

# UPS

## UNINTERRUPTIBLE POWER SUPPLY

CATALOGUE



## COMPANY PROFILE

Inform Electronic, one of the European leading power solution specialist, is established in 1980 with the aim of designing and building industrial electronic systems. Soon after, it diversified into the production, and marketing of standard professional electronic equipment, and special projects.

The company always combines its experience with its innovative identity and is recognized by its worldwide technology leading character. Right business understanding of Inform makes the company one of the most wanted brands in the world with its exceptional growth ratio. The Company has 31,000 m<sup>2</sup> closed production area, committed to the manufacturing of electrical products and electronic equipments.

Analysing infrastructural conditions, and customer needs, the company decided to provide complete solutions. Inform product range varies from Uninterruptible Power Supply (UPS) Systems, Voltage Regulators, to DC Power Supply, Telecom Equipments, Battery chargers, Inverters, 19" rack cabinets and other electrical products and electronic equipments.

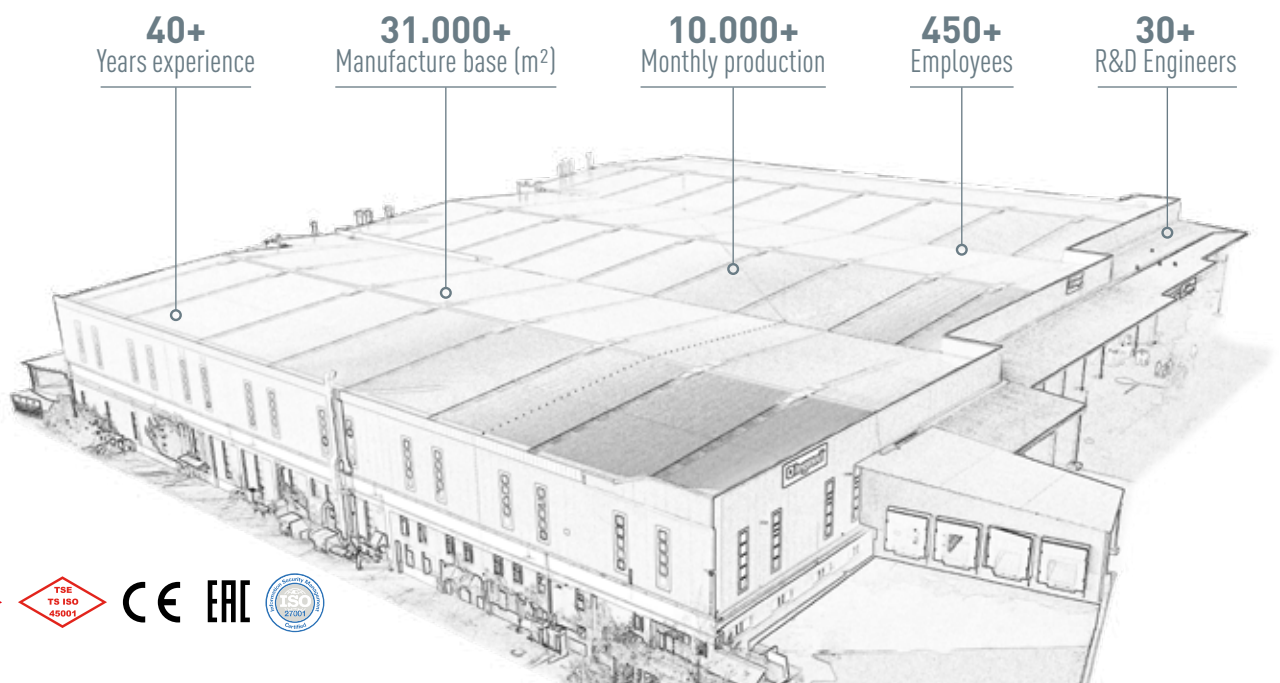
Since its foundation, INFORM ELECTRONIC has based its strategy on below main policies:

- Quality understanding for its products and services,
- Tailored solutions to specific customer needs,
- Customer satisfaction and happiness,
- After sales service and support
- Continuous improvement for operational excellence and advanced technology

Inform is an official ISO certified company. The company has also Gost, Soncap, and CE certifications. All the Inform products are designed and produced with the worldwide quality understanding, and ISO rules.

Inform was acquired by Legrand Group in 2010.

Legrand is global specialist in electrical and digital building infrastructures. The Group has direct presence in more than 70 countries and number of employee is more than 31.000 people.



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# INFORM UPS

## Distinguishing characteristics

### High performance

The innovative design and high quality of the components used enable our UPS to achieve up to 96,5% efficiency, leading to significant energy savings.

### Latest generation components

In-depth research on the best electronic components on the market combined with state-of-the-art manufacturing methods, make Inform UPS extremely reliable and abreast of the times.

### Environmentally sustainable products

Efficient UPS built with maximum attention to detail. Moreover, Inform has developed an innovative testing system which reduces the energy consumed for each device manufactured.

### Advanced technology

The On-line Double Conversion technology ensures a top quality power supply and maximum energy efficiency.

### Reliable electronics

The optimum sizing of the power stages and thorough testing of each unit ensure excellent reliability.

### High performance batteries

The batteries supplied with Inform UPS are the best on the market. The innovative charging system significantly extends the life of the battery by up to 50%.

### Services

Inform provides a complete range of services to meet the demands of all its customers







## Range of **application**

Each type of UPS is characterised by different design properties, which means that the range is ideally suitable and usable in different environments, from domestic to tertiary and industrial sectors, and applications in specific fields.

### **DOMESTIC APPLICATIONS**

Video surveillance, home alarms, smart TV, Home Entertainment systems

### **TRADE AND TERTIARY SECTORS**

Offices, shops, points of sale

### **HEALTH AND HOSPITALITY SECTORS**

Hospitals, medical centres, hotels

### **INDUSTRIAL AND LARGE TERTIARY STRUCTURE SECTORS**

Factories, warehouses, shopping centres

### **TRANSPORT**

Airports, rail and ship transport

### **DATA PROCESSING CENTRES**

Datacenter



# RANGE

**Inform** offers a range of UPS products that are divided into 2 different types of products:  
**single-phase and three-phase.**

**The range is wide and complete,** with solutions that guarantee maximum performance in terms of power and backup time.



Sinus Evo



Sinus Evo RM



Sinus LCD



Dsp Evo

**Online**

**Single-phase UPS**



Modulera



Modulera

**Modular**

**Three-phase UPS**



Dsp Multipower  
Convertible



Dsp Flexipower



Saver Plus DSP



Dsp Multipower



Guardian  
Guardian LCD



Informer  
Compact

## Line Interactive



StarK



Estia UPS  
Estia Hybrid



Forte



Pyramid DSP  
Premium



Pyramid  
DSP



Pyramid  
DSP T



Solutio

## Conventional





# UPS PRODUCT RANGE

PRODUCT		POWER													
LINE INTERACTIVE		600 VA	800 VA	1000 VA	1500 VA	2000 VA	3000 VA								
Line Interactive	GUARDIAN & GUARDIAN LCD	✓	✓	✓	✓	✓									
	INFORMER COMPACT			✓		✓	✓								
ONLINE UPS		1 kVA	2 kVA	3 kVA	5 kVA	6 kVA	10 kVA	15 kVA	20 kVA	30 kVA	40 kVA				
1 Ph in - 1 Ph out	SINUS EVO	✓	✓	✓											
	SINUS EVO RM	✓	✓	✓											
	SINUS LCD /convertible	✓	✓	✓											
	DSP EVO					✓	✓								
	DSP MULTIPOWER /convertible				✓	✓	✓								
	DSP FLEXIPOWER			✓	✓	✓	✓								
3 Ph in - 1 Ph out	DSP MULTIPOWER /convertible						✓	✓	✓						
	DSP FLEXIPOWER						✓								
	DSP MULTIPOWER / tower							✓	✓						
	SAVER PLUS DSP							✓	✓						
	PYRAMID DSP						✓	✓	✓	✓	✓				
	FORTE						✓	✓	✓	✓	✓				
ONLINE UPS		10 kVA	15 kVA	20 kVA	30 kVA	40 kVA	60 kVA	80 kVA	100 kVA	120 kVA	160 kVA	200 kVA	250 kVA	300 kVA	400 kVA
3 Ph in - 3 Ph out	STARK	✓	✓	✓											
	ESTIA	✓	✓	✓											
	FORTE	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	PYRAMID DSP Premium										✓	✓	✓	✓	✓
	PYRAMID DSP Premium T										✓	✓	✓	✓	
	PYRAMID DSP	✓	✓	✓	✓	✓	✓	✓	✓	✓					
	PYRAMID DSP T	✓	✓	✓	✓	✓	✓	✓	✓	✓					
	SOLUTIO													✓	✓
	MODULERA			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ UP TO 800 kVA



# Guardian & Guardian LCD

1 Phase In – 1 Phase Out / 600 VA – 2000VA

- Microprocessor controlled Line Interactive Technology
- Boost and Buck Automatic Voltage Regulation (AVR)
- LCD or LED Display Panel
- Advanced Battery Management (ABM)
- Input Frequency auto sensing ( 50/60 Hz )
- Auto restart after mains recovery
- Charging during switched off mode
- Short circuit and overload protection
- Cold Start Function
- RJ45 or RJ11 tel-modem surge protection
- USB Communication Interface and Remote Monitoring Software\*
- Compact size and user friendly operation



(\*) Available at AP models only



## TECHNICAL SPECIFICATIONS

MODEL		GUARDIAN LED - LCD A/AP			
Nominal Power (VA)	600VA	800VA	1000VA	1500VA	2000VA
INPUT					
Input Voltage	220V / 230V				
Input Voltage Range	162-290VAC				
Frequency	50 or 60 Hz (Auto-sensing)				
OUTPUT					
Output Power Factor	0.6				
Output Voltage (Battery)	220V or 230V ± 10%				
Output Waveform (Battery)	Simulated Sinewave				
Output Frequency (Battery)	50 or 60 Hz ± 1Hz				
Output Voltage Regulation (AVR)	AVR automatically increases output voltage by 15% above of input voltage if input is -10% to -26% of nominal AVR automatically decreases output voltage by 15% below of input voltage if input is +10% to +22% of nominal				
Transfer Time	2 - 6 ms				
Outputs	1xGerman Std. Socket + 1xIEC C13		2xGerman Std. Socket + 2xIEC C13		
BATTERY					
Battery Type	Maintenance Free Lead Acid Batteries				
Battery Charge Duration	6 hours (90% capacity)				
Nominal DC Voltage	12VDC		24VDC		
Battery Quantity	1 x 12V 7Ah	1 x 12V 9Ah	2 x 12V 7Ah	2 x 12V 9Ah	
Backup Time	7 - 20 min. (Depending on Computer Load)				
DISPLAY					
LED Display	Online Mod, Battery Mod, Fault				
LCD Display (Optional)	Input & Output Voltage values, AC mode, Load Level, Battery Capacity Indicators				
ALARMS					
	Battery Mode (Every 10 seconds), Low Battery (Every second), Overload (Every 0.5 seconds), Fault (Continuous)				
PROTECTION					
	Short-circuit, Overload, Battery overcharge-discharge, Tel/Modem				
COMMUNICATION					
Interface	RJ11 (@600-800VA), RJ45 (@1000-2000VA) , USB Port (Only AP Models)				
ENVIRONMENT					
Operational Temperature	0-40 °C (20 to 25 recommended for longer battery life time)				
Humidity	0 - 95% (non-condensing)				
Noise Level (1m distance)	<40dBA				
Protection Level	IP20				
PHYSICAL					
Net Weight (kg)	4.35	4.7	7.8	10.1	10.5
Dimensions (WxDxH) mm	101x298x142		149.3x353x162	158x380x198	
STANDARDS					
Safety	EN 62040-1				
EMC	EN 62040-2				



HOME/OFFICE



EMERGENCY

# Informer Compact

1 Phase In - 1 Phase Out / 1000VA/2000VA/3000VA

- Pure Sinewave Output for any critical load
- User Friendly LCD Display
- Boost and buck Automatic Voltage Regulation
- 97% High Efficiency in Normal Mode
- Communication Port and Remote Monitoring Software
- Overload and Short Circuit Protection
- Advanced Battery Management
- Discharge Protection
- Fault Alarms and State Warnings
- Cold Start Function
- Compact size, light weight and low noise



UPS LINE INTERACTIVE



TOWER



PLUG &amp; PLAY



USB

LCD DISPLAY  
(1000-2000-3000VA)

## TECHNICAL SPECIFICATIONS

MODEL	INF-C1000	INF-C2000	INF-C3000
Capacity (VA)	1000	2000	3000
INPUT			
Voltage	220/230/240VAC ± 25% (adjustable from DIP switches on ups)		
Frequency	50 or 60Hz ± 5%		
OUTPUT			
Power Factor	0.6		
Voltage(on mains)	220/230/240VAC ± 12%		
Voltage(on battery)	220/230/240VAC +3% -10%		
Wave Form	Sine Wave		
Output Voltage Harmonic (THDv)	THD < 3 %		
Frequency(on battery)	50 or 60 Hz ± 0.5%		
Voltage Regulation (AVR)	AVR automatically increase output voltage 15% above input voltage if -9% to 25% of nominal. AVR decrease output voltage 15% below input voltage if +9% to +25% of nominal		
Transfer Time	4 ms.		
Overload	UPS automatically shuts down if overload exceeds 110% of nominal at 10min. (AC Mode) and if overload exceeds 100% of nominal at 10sec. (Battery model)		
Outlets	1 pc German Std. Socket + 2 pcs IEC C13	1 pc German Std. Socket + 3 pcs IEC C13	1 pc German Std. Socket + 3 pcs IEC C13
BATTERY			
Type	Maintenance-free lead acid batteries		
Recharge Time	2 to 4 hours to 90%		
Voltage	24VDC	48VDC	
Quantity	2x12V 7Ah	4x12V 7Ah	4x12V 9Ah
Protection	Automatic self-test & discharge protection, replace battery indicator		
DISPLAY			
LED Display	Utility Normal, Backup, UPS Fault and Battery condition		
LCD Display	Load Level, Battery Level, Bypass, AVR, Battery Low-Replace-Fault, UPS Fault, Overload		
ALARMS			
Alarms	Line Failure, Battery Low, Overload and Fault		
PROTECTION			
	Spike Protection (320 joule, 2 ms), overload protection, short circuit protection		
COMMUNICATION			
Interface (Communication Ports)	USB Standard		
Software	Standard		
ENVIRONMENT			
Operating Temperature	0-40 °C		
Humidity	0 - 95% (non-condensing)		
Audible Noise at 1m	< 40 dBA	< 45 dBA	
Protection Class	IP20		
PHYSICAL SPECIFICATIONS			
Net Weight (kg)	15.5	23	27
Dimensions (mm) WxDxH	175x370x247	175x427x247	
STANDARDS			
Standards	EN 62040-1-1 (safety), EN 62040-2(EMC)		

# Sinus EVO

1 Phase In – 1 Phase Out / 1kVA – 3kVA

- On-Line Double Conversion Technology
- Real Digital Signal Processor (DSP) Controller
- User friendly LCD display
- High Efficiency
- Input Power Factor correction PFC (PF:  $\geq 0.98$ )
- Wide Input Voltage & Frequency Range
- Cold Start Function
- Wide communication option  
Standard: USB, RS-232, EPO  
Optional: SNMP, Relay card
- Frequency Converter Operation Mode (50-60Hz)
- Generator compatible
- ECO Mode operation feature
- Environment friendly



## TECHNICAL SPECIFICATIONS

MODEL	Sinus EVO 1KVA		Sinus EVO 2KVA		Sinus EVO 3KVA	
Nominal Power (VA)	1000		2000		3000	
INPUT						
Input Voltage Range*	110VAC - 300VAC					
Nominal Voltage	200*/208*/220/230/240VAC					
Frequency	50/60 Hz ±10% (Auto-sensing), 40-70Hz ( @generator mode )					
Phase	1Ph - N - PE					
Power Factor	≥0.98					
OUTPUT						
Power Factor	0.9					
Output Voltage	200*/208*/220/230/240VAC					
Voltage Regulation	±2%					
Frequency	50/60 Hz					
Frequency Regulation	±0.1%					
Output Voltage Harmonic (THDv)	≤3% (linear load); ≤5% (non-linear load)					
Transfer Time	Online Mode - Battery Mode: 0ms, Inverter - Bypass: 4ms (typical)					
Crest Factor	3:1					
Overload	120% 60s, 150% 200ms					
Efficiency**	> 88%		> 90%			
Outputs***	2xIEC + 1xGerman Std. Socket		3xIEC + 2xGerman Std. Socket			
ECO mode	Present					
Frequency Converter	Present					
BATTERY						
Battery Type	12 V / Maintenance-free lead acid batteries					
Charge Time	4 hour 90% capacity (typical)					
Charge Current	1A (max.)					
Voltage	24VDC		48VDC		72VDC	
QTY	2 x 12V / 7Ah		4 x 12V / 9Ah		6 x 12V / 9Ah	
Cold Start	Present					
DISPLAY						
LED Display	Utility or Bypass, Battery Low, Battery Abnormal, Overload, UPS Off, UPS Abnormal					
LCD Display	Input / Output Voltage and Frequency, Load %, Battery Voltage, Internal Temperature					
ALARMS						
	Mains fault, Low Battery, Overload, UPS Failure					
PROTECTION						
	Short circuit, Over temperature, Overload, High voltage, Low battery, EPO					
COMMUNICATION****						
Standard	RS232, USB, RJ45 (power surge-lightning protection)					
Optional	SNMP and Relay Card					
ENVIRONMENT						
Operating Temperature / Storage Temperature	0°C ~ +40°C / -25°C ~ +55°C					
Humidity	0 - 95% (non-condensing)					
Altitude	0 - 1500 m					
Noise Level (1m distance)	< 50 dBA					
Protection Level	IP20					
PHYSICAL						
Net Weight - Gross (kg)	9.3 - 10.3		18.8 - 20.8		23.3 - 25.8	
Dimensions WxHxD (mm)	144x209x293		191x336x470			
STANDARDS						
	EN 62040-1-1 (safety), EN 62040-2 (EMC), EN 62040-3 (performance)					

\* Depends on the power rating and the amount of load at the output of UPS.

\*\* It depends on UPS power and environmental conditions.

\*\*\*Device outputs are optional, please contact your sales representative.

\*\*\*\*Please contact to your sales representative for communication options.



