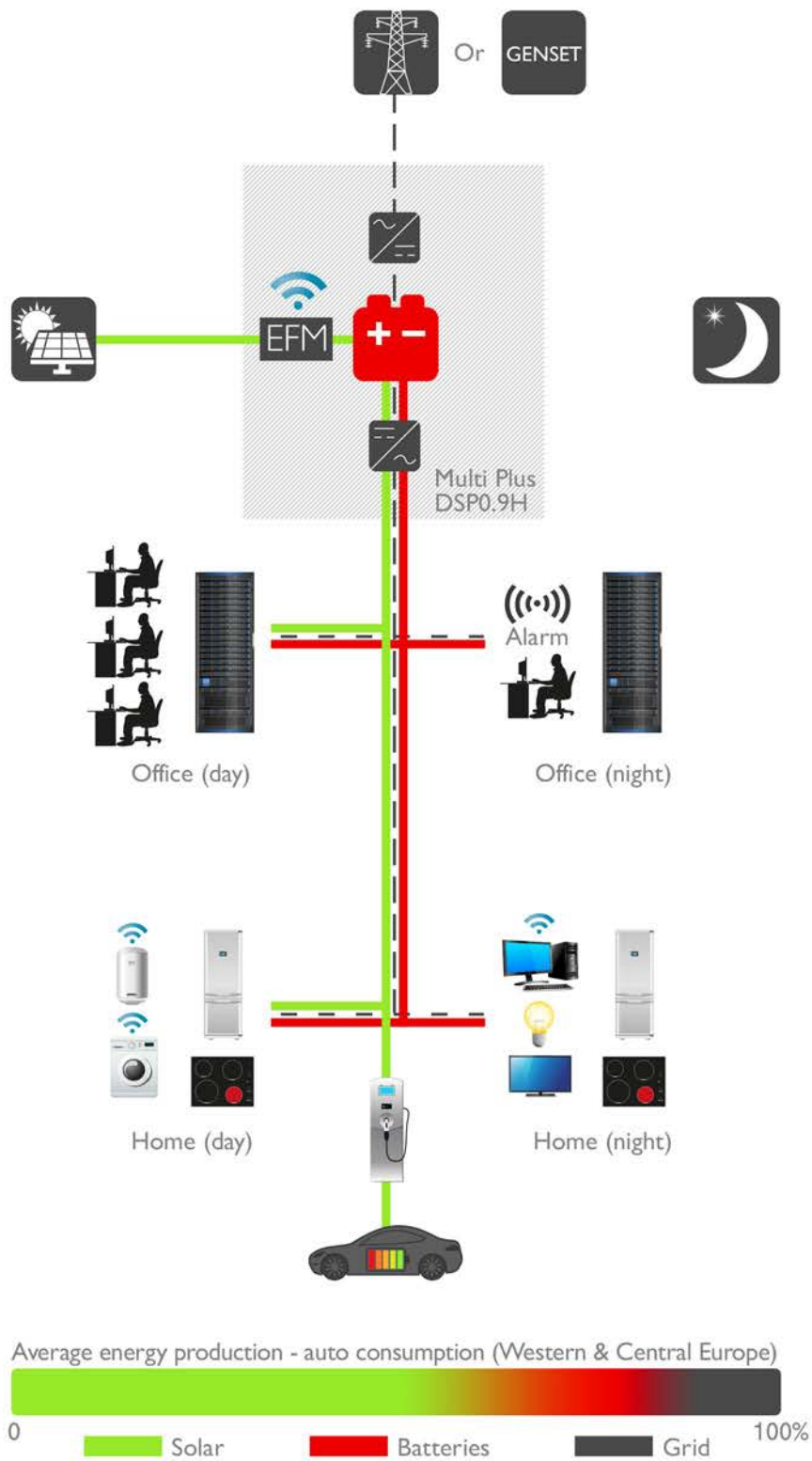




UPS Product Catalogue

2019  
20

# More than a UPS...



Learn more about the Hybrid UPS on page 44

# UPS product catalogue | Index

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Your possibility to reduce the energy consumption and at the same time reduce the CO<sub>2</sub> emissions



Your possibility to improve the efficiency of the UPS

## Aunilec - France (Guénange)



Aunilec warehouse



Factory in TORINO (Italy)



Factory in VERONA (Italy)

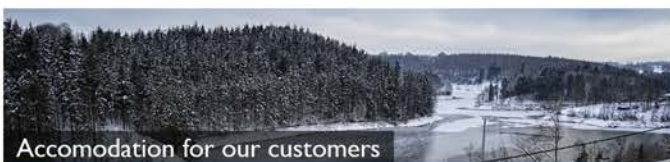
- European quality and reputation
- Large stock
- Custom made products
- After sales service
- Wide range of products

### The Aunilec UPS

The Aunilec company was established in January 1999 in France with major plants in Italy, Spain and the Grand Duchy of Luxembourg. We became a worldwide company recognized in more than 40 countries.

### All over the world

The Aunilec products are protecting all over the world.



Accommodation for our customers



Commercial training office



## Our philosophy

### Training

Aunilec offers to all its customers business and technical training.

### Installation and maintenance

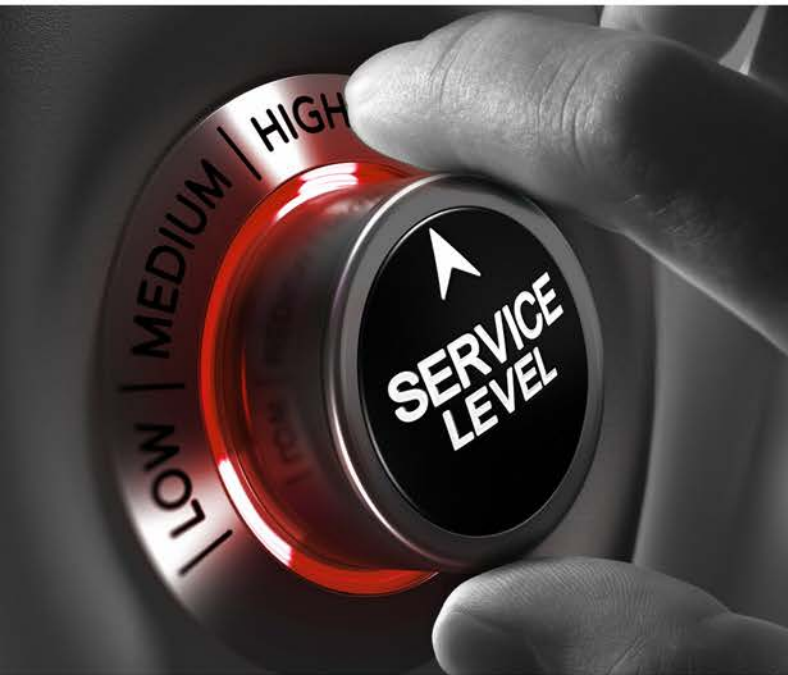
Aunilec offers - in addition to standard instructions - specified technical documentation for installation and maintenance. This allow the technical and maintenance staff to save time on-site and minimize the source of error.

### Assistance

Aunilec acknowledges its part of responsibility for all products during and after the terms of warranty period. We offer technical support and assistance together with our engineers.

### Custom solutions

Besides standard solutions, we also offer custom-made solutions for special applications.



### Service level

Aunilec guarantees a high quality service in multibrand manufacturer and maintenance of all products related to the backup power, energy saving and energy conversion, such as UPS, battery charger, continuous power (circuit breaker operating light...) central emergency lighting source, stationary battery, power factor correction capacitor, rectifier and battery charger, stabilized power supply, DC-AC converter and DC-DC, industrial battery, transformer, voltage regulator and networks conditioner.

Our technical team offers several services:

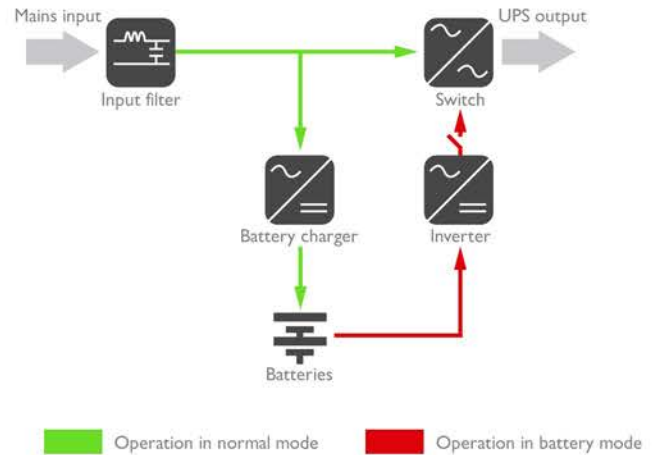
- Maintenance contract
- Repair workshop (test platform)
- Battery Replacement
- Troubleshooting
- Commissioning
- Inverter Rental

## Technology | Off-Line

### VFD - Voltage & frequency dependant

Passive standby technology (off-line) is a frequently used UPS to protect against **blackout**. In normal mode, the UