electronic Module		
Running Humidity & Temperature	0 - 95% RH (Non-Condensing) @ 0 ~ 40 °C		
Storage Temperature	For UPS - 40 ~ 70 °C; for Batteries - 20 ~ 30 °C		
Acoustic noise level at 1 meter	< 65 dB		
Altitude (meters above sea level)	< 3000 meters		
IP Protection Class	IP20		
Parallel Operation	Parallel Power increase up to 600 KW/KVA with Three 200 KVA/KW System Cabinets		
EPO (Emergency Power Off)	Standard		
Insolation Transformer	Optional		
STANDARDS & CERTIFICATIONS			
Quality	ISO 9001 ; CE		
Compliance	EN50091 (1,2,3); IEC62040 (1,2,3); IEC/EN/AS60950; (IEC/EN/AS60146 series); IEC/EN/ AS61000 series and 60950)		

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