# Sinus EVO RM

1 Phase In – 1 Phase Out / 1kVA – 3kVA

- On-Line Double Conversion Technology
- Real Digital Signal Processor (DSP) Controller
- User friendly LCD display
- High Efficiency
- Input Power Factor correction PFC (PF: ≥0.99)
- Wide Input Voltage & Frequency Range
- Cold Start Function
- Wide communication option  
Standard: USB, RS-232, EPO  
Optional: SNMP, Relay card
- Frequency Converter Operation Mode (50-60Hz)
- Generator compatible
- ECO Mode operation feature
- Environment friendly



UPS ONLINE

CONVERTIBLE  
(RACK/TOWER)

PLUG &amp; PLAY



USB

LCD DISPLAY  
(1-3kVA)

## TECHNICAL SPECIFICATIONS

MODEL	Sinus EVO 1KVA RM		Sinus EVO 2KVA RM		Sinus EVO 3KVA RM	
Nominal Power (VA)	1000		2000		3000	
INPUT						
Input Voltage Range*	110VAC - 300VAC					
Nominal Voltage	208/220/230/240VAC					
Frequency	50/60 Hz ±10% (Auto-sensing), 40-70Hz ( @generator mode )					
Phase	1Ph - N - PE					
Power Factor	≥0.99					
OUTPUT						
Power Factor	0.9					
Output Voltage	208/220/230/240VAC					
Voltage Regulation	±1%					
Frequency	50/60 Hz					
Frequency Regulation	± 0.1%					
Output Voltage Harmonic (THDv)	≤3% (linear load); ≤5% (non-linear load)					
Transfer Time	Online Mode - Battery Mode: 0ms, Inverter - Bypass: 4ms (typical)					
Crest Factor	3:1					
Overload	105%~110%: 10 minute ,110%~130%: 1 minute, >130%: 5 seconds					
Efficiency**	> 88%		> 90%			
Outputs	2xIEC + 1xGerman Std. Socket					
ECO mode	Present					
Frequency Converter	Present					
BATTERY						
Battery Type	12 V / Maintenance-free lead acid batteries					
Charge Time	4 hour 90% capacity (typical)					
Charge Current	1A (max.)					
Voltage	24VDC		48VDC		72VDC	
QTY	2 x 12V / 9Ah		4 x 12V / 9Ah		6 x 12V / 9Ah	
Cold Start	Present					
DISPLAY						
LED Display	Utility or Bypass, Battery Low, Battery Abnormal, Overload, UPS Off, UPS Abnormal					
LCD Display	Input / Output Voltage and Frequency, Load %, Battery Voltage, Internal Temperature					
ALARMS						
	Mains fault, Low Battery, Overload, UPS Failure					
PROTECTION						
	Short circuit, Over temperature, Overload, High voltage, Low battery, EPO					
COMMUNICATION						
Standard	RS232, USB, RJ45 (power surge-lightning protection)					
Optional	SNMP and Relay Card					
ENVIRONMENT						
Operating Temperature / Storage Temperature	0°C ~ +40°C / -25°C ~ +55°C					
Humidity	0 - 95% (non-condensing)					
Altitude	0 - 1500 m					
Noise Level (1m distance)	< 50 dBA					
Protection Level	IP20					
PHYSICAL						
Net Weight (kg)	11.3		19.5		26.2	
Dimensions (mm) WxDxH (Rack)	440x325x86.5 (2U)		440x460x86.5 (2U)		440x600x86.5 (2U)	
STANDARDS						
	EN 62040-1-1 (safety), EN 62040-2 (EMC)					

\* Depends on the power rating and the amount of load at the output of UPS.

\*\* It depends on UPS power and environmental conditions..



# Sinus LCD

1 Phase In - 1 Phase Out / 1kVA – 3kVA

- On-line 'double conversion' technology
- Real Digital Signal Processor (DSP) Controller
- Power factor correction PFC (PF: >0.99)
- User friendly LCD display
- Programmable Receptacles
- Wide input voltage range and frequency
- Availability to configure as 50/60Hz Frequency Converter from LCD Panel
- Smart communication port and SNMP management capability
- Hot Swappable Battery
- Emergency shutdown control through EPO
- Overload & short circuit protection
- Cold start (DC power on)
- Genius battery management (GBM)
- RS232, USB and SNMP can be activated simultaneously
- Compact size, light weight & low noise



UPS ONLINE



CONVERTIBLE (RACK/TOWER)



PLUG & PLAY



USB



LCD DISPLAY (1-3kVA)

## TECHNICAL SPECIFICATIONS

MODEL	SS LCD 210		SS LCD 220	SS LCD 230
Power(kVA)	1		2	3
INPUT				
Voltage	160VAC - 288VAC			
Frequency	50/60 Hz ± 5% [Auto-sensing]			
Power Factor	>0.99			
OUTPUT				
Power Factor	0.8			
Voltage	220VAC / 230 / 240VAC			
Voltage Regulation	±1%			
Frequency	50/60 Hz			
Frequency Regulation	± 0.1%			
Output Voltage Harmonic (THDv)	<3%			
Crest Factor	3:1			
Output Waveform	Sinusoidal			
Overload Capacity	100%-120% for 30 seconds			
	120%-150% for 10seconds			
Whole efficiency	>85%			>88%
Transfer Time	0ms			
Outlets	6 pcs IEC C13 or 2pc German Std. Socket	6 pcs IEC C13 or 2pcs German Std. Socket		4pcs IEC C13 or 2pcs German Std. Socket
BATTERY				
Type	Maintenance-free lead acid batteries			
Recharge Time	3 hours (to 90% of full capacity)			
Voltage	36VDC	72VDC		
Internal Battery	3pcs 12V 7Ah	6pcs 12V 7Ah		6pcs 12V 9Ah
Back Up Time	Full Load	5 min		4 min
	Half Load	12 min		10 min
Cold Start	YES			
DISPLAY				
LED Display	Utility or Bypass, Battery Low, Battery Abnormal, Overload, Site Wiring Fault, Service Mode, UPS Off, UPS Abnormal			
LCD Display	Input /Output Voltage and Frequency Values, Load%, Battery Voltage, Internal Temperature			
ALARMS				
	Line Failure, Battery Low, Over Load, Failure Events			
PROTECTIONS				
	Short Circuit, Over Temperature, Overload, High Voltage, Battery Low, EPO			
COMMUNICATION				
Interface	RS232 and USB			
ENVIRONMENT				
Temperature	0°C - 40°C			
Humidity	0 - 95% (non-condensing)			
Noise Level(1m distance)	<50dBA [at 1 meter]			
Protection Class	IP 20			
PHYSICAL				
Net Weight (kg)	16	29.5		30
Dimensions (mm) WxDxH (Rack)	440x450x88 [2U]	440x650x88 [2U]		440x650x88 [2U]
STANDARDS				
	EN 62040-1-1 (safety), EN 62040-2(EMC)			
ACCESSORIES				
	Internal&External SNMP, Dry Contact Board, External Manual Bypass, Rail Kit, Software			



HOME/OFFICE

DATA CENTER

MEDICAL

INDUSTRY

TRANSPORTATION

EMERGENCY

# DSP EVO

## 1 Phase In - 1 Phase Out / 6kVA – 10kVA

- On-Line Double Conversion Technology
- Microprocessor controlled
- High Output Power Factor (PF:0.9)
- Extended back up time with battery cabinet
- User friendly LCD display
- High Efficiency
- Wide Input Voltage & Frequency Range
- 3-stage smart battery charging method, automatic Battery Test mode
- Adjustable Battery voltage and charging current
- Cold Start Function
- Wide communication option  
Standard: USB, RS-232, EPO  
Optional: SNMP &, Relay card
- Load-controlled fan feature
- Frequency Converter Operation Mode (50-60Hz)
- ECO Mode operation feature
- Environment friendly



UPS ONLINE



TOWER



USB

LCD DISPLAY  
(6-10kVA)

SERVICE

## TECHNICAL SPECIFICATIONS

MODEL	DSP EVO 6K	DSP EVO 10K
Capacity (kVA/kW)	6kVA/5.4kW	10kVA/9kW
INPUT		
Phase	1Ph+N+PE	
Nominal Voltage	220/230/240VAC	
Input Voltage Range*	120VAC-276VAC	
Nominal Frequency	50/60 Hz (Auto-sensing)	
Frequency Range	45Hz-65Hz	
Power Factor	≥0.99	
Input Current Harmonics (THDi)	≤5% (100% linear load, input THDv≤1%)	
Bypass Voltage Range	220Vac max:+25% (+10% ,+15%, 20% , 25%), 230Vac max: +20% (+10% ,+15%, 20% ) 240Vac max: +15% (+10% ,+15%), min: default -45% [-20%, -30%, -45%, ]	
Generator Input	Present	
OUTPUT		
Phase	1Ph+N+PE	
Nominal Voltage	220/230/240VAC	
Power Factor	0.9	
Voltage Regulation	±1%	
Frequency	50/60Hz /(±0.1%)	
Crest Factor	3:1	
Output Voltage Harmonic (THDv)	≤3% @ linear load, ≤5% @ non linear load	
Waveform	Pure Sinewave	
Efficiency**	≥90%	
BATTERY		
Battery Number	16/18/20 pcs (Adjustable)	
Internal Battery	16 x 12V 7-9 Ah (Built-in as standard)	
Battery Type	VRLA	
Standard Charge Current	1A	
Charge Current (Max.)	6A (Adjustable)	
Charge Time (90%)	8~10 Hr. (Adjustable)	
Transfer Time	Online Mode-Battery Mode: 0ms; Online Mode-Bypass: 0ms	
PROTECTION		
Overload	105% ~ 110%10 min. 110% ~ 130% 1 min, >130% switch to bypass immediately	
Short Circuit	System stops	
Over Temperature	Online Mode: switches to Bypass; Battery Mode: UPS shuts down immediately	
Battery Low	Alarm and Shutdown	
Self-Test	Software testing at startup	
EPO	UPS shuts down immediately	
Battery	Advanced Battery Management	
ALARMS		
Audible and Visual Alarms	Input fault, Low Battery, Overload, System fault	
DISPLAY		
Status LED & LCD	Online Mode, Battery Mode, Eco Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Failure	
LCD	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load %, Battery Voltage, Internal Temperature and Ambient Temperature	
PHYSICAL		
Dimensions - WxHxD (mm)	191x720x460	
Net Weight (kg)	60	61
COMMUNICATION***		
	Standard:USB, RS232, EPO, Optional: SNMP and Relay card	
ENVIRONMENT		
Operating / Storage Temperature	0°C ~ +40°C / -25°C ~ +55°C	
Humidity	0 - 95% (non-condensing)	
Altitude	< 1500m	
Noise Level (1m distance)	<55dB (@1 mt)	
STANDARDS		
	CE, EN/IEC 62040-1-1, EN/IEC 62040-2	

\* Depends on the power rating and the amount of load at the output of UPS.

\*\* It depends on UPS power and environmental conditions.

\*\*\*Please contact to your sales representative for communication options.

# DSP Multipower Convertible

1 Phase In - 1 Phase Out / 5kVA – 10kVA

3 Phase In - 1 Phase Out / 10kVA – 20kVA

- On-line 'double conversion' technology
- Real Digital Signal Processor (DSP) Controller
- Parallel redundant operation up to 4 units
- Input Power Factor Correction PFC
- High output power factor (PF: 0.9)
- Low total harmonic distortion (THD) level
- Convertible display helps to use both for tower and rack applications
- Transformerless Design
- Availability to configure as 50/60Hz Frequency Converter from LCD Panel
- High Performance with the PWM Sinewave Topology
- Cold Start Function
- Intelligent Battery Management System extends the life time of batteries
- Overload, Overheat & Short Circuit Protections
- User Friendly Multi-Functional LED/LCD Display Panel
- Energy Saving Mode (ECOMODE)
- Smart Fan Speed Regulation with temperature controlled
- RS232 Communication Port & Management Software
- Internal SNMP, DRY contact, RS485 card options



## TECHNICAL SPECIFICATIONS

MODEL	DSPMP-1105	DSPMP-1106	DSPMP-1110	DSPMP-3110	DSPMP-3115	DSPMP-3120
Power (kVA)	5	6	10	10	15	20
Power (kW)	4.5	5.4	9	9	13.5	18
INPUT						
Phase Configuration	1Ph + N + PE (Hardwire)			3Ph + N + PE (Hardwire)		
Nominal Voltage	220VAC/230VAC/240VAC			380VAC/400VAC/415VAC		
Minimum Voltage [at Half load]	160VAC			277VAC		
Minimum Voltage [at Full load]	180VAC			312VAC		
Maximum Voltage	280VAC			485VAC		
Frequency				45-65 Hz		
Power Factor	0.99			0.95		
OUTPUT						
Power Factor				0.9		
Phase Configuration				1Ph + N + PE (Hardwire)		
Nominal Voltage				220VAC / 230VAC / 240VAC		
Wave Form				Pure Sine Wave		
Total Harmonic Distortion at 100% linear load				<3%		
at 100% non-linear load				<5%		
Frequency				50Hz or 60Hz (adjustable)		
Frequency Tolerance[free running]				±0.1 %		
Frequency Synchronized Range				±1Hz; ±3Hz (selectable)		
Static Voltage Regulation [0%-100% load]				<1%		
Crest Factor				3		
Transfer Time				0sec		
Overload				Up to 10min. @100%-120%		
				Up to 1min. @120%-150%		
				Transfer to bypass @ >150%		
Total Efficiency	up to 90%		up to 91%		up to 93%	
Greenmode efficiency				>97%		
Outlets	External Socket Box (2 pcs German Std. Socket, 4 pcs IEC C13 Outlets) Optional					
BATTERY						
Type	Maintenance-free lead acid batteries					
Recharge Time	4-6h up to 90%					
Voltage	240VDC			192VDC for 16 pcs 240VDC for 20 pcs (20 pcs 12V Batteries) or (16 pcs 12V Batteries)**		
Quantity per string	20 pcs 12V Batteries					
Internal batteries	20 pcs 12V 4.5Ah (internal battery version only)		N/A			
Built in max. Charge Current	1.6A		4A			
Cold Start	Present					
DISPLAY						
LED + LCD Display	Line Mode, Backup Mode, ECO Mode, Bypass Supply, Battery Low, Battery Bad/Disconnect, Overload and Transferring with Interruption & UPS Fault					
LCD display	Input Voltage, Input Frequency, Output Voltage, Output Current, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature.					
Self Diagnostics	Upon Power-on, Front Panel Setting & Software Control, 24-hour routine checking					
Audible and Visual Alarms	Line Failure, Battery Low, Transfer to Bypass, System Fault Conditions					
PROTECTION						
Overload Protection	Bypass transfer time is calculated by simulating a temperature related model of a fuse					
Short Circuit Protection	Acts as the ideal current source during the short circuit time					
Other Protection	Against excessive (heat,voltage,current) intense battery discharge					
COMMUNICATION						
Interface [Communication ports]	Standard RS232 port and optional RS485, Internal SNMP, Dry Contact Cards					
ENVIRONMENT						
Operating Temperature	0 °C.... + 40 °C					
Proposed Temp. to extend battery life	20 - 25 °C					
Humidity	0 - 95% (non-condensing)					
Audible Noise at 1 m	<50 dB			<60 dB		
Protection Class	IP 20					
PHYSICAL SPECIFICATIONS (tower position)						
Net Weight (power module)	25kg		26kg	28kg	36 kg	
Net Weight [with internal batteries]	55kg		85kg with 9Ah battery		-	
Dimensions (mm) [WxDxH]-power module [Rack]	440x680x88 [2U]		440x680x132 [3U]		440x720x220 [5U]	
Dimensions[mm] [WxDxH]- w/battery vers. [Rack]	440x680x176 [4U]		-		-	
STANDARDS						
Standards	EN62040-1-1 [safety]; EN62040-2 [EMC];EN62040-3[performance]; EN60950-1					
ACCESSORIES						
	Internal&External SNMP, Dry Contact Board, External Manual Bypass, Rail Kit, External Battery Connection Cable, External Socket Box, External Additional Charging Board Software					
** Availability to use 16pcs 12V batteries per string if load is less than 85%						

\*\* Availability to use 16pcs 12V batteries per string if load is less than 85%



# DSP Flexipower

1 Phase In - 1 Phase Out / 3kVA - 10kVA

3 Phase In - 1 Phase Out / 10 kVA

- On-Line Double Conversion Technology
- Real Digital Signal Processor (DSP) Controller
- Power Factor Correction
- High output power factor
- Parallel redundant operation up to 4 units (excluding 3kVA)
- Integrated Manual Bypass (excluding 3kVA)
- Low total harmonic distortion (THD) level
- Transformerless Design
- High Performance with the PWM Sinewave Topology
- Cold Start Function
- Intelligent Battery Management System extends the life time of batteries
- Overload, Overheat & Short Circuit Protections
- Emergency Shutdown Control through EPO
- User Friendly Multi-Functional LED/LCD Display Panel
- Energy Saving Mode (ECOMODE)
- RS232 Communication Port & Management Software
- Internal SNMP, Dry contact and RS485 card options
- Possible to operate as 50Hz/60Hz Frequency Converter
- Extended Back up time with External Battery Cabinet



UPS ONLINE



TOWER

LCD DISPLAY  
(3-10kVA)

SERVICE

## TECHNICAL SPECIFICATIONS

MODEL	FP1103	FP1105	FP1106	FP1108	FP1110	FP3110
Power (kVA)	3	5	6	8	10	10
Power (kW)	2.4	4.5	5.4	7.2	9	9
INPUT						
Phase Configuration	1Ph + N + PE					3Ph + N + PE
Nominal Voltage	220V/230/240V					380V/400V/415V
Minimum Voltage	160 V	180 V			320 V	
Maximum Voltage	288 V	280 V				485 V
Frequency	± 5 Hz	45 - 65 Hz				
Power Factor	0.99					
OUTPUT						
Power Factor	0.8	0.9				
Phase Configuration	1Ph + N + PE					
Nominal Voltage	220V / 230 / 240V (adjustable)					
Wave Form	Pure Sine Wave					
Total Harmonic Distortion at 100% linear load	<3%					
Frequency	50Hz or 60Hz (adjustable)					
Frequency Tolerance (free running)	±0.2 %					
Static Voltage Regulation (0%-100% load)	<1%					
Crest Factor	3:1					
Transfer Time	0 sec					
Overload	30 sec @ (106%-120%)	2min @ (100%-120%)				
	10 sec @ (120%-150%)	30sec @ (120%-150%)				
Total Efficiency	≥90%	Transfers to Bypass @150%				
		≥92%				
BATTERY						
Type	Maintenance-free lead acid batteries					
Recharge Time (for Internal Battery)	4-6h up to 90%					
Quantity per String	6pcs 12V Batteries	20 pcs 12V Batteries				
Voltage	72 VDC	240VDC				
Internal Batteries (Optional)	7Ah, 9Ah					
Cold Start	Present					
DISPLAY						
LED + LCD Display	Line Mode, Back up Mode, Eco Mode, Bypass Supply, Battery Low, Battery Bad/Disconnect, Overload, UPS Fault, Interruption during transfer					
LCD Display	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load%, Battery Voltage, Internal Temperature					
Self Diagnostics	Upon Power On, Front Panel Setting and Through Software Control, 24h routine Check					
PROTECTION						
Overload Protection	Bypass transfer time is calculated by simulating a temperature related model of a fuse					
Short Circuit Protection	Acts as the ideal current source during the short circuit time					
Other Protection	Against excessive (heat, voltage, current) intense battery discharge					
COMMUNICATION						
Interface (Communication ports)	Standard RS232 port and optional RS485, Internal SNMP, Dry Contact Cards					
ENVIRONMENT						
Operating Temperature	0 °C.... + 40 °C					
Proposed Temp. to extend battery life	20 - 25 °C					
Humidity	0 - 95% (non-condensing)					
Audible Noise at 1 m	<50 dB					<52 dB
Protection Class	IP 20					
PHYSICAL SPECIFICATIONS						
Dimensions(mm) (HxWxD)	449x226x454	585x254x710				
Weight - without battery (kg)	19	30	38		45	
STANDARDS						
Standards	EN62040-1-1 (Safety); EN62040-2 (EMC)					
ACCESSORIES						
Optional	Internal&External SNMP, Dry Contact Board, Monitoring and Management Software, Internal Battery Holder Apparatus, Additional Charging Set					





# DSP Multipower

3 Phase In - 1 Phase Out / 15kVA – 20kVA

- On-Line Double Conversion Technology
- Real Digital Signal Processor (DSP) Controller
- Parallel redundant operation up to 4 units (Optional)
- Increased Input Power Factor (PF:0.95)
- Transformerless Design
- Cold Start Function
- Overload, Overheat & Short Circuit Protections
- User Friendly Multi-Functional LED/LCD Display Panel
- Energy Saving Mode (GREEN MODE)
- Intelligent Battery Management System
- RS232 Communication Port & Management Software
- SNMP, Dry Contact, RS485, USB Card options



## TECHNICAL SPECIFICATIONS

MODEL	DSPMP-3115T		DSPMP-3120T
Power (kVA)	15		20
Power (kW)	13.5		18
INPUT			
Phase Configuration	3Ph + N + PE (Hardwire)		
Nominal Voltage	380VAC/400VAC /415VAC		
Minimum Voltage (at 75% Load)	277VAC		
Maximum Voltage	485VAC		
Frequency	45-65 Hz		
Power Factor (@linear load)	0.95		
OUTPUT			
Power Factor	0.9		
Phase Configuration	1Ph + N + PE (Hardwire)		
Nominal Voltage	220VAC/230VAC/240VAC		
Wave Form	Pure Sine Wave		
Total Harmonic Distortion at 0 to 100% linear load	<3%		
Frequency	50Hz or 60Hz (adjustable)		
Frequency Tolerance (free running)	±0.2%		
Frequency Synchronized Range	±1Hz or ±3Hz (selectable)		
Voltage Regulation	±2%		
Crest Factor	3		
Transfer Time	0sec		
Total Efficiency	> 91%		
Greenmode Efficiency	> 95%		
BATTERY			
Type	Maintenance-free lead acid batteries		
Voltage	240VDC		
Quantity per string	20pcs 12V Batteries		
Built in max. Charge Current	4A		
DISPLAY			
LED + LCD Display	Line Mode, Backup Mode, ECO Mode, Bypass Supply, Battery Low, Battery Bad/Disconnect, Overload and Transferring with Interruption & UPS Fault		
LCD display	Input Voltage, Input Frequency, Output Voltage, Output Current, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature.		
Self Diagnostics	Upon Power-on, Front Panel Setting & Software Control, 24-hour routine checking		
Audible and Visual Alarms	Line Failure, Battery Low, Transfer to Bypass, System Fault Conditions		
COMMUNICATION			
Interface (Communication ports)	Standard RS232 port and optional RS485, Internal SNMP, Dry Contact Cards		
ENVIRONMENT			
Operating Temperature	0 °C - 40 °C		
Proposed Temp. to extend battery life	20 - 25 °C		
Humidity	0 - 95% (non-condensing)		
Audible Noise at 1 m	<60 dB		
Protection Class	IP 20		
PHYSICAL SPECIFICATIONS			
Net Weight	60kg	62kg	
Dimensions (mm) (WxDxH)	290x650x770		
STANDARDS			
Standards	EN62040-1-1 (Safety); EN62040-2 (EMC); EN62040-3 (Performance); EN60950-1		
ACCESSORIES			
Optional	Internal&External SNMP, Dry Contact Board, External Manual Bypass, External Battery Connection Cable, External Additional Charging Board Software		



# Saver Plus DSP

3 Phase In - 1 Phase Out / 15kVA - 20kVA

- On-line 'double conversion' technology
- Real Digital Signal Processor (DSP) controlled, IGBT technology
- Wide input voltage range (140V-480V)
- Input Power Factor Correction PFC (PF: >0.97)
- Intelligent Battery Management System extends the life time of batteries
- Transformerless Design
- Small Dimensions
- Manual Bypass
- LCD display
- RS 232 and relay interface
- Management and monitoring software available for all operating systems and SNMP support



UPS ONLINE



TOWER

LCD DISPLAY  
(15-20kVA)

SERVICE

## TECHNICAL SPECIFICATIONS

MODEL	SD3115	SD3120
Power	15kVA	20kVA
INPUT		
Nominal Voltage	380 V / 400V / 415V 3Phase, N	
Minimum Voltage	140V 3Phase, N	
Minimum Voltage (at full load)	260V 3Phase, N	
Maximum Voltage	480V 3Phase, N	
Frequency	50 - 60Hz (45 to 65 Hz)	
Nominal Current	17.4 A / phase	23.3 A / phase
Maximum Current	53 A peak / phase	71 A peak / phase
Power Factor	>0.97	
OUTPUT		
Power Factor	0.7	
Nominal Voltage	220V / 230V (adjustable)	
Wave Form	Sinus	
Total Harmonic Distortion	< 3%	
Frequency	50Hz or 60Hz (adjustable)	
Voltage Regulation (Static)	1%	
Crest Factor	3	
Overload	> 30s (at 150 % load)	
Total Efficiency	> 91%	
BATTERY		
Type	Maintenance-free lead acid batteries	
Quantity per string	32pcs 12V Batteries	
Voltage	384VDC	
Recharge Time for Internal Batteries	< 4 h	
Discharge Current	< 10%	
Internal Batteries (Optional)	12Ah	
Warning	Audible Buzzer through the end of Battery Discharge	
DISPLAY		
LED Panel	Line, Bypass, Battery, Inverter, Overload, Fault Indicators	
LCD Panel	Load%, Battery Temperature, Input&Output&Battery Voltages, Output Frequency	
STATIC BY-PASS		
Voltage Tolerance	10% (adjustable)	
Frequency Tolerance	3Hz (adjustable)	
Transfer Time	0 ms	
PROTECTION		
Protections	Overload Protection, Short Circuit Protection, High Temperature, Over Voltage, Over Current	
COMMUNICATION INTERFACE		
Interface (Communication Ports)	RS 232	
Dry Contact Signals	Ups shutdown, mains failure, low battery, by-pass active, summary alarm	
ENVIRONMENT		
Temperature	0 - 40 °C	
Suggested Temp. to extend battery life	20 - 25 °C	
Humidity	0 - 95% (non-condensing)	
Audible Noise (from 1m distance)	< 55 dB	
Protection Class	IP 20	
PHYSICAL SPECIFICATIONS		
Net Weight - without battery (kg)	103.5	108
Dimensions (mm) (WxDxH)	430x870x970	
STANDARDS		
Standards	EN 62040-1-1 (Safety), EN 62040-2 (EMC)	
ACCESSORIES		
Optional	External SNMP, Monitoring and Management Software, Remote Monitoring Panel, Additional Charging Set, Internal Galvanic Isolation Transformer	



# Stark

## 3 Phase In - 3 Phase Out / 10 – 20kVA

- IGBT Rectifier & Inverter
- Real Digital Signal Processor (DSP) controlled
- Input Power Factor Correction PFC (PF:  $\geq 0.99$ )
- Low Input Total Harmonic Distortion Level (THDi  $\leq 3\%$ )
- Wide Input Voltage Range
- High Output Power Factor (PF: 0.9)
- Cold Start Availability
- Increased Efficiency with Eco Mode Operation
- Transformerless design
- High Efficiency
- User Friendly LCD/LED Display Panel with functional keypads
- Static and Manual Bypass Built-in
- High charging current
- Fan Speed Control depending on internal temperature and load %
- Wide Communication Option  
Standard: RS232, RS485 (ModBus) and EPO  
Optional: SNMP, Relay card
- Increased battery supply time (optional)
- Low cost of installation and operating
- Compact dimension with internal battery placement availability



UPS ONLINE



TOWER



USB

LCD DISPLAY  
(10-20kVA)

SERVICE

## TECHNICAL SPECIFICATIONS

MODEL	STK 3310	STK 3315	STK 3320
Capacity (kVA/kW)	10kVA/9kW	15kVA/13.5kW	20kVA/18kW
INPUT			
Phase	3Ph + N + PE		
Nominal Voltage	380 / 400 / 415 VAC		
Input Voltage Range*	208-478 VAC		
Frequency	50/60 Hz ±10% (Auto-sensing)		
Input Power Factor	≥0.99		
Input Current Harmonics (THDi)	≤3%		
OUTPUT			
Output Power Factor	0.9		
Phase	3Ph + N + PE		
Nominal Voltage	380 / 400 / 415 VAC (Adjustable from the front panel)		
Output Voltage Harmonic (THDv)	≤2% Linear Load ≤5% Nonlinear Load		
Frequency	50Hz or 60Hz (Adjustable from the front panel)		
Frequency Range	Utility Mode: ±1% ±2% ±4% ±5% ±10% of the rated frequency (optional) Battery Mode: (50/60±0.2%)Hz		
Voltage Regulation	±1%		
Crest Factor	3:1		
Transfer Time	Online Mode-Battery Mode: 0ms; Online Mode-Bypass: 0ms		
Overload	AC Mode: Load≤110%: last 60min, ≤125%: last 10min, ≤150%: last 1min, >150% change to bypass immediately Battery Mode: Load≤110%: last 10min, ≤125%: last 1min, ≤150%: last 5s, >150% shut down UPS immediately		
Efficiency**	up to 94%		
BATTERY			
Type	Maintenance-free lead acid batteries		
Recharge Time (for Internal Battery)	4-6h up to 90%		
Internal Battery Quantity/Type (Standad)	16x12V 9 Ah	32x12V 9 Ah	
Battery Quantity (optional)	16/18/20 pcs (optional)	32/34/36/38/40 pcs (optional)	
Standard Charging Current	1.35A	2.7A	
Max Charging Current	6A (Adjustable)		
Cold Start	Present		
ALARMS			
Audible & Visual	Online Failure, Battery Low, Overload, System Fault		
DISPLAY			
Status LED & LCD	Line Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault		
LCD Display	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature		
PROTECTION			
	Overload, Short Circuit, Overheat, Battery Low,		
COMMUNICATION***			
	Standard:RS232, RS485, EPO Optional: SNMP card and Relay card		
ENVIRONMENT			
Operating Temperature	0°C - 40°C (20°C - 25°C recommended range for long battery life)		
Storage Temperature	-25°C - +55°C		
Humidity	0 - 95% (non-condensing)		
Altitude	1500 m		
Noise Level (1m distance)	<55 dB		
Protection Class	IP20		
PHYSICAL			
Dimensions (mm) (WxDxH)	250x645x715	250x645x868	
Net Weigh (without batteries) ( kg )	42	53	54
Net Weigh (with batteries) ( kg )	80	120	121
STANDARDS			
	EN62040-1-1 (Safety); EN62040-2 (EMC)		

\* Depends on the power rating and the amount of load at the output of UPS.

\*\* It depends on UPS power and environmental conditions.

\*\*\* Please contact to your sales representative for communication options.



# ESTIA UPS

3 Phase Input - 3 Phase Output / 10 - 60 kVA

NEW  
PRODUCT

- On-Line "Double Conversion" technology
- IGBT Rectifier & Inverter
- Real DSP (Digital Signal Processor) Controlled Processor
- High Input Power Factor (PFC > 0.99)
- High Efficiency
- Low Input Current Harmonics (THDi < 3%)
- Low Output Voltage Harmonics (THDv < 1.5%)
- Easy-use LCD Display
- Energy Saving Mode (ECO Mode)
- Cold Start
- Wide Frequency and Voltage Range
- Smart Battery Management Software & Deep Discharge Protection
- Automatic Battery Test Feature
- Adjustable Battery Quantity (10-20kVA)
- External Battery Support for Long Backup time (External Battery Version)
- Battery Recharge Support with High Current (up to 9A)
- Standard built-in Static and Manual Bypass
- Short circuit and Overload Protection
- Built-in Back Feed Protection
- Temperature Controlled Smart Fan Speed Regulation
- Frequency Converter Operation Mode Selection
- Generator Compatible Operation
- Advanced Event Log
- Statistical Daily Data Log
- Comprehensive Communication Options
- Standard: RS-232, USB, EPO, GENSET, STS Sync
- Optional: SNMP, Relay Card, Modbus
- Two Years Full Warranty in accordance with ISO 9001, ISO 14001, CE standards
- INFORM 7/24 Technical Support and Customer Services



UPS ONLINE



TOWER



USB



LCD DISPLAY  
(10-60kVA)



SERVICE





# Estia

## TECHNICAL SPECIFICATIONS

MODEL	ESTIA 33010	ESTIA 33015	ESTIA 33020	ESTIA 33030	ESTIA 33040	ESTIA 33060
Capacity (kVA/kW)	10kVA / 9kW	15kVA / 13,5kW	20kVA / 18 kW	30kVA / 27kW	40kVA / 36kW	60kVA / 54kW
INPUT						
Phase Number	3Ph + N + PE					
Nominal Voltage	380 / 400 / 415 VAC					
Voltage Range (VAC) [100% Load]*	[-15%] [+20%]					
Voltage Range (VAC) [50% Load]*	[-45%] [+20%]					
Frequency	50/60 Hz ±10% (Auto Sensing)					
Input Power Factor	>0.99					
Input Current Harmonics (THDi) **	<3%					
OUTPUT						
Output Power Factor	0.9					
Phase Number	3Ph + N + PE					
Nominal Voltage	380 / 400 / 415 VAC (Adjustable from LCD menu)					
Voltage Harmonics (THDv) **	< 1.5% (Linear Load), <3% (Nonlinear Load)					
Frequency	50Hz or 60Hz (Adjustable from LCD menu)					
Frequency Tolerance	Utility Mode: Rated frequencies ±1% ±2% ±4% ±5% ±10% Battery Mode: (50/60±0.2%)Hz					
Voltage Regulation	±1%					
Crest Factor	3:1					
Transfer Time	Online-Battery : 0ms; Online-Bypass: 0ms					
Overload*	10 minute at 125% load, 1 minute at 150% load					
Efficiency*	Up to 93%					
STATIC BYPASS						
Static Bypass Voltage Tolerance	380/400/415 VAC (Adjustable from LCD menu -15% +12%)					
Static Bypass Frequency Tolerance	47 Hz - 53 Hz (Adjustable)					
BATTERY						
Battery Connection	One String			Two Strings (with central neutral point)		
Type	Maintenance-Free Dry Type					
Recharge Time (For Internal Battery)	4-6 hours up to 90%					
Battery Qty (Compact Standard Bat.)	16x12V 9 Ah 32x12V 9 Ah	24x12V 9 Ah	32x12V 9 Ah	-		
Battery Qty (Compact External Bat.)	16-32 pcs (on request)	24-32 pcs (on request)	32 pcs	-		
Battery Qty (Tower Internal Bat.)	64x12V 9 Ah			62x12V 9 Ah	124x12V 9 Ah	
Battery Qty (Tower External Bat.)	16-32 pcs (on request)	24-32 pcs (on request)	32 pcs	62 pcs		
Recharge Current (Max.)	max. up to 9A (Adjustable)					
Cold Start (Start-up without mains)	Present					
ALARMS						
Audible & Visual	48 type alarms (Details can be found in User manual)					
Event Log	1024 pcs					
DISPLAY						
Indicator LED & LCD	Online mode, Bypass mode, Battery Low, Overload & UPS Failure					
LCD Display	Input Voltage, Current & Frequency, Output Voltage, Current & Frequency, Output power values (KVA, KW), Load Power Factor (PF), Load Rate, Battery Voltage & Current, Battery backup time, Bypass Voltage & Frequency, Output Current, Crest Factor, Internal Temperature					
PROTECTION						
	Overload, Short circuit, High Temperature, Battery Deep Discharge					
COMMUNICATION ***						
	Standard:RS232, USB, EPO, GENSET, STS SYNC Optional: SNMP, Dry Contact, Modbus (RS485)					
ENVIRONMENT CONDITIONS						
Operation Temperature Range	0°C - 40°C (20°C - 25°C recommended temperature for long battery life)					
Storage Temperature	-25°C - +55°C (15 - 40°C recommended temperature for long battery life)					
Humidity	0 - 95% (non-condensing)					
Operational Altitude	1500 meter					
Noise Level (from 1m distance)*	<55dBA					
Protection Class	IP20					
PHYSICAL SPECIFICATIONS						
Dimensions (mm) (WxDxH) Compact	295x620x875			-		
Dimensions (mm) (WxDxH) Tower	389x800x1170				506x800x1326	
Weight (w/o battery) [Compact]	48 kg	54 kg		-		
Weight (with 12V 9Ah) [Compact]	16 Blocks 88 kg 32 Blocks 128 kg	24 Blocks 114 kg	32 Blocks 134 kg	-		
Weight (w/o battery) [Tower]	87 kg	96 kg	100 kg	107 kg	138 kg	156 kg
Installation Type	Floor, Wheeled (Tower)					
STANDARDS						
	EN 62040-1(Safety). EN 62040-2 (EMC). EN 62040-3 (VFI-SS-111)					

\* Depending on rated power and load rate at the output

\*\* Depending on UPS power and environmental conditions

\*\*\* Please contact with your sales representative for communication options.

INFORM reserves the right to change the information contained herein without notice

## Estia Hybrid Solar UPS

3 Phase In - 3 Phase Out / 10-20 kVA

Get your energy from the sun with Inform's new generation HYBRID UPS.

UPS + OFF-GRID INVERTER + ON-GRID INVERTER + HYBRID INVERTER + ENERGY STORAGE

### UPS Operation Mode

The energy needed by the load is primarily provided from the grid. In case of failure or failure of the grid, the energy needed is supplied from the battery group inside the Estia Hybrid.

### Off-Grid Inverter Operation Mode

The energy needed by the load is primarily provided from the sun. After sunset or when the panels fail to produce, the energy needed continues to be provided from the battery pack.

### On-Grid Inverter Operation Mode

The energy needed by the load is provided primarily from the sun and is supplied from the grid where the solar energy is not sufficient. If the load is low, the energy generated from the solar panels is transferred to the grid.

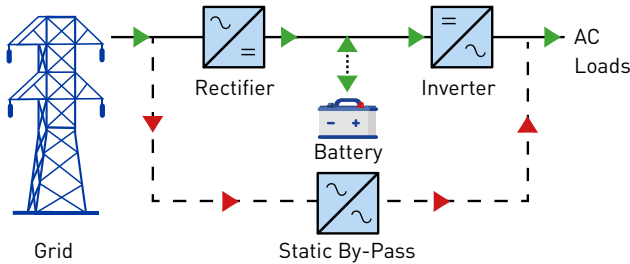
### Hybrid Inverter Operation Mode

The energy needed by the load is provided primarily from the sun and is supplied from the grid where the solar energy is not sufficient. In case of failure or failure of the grid, the energy needed is supplied from the battery group in the Estia Hybrid.

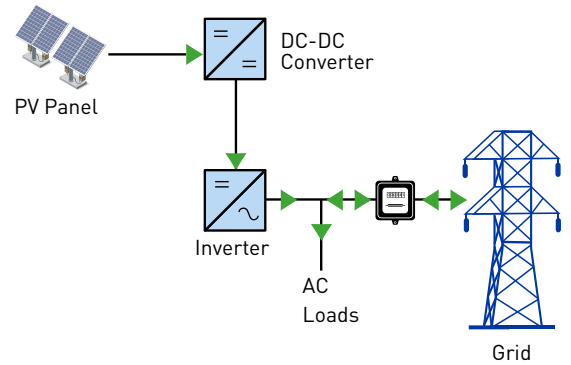
YENİ  
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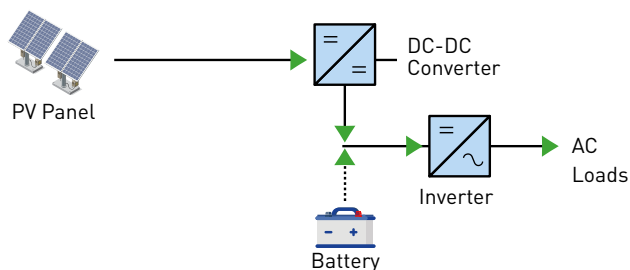
### UPS Operation Mode



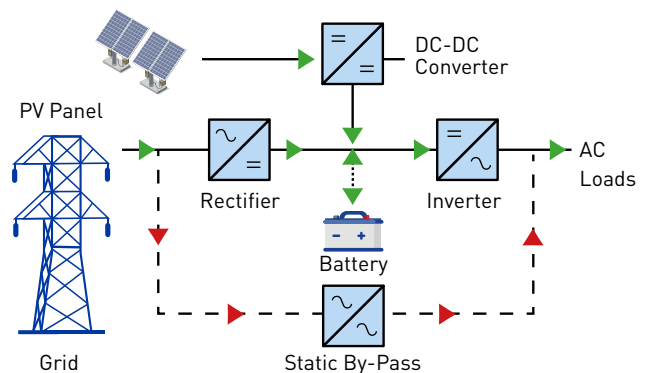
### On-Grid Inverter Operation Mode



### Off-Grid Inverter Operation Mode



### Hybrid Inverter Operation Mode



# Estia Hybrid Solar UPS

## TECHNICAL SPECIFICATIONS

MODEL		Estia Hybrid 33010		Estia Hybrid 33015		Estia Hybrid 33020			
POWER		Output Power		10 KVA / 9 kW		15 KVA / 13,5 kW		20 KVA / 18 kW	
UPS OPERATION (Grid- Battery)									
GRID INPUT (AC)	Input Voltage - Phase number		380/400/415 VAC / 3Ph+N+PE						
	Input Voltage Range		195V-260V at 100% load, 145V-260V at 50% load						
	Input Frequency Tolerance		45-65 Hz						
LOAD OUTPUT (AC)	Output Voltage - Phase number		380/400/415 VAC / 3Ph+N+PE						
	Output Frequency		50 / 60 Hz						
	Overload		10min at 125% load, 1min at 150% load						
STATIC BY-PASS	Static Bypass Voltage Tolerance		380/400/415 VAC (Adjustable from LCD front panel -15% +12%)						
	Static Bypass Frequency Tolerance		47 Hz - 53 Hz (Adjustable)						
BATTERY & CHARGE CONTROL	Battery Type		Maintenance free type (VRLA), Lithium Iron Phosphate / Gel / Lead Acid						
	Nominal Battery Voltage		192-384 VDC (16-32pcs 12V)		288-384 VDC (24-32pcs 12V)		384 VDC (32pcs 12V)		
	Max. Battery Charge Current		5A						
HYBRID OPERATION (Grid-Battery-PV)									
PV INPUT (DC)	Max. PV Input Power		9000 W						
	Max. PV Voltage/MPPT Voltage range		600 VDC / 400-600 VDC						
	Min. PV Operation Voltage		200 VDC						
	MPPT Qty / Max. MPPT Input Current		1 / 24A						
GRID OUTPUT (AC)	Grid Output Voltage – Phase number		380/400/415 VAC / 3Ph+N+PE						
GRID INPUT (AC)	Grid Input Voltage Range		195V-260V at 100% load, 145V-260V at 50% load						
	Automatic Operation Voltage		195-260 VAC						
BATTERY & CHARGE CONTROL	Nominal Battery Voltage		192-384 VDC (16-32pcs 12V)		288-384 VDC (24-32pcs 12V)		384 VDC (32pcs 12V)		
	Max. Battery Charge Current		5A						
OFF-GRID OPERATION (Battery-PV)									
PV INPUT (DC)	Max. PV Input Power		9000 W						
	Automatic Operation Voltage (Cold Start)		166 VDC		250 VDC		333 VDC		
	Max. PV Voltage/MPPT Voltage range		600 VDC / 400-600 VDC						
	Min. PV Operation Voltage		200 VDC						
	MPPT Qty / Max. MPPT Input Current		1 / 24A						
BATTERY & CHARGE CONTROL	Nominal Battery Voltage		192-384 VDC (16-32pcs 12V)		288-384 VDC (24-32pcs 12V)		384 VDC (32pcs 12V)		
	Max. Battery Charge Current		5A						
LOAD OUTPUT (AC)	Output Voltage – Phase Number		380/400/415 VAC / 3Ph+N+PE						
	Output Frequency		50 / 60 Hz						
ON-GRID OPERATION (Grid-PV)									
PV INPUT (DC)	Max. PV Input Power		9000 W						
	Max. PV Voltage/MPPT Voltage range		600 VDC / 400-600 VDC						
	Min. PV Operation Voltage		200 VDC						
	MPPT Qty / Max. MPPT Input Current		1 / 24A						
GRID OUTPUT (AC)	Grid Output Voltage – Phase number		380/400/415 VAC / 3Ph+N+PE						
GENERAL DATA									
EURO EFFICIENCY	UPS Operation / Solar Operation		93% / 96%						
DISPLAY	Screen		4x16 LCD, LED Display						
COMMUNICATION	Interface / Other		RS-232, USB, Emergency Power Off button (EPO), GENSET, STS SYNC						
	Optional		RS485, Dry Contact, SNMP						
ENVIRONMENT	Storage / Operating Temperature Range		-25°C + 55°C / 0°C + 40°C						
	Humidity / Protection Class		0-95% (non-condensing) / IP20						
	Operating Altitude / Noise		0~1000 m / < 55dBA (Tower)						
	Cooling / Topology		Forced Convection / Transformer-less						
PHYSICAL FEATURES	Dimensions (WxDxH) (mm) (Tower)		389x800x1170						
	Weight (w/o Battery) (Tower)		89 kg		98 kg		102 kg		
	Installation Type		Floor, Wheeled (Tower)						
STANDARDS	Safety / EMC / Certification		IEC/EN 62040-1, IEC/EN 62040-2, IEC/EN 62040-3						



## FORTE

3 Phase In – 3 Phase Out / 10kVA – 250kVA

3 Phase In – 1 Phase Out / 10kVA – 40kVA

- 3 Level IGBT Rectifier & Inverter Technology
- Real Digital Signal Processor (DSP) controlled transformerless design
- High Output Power Factor (PF:1, kVA=kW)
- Increased AC-AC Efficiency (up to 96.5%)
- Unity Input Power Factor (PF: > 0.99)
- Low Input Current THD (<3%)
- Low Output Voltage THD (<2%)
- Wide input voltage range
- Built-in Static & Manual Bypass
- Soft Start Feature
- Parallel connection availability up to 8 units
- Adjustable Battery Qty with optional DC-DC Charger/Booster at 10-15-20kVA Compact version
- Intelligent battery management system extends the life time of batteries
- Colorful Graphical Multi-Functional TouchScreen LCD Panel
- Event Log Display up to 500 Events
- Advanced communication possibility via RS232
- MODBUS connection through RS 485
- Generator Port for Generator Friendly Operation
- EPO Port for Emergency Power Off
- 50/60Hz Frequency Converter Operation Mode (Adjustable from LCD Panel)
- Management and monitoring software available for all operating systems
- Communication with computers and network systems through Optional SNMP
- Optional Programmable 4pcs Relays for dry contact signals
- Compact dimension



UPS ONLINE



TOWER

LCD DISPLAY  
(10-250kVA)

SERVICE

### High Efficiency, Real Economy

- High efficiency of up to 96.5%, reduces the operational cost and provides significant energy saving.
- Continuous Operation, Unique Operational Efficiency, Minimized occupied Installation Area, Maximum Power Delivery, Reduced Infrastructure Material Cost (cable, transformer, generator), Low Cooling Expenses, Optimized TCO (Total Cost of Ownership) features of FORTE guarantees fast return of your investment.



10-20kVA COMPACT

10-30kVA

40-60kVA

80-100kVA

120-250kVA

# FORTE

## TECHNICAL SPECIFICATIONS

MODEL (380-400-415V 3ph version)	FORTE 33010	FORTE 33015	FORTE 33020	FORTE 33030	FORTE 33040	FORTE 33060	FORTE 33080	FORTE 33100	FORTE 33120	FORTE 33160	FORTE 33200	FORTE 33250
Power (kVA)	10	15	20	30	40	60	80	100	120	160	200	250
Active Power (kW)	10	15	20	30	40	60	80	100	120	160	200	250
MODEL (200-208-220V 3Ph version)	FORTE U33005	FORTE U33007	FORTE U33010	FORTE U33015	FORTE U33020	FORTE U33030	FORTE U33040	FORTE U33050	FORTE U33060	FORTE U33080	FORTE U33100	FORTE U33125
Power (kVA)	5	7.5	10	15	20	30	40	50	60	80	100	125
Active Power (kW)	5	7.5	10	15	20	30	40	50	60	80	100	125
INPUT												
Phase	3Ph+N+PE											
Nominal Voltage	380V / 400V / 415V											
Voltage Range (100% Load)	[-15%] [+20%]											
Voltage Range (50% Load)	[-45%] [+20%]											
Nominal Frequency (Hz)	50 or 60											
Frequency Range (Online Mode)	45-65Hz											
Input Current Harmonics (THDi) *	<3%											
Input Power Factor	> 0.99											
OUTPUT												
Output Power Factor	1											
Phase	3Ph+N+PE											
Nominal Voltage	380V / 400V / 415V (adjustable via display)											
Static Voltage Regulation @100% Linear Load	<1%											
Output Voltage Harmonics (THDv) *	< 2% (Linear Load)											
Crest Factor	3:1											
Frequency (Hz)	50 Hz / 60 Hz											
Frequency Range	± 0.01% (Battery Mode)											
Overload	Online – Battery Mode: <125% Load 10 min, <150% Load 1 min BypassMode: <200% continous											
Efficiency*	up to 96.5% (Online) , 98.5% (ECO MODE)											
STATIC BYPASS LINE												
Phase	3Ph+N+PE											
Bypass Voltage Range	380V / 400V / 415V (adjustable via display: -15% +12%)											
Bypass Frequency Range	47 Hz - 53 Hz (adjustable)											
BATTERY												
Type	Maintenance-Free Lead Acid Batteries											
Charge Current (A)	Nominal Charge Current x 0.1 (adjustable via display)											
Battery QTY STANDARD	60											
Battery QTY for FORTE-U version	34											
Internal Battery QTY STANDARD	60pcs 12V 7-9Ah											
Battery QTY COMPACT	20 - 52	30 - 52	36 - 52									
Battery Protection	Deep Discharge Protection, Temperature-compensated Battery Charging											
Battery Test	Standard (Automatic & Manual)											
FRONT DISPLAY PANEL												
Display	3.5" TFT Touch Screen with UPS Operation Modes & Energy Flow Diagram											
Color Graphic Touch Screen TFT	Load %, Input / Output / Bypass Voltage, Output Power (W & VA), Output Current, Output Power Factor, Battery ± Voltage, Input / Output Frequency, DC Bus ± Voltage, Back-up Time, Internal Temperature											
Event Log	500pcs (details can be checked via display)											
COMMUNICATION												
Interface (Communication Port)	RS232 & RS485 MODBUS & SNMP (optional)											
Dry Contact Signals (Optional)	4pcs Relays configurable to ; " General Alarm", "Input Failure", "Battery Failure", "Output Failure", "Bypass Active", "Output Overload",											
Others as standard	High Temperature" Dry contact signals											
ENVIRONMENT												
Storage Temperature (°C)	-25°C - +70°C (15 - 40°C recomended for longer battery life time)											
Operating Temperature (°C)	0 - 40°C (20 - 25 °C recomended for longer battery life time)											
Relative Humidity	0 - 95% ( non-condensing )											
Operating Altitude (maximum m.)	1000 m											
Protection Class	IP20											
Standards	EN 62040-1 (Safety), EN 62040-2 (EMC), EN 62040-3 (Performance), EN 60950											
PHYSICAL SPECIFICATIONS	FORTE 33010 U33005	FORTE 33015 U33007	FORTE 33020 U33010	FORTE 33030 U33015	FORTE 33040 U33020	FORTE 33060 U33030	FORTE 33080 U33040	FORTE 33100 U33050	FORTE 33120 U33060	FORTE 33160 U33080	FORTE 33200 U33100	FORTE 33250 U33125
Dimensions (WxDxH) (cm) - STANDARD	40 x 75 x 110				52 x 89 x 131		67x77x165		85 x 80 x 185			
Weight (w/o battery) kg - STANDARD	100	114	116	122	180	202	253	285	405	522	570	600
Dimensions (WxDxH) (cm) - COMPACT	27 x 80 x 103											
Weight (w/o battery) kg - COMPACT	75	79	81									
OPTIONS												
Parallel Kit, Internal/External SNMP, Split Bypass, Remote Monitoring Panel, Isolation Transformer, Battery Cabinet, Backfeed Protection												

\* May vary depending on UPS power & Load & Environmental Conditions.



HOME/OFFICE

DATA CENTER

MEDICAL

INDUSTRY

TRANSPORTATION

EMERGENCY

# FORTE-T

3 Phase In – 3 Phase Out / 10kVA – 60kVA

- 3 Level IGBT Rectifier & Inverter Technology
- Real Digital Signal Processor (DSP) controlled
- Built-in Output transformer
- Increased Output Power Factor (PF:0.9)
- High AC-AC Efficiency (up to 93%)
- Unity Input Power Factor (p.f. > 0.99)
- Low Input Current THD (<3%)
- Low Output Voltage THD (<2%)
- Wide input voltage range
- Built-in Static & Manual Bypass
- Soft Start Feature
- Intelligent battery management system extends the life time of batteries
- Colorful Graphical Multi-Functional TouchScreen LCD Panel
- Event Log Display up to 500 Events
- Advanced communication possibility via RS232
- MODBUS connection through RS 485
- Generator Port for Generator Friendly Operation
- EPO Port for Emergency Power Off
- Management and monitoring software available for all operating systems
- Communication with computers and network systems through Optional SNMP
- Optional Programmable 4pcs Relays for dry contact signals



## TECHNICAL SPECIFICATIONS

MODEL (380-400-415V 3ph version)	FORTE-T 33010	FORTE-T 33015	FORTE-T 33020	FORTE-T 33030	FORTE-T 33040	FORTE-T 33060
Power (kVA)	10	15	20	30	40	60
Active Power (kW)	9	13,5	18	27	36	54
INPUT						
Phase	3Ph+N+PE					
Nominal Voltage	380V / 400V / 415V					
Voltage Range (%100 Load)	(-15%) (+20%)					
Voltage Range (%50 Load)	(-45%) (+20%)					
Nominal Frequency (Hz)	50 or 60					
Frequency Range (Online Mode)	45-65Hz					
Input Current THD*	<3%					
Input Power Factor	> 0.99					
OUTPUT						
Output Power Factor	0.9					
Phase	3Ph+N+PE					
Nominal Voltage	380V / 400V / 415V (adjustable via display)					
Static Voltage Regulation @%100 Linear Load	<1%					
Output Voltage THD* (Online&Battery Mode)	< 2% (Linear Load)					
Crest Factor	3:1					
Frequency (Hz)	50 Hz / 60 Hz					
Frequency Range	± 0.01% (Battery Mode)					
Overload	"Online - Battery Mode: <125% Load 10 min, <150% Load 1 min Bypass Mode: <200% continous up to 93% (Online)					
Efficiency*	up to 93% (Online)					
STATIC BYPASS LINE						
Phase	3Ph+N+PE					
Bypass Voltage Range	380V / 400V / 415V (adjustable via display: -15% +12%)					
Bypass Frequency Range	47 Hz - 53 Hz (adjustable)					
BATTERY						
Type	Maintenance-Free Lead Acid Batteries					
Charge Current (A)	Nominal Charge Current x 0.1 (adjustable via display)					
Battery QTY STANDARD	54					
Battery Protection	Deep Discharge Protection, Temperature-compensated Battery Charging					
Battery Test	Standard (Automatic & Manual)					
FRONT DISPLAY PANEL						
Display	3.5" TFT Touch Screen with UPS Operation Modes & Energy Flow Diagram					
Color Graphic Touch Screen TFT	Load %, Input / Output / Bypass Voltage, Output Power (W & VA), Output Current, Output Power Factor, Battery ± Voltage, Input / Output Frequency, DC Bus ± Voltage, Back-up Time, Internal Temperature					
Event Log	500pcs (details can be checked via display)					
COMMUNICATION						
Interface (Communication Port)	RS232 & RS485 MODBUS & SNMP (optional)					
Dry Contact Signals (Optional)	4pcs Relays configurable to ; "General Alarm", "Input Failure", "Battery Failure", "Output Failure", "Bypass Active", "Output Overload",					
ENVIRONMENT						
Storage Temperature (°C)	-25°C - +70°C (15 - 40°C recomended for longer battery life time)					
Operating Temperature (°C)	0 - 40°C (20 - 25 °C recommended for longer battery life time)					
Relative Humidity	0-%95 (non-condensing)					
Operating Altitude (maximum m.)	1000 m					
Protection Class	IP20					
Standards	EN 62040-1 (Safety), EN 62040-2 (EMC), EN 62040-3 (Performance), EN 60950					
PHYSICAL SPECIFICATIONS						
Dimensions (WxDxH) (mm) - STANDARD	400 x 750 x 1100			520 x 890 x 1310		
Weight (w/o battery) kg - STANDARD	235	240	251	273	450	502
OPTIONS						
Parallel Kit, Internal/External SNMP, Split Bypass, Remote Monitoring Panel, Battery Cabinet, Backfeed Protection						







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MEDICAL

INDUSTRY

TRANSPORTATION

EMERGENCY

# Pyramid DSP Premium

3 Phase In – 3 Phase Out / 160 – 400kVA

- High Output Power Factor (PF: 0.9)
- Graphical Touch Screen Front Display Panel
- IGBT Rectifier
- Real Digital Signal Processor (DSP) controlled transformerless design
- Input Power Factor Correction PFC (PF: >0.99)
- Low Total Harmonic Distortion Level (THDi ≤ 4%)
- High Efficiency (up to 95%)
- Wide Input Voltage Range
- Generator Compatible Operation
- Evolution and redundancy guaranteed by on site Modular Parallel Systems
- Intelligent battery management system extends the lifetime of batteries
- Static and Manual Bypass
- EPO (Emergency Power Off)
- Communication with computers and network systems with SNMP availability
- Expandable battery blocks
- Low installation and operating costs
- Different voltage applications with refer to country mains characteristic



UPS ONLINE



TOWER

LCD DISPLAY  
(160-400kVA)

SERVICE

## ACCESSORIES

### Communication

- Remote Monitoring Panel & 25m Cable For Remote Panel
- UPSMAN (Management Software)
- Multiserver Shutdown Licence
- Internal SNMP kit :  
Internal Slot Card SNMP CS141BSC or CY504,  
slot box, cable
- External Adapter  
SNMP Adapter Net Agent Mini DY 522  
SNMP Adapter CS141BL

### Other

- Split By-pass
- Parallel Kit
- Drawer Type Internal Battery Shelves 10 - 30kVA
- Special Battery Connection Cable for Drawer Type Shelves

### Battery Cabinets

- UPS looking battery Cabinets (different battery configuration available)  
V14, V15, V24, V33, V34
- Eco Cabinets (different battery configurations available)  
BC00, BC10, BC20, BC30, BC40, BC50, BC60



# Pyramid DSP Premium

## TECHNICAL SPECIFICATIONS

MODEL	PDSP-P 33160		PDSP-P 33200		PDSP-P 33250		PDSP-P 33300		PDSP-P 33400	
Output power [ kVA]	160		200		250		300		400	
Nominal Active Power [ kW ]	144		180		225		270		360	
INPUT										
Number of phases	3Ph+N+PE									
Nominal Voltage [ 3ph Phase to Phase ]	380V/400V/415V									
Voltage range	[-15%] [+27%]									
Voltage range [64% load]	[-45%] [+27%]									
Voltage range [42% load]	[-64%] [+27%]									
Nominal Frequency [ Hz ]	50 or 60									
Frequency range for online operation	±10%									
Input Current Harmonics [THDi][*] [ **]	≤4%									
Input Power Factor	>0.99									
OUTPUT										
Power factor	0.9									
Number of phases	3Ph+N+PE									
Voltage [ 3ph Phase to Phase ]	380V/400V/415V									
Static Voltage Regulation at 100% Linear Load [ online&battery mode ]	<1%									
Output Voltage Harmonics [THDv]	<3% [linear load]									
Crest factor	3:1									
Frequency [Hz]	50 or 60									
Free Running Frequency [Hz]	± 0.01%									
Overload	125% for 10 minutes, 150% for 1 minute									
Efficiency [**]	up to 95%									
BATTERY										
Type	Maintenance-free Lead Acid Batteries									
Quantity [pcs ]	60 [2*30]									
Battery Protection	Deep Discharge Protection with Auto Cut off, Temperature Voltage Compensated Charge									
Battery Test	Standard [ Automatic and Manual ]									
DISPLAY										
3.5" Graphical Touch Screen	Graphical Flow Diagram for Line, Rectifier, Bypass, Battery, Inverter and Load Input & Output Frequency, Voltage & Current, Load Power Factor, Load%, Load Active & Apparent Power, Bypass Voltage & Frequency, Battery Voltage, Current & Temperature, Autonomy Time [min],									
STATIC BYPASS										
Number of phases	3Ph+N+PE									
Voltage Range for bypass operation	± 10%									
Frequency Range for bypass operation [Hz]	± 6% [ Configurable ]									
COMMUNICATION										
Interface [Communication Ports ]	RS232, RS485 [ModBus]									
Relay Contact Signals [Adjustable]	Programmable 4 Relay Contacts to any of following signals ; General Alarm, Input Failure, Battery Failure, Output Failure, Bypass Acvite, Output Overload, High Temperature									
Others	EPO, Generator Interface									
ENVIRONMENT										
Storage Temperature Range [°C ]	-25 to +55 [ 15 to 40 recommended for longer battery life time ]									
Operating Temperature Range [°C ]	0 to 40 [ 20 to 25 recommended for longer battery life time ]									
Relative Humidity Range	0-95% [ non-condensing ]									
Maximum Altitude without derating [m]	1000									
Protection Level	IP20									
Audible Noise Level from 1m [dBA]	62	67								
PHYSICAL SPECIFICATIONS										
Output power [ kVA]	160	200	250	300	400					
Dimensions WxDxH [mm]	980x870x1950	1340x1080x2050								
Weight [kg]	570	830	865	900	1070					
STANDARDS										
Standards	EN 62040-1-1 [Safety], EN 62040-2 [EMC], EN 62040-3 [VFI-SS-111]									

[\*] for source having THDv < 2 % @ nominal load  
 [\*\*] varies depending on ups power



# Pyramid DSP Premium T

3 Phase In – 3 Phase Out / 160 - 300kVA

- High Output Power Factor (PF: 0.9)
- Graphical Touch Screen Front Display Panel
- IGBT Rectifier
- Real Digital Signal Processor (DSP) controlled technology with built-in output isolation transformer
- Input Power Factor Correction PFC (PF: >0.99)
- Low Total Harmonic Distortion Level (THDi ≤ 4% )
- High Efficiency ( up to 93% )
- Wide Input Voltage Range
- Generator Compatible Operation
- Evolution and redundancy guaranteed by on site Modular Parallel Systems
- Intelligent battery management system extends the lifetime of batteries
- Static and Manual Bypass
- EPO (Emergency Power Off)
- Communication with computers and network systems with SNMP availability
- Expandable battery blocks
- Low installation and operating costs
- Different voltage applications with refer to country mains characteristic



UPS ONLINE



TOWER

LCD DISPLAY  
160-300KVA

SERVICE

## ACCESSORIES

### Communication

- Remote Monitoring Panel & 25m Cable For Remote Panel
- UPSMAN (Management Software)
- Multiserver Shutdown Licence
- Internal SNMP kit :  
Internal Slot Card SNMP CS141BSC or CY504,  
slot box, cable
- External Adapter  
SNMP Adapter Net Agent Mini DY 522  
SNMP Adapter CS141BL

### Other

- Split By-pass
- Parallel Kit

### Battery Cabinets

- UPS looking battery Cabinets (different battery configuration available)  
V14, V15, V24, V33, V34
- Eco Cabinets (different battery configurations available)  
BC00, BC10, BC20, BC30, BC40, BC50, BC60



# Pyramid DSP Premium T

## TECHNICAL SPECIFICATIONS

MODEL	PDSP-PT 33160	PDSP-PT 33200	PDSP-PT 33250	PDSP-PT 33300
Output power ( kVA)	160	200	250	300
Nominal Active Power ( kW )	144	180	225	270
INPUT				
Number of phases	3Ph+N+PE			
Nominal Voltage ( 3ph Phase to Phase )	380V/400V/415V			
Voltage range	[-15%] (+27%)			
Voltage range (64% load)	[-45%] (+27%)			
Voltage range (42% load)	[-64%] (+27%)			
Nominal Frequency ( Hz )	50 or 60			
Frequency range for online operation	±10%			
Input Current Harmonics (THDi) (*) ( **)	≤4%			
Input Power Factor	>0.99			
OUTPUT				
Power factor	0.9			
Number of phases	3Ph+N+PE			
Voltage ( 3ph Phase to Phase )	380V/400V/415V			
Static Voltage Regulation at 100% Linear Load ( online&battery mode )	<1%			
Output Voltage Harmonics (THDv)	<3% (linear load)			
Crest factor	3:1			
Frequency (Hz)	50 or 60			
Free Running Frequency (Hz)	± 0.01%			
Overload	125% for 10 minutes, 150% for 1 minute			
Efficiency (**)	up to 93%			
BATTERY				
Type	Maintenance-free Lead Acid Batteries			
Quantity (pcs )	54 (2*27)			
Battery Protection	Deep Discharge Protection with Auto Cut off, Temperature Voltage Compensated Charge			
Battery Test	Standard ( Automatic and Manual )			
DISPLAY				
3.5" Graphical Touch Screen	Graphical Flow Diagram for Line, Rectifier, Bypass, Battery, Inverter and Load Input & Output Frequency, Voltage & Current, Load Power Factor, Load%, Load Active & Apparent Power, Bypass Voltage & Frequency, Battery Voltage, Current & Temperature, Autonomy Time (min),			
STATIC BYPASS				
Number of phases	3Ph+N+PE			
Voltage Range for bypass operation	± 10%			
Frequency Range for bypass operation (Hz)	± 6% ( Configurable )			
COMMUNICATION				
Interface (Communication Ports )	RS232, RS485 (ModBus)			
Relay Contact Signals (Adjustable)	Programmable 4 Relay Contacts to any of following signals ; General Alarm, Input Failure, Battery Failure, Output Failure, Bypass Acvite, Output Overload, High Temperature			
Others	EPO, Generator Interface			
ENVIRONMENT				
Storage Temperature Range (°C )	-25 to +55 ( 15 to 40 recommended for longer battery life time )			
Operating Temperature Range (°C )	0 to 40 ( 20 to 25 recommended for longer battery life time )			
Relative Humidity Range	0 - 95% ( non-condensing )			
Maximum Altitude without derating (m)	1000			
Protection Level	IP20			
Audible Noise Level from 1m (dBA)	62	67		
PHYSICAL SPECIFICATIONS				
Output power ( kVA)	160	200	250	300
Dimensions WxDxH (mm)	960x1080x1820	1620x1080x1950		
Weight (kg)	1290	1675	1775	
STANDARDS				
Standards	EN 62040-1-1 (Safety), EN 62040-2 (EMC), EN 62040-3 (VFI-SS-111)			

(\*) for source having THDv < 2 % @ nominal load  
(\*\*) varies depending on ups power



HOME/OFFICE



DATA CENTER



MEDICAL



INDUSTRY



TRANSPORTATION



EMERGENCY

# Pyramid DSP

3 Phase In - 3 Phase Out / 10 - 120kVA

3 Phase In - 1 Phase Out / 10 - 40kVA

- IGBT Rectifier
- Real Digital Signal Processor (DSP) controlled transformerless design
- Input Power Factor Correction PFC (PF: >0.99)
- Low Total Harmonic Distortion Level (THDi ≤ 4%)
- High Efficiency (up to 94%)
- Wide Input Voltage Range
- Generator Compatible Operation
- Evolution and redundancy guaranteed by on site Modular Parallel Systems
- Intelligent battery management system extends the lifetime of batteries
- Static and Manual Bypass
- Optional Galvanic isolation transformer
- Communication with computers and network systems with SNMP availability
- Expandable battery blocks
- Low installation and operating costs
- Different voltage applications with refer to country mains characteristic;
  - PDSP version for 380/400/415V(Ph\_Ph) applications
  - PDSP-U version for 200/208/220V(Ph\_Ph) applications
  - Special voltage applications other than stated values
- EPO (Emergency Power Off)

\* 3 phase in 1 phase out version is available  
(10 to 40 kVA) (380-400-415V version)

\* 50/60 Hz Frequency Converter version is available



UPS ONLINE



TOWER

LCD DISPLAY  
(10-120kVA)

SERVICE

## ACCESSORIES

### Communication

- Remote Monitoring Panel & 25m Cable For Remote Panel
- UPSMAN (Management Software)
- Multiserver Shutdown Licence
- Internal SNMP kit :
  - Internal Slot Card SNMP CS141BSC or CY504, slot box, cable
- External Adapter
  - SNMP Adapter Net Agent Mini DY522
  - SNMP Adapter CS141BL
  - SNMP Adapter with Modbus CS141LM

### Other

- Split By-pass
- Parallel Kit
- Drawer Type Internal Battery Shelves 10 - 30kVA
- Special Battery Connection Cable for Drawer Type Shelves

### Battery Cabinets

UPS looking battery Cabinets (different battery configuration available)

- V14, V15, V24, V33, V34

Eco Cabinets (different battery configurations available)

- BC00, BC10, BC20, BC30, BC40, BC50, BC60





# Pyramid DSP

## TECHNICAL SPECIFICATIONS

MODEL (380-400-415V 3ph version)	PDSP 33010	PDSP 33015	PDSP 33020	PDSP 33030	PDSP 33040	PDSP 33060	PDSP 33080	PDSP 33100	PDSP 33120
Output power (kVA)	10	15	20	30	40	60	80	100	120
Nominal Active Power (kW)	8	12	16	24	32	48	64	80	96
MODEL (200-208-220V 3Ph version)	PDSP-U33005	PDSP-U33007	PDSP-U33010	PDSP-U33015	PDSP-U33020	PDSP-U33030	PDSP-U33040	PDSP-U33050	PDSP-U33060
Output power (kva)	5	7.5	10	15	20	30	40	50	60
Nominal Active Power (kW)	4	6	8	12	16	24	32	40	48
INPUT									
Number of phases	3Ph+N+PE								
Nominal Voltage (Ph-Ph)	380V / 400V / 415V (PDSP) & 200V / 208V / 220V (PDSP-U)								
Voltage range (100% load)	(-15)% (+27)% @PYRAMID DSP / ±15% @PYRAMID DSP-U								
Voltage range (64% load)	[-45)% (+27)%@PYRAMID DSP								
Voltage range (42% load)	[-64)% (+27)%@PYRAMID DSP								
Nominal Frequency (Hz)	50 or 60								
Frequency range for online operation	±10%								
Input Current THD (*) (**)	≤4%								
Input Power Factor	>0.99								
OUTPUT									
Power factor	0.8								
Number of phases	3Ph+N+PE (PDSP & PDSP-U) / 1Ph+N+PE (1Ph ver.)								
Voltage (3Ph Phase to Phase)	380V/400V/415V (PDSP) & 200V / 208V / 220V (PDSP-U) / 220 / 230 /240V (1 ph ver.)								
Static Voltage Regulation at %100 Linear Load (online&battery mode)	<1%								
Voltage THD at rated linear load	<3%								
Crest Factor	3:1								
Frequency (Hz)	50 or 60								
Free Running Frequency (Hz)	± 0.01%								
Overload	125% for 10 minutes, 150% for 1 minute								
Efficiency (**)	up to 94%								
BATTERY									
Type	Maintenance-free lead acid batteries								
Quantity (pcs) PDSP version	62 [2*31]								
Quantity (pcs) PDSP-U version	34 [2*17]								
Battery Protection	Deep Discharge Protection with Auto Cut off								
Battery Test	Standard (Automatic and Manual)								
DISPLAY									
LED Display	Line, Bypass, Battery, Inverter, Load, Fault Indications								
LCD Display	Load%, Input & Output Frequency, Voltage & Current, Bypass voltage, Battery Voltage & Current, Temperature, Alarms								
STATIC BYPASS									
Number of phases	3Ph+N+PE								
Voltage Range for bypass operation	± 10%								
Frequency Range for bypass operation (Hz)	± 6% (Configurable)								
COMMUNICATION									
Interface (Communication Ports)	RS232 or RS485 & Modbus (optional)								
Dry Contact Signals (optional)	AC failure, Battery under voltage, bypass operation, output failure								
Others	EPO, Generator interface								
ENVIRONMENT									
Storage Temperature Range (°C)	-25 to +55 (15 to 40 recommended for longer battery life time)								
Operating Temperature Range (°C)	0 to 40 (20 to 25 recommended for longer battery life time)								
Relative Humidity Range	0 - 95% ( non-condensing )								
Maximum Altitude without derating (m)	1000								
Protection Level	IP20								
PHYSICAL SPECIFICATIONS	PDSP 33010 U33005	PDSP 33015 U33007	PDSP 33020 U33010	PDSP 33030 U33015	PDSP 33040 U33020	PDSP 33060 U33030	PDSP 33080 U33040	PDSP 33100 U33050	PDSP 33120 U33060
Dimensions wxdxh (mm)	400 x 780 x 1070				520 x 900 x 1300		670x730x1630		850x780x1820
Weight (kg)	100	114	116	122	180	202	253	285	405
STANDARDS									
Standards	EN 62040-1-1 (safety), EN 62040-2(EMC), EN 62040-3 (VFI-SS-111)								
(*) for source having THDv < 2 % @ nominal load    (**) varies depending on ups power									



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TRANSPORTATION



EMERGENCY

# Pyramid DSP T

3 Phase In - 3 Phase Out / 10 – 120kVA

- IGBT Rectifier
- Real Digital Signal Processor (DSP) controlled
- Built in Inverter Output Isolation Transformer
- Input Power Factor Correction PFC (PF: >0.99)
- Low Total Harmonic Distortion Level (THDi ≤ 4%) and (THDv < 1.5%)
- Wide Input Voltage Range
- Generator Compatible Operation
- Evolution and redundancy guaranteed by on site Modular Parallel Systems
- Intelligent battery management system extends the lifetime of batteries
- Synchronization Capability with external sources
- Static and Manual Bypass
- Communication with computers and network systems with SNMP availability
- Expandable battery blocks
- Low installation and operating costs
- EPO (Emergency Power Off)



UPS ONLINE



TOWER

LCD DISPLAY  
(1-120kVA)

SERVICE

## ACCESSORIES

### Communication

- Remote Monitoring Panel & 25m Cable For Remote Panel
- UPSMAN (Management Software)
- Multiserver Shutdown Licence
- Internal SNMP kit :  
Internal Slot Card SNMP CS141BSC or CY504, slot box, cable
- External Adapter  
SNMP Adapter Net Agent Mini DY 522  
SNMP Adapter CS141BL  
SNMP Adapter with Modbus CS141LM

### Other

- Split By-pass
- Parallel Kit

### Battery Cabinets

UPS looking battery Cabinets (different battery configuration available)

- V14, V15, V24, V33, V34

Eco Cabinets (different battery configurations available)

- BC00, BC10, BC20, BC30, BC40, BC50, BC60



# Pyramid DSP T

## TECHNICAL SPECIFICATIONS

MODEL	PDSP-T 33010	PDSP-T 33015	PDSP-T 33020	PDSP-T 33030	PDSP-T 33040	PDSP-T 33060	PDSP-T 33080	PDSP-T 33100	PDSP-T 33120
Output Power (kVA)	10	15	20	30	40	60	80	100	120
Active Power (kW)	8	12	16	24	32	48	64	80	96
INPUT									
Number of Phases	3Ph + N + PE								
Nominal Voltage (Ph-Ph)	380V/400V/415V								
Voltage range (100% load)	[-15%] [+27%]								
Voltage range (64% load)	[-45%] [+27%]								
Voltage range (42% load)	[-64%] [+27%]								
Nominal Frequency (Hz)	50 or 60 (±10%)								
Input Current Harmonics (THDi) (*) [ **]	≤ 4%								
Input Power Factor	>0.99								
OUTPUT									
Output Power factor	0.8								
Number of Phases	3Ph + N + PE								
Voltage	380V/400V/415V								
Static Voltage Regulation at 100% Linear Load (online&battery mode)	<1%								
Output Voltage Harmonics (THDv)	<1.5% (linear load)								
Crest factor	3:1								
Free Running Frequency (Hz)	50 or 60 (± 0.01%)								
Overload	125% for 10 minutes; 150% for 1 minute								
Efficiency (**)	≥ 90%								
STATIC BYPASS									
Voltage Range	380V / 400V (Ph-Ph) ± 10%								
Frequency Range for bypass operation (Hz)	±6% (Adjustable)								
BATTERY									
Type	Maintenance-free lead acid batteries								
Battery Quantity (pcs)	54 (2 x 27)								
Battery Protection	Deep discharge Protection with Auto Cut off								
Battery Test	Standard (Automatic and Manual)								
COMMUNICATION									
Interface (Communication Ports)	RS232&485@ 10 to 120kVA								
Dry Contact Signals (optional)	AC Failure, Battery Under Voltage, Bypass Operation, Output Failure								
Others	EPO, Generator Interface								
ENVIRONMENT									
Storage Temperature Range (°C)	-25 to +55 (15 to 40 recommended for longer battery life)								
Operating Temperature Range (°C)	0 to 40 (20 to 25 recommended for longer battery life)								
Relative Humidity Range	0 - 95% [ non-condensing ]								
Maximum Altitude without derating (m)	< 1000								
Protection Class	IP20								
PHYSICAL SPECIFICATIONS	PDSP-T 33010	PDSP-T 33015	PDSP-T 33020	PDSP-T 33030	PDSP-T 33040	PDSP-T 33060	PDSP-T 33080	PDSP-T 33100	PDSP-T 33120
Dimensions (WxDxH) (mm)	400 x 780 x 1070				520 x 900 x 1300		640x1000x1400		760 x 1250x1685
Weight (kg)	235		238	273	450	502	625	680	790
STANDARDS									
	EN 62040-1-1 (safety), EN 62040-2(EMC), EN 62040-3 (VFI-SS-111)								
(*) for source having THDv < 2 % @ nominal load    (**) varies depending on ups power									



# Solutio

3 Phase In – 3 Phase Out / 300kVA – 600kVA

NEW  
PRODUCT

- Interleaved 3 Level IGBT Technology
- Real Digital Signal Processor (DSP) controlled transformerless design
- High output power factor (PF:1, kVA=kW)
- Increased AC-AC Efficiency (up to 96.5%)
- High input power factor (PF: ≥ 0.99)
- Low input current (THDi <3%)
- Low output voltage (THDv <2%)
- Wide input voltage range
- Graphical Multi-Functional touch screen display ( 7" TFT )
- Built-in static & manual Bypass
- On-site parallel connection availability up to 6 units
- Intelligent battery management system & expandable battery autonomy time
- Event log display up to 1024 events
- Advanced communication features; RS232, RS485, ESD (EP0, NO or NC selectable), Genset and USB ports as standard. Modbus & SNMP as optional
- Generator compatible operation mode (Selectable from HMI)
- 50/60Hz Frequency converter operation mode (Selectable from HMI)
- Backfeed protection (Optional)
- Cold start (Optional)
- User friendly input & output connection terminals
- High reliability & performance, thanks to artificial intelligence algorithms



UPS ONLINE



TOWER



USB

LCD DISPLAY  
(300-600kVA)

SERVICE

"Interleaved  
3 Level"  
Technology

## Other Features

- Dual Input (Split Bypass) (Optional)
- Temperature controlled battery charging
- Selectable output voltage (220/380V, 230/400V or 240/415V) from HMI
- Selectable output frequency (50/60 Hz) from HMI
- Programmable dry contact board (Optional)
- Easy service with modular architecture
- Temperature controlled fan speed
- Special voltage application & galvanic isolation options
- Ability to operate without batteries
- Frequency converter (50/60 Hz) option
- Availability to disable bypass and inverter from HMI
- Availability to run battery test from HMI or SNMP
- Compatibility with dynamic loads
- Low audible noise, thanks to interleaved 3 Level IGBT Topology
- Advanced on-system diagnosis
- Bypass line temperature protection with temperature control on Bypass thyristor
- High Reliability, Rigid structure
- Advanced statistical data recording



# Solutio

## TECHNICAL SPECIFICATIONS

MODEL	SOLUTIO 300	SOLUTIO 400	SOLUTIO 500	SOLUTIO 600
Power (kVA)	300	400	500	600
Active Power (kW)	300	400	500	600
INPUT				
Phase	3Ph+N+PE			
Nominal Voltage	380V / 400V / 415V			
Voltage Range (VAC) (100% Load)	[-15%] [+20%]			
Voltage Range (VAC) (50% Load)	[-45%] [+20%]			
Nominal Frequency	50 / 60 Hz			
Frequency Range (Online Mode)	45 - 65 Hz			
Input Current Harmonics (THDi)*	<3%			
Input Power Factor	≥ 0.99			
OUTPUT				
Phase	3Ph+N+PE			
Nominal Voltage	380V / 400V / 415V (Selectable from HMI)			
Output Power Factor	1.0			
Static Voltage Regulation @ 100% Linear Load	±1%			
Output Voltage Harmonics (THDv)*	< 2% (Linear Load), < 4% (Non-Linear Load)			
Crest Factor	3:1			
Frequency	50/60 Hz (Selectable from HMI)			
Frequency Range [ Battery Operation Mode ]	50/60 Hz ±0.01%			
Overload	Online – Battery Mode: <125% Load 10 mins, <150% Load 1 min; Bypass Mode: Up to 175%			
Efficiency*	up to 96.5% (Online), >98.5% (Ecomode)			
STATIC BYPASS LINE				
Phase	3Ph+N+PE			
Bypass Voltage Range	380V / 400V / 415V [ -15% +10% selectable from HMI]			
Bypass Frequency Range	± 3 Hz (Selectable from HMI)			
Transfer Time	0 msec			
BATTERY				
Battery Type	Maintenance-Free Lead Acid Batteries			
Charge Current (A)**	C/10 (Selectable from HMI)			
Battery Qty (pcs)	60			
Battery Protection	Deep Discharge Protection, Temperature-compensated Battery Charging			
Battery Test	Standard (Automatic & Manual)			
FRONT PANEL DISPLAY (HMI)				
Display	7" TFT Colorful Graphical Touch Screen Display			
Display Measurements	Load Percent, Input/Output/Bypass Voltage, Input/Output Current, Input/Output/Bypass Frequency, Output Power (kW & kVA), Output Power Factor, Battery ± Voltage, DC Bus ± Voltage, Back-up Time, Internal Temperature, Charge-Discharge Current			
Event Log Quantity	1024			
COMMUNICATION				
Interface (Communication Port)	RS232, RS485, ESD (EP0, NO or NC selectable), Genset and USB ports as standard. Modbus & SNMP as optional			
Dry Contact Signals	4pcs Programmable dry contacts (Optional)			
PROTECTION				
	Overload, High Temperature, High Voltage & High Current Protections, Backfeed Protection(Optional), Deep Discharge Protection, Short Circuit Protection			
ENVIRONMENT				
Operating Temperature	0 - 40 °C (20 - 25°C recommended for longer battery life time)			
Storage Temperature	-25 ~ +55 °C			
Max. Operating Altitude	1000m			
Relative Humidity	0 - 95% ( non-condensing )			
Audible Noise Level [ from 1m distance ]	< 70 dBA			
PHYSICAL SPECIFICATIONS				
Dimension (WxDxH) (mm)	1660 x 750 x 1910		1860 x 932 x 1936	
Weight (kg) (W/O Battery)	715	825	-	-
STANDARDS				
Safety	IEC/EN 60950,62040-1			
EMC	IEC/EN 62040-2			
Performance	IEC/EN 62040-3			
Protection Class	IP 20			

\*May vary depending on UPS power & Load & Environmental Conditions

\*\*It is limited by 10% of UPS power

\*\*\*INFORM keeps the right to change the specifications without any notice





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TRANSPORTATION



EMERGENCY

## Modulera

Modular UPS 3 Phase In - 3 Phase Out / 20 - 200 kVA

- Hot Swappable Decentralized Parallel Architecture
- DSP (Digital Signal Processor) Controlled Technology
- Modular N+X Parallel Redundancy
- Plug & Play Type Hot Swappable Power Modules
- Cold Start Function
- Parallel connection availability of UPS Frames up to 4pcs
- Wide Input Voltage Window (208Vac ~ 478Vac)
- Wide input frequency range (40Hz ~ 70Hz)
- High Overall Efficiency (up to 94%)
- Increased Output Power Factor (PF: 0.9)
- Unity Input Power Factor (PF:  $\geq 0.99$ )
- Low Input Total Harmonic Distortion Level (THDi down to 3 %)
- Fit into standard 19" Rack Cabinet
- Touch-screen LCD display for user's friendly operation
- EPO (Emergency Power Off)
- Smart Fan Speed Control
- Programmable Battery Voltage (32/ 34 / 36 / 38 / 40 blocks of 12V Batteries)
- Three Level Battery Charge system with smart charge current adjustment
- Powerful charger built in each Modular UPS Power Module
- Equip with Maintenance Bypass Switch for easy maintenance
- RS232 & 485 Ports as standard communication
- Megatec/Mod Bus protocol supported
- Optional Communication Interfaces (SNMP Card or DRY contact board)



UPS ONLINE



MODULAR SYSTEM



LCD DISPLAY (20-200kVA)



SERVICE



# Modulera

## TECHNICAL SPECIFICATIONS

MODEL		MDL 3300-60K	MDL 3300-100K	MDL 3300-200K
Frame Capacity		20kVA (18kW) to 60kVA (54kW)	20kVA (18kW) to 100kVA (90kW)	20kVA (18kW) to 200kVA (180kW)
MDL Module Capacity		20KVA/18KW		
INPUT				
Phase		3Ph+N+PE		
Rated Voltage		380 / 400 / 415Vac		
Voltage Range		208 - 478Vac at 50% load, 305 - 478Vac at 100% load		
Frequency range		40Hz - 70Hz		
Power Factor		≥ 0.99		
Current THDi		down to 3%		
Generator Input		Present		
OUTPUT				
Phase		3Ph+N+PE		
Rated Voltage		380/400/415Vac		
Power Factor		0.9		
Voltage Regulation		±1%		
Frequency	Utility Mode	±1%, ±2%, ±4%, ±5%, ±10% of the rated frequency(optional)		
	Battery Mode	(50/60 ±%0.2)Hz		
Crest Factor		3:1		
THDv		≤2% with linear load		
Waveform		Pure Sinewave		
Over Load	AC Mode	100% - 110%: 60min,110% - 125%: 10min, 125% - 150%: 1min, ≥150%: immediately transfers to bypass		
		100% - 110%: 60min,110% - 125%: 10min, 125% - 150%: 1min, ≥150%: immediately shutdown		
	Bat. Mode	Breaker (40Amp)		
	Bypass Mode			
AC-AC Efficiency		Up to 94%		
Eco-Mode Efficiency		97%		
BATTERY				
Type		Maintenance-free lead acid batteries		
Quantity (12V VRLA batteries)		Configurable to 32/34/36/38/40 pcs per string		
Voltage (12V VRLA batteries)		384/408/432V/456V/480V DC		
Charging Current	Frame	18A Max. (charge current can be set according to battery capacity installed)	30A Max. (charge current can be set according to battery capacity installed)	60A Max. (charge current can be set according to battery capacity installed)
	MDL Module	6A Max. (charge current can be set according to battery capacity installed)		
DISPLAY				
Status LED & LCD		Line Mode, Eco Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault		
Reading On the LCD		Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Inner Temperature		
PROTECTION				
Short Circuit		Hold Whole System		
Overheat		Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately		
Battery Low		Alarm and Switch off		
Self-diagnostics		Upon Power On and Software Control		
EPO (optional)		Shut down UPS immediately		
Battery		Advanced Battery Management		
Noise Suppression		Complies with EN62040-2		
Alarms		Line Failure, Battery Low, Overload, System Fault		
COMMUNICATION				
Standard		1xRS232 Communication port, 2xRS485 Communication ports, 1xModBus port, 2xCommunication Slot		
Optional		SNMP (Megatec Protocol), Dry Contact Board, EPO		
ENVIRONMENT				
Operating Temperature		0°C - 40°C		
Storage Temperature		-25°C - 55°C		
Humidity		0 - 95% non condensing		
Altitude		< 1500m		
Noise		<60dBA (at 1 meter)		
PHYSICAL SPECIFICATIONS				
Dimensions (WxDxH)	MDL Module	443 x 580 x 131- 3U (for all frames)		
	Frame	600x840x1400		600x1100x2000
Weight - Without Batteries (kg)	MDL Module	31		
	Frame	150	152	290
STANDARDS				
CE, EN/IEC 62040-2, EN/IEC 62040-1-1, EN/IEC 62040-3 (VFI SS 111)				



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MEDICAL

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EMERGENCY

## Modulera

Modular UPS 3 Phase In - 3 Phase Out / 30 - 800 kVA

- True Online Double Conversion Technology with 3-Level Inverter Topology
- Hot Swappable Decentralized Parallel Architecture
- DSP (Digital Signal Processor) Controlled Technology
- Modular N+X Parallel Redundancy
- Plug & Play Type Hot Swappable easy replaceable Power Modules
- Independent control of each individual power module
- Common Battery use between parallel Frames
- Parallel connection availability of UPS Frames up to 4pcs
- Wide Input Voltage Window (305Vac ~ 485Vac)
- Wide input frequency range (40Hz ~ 70Hz)
- Transformerless Design with High Overall Efficiency
- Increased Output Power Factor (PF: 1.0)
- Unity Input Power Factor (PF:  $\geq 0.99$ )
- Low Input Total Harmonic Distortion Level (THDi down to 3%)
- Increased Output Energy Quality with low harmonics (THDv < 2%)
- Touch-screen LCD display for user's friendly operation
- EPO (Emergency Power Off)
- Programmable Battery Voltage (32/ 34 / 36 / 38 / 40 blocks of 12V Batteries)
- Three Level Battery Charge system with smart charge current adjustment
- Powerful charger built in each Modular UPS Power Module
- RS232 & 485 Ports as standard communication
- Megatec/Mod Bus protocol supported
- Optional Communication Interfaces (SNMP Card or DRY contact board)
- Small footprint up to 800kVA built-in one 19" Frame



POWER MODULE SPECIFICATIONS			
MDL Module Capacity (KVA/KW)		30kVA - 30kW	50kVA - 50kW
"MDL Module Dimension (WxDxH) (mm) "		442x620x86x(2U)	442x620x130x(3U)
Weight (kg )		32	
INPUT			
Phase		3Ph+N+PE	
Nominal Voltage		380/400/415Vac	
Operating Voltage Range		305~485Vac	
Operating Frequency Range		40Hz-70Hz	
Power Factor		≥0.99	
Harmonic Distortion (THDi)		3% (100% non-linear load)	
Bypass Voltage Range		Maximum Voltage: 220V: +25% (adjustable to +10%, +15%, +25% ); 230V: +20% (adjustable to +10%, +15%), 240V:+15% (adjustable to +10%) Minimum Voltage: -45% (adjustable to-10%, -20%, -30%)	
Bypass Frequency Range		±10%	
Generator Input		Support	
OUTPUT			
Phase		3Ph+N+PE	
Nominal Voltage		380/400/415Vac (adjustable from front panel)	
Power Factor		1	
Voltage Regulation		±1%	
Frequency		50/60Hz (adjustable from front panel)	
Output Frequency	Utility Mode	±1% ±2% ±4% ±5% ±10% of the rated frequency (adjustable)	
	Battery Mode	(50/60±0.1%)Hz	
Crest Factor		3:1	
Harmonic Distortion (THDv)		≤1% Linear Load, ≤4% Non-linear Load	
Output Waveform		Pure Sinewave	
Efficiency		≥95	96.5%
BATTERY			
Battery Voltage		±180V/ ±192V\±204V\±216V\±228V\±240V\±252V\±264V\±276V\±288V\±300V DC; (30/32/34/36/38/40/42/44/46/48/50 pcs) adjustable battery quantity	
Charge Current (A)	UPS Cabinet	Charge current can be set according to battery capacity installed	
	MDL Module	10A Max.	20A Max.
Transfer Time		Utility to Battery : 0ms; Utility to by-pass: 0ms	
PROTECTION			
Overload		Load 110 % last 60min; Load 125 % last 10min; Load 150 % last 1min	
Short Circuit		Hold Whole System	
Overheat		Line Mode: Switch to By-pass, Backup Mode: Shut down UPS Immediately	
Low Battery Voltage		Alarm and Switch off	
Self Diagnostics		Upon Power On and Software Control	
EPO (optional)		Shut Down UPS Immediately	
Battery		Advanced Battery Management	
COMMUNICATION			
UPS Frame		CAN, RS232, RS485, Intelligent Slot	
Optional		Dry Contact / Relay Card, SNMP Card, Battery Temperture Sensor	
Parallel		Maximum 4 cabinets can be connected in parallel	
STANDARDS			
		EN/IEC 62040-2 (EMC); EN/IEC62040-1 & EN/IEC60950-1(SAFETY), EN/IEC62040-3(PERFORMANCE)	

MODULERA FRAME SPECIFICATIONS							
Model Name	MDL3330-150K MDL3350-150K	MDL3350-200K	MDL3330-300K MDL3350-300K	MDL3350-400K	MDL3350-500K	MDL3350-600K	MDL3350-800K
Frame Power [ kVA - kW ]	150kVA/150kW	200kVA/200kW	300kVA/300kW	400kVA/400kW	500kVA/500kW	600kVA/600kW	800kVA/800kW
Max Module Capacity (pcs)	5pcs 30kVA 3pcs 50kVA	4pcs 50kVA	10pcs 30kVA 6pcs 50kVA	8pcs 50kVA	10pcs 50kVA	12pcs 50kVA	16pcs 50kVA
Frame Dimensions [ W*D*H] (mm)	600x850x1200	600x850x1600	600x850x2000	1200x850x2000	1200x850x2000	1400x850x2000	2000x850x2000
Frame weight (kg)	170	230	260	470	650	720	1080
DISPLAY							
LCD Display	Touchscreen LCD Panel on the main Frame						
Status LED & LCD	Line Mode, Bypass Mode, Battery Low, Battery Bad, Overload & UPS Fault						
Displays on LCD Panel	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage & Internal Temperature						
ENVIRONMENT							
Operating Temperature [°C]	0°C - 40°C						
Storage Temperature [°C]	-25°C - 55°C						
Relative Humidity	0 - 95% [ non-condensing ]						
Operating Altitude [max.]	< 1500m						
Audible Noise Level from 1m	<63dBA	<65dBA	<68dBA	<70dBA		<73dBA	
Protection Class	IP21						



## Frequency Converter

3 Phase In - 3 Phase Out / 10 - 120kVA

- Double conversion and PWM technology with pure sinewave output,
- Microprocessor controller,
- Galvanic isolation,
- Efficiency up to 91%,
- Emergency close switch connection,
- User friendly front panel (5 buttons and LCD indicator), detailed information
- availability to do the adjustment of parameters through front panel,
- History log of 128 events, calendar and time indicators,
- High performance at non-linear loads,
- Remote monitoring via network,
- SNMP compatibility,
- 10 Years spare parts supply warranty,
- Low installation and operating cost



## TECHNICAL SPECIFICATIONS

MODEL	FC 3310	FC 3315	FC 3320	FC 3330	FC 3340	FC 3360	FC 3380	FC 33100	FC 33120
Output Power kVA	10	15	20	30	40	60	80	100	120
Output Power Kw	8	12	16	24	32	48	64	80	96
Power factor	0.8								
INPUT									
Voltage	400 VAC or 380VAC, 3Ph+N+PE								
Tolerance	±10%								
Frequency	50 / 60Hz								
Tolerance	±5%								
Power factor	0.8								
max RFI	EN 50091-2 Class A								
OUTPUT									
Voltage	208VAC, 3Ph+N+PE								
Voltage Stability	static (balanced load) : +/-2%								
	static (unbalanced load) : +/-4%								
	Dynamic (0% - 100%step load) : +/-6%								
Uptum Time	after 0%-100% step load: max 25m sec								
Crest factor	3:1								
Frequency	400 Hz								
Frequency Tolerance	±0.2%								
Overload 101% - 110% load	1h								
Overload 130% load	10min.								
Overload 150% load	1min.								
Overall Efficiency	up to 91%								
Total Harmonic Distortion	<3% at linear load								
	<5% at non-linear load								
COMMUNICATION									
Interface	RS232 and Dry Contact,								
PHYSICAL									
Weight without battery (kg)	240	255	270	285	490	570	600	750	810
Dimensions (mm) WxDxH	490x650x1190				565x820x1400		720x800x1450	1192x874x1720	
ENVIRONMENT									
Audible Noise	<55dBA					<60dBA		63 to 66dBA	
Operating Temperature	0-40°C								
Relative Humidity (non condensing)	0-95%								
Max. Altitude	<1000m								
Standards	EN 50091-1 (safety), EN 50091-2 (EMC), IEC 62040-3 (class VFI), IP20								



# AVR Series

One Phase 1 - 200 kVA / Three Phase 6 - 3200 kVA

- Servo Motor Controlled Technology
- Reliable Stabilization for Secure Energy
- 1 pc (digital) voltmeter ( @ One phase version )
- 3 pcs (digital) voltmeter ( @ Three phase version )
- Phase Independent Voltage Regulation ( @ Three phase version )
- High efficiency at all Powers
- Short circuit protection
- Manual by-pass switch
- Overload, short circuit, over-temperature and over-voltage protections
- Fast response for fluctuations
- Adjustable precise tolerance limits from front panel
- Fan cooling with timer
- Fault signal (Light & Buzzer)
- High - low voltage protection (breaker module option)
- Comply with CE, ISO9001, ISO14001 standards
- Wide Voltage Range version ( optional )



## TECHNICAL SPECIFICATIONS

MODEL	Single phase	Three phase
Power (kVA)	1-200 kVA	6-3200 kVA
INPUT		
Nominal Voltage	220 VAC 1Ph+N	380 VAC 3Ph+N
Voltage Range (Normal Range)	160-240 VAC (Ph+N)	
Voltage Range (Wide Range-optional)	135-245 VAC (Ph+N)	
Frequency	50 / 60 Hz	
OUTPUT		
Phase Number	1Ph + N + PE	3Ph + N + PE
Nominal Voltage	200 V AC / 220 V AC / 240 V AC (Ph+N) (Adjustable from front panel)	
Output Voltage Tolerance	2% (Adjustable from Menu)	
Response Time	200 Vac / sec	
Frequency Speed	Frequency @ 50Hz: 20ms -/ Frequency @60Hz: 50 ms	
Output delay time adjustment	1 sec to 10 sec (Adjustable from Menu)	
Overload	Running 3 sec at 150% load	
Efficiency	Up to 97% at full load	
GENERAL PARAMETERS		
Mechanic By-Pass	With Manual Switch	
Automatic By-Pass	Optional	
Cooling System	Smart Fan	
Harmonic Distortion	No effect	
Input voltage / Output voltage Display	TRUE RMS (Adjustable from Menu)	
Display Panel	2x3 Digit red led display	
ENVIRONMENT		
Operating Temperature	- 10°C + 50°C (20°C - 25°C recommended range for Long Battery Life)	
Storage Temperature	-25°C - +55°C (15°C - 40°C recommended range for Long Battery Life)	
Humidity	0 - 95% [ non-condensing ]	
Altitude	<3000 Metre	
Noise Level (from 1m distance)	<50 dB	
Protection Class	IP20	

\*Breaker module maintains low/high voltage protection & Phase missing protection and it is optional.

\*Physical size and weight information of the product varies according to the voltage range version and options equipped.



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# SS ICR

## Microprocessor Controlled Battery Charge Rectifier

### 2KW 1 Phase

- Microprocessor Controlled
- Voltage, Current, Temperature, Charge and Status data digitally
- Operation according to Constant Voltage and Constant Current principle
- Adjustable boost and nominal charge voltages
- Adjustable Output Current/High Voltage Protection
- Overcurrent Protection / Short circuit Protection
- Overtemperature Protection / Input Filter Control Panel
- Alphanumeric LCD Display
- Low Voltage DC Protection (LVD) (Optional)
- External Alarm Contacts
- Easy Menu Navigation with Keypad

#### Front Panel

- LCD Display (Alphanumeric)
- Digitally monitoring of Voltage, Current, Temperature, Charge and Status data

#### Lighted Alarms

- Overload
- Mains On / Off
- Battery operation
- Load status
- Low Voltage DC Protection (LVD)
- General Failure

#### Communication

- RS232 (optional)
- MODBUS (optional)
- RJ45 (optional)
- Temperature Sensor (Optional)
- Dry Contact (Optional)



## TECHNICAL SPECIFICATIONS

MODEL	SSICR024-60	SSICR048-30	SSICR110-15
Output Current	60 A	30 A DENEME	15 A
Output DC Voltage	24 VDC	48 VDC	110 VDC
INPUT			
Input Phase Number	1 Phase		
Input Voltage Range	154-265 VAC		
Input Frequency Range	45-65 Hz		
Power Factor	>0.99		
OUTPUT			
Nominal Output Voltage (In case of order as Battery Charger)	24 VDC	48 VDC	110 VDC
Output Voltage Adjustment Range (In case of order as DC Power Supply)	0-30 VDC	0-59 VDC	0-130 VDC
Initial Charge	24.5V	49V	112V
Float Charge	27.1V	54.2V	122V
Boost Charge	28.8V	57.6V	129.6V
Short circuit Current	110%	110%	110%
Output Current	60A	30A	15A
Output Voltage Ripple	<30mV	<60mV	<100mV
Dynamic Response	2%		
Output Protection	Electronic short circuit/ Overvoltage/ Reverse voltage protection/ Overtemperature/ Overcurrent/ ±DC leakage current protection		
GENERAL			
Cooling	Forced (FAN cooling)		
Isolation Voltage	2000VAC between Output and Chassis		
Efficiency	>90%		
Operating Temperature	0-50°C		
Relative Humidity	5%-90%		
Input/Output Connections	Terminal block		
Fuses	Thermal magnetic automaton for input & output, battery automaton (installed when LVD option is selected)		
DISPLAY & COMMUNICATION			
LCD Display Panel	Voltage,current, temperature,charge and status information (alphanumeric)		
LCD Display Information	Overload, Mains On, Battery, Load, LVD, Fault information		
External Alarm Contacts	Normally Open or Closed (9pcs dry contacts) (Optional)		
LVD	DC Undervoltage Protection (Optional)		
ENVIRONMENTAL			
Operating and Storage Temperature	0... +50 [°C] / -15... +70 [°C]		
Operating and Storage Relative Humidity	20%... 80% / 20%... 95%		
DIMENSIONS			
Net Weight (kg)	11		
Dimensions (WxDxH) (mm)	420x420x200		
STANDARDS			
Cabinet Protection Class	IP 20		
EMC	EN61204-3		
Safety	EN 50091-1		
Performance	EN 62040-3, EN 50091-3		

INFORM reserves the right to change the information contained herein without notice.





# Infocharger

25-200 A

- Microprocessor Controller
- IGBT Technology (ICH Series)
- PFC Technology (ICC Series)
- Transformerless Design
- Wide Input Voltage Range
- Operation according to constant voltage and current principle
- Adjustable Boost and Nominal Charge Voltage
- Adjustable Output Current
- High Voltage, Over Current, Short Circuit Protections
- Over Temperature Protection
- Alphanumeric LCD Display and Control Panel
- Low DC Voltage Protection (LVD) - Optional
- Dry Contact Alarms- Optional
- Parallel Connection Availability at ICH Series - Optional
- Small Footprints, Compact Size



ICC Series



ICH Series

## TECHNICAL SPECIFICATIONS

TYPE	ICC2460	ICC4830	ICC11015	ICH2450	ICH24100	ICH24200	ICH4850	ICH48100	ICH11025	ICH11050
Power	60Amp	30Amp	15Amp	50Amp	100Amp	200Amp	50Amp	100Amp	25Amp	50Amp
DC Voltage	24VDC	48VDC	110VDC	24VDC			48VDC		110VDC	
INPUT										
Input Phase	1Phase			1Phase / 3Phase						
Nominal Voltage Range	90-265VAC			176-280VAC (Ph - N)						
Frequency Range	50/60Hz ± 10%									
Power Factor	>0.98			>0.8						
OUTPUT										
Nominal Voltage	24VDC	48VDC	110VDC	24VDC			48VDC		110VDC	
Nominal current	60Amp	30Amp	15Amp	50Amp	100Amp	200Amp	50Amp	100Amp	25Amp	50Amp
Output Current Adjustment value	0 to 60A	0 to 30A	0 to 15A	0 to 50A	0 to 100A	0 to 200A	0 to 50A	0 to 100A	0 to 25A	0 to 50A
Max Output Current	110% of Inominal									
Boost Charge Voltage	100% - 120% of the nominal output voltage									
Output Fluctuation	<1% rms AC Output Voltage									
Dynamic Response	less than 2% of output voltage									
Output protection	electronic short circuit / over voltage									
DISPLAY										
LCD Display Panel	Voltage, Current, Temperature, Charge and Status Informations									
LED Display Panel	Overload, Line, Battery, Load, LVD, Fault Indications									
GENERAL										
Cooling	Forced (FAN Cooling)									
Isolation Voltage	2000VAC between output and chassis									
Efficiency	90%									
Operating Temperature	0 – 40 °C									
Relative Humidity	0% - 95%									
Input/Output Connections	Terminals									
Fuses	input, load and Battery									
PHYSICAL SPECIFICATIONS										
Net Weight (kg)	11.6			35						
Dimensions (mm) (WxDxH)	250x420x280			265x556x560						
STANDARDS										
Safety	EN62040-1-1									
EMC	EN62040-2									
Performance	EN62040-3									
Protection Class	IP 20									
OPTIONS										
Dry Contact Card	9pcs contact alarms (NO/NC)			8pcs contact alarms (NO/NC)						
LVD	Low Voltage Disconnect (Contactor)									
Parallel Connection	Not Available			up to 7 units						



# Battery Charger

5-700 A

- Microprocessor controlled Thyristor Technology
- Built in input transformer topology
- Fully Adjustable float, boost and equalizing charge modes with V/I characteristics
- Advanced technology for phase control
- Very low voltage ripple and extended battery life
- High efficiency and low operation cost
- Ability to operate as voltage or current source
- Wide range of options for monitoring
- Improved environmental operation characteristics
- Remote monitoring via RS232 communication port
- Potential free alarm contacts on extended alarm board
- Internal Over Temperature protection
- User Friendly Control Panel



## TECHNICAL SPECIFICATIONS

DC Voltage	24VDC	48VDC	110VDC	220VDC
INPUT				
Input Phase	1Phase/3Phase			
Nominal Voltage Range	1x220V or 1x230V / 3x380V or 3x400V ± 15 % – 2 / 4 wire			
Frequency Range	47-63Hz			
OUTPUT				
Nominal Voltage	24VDC	48VDC	110VDC	220VDC
1Ph Nominal current	60A	15A/30A/40A/60A	5A/20A/30A/40A/60A/80A/100A/120A/150A	15A/30A/40A/60A
3Ph Nominal current	30A/60A/100A/150A/200A/250A/400A	10A/30A/60A/100A/150A/200A/250A	30A/60A/100A/150A/ 200A/250A/300A/400A/500A/700A	30A/60A/100A/150A/200A/250A/300A/400A/500A/700A
Max Output Current	110% of nominal			
Float Charge Adjustment Range	80% - 115% of the nominal output voltage			
Boost Charge Voltage	80% - 125% of the nominal output voltage			
Equalizing Charge Adjustment Range	80% - 125% of the nominal output voltage			
Current Limit Adjustment Range	25% - 100% of the nominal output voltage			
Voltage Ripple	< 1% (with or without battery)			
Voltage Regulation	< 1% (10% to 100% load)			
Efficiency	87%	89%	91%	93%
DISPLAY				
LCD Display Panel	Voltage, Current, Charge and Status Information			
LED Display Panel	Line, Operation, Fault Indications			
GENERAL				
Charger Mode	Automatic / Manual U-I Characteristic			
Charger Type	Float / Boost / Equalizing Charge			
Cooling	Forced Cooling with Thermic Controlled Fan			
Input/Output Connections	Terminals			
Fuses	Semiconductor Type			
ENVIRONMENT				
Operating Temperature	-5 – +50 °C			
Relative Humidity	0 - 95% [ non-condensing ]			
Protection Class	IP 20 (Higher IP Class is optional)			
STANDARDS				
Standards	89/336/EEC (EMC); 62040-1, 62040-2, 62040-3, IEC 950, IEC 439, IEC 146			
OPTIONS				
Dry Contact Card	4pcs contact alarms / normally(closed/open /Modbus)			
Parallel Connection	Available			
Others	Earth Leakage Monitoring, DC Supply & Battery Monitoring, Gauges, Load Voltage Limitation Module / Voltage Drop, Battery Charge Temperature Compensation, IP Protection, Touch panel, LVD, Fan failure monitoring, AC Input Power measurement. Active parallel current sharing			



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## Info-STS (1 Phase)

1 Phase In - 1 Phase Out / 50 - 100 A

- Uninterruptible transfer between the independent sources
- Synchronous/Asynchronous transfer feature
- "In flight" transfer mode
- RS232/RS485 communication facilities
- Source priority selection
- Automatic and Manual transfer in case of failure on both sources
- Module replacement without interruption under load
- Fast Diagnostic Response with microprocessor controller
- Internal (2 pcs) manual bypass
- Easy Maintenance availability
- Current Distortion level less than 1%
- High Efficiency
- Transfer to the second source in less than 5 ms in case of over low/high voltage values



## TECHNICAL SPECIFICATIONS

MODEL	STS1050		STS1100	
GENERAL SPECIFICATIONS				
Nominal Voltage	220V / 230VAC (Monophase)			
Nominal Operation Current	50A		100A	
Transfer Time (Synchronized)	5ms			
PHYSICAL SPECIFICATIONS				
Cable Entry	Rear			
Air Entry/ Exit	Bottom/Top			
Advised Cable Cross Section	10mm2		35mm2	
Dimensions WxDxH	{19"x360mmx2U}		{19"x360mmx4U}	
Weight (kg)	9kg		17kg	
ENVIRONMENT				
Max Altitude	2000m above sea level			
Humidity	0 - 95% ( non-condensing )			
Operating Temperature	0-40°C			
Audible Noise (from 1m)	<45dBA			
Protection Class	IP20			
STANDARDS				
Standards	EN 62310-2, EN 62310-1, EN 60950-1			





## Info-STS (3 Phase)

3 Phase + Neutral In - 3 Phase + Neutral Out / 50 - 600A

- Increased power quality
- Easy monitoring all parameters on LCD display
- Fast microcontroller (32 mips)
- Power blackout protection
- Automatic static switching
- Remote monitoring of input power sources
- Easy static and mechanical transfer between separate input sources
- Remote management of power events
- Power event logging
- Advanced RS232 communication features
- DRY contact alarm interface
- Password protected login system from remote site (time Access)
- Easy front access to all components inside of the STS
- Second protection cover on live circuits which prevents electrical shock
- Input sources protected by fuses
- 3 positioned Maintenance bypass switch which prevents cross currents between input sources
- User adjustable parameters by entering a password.
- Built in real time clock.
- Alarm history (with date and time)
- Automatic transfer test from a remote site or using front panel
- Front panel Lamp test
- External emergency shutdown (EPO) input
- Hot plug construction during maintenance bypass
- High current output tolerance up to 1000%
- Temperature sensor inside the Cabinet
- Fast voltage black-out circuit
- Input phase balance and phase sequence fault detect circuit
- Adjustable Input source frequency lower/upper limits



## TECHNICAL SPECIFICATIONS

MODEL - 3pole	STS3050	STS3100	STS3150	STS3200	STS3250	STS3300	STS3400	STS3600
MODEL - 4pole	STS4050	STS4100	STS4150	STS4200	STS4250	STS4300	STS4400	STS4600
INPUT								
Voltage	380,400VAC, [3 wires for 3pole version And 4 wires for 4pole version]							
Voltage Range	310-430VAC							
Frequency	50 or 60Hz +/-5%							
Voltage Distortion	<10%							
Input voltage error window	adjustable							
Input frequency error window	adjustable							
OUTPUT								
Current	50A	100A	150A	200A	250A	300A	400A	600A
Voltage	380,400VAC, [3 wires for 3pole version And 4 wires for 4pole version]							
Crest factor	up to 3.5							
Synchronized transfer time	max 1.8 msec (on 0 current mode)							
Non-synchronised transfer time	max 10 msec in 0 current mode, 0-25 sec adjustable in delay mode and in 0 current mode							
load power factor range	0.6 lagging to 0.9 leading							
Efficiency	>98%							
Overload	100% to 150% = 1 minute							
	150% to 200% = 10 seconds							
	>200% = 0.5 seconds							
	1000% = 20 msecs							
Type of transfer	break before make							
As standard	Overcurrent inhibit LCD front panel, MBP							
DISPLAY								
LCD Display	2 lines 16 character LCD Display							
Monitored Parameters	Source 1 Voltages, Source 2 Voltages, Output Load, Phase Balance, Synchronization Source 1 Frequency, Source 2 Frequency, Phase Angel Degree, Temperature							
Indications	8 LEDs arranged as mimic diagram							
Control buttons	5 push button interactive with LCD panel							
Event log	64 recorded alarm logs from panel or RS232							
COMMUNICATION								
Interface (Communication Ports)	RS 232 Standard							
Dry contact signals	Output Inhibit Relay, Summary Alarm Relay, Static Or Manual Transfer Relay, S1 /S2 Backfeed Trip Relay, Preferred Source Indicator Relay, Load Is Connected To Alternate Input Source Relay							
GENERAL								
Neutral connection	available at 4pole version							
Transfer time	<5msec : within CBEMA & IEEE for synchronized sources <11msec: for unsynchronized sources.							
Manual transfer switch	available							
ENVIRONMENT								
Operating Temperature	0-40°C							
Relative Humidity	0 - 95% (non-condensing)							
PHYSICAL SPECIFICATIONS								
Dimensions [mm] WxDxH	685x530x1500			685x570x1770			915x735x1935	
Weight [kg]	175			205	215	220	240	340
STANDARDS								
Standards	EN 62310-2, EN 62310-1, EN 60950-1							

## Infomips

### Isolation Power Systems With Transfer Unit And Isolation Error Detection System

Isolation power panels with transfer units are designed with double source inputs. The transfer unit monitors the priority selected source continuously and directs the output to the 2nd source in cases such as power cuts and voltage out of the set values. In case the priority source returns to nominal values, the output continues to be operated from the 1st source again.

In addition to isolation power panels with transfer units, a line monitoring system is included. All output lines are monitored separately via toroidal current transformers. Isolation leakage is detected on a line basis. Due to the 6 toroidal current transformers, the panels are produced with 12, 18 and 24 lines.

#### TECHNICAL SPECIFICATIONS

- Patient and doctor life safety
- Automatic transfer changeover system
- Transfer time under 100ms
- 10 kVA isolation power transformer
- Isolation monitoring device
- Error detection system
- Line-based isolation leakage monitoring
- LCD screen
- 12/18/24 pcs 2x16A B type line output
- 0-43A load current
- Transformer temperature value tracking
- Load current monitoring
- Remote monitoring with local and central alarm panels
- Multi-device communication possibility
- RS485 Mod-Bus / TCP-IP Mod-Bus communication



### GTFD Series Isolation Transformer

Transformer providing the necessary isolation for Group – 2 fields in the hospital.

Standards:

IEC 61558-2-15

IEC 60364-7-710



### Isolation Monitoring Module

It continuously monitors the isolation resistance level and gives an alarm if there is a leakage between the system and the ground. Apart from the isolation level, it constantly monitors the current drawn from the system and the transformer temperature. It can transmit all data as instant value and alarm to local and central alarm panels.

Standards:

IEC 60364-7-710

IEC 61557-8

IEC 61557-9



### Transfer Module

Transfer Modules are devices that control two contactors and simultaneously monitor Input-Output Voltages and Current Drawn in order to transfer the double line supply to the output without interruption. It can transmit all data as instant value and alarm to local and central alarm panels.

Standards:

IEC 60364-7-710

IEC 60364-5-53

IEC 60947-6-1



## Local And Central Alarm Panels

Local Alarm Panels are units that display all the data and alarms of the panel by installing them in the area fed by the isolation panel. From local alarm panels; You can monitor Isolation resistance level and its alarm, Current drawn value and its alarm, Transformer temperature and its alarm, Line-based alarm information from error detection system, Line feeding information, Line1, Line2 and Output voltage information. The whole system communicates with each other via Mod-Bus. The central monitoring panel is used to display the information of all panels in the same group from a single point. It is generally located in the technical staff room.

Standards:  
IEC 60364-7-710

### TECHNICAL SPECIFICATIONS

- Ability to operate as a local or central alarm panel
- Monitoring up to 16 boards
- Isolation level monitoring
- Current level monitoring
- Temperature monitoring
- Source monitoring
- Line-based error monitoring
- LCD graphic display
- Audible and visual alarm
- Data export with MODBUS and IPTly.



## 21" Central Monitoring Panel

The 21" Central Monitoring Panel provides the opportunity to monitor up to 300 panels over the Network. IT panels can be grouped and named as desired. It provides the opportunity to name up to the line outputs. It can transfer all data to the scada system over the network.

### TECHNICAL SPECIFICATIONS

- Windows operating System
- 21" infrared touch screen
- Built-in speaker
- Possibility to communicate up to 300 panels
- Possibility to define IP address
- TCP-IP communication protocol



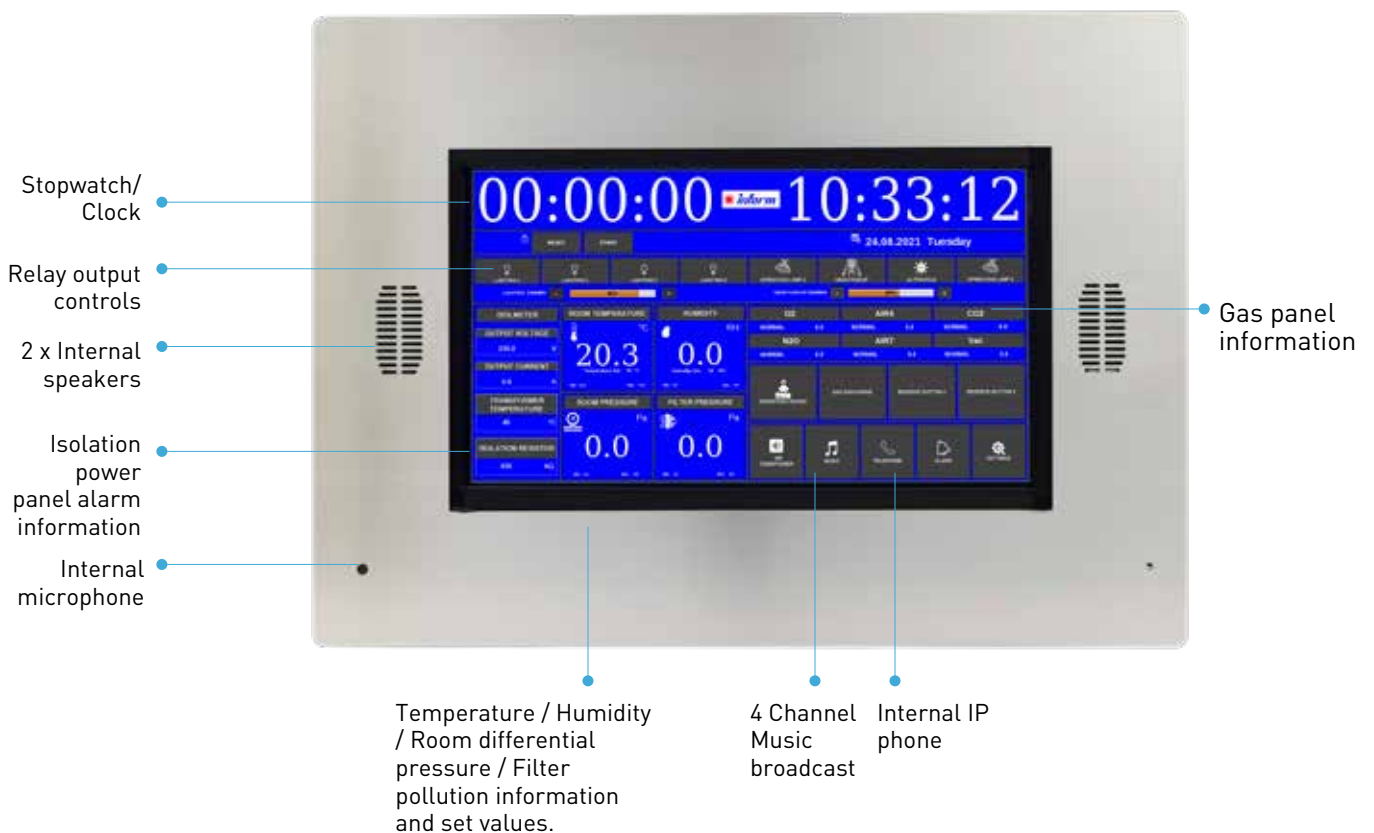
## Operating Room Control Panels

### Wildtouch 21" Operating Room Control Panel

Operating room control panels are used to control the lighting, operation lamps, negatoscope, etc. units in the room, and to display environmental information such as temperature, humidity, filter pressure, room differential pressure with external sensors to be connected. It has many additional features such as communicating with gas panel and automation system, handsfree phone, music system.

#### TECHNICAL SPECIFICATIONS

- 21" widescreen display
- 4 x Music channels, 2 x internal speakers
- Handsfree internal phone.
- RS485 / TCP-IP communication protocols.
- Clock, Stopwatch and Gas information on one screen.
- DIN4301 stainless steel front panel.
- Communication with IT panel and Gas panel directly.



## TECHNICAL SPECIFICATIONS

SCREEN	
Screen type	21.5" Infrared touchscreen
Clock	On the main menu
User data input	Touch screen
INPUTS	
0-10V analog sensor input	8 Reserved analog inputs
Music input	4 Channels
Temperature / Humidity / Filter pressure / Room pressure	4 Channel analog input
OUTPUTS	
Lighting	4 Channels / (On-Off) - (L1/L2/L3/L3) + Dimmer
Operation lamp	2 Channel / (On-Off)
Negatoscope	1 Channel / (On-Off) + DIMMER
Operating room busy luminaire	1 Channel / (On-Off)
Ultraviolet lamp	1 Channel / (On-Off)
Heater	1 Channel / (On-Off)
Air conditioner (half flow / full flow)	2 Channel / (On-Off)
Gas information	8 Channels
Reserved	8 Reserved analog output
Temperature / Humidity set	2 Analog output
Music	4 Channels
Alarm	(On-Off)
Alarm mute	(On-Off)
SPECIFICATIONS	
Operating system	Linux
Temperature / Humidity / Pressure sensor limit setting	Lower limit / Upper limit setting, buzzer available
Gas discharge outlet	1 Channel / (On-Off)
Internal speaker	Available
Internal microphone	Available
Phone	Internal IP Phone
MEASUREMENTS	
Temperature	0°C-50° C / 0-10V Analog
Humidity	0%-100% / 0-10V Analog
Room pressure	Pascal / 0 Pa- 100 Pa / 0-10V Analog
Filter pollution level	Pascal / 0 Pa- 100 Pa / 0-10V Analog
Audible alarm	Adjustable
Communication	Mod-Bus(RS485) / TCP-IP
Front panel	DIN4301 (2mm Stainless Steel)
DIMENSIONS	
Dimensions (WxDxH)(mm)	703x135x498



# Battery Cabinets

	Battery cabinet type	Cabinet model	Capacity												Cabinet dimensions			
			7-9 AH.	12AH.	18 AH.	25 AH.	40 AH.	65 AH.	80 AH.	100 AH.	120 AH.	150 AH.	200 AH.	Length	Width	Height	Weight	
	BC Cabinets (multi-purpose)	BC 00	32	22	14	6	6							655	230	530	15	
		BC 10	64	42	24	12	12							835	246	700	25	
		BC 20	76	48	32	15	15	6	6					957	246	760	30	
		BC 30	144	96	40	38	32	16	16					926	386	1073	50	
		BC 40	120	72		32								828	386	846	35	
		BC 45	109	72	64	28	24							957	422	800	55	
		BC 50	240	144		64	48	32	32	32	8			1566	386	1166	80	
		BC 55				78	78	38	38	38	30			1497	749	1800	139	
		BC 60			124	100	80	64	64	64	45	45	32	1774	565	1785	230	
		BC 65				180	150	90	90	90	60	60	40	2540	565	1785	204	
	V type PDSP Cabinets	V 14			62	31								400	765	1070	51	
		V 15		62										400	765	1070	51	
		V 24				32	31							525	880	1310	64	
		V 33						35	35	35				835	1160	1310	143	
		V 34				94	78							835	1160	1310	143	
	V type Informer Cabinets	BC 1000		6										135	430	390	10	
		BC 2000	8											135	470	390	10	
		BC 3000	12											135	470	390	10	
	Informer Rack Cabinets	RMBC 1000		6										483	470	132	10	
		RMBC 2000	8											483	450	132	10	
		RMBC 3000	12											483	512	132	10	
	V type Saver (plus) DSP Cabinets	BC 1714			14									270	512	685	28	
		BC 1426				14								270	655	685	30	
		BC 0740	40											270	655	685	28	
		BC 1720			20									270	655	685	30	
		BC 2620				20								390	755	700	46	
		BC 1232		32										270	655	685	30	
	Saver DSP Rack Cabinets	RMBC 0714	14											483	535	134	11	
		RMBC 1214		14										483	535	222	12	
		RMBC 0720	20											483	535	222	11	
		RMBC 1220		20										483	535	222	17	
	BC Cabinets (DSP Multipower)	MPBC	20	20										425	563	222	16	
	V type DSP Multipower Cabinets	MPBC-V	20											445	677	132.9	15	
Battery connection cables depend on UPS models. Battery cable price is not included in cabinet price.																		





# UPS

## High performance, uninterruptible service and energy efficiency.

The wide diffusion of UPS systems generally stems from an increasing dependence on electricity and the need to protect a range of equipment, data and processes that are crucial to companies. Power electronics is focused on the design and development of static UPS with increasing performance, which provide adequate energy saving along with lower environmental impact.

### Safety and uninterruptible service

Any electronic device that is not properly protected by UPS systems may be subject to disturbances from the mains supply. Electrical events such as voltage dips, black-outs, voltage surges, or other voltage or frequency anomalies, can generate serious consequences including:

- interruption of services
- loss of data and information
- faults or damage to the actual electronic devices.

The solution to these problems is provided by Uninterruptible Power Supplies (UPS) which, when installed between the power supply network and the equipment, **improve the quality of the power** by ensuring **uninterruptible service** and **protection** of all devices that perform functions that are critical to the business life of companies.

### Energy efficiency

Thanks to the use of the latest technologies, the new concept UPS boast high efficiency and an intelligent battery charging system that extends its useful life. In addition to significantly reducing UPS consumptions and operating costs, these features contribute to reducing the environmental impact of battery disposal.



# REFERENCES

- ABB – GERMANY
- ABB - SWEDEN
- AGUSTA WESTLAND – ITALY
- AKZO NOBEL - PAKISTAN
- AIRPORT AUHORITY OF INDIA
- ALBARAK BANK – SOUTH AFRICA
- ALCATEL - PORTUGAL
- ALPHA MEDICAL – FRANCE
- AMALGAMATED HEALTH CARE SOUTH AFRICA
- ALVARVE UNIVERSITY - PORTUGAL
- ANGOLA AIRPORT – ANGOLA
- ATATURK AIRPORT - TURKEY
- AUCHAN SUPERSTORES - ITALY
- AZERCELL - AZERBAIJAN
- BANGLALINK-BANGLADESH
- BANK OF GUINEA-GUINEA
- BANK AL HABIB-PAKISTAN
- BANQUE B.C.P – FRANCE
- BARILLA - ITALY
- BARWON PRISON-AUSTRALIA
- BASHKORTOSTANA TV - RUSSIA
- BATUMI AIRPORT- GEORGIA
- BAUER - GERMANY
- BLOEMFONTEIN INT AIRPORT- SOUTH AFRICA
- BOUYGUES TELECOM – FRANCE
- CAMARA MUNICIPAL DE FAFE PORTUGAL
- CANCER HOSPITAL-BANGLADESH
- CARREFOUR - TURKEY
- CARREFOUR- ITALY
- CARREFOUR - BRASIL
- CASINO DE SAINT PAIR – FRANCE
- CEGELEC - GERMANY
- CENTRE HOSPITALIER D'ARGENTAN FRANCE
- CENTRAL HOSPITAL - RUSSIA
- CENTRO HOSPITALAR COVA DA BEIRA – PORTUGAL
- CHAMBRE D'AGRICULTURE DES DEUX SEVRES – FRANCE
- CHANTIER CEGELEC BATIMENT GRAND TOULOUSE –FRANCE
- CHINABANK -KAZAKHSTAN
- CLINIQUE LA SOLANE - FRANCE
- COIMBRA CENTRO- PORTUGAL
- COLGATE PALMOLIVE -PAKISTAN
- COLOPLAST- HUNGARY
- COMMERCIAL & INDUSTRIAL CHAMBER OF SALONIKA-GREECE
- CONSOL SPECIALITY GLASS SOUTH AFRICA
- COSCOM-UZBEKISTAN
- CUSTOMS POLICE- ROMANIA
- CREDIT EUROPE BANK - RUSSIA
- CSKA STADIUM- RUSSIA
- DAIMLER CHRYSLER-GERMANY
- DANONE - FRANCE
- DELTA STATE GOVERNMENT NIGERIA
- DENEL AEROSPACE – SOUTH AFRICA
- DHL MALAYSIA- MALAYSIA
- EKO FM - NIGERIA
- ERICSSON - TURKEY
- ERICSSON-GERMANY
- ERCAN AIRPORT - CYPRUS
- EXPRESS HIGHWAY - S.KOREA
- ESIA BAKRIE TELECOM INDONESIA
- ESSILOR – SOUTH AFRICA
- EFG EUROBANK –GREECE
- FAISALABAD AIRPORT - PAKISTAN
- FARO AIRPORT - PORTUGAL
- FNB BANK - S.AFRICA
- FIDELITY BANK PLC - NIGERIA
- GAZPROM - RUSSIA
- GEOCELL-GEORGIA
- GE MONEY BANK -RUSSIA
- GILGIT AIRPORT - PAKISTAN
- GLAXO KLINE-AUSTRALIA
- GLOBE TELECOM-PHILIPPINES
- GREAT ORMOND ST HOSPITAL-UK
- H&K-TAIWAN
- HANKOOK TIRE - HUNGARY
- HIRSCHMANN ELEK - HUNGARY
- HOME CREDIT&FINANCE BANK RUSSIA
- HOSPITAL LOCAL DE BAUME-LES-DAMES -FRANCE
- HOSPITAL DE AVEIRO – PORTUGAL
- HOSPITAL DE BELLVITGE-SPAIN
- HOSPITAL DE BENIDORM-SPAIN
- HOTEL ST. JOSEPH, KARLOVY VARY CZECH REPUBLIC
- IKEA-UK
- IKEA - RUSSIA
- IMMIGRATION DEPT-HONG KONG
- INCREDIBANK -RUSSIA
- INDOSAT-INDONESIA
- INOX - INDIA
- INTERTEK -HONG KONG
- INTERCONTINENTAL BANK PLC NIGERIA
- IRIT UNIVERSITY - FRANCE
- IS BANK - TURKEY
- ISTANBUL LRT-BOMBARDIER TURKEY
- ISP TAIWAN
- ISLAMABAD AIRPORT - PAKISTAN
- JSC-RUSSIA
- KARACHI AIRPORT - PAKISTAN
- K MOBILE GSM-KAZAKHSTAN
- KAUF LAND - POLAND
- KAZAK TELECOM – KAZAKHSTAN
- KCEL -KAZAKHSTAN
- KIA MOTORS - S.KOREA
- KING SHAKA INT AIRPORT – SOUTH AFRICA
- KNAUF GIBS – RUSSIA
- KOREAN TELECOM - S.KOREA
- KWAIT PETROLEUM-ITALY
- LAGOS TELEVISION - NIGERIA
- LAUSANNE METRO- SWITZERLAND
- LEICESTER MERCURY NEWSP-UK
- LG - S.KOREA
- MARZ - GERMANY

- MEGA CENTER- RUSSIA
- MELO MEDICAL – SOUTH AFRICA
- MEMORIAL HOSPITAL - PAKISTAN
- MEWAH OILS SDN BHD - MALAYSIA
- MICROSOFT - TURKEY
- MIDDLESEX UNIVERSITY-UK
- MINISTRY OF AGRICULTURE ROMANIA
- MINISTRY OF COMMUNICAT. ROMANIA
- MINISTRY OF EDUCATION KAZAKHSTAN
- MINISTRY OF JUSTICE- ROMANIA
- MINISTRY OF HEALTH- RUSSIA
- MINISTRY OF FINANCE –INDONESIA
- MINITARY HOSPITAL - SAUDI ARABIA
- MGU UNIVERSITY - RUSSIA
- MOLDCELL- MOLDOVIA
- MOLODAYA GVARDIYA RUSSIA
- MOTOROLA-HONG KONG
- MTN GSM - S.AFRICA
- MULTIRAMA- BULGARIA
- NATIONAL BANK OF KIRGIZYSTAN
- NATIONAL BANK OF PAKISTAN
- NATIONAL SEMICON.- HONG KONG
- NATIONAL BANK OF GREECE GREECE
- NATIONIAL ELECTRIC CO.- BULGARIA
- NATIONAL ORTOPAEDIC HOSPITAL, IGBObI - NIGERIA
- NATIONAL HIGHWAY –EUROIONIA CONSORTIUM – GREECE
- NUMERICABLE - FRANCE
- NESTLE- PAKISTAN
- NIKONA- MACEDONIA
- NORTHUMBRIA POLICE - UK
- OBI MARKET - HUNGARY
- ORASCOM TELECOM-BANGLADESH
- OR TAMBO INT AIRPORT – SOUTH AFRICA
- OSMO- GERMANY
- PARQUE NASCENTE - PORTUGAL
- PETROKAZAKISTAN - KAZAKHSTAN
- PETRONAS MITCO (JAPAN) SDN BHD MALAYSIA
- PHILIPS - TURKEY
- PHILIPS ELECTRONICS-HONG KONG
- PHILIPS MEDICAL - S.AFRICA
- PHILIPS-HOLLAND
- PHILIPS PROJECT CENTRE -NIGERIA
- PLANET PRESS - NIGERIA
- PKP (NATIOANL POLISH RAILWAY) POLAND
- POLICE STATIONS - POLAND
- POLISH ARMY - POLAND
- POST OFFICES - POLAND
- POST & TELECOM-INDONESIA
- PORTUGAL TELECOM - PORTUGAL
- PRINCE SULTAN CARDIAC HOSPITAL-SAUDI ARABIA
- PT TELECOM-INDONESIA
- PWC-BULGARIA
- QUALITY CINE LABS - INDIA
- RADIOTELEOPTIKI NEAPOLIS-GREECE
- RED CROSS - PROTUGAL
- RENAULT - FRANCE
- RESERVE BANK OF INDIA
- REUTERS - GERMANY
- RIKSBYGGGEN-SWEDEN
- ROCA SANITARIOS-SPAIN
- ROYAL HOSPITAL-AUSTRALIA
- RODAX S.A. - GREECE
- SAFT - FRANCE
- SAMSUNG - S.KOREA
- SAUDI ARAMCO-SAUDI ARABIA
- SAUDI ERICSSON-SAUDI ARABIA
- SEISSSENSCHMIDT - HUNGARY
- SEL BIO PARIS OUEST - FRANCE
- SHANGRI-LA HOTEL-HONG KONG
- SHINBUNDANG RAILWAY – SOUTH KOREA
- SHELL - GERMANY
- SIEMENS - TURKEY
- SIEMENS -GERMANY
- SIEMENS - S.AFRICA
- SIEMENS-KAZAKHSTAN
- SOCIAL INSURANCE - POLAND
- SOMERSET AND AVON POLICE-UK
- SOUTHPORT HOSPITAL-UK
- SPACE CO- AZERBAIJAN
- SPORT STADIUM, PLZEN-CZECH REPUBLIC
- ST JAMES HOSPITAL-UK
- STATE BANK OF INDIA
- SYARIKAT PRASARANA NEGARA BERHAD – MALAYSIA
- SWISS INS - SWITZERLAND
- TECHNICAL CHAMBER OF GREECE GREECE
- TECHNICAL UNIVERSITY OF IONIAN ISLANDS-GREECE
- TECHNOLOGY-HONG KONG
- TECHNOPOLIS-BULGARIA
- THALES RECHEARCH AND TECHNOLOGY FRANCE
- THYSSENKRUPP AIRPORT SYSTEMS, S.A.- SPAIN
- TRANSTEL - S.AFRICA
- TRANSWORLD PUBLISHING-UK
- TYGERBERG HOSPITAL - S.AFRICA
- UNIVERSIDAD DE ZARAGOZA-SPAIN
- UNIVERSITY OF SCIENCE & UNIVERSTY OF SINGD-PAKISTAN
- UNIVERSITY HOSPITAL PRAGUE 2 CZECH REPUBLIC
- VÄXJÖ MUNICIPALITY-SWEDEN
- WAGON AUTOMOTIVE (FARNIER PENIN) FRANCE
- WOLMIDO MONORAIL – SOUTH KOREA
- ZANTE HOSPITAL -GREECE
- ZARA SHOP -RUSSIA
- RIYADH POISON CONTROL CENTER – S. ARABIA
- NATIONAL HAYAT HOSPITAL – S. ARABIA
- PRINCE MOHAMMAD BIN ABDULAZIZ HOSPITAL – S. ARABIA
- ALMAJMAAH UNIVERSITY – S. ARABIA
- ABOUARISH HOSPITAL – S. ARABIA
- SAMTA HOSPITAL – S. ARABIA
- SABYA HOSPITAL – S. ARABIA
- ALMOSAM HOSPITAL – S. ARABIA
- AL RAYTH HOSPITAL – S. ARABIA



# CUSTOMER SERVICES

## Reliable

Directly present in more than 70 countries and servicing its products worldwide, a team of qualified engineers is available 24/7/365 to support your UPS system to ensure power quality and availability to the most critical loads.

## Excellent

Inform's competitive edge lies in its ability to provide high value-added UPS systems and services for both end users and business partners.

For Inform, creating value means coming up with solutions for lower energy consumption, but also integrating product design into the overall development process.

## Tailor-made

Inform offers a complete range of specific solutions and services to meet customer requirements:

- Technical pre-sales support at the project design stage
- Factory acceptance test
- Supervision of installation, testing and commissioning, site acceptance test
- Operator training
- Site audit
- Warranty extension
- Annual maintenance contract
- Fast intervention on emergency call



## SUPPORT



### **SITE INSPECTION, INSTALLATION SUPERVISION.**

We perform a comprehensive check of the UPS environment to ensure safety and fault-free operation. Our technical experts give manufacturer's recommendations to the site engineer or electrical contractors, and supervise the UPS installation before load power-up.

### **SITE TEST, COMMISSIONING.**

Our Service Engineers conduct rigorous site tests and full setting-up of the UPS system before going live. They also perform site acceptance tests according to your requirements. Commissioning operations for all UPS are carried out by qualified engineers to guarantee seamless start-up. After the final handing over of the UPS system, a Test and Commissioning report is delivered to you.

## TRAINING



We offer on-site training to ensure your equipment's safe and efficient operation. Troubleshooting courses are also available in our plants for intensive hands-on practice on UPS training equipment.

## MAINTENANCE



### **PREVENTIVE MAINTENANCE**

Electronic equipment and power systems, such as UPS, contain life-limited components and parts that must be replaced according to the manufacturer's specifications.

To ensure optimal performance and to protect your critical application from potential downtime, it is crucial to perform

preventive maintenance operations on a regular basis and replace parts when needed. Our Service Contracts include cleaning, IR thermography, measurements, functional tests, event log and power quality analysis, battery health check, hardware and software upgrades, and technical reports. A Preventive Maintenance Plan is one of the most cost-effective actions that can preserve your initial investment and ensure your business continuity.

### **CORRECTIVE MAINTENANCE, EMERGENCY CALL**

In the event of an Emergency Call, our worldwide service network, with engineers and spare-parts stocks strategically located as close as possible to your site, guarantees a fast intervention time with 24/7/365 assistance.

After connecting his laptop to your UPS, very powerful diagnostic software helps our engineer to identify the fault, thus ensuring short MTTR (Mean Time To Repair).

Corrective actions are performed such as part replacement, adjustments and upgrades to return the UPS system back to normal operation.

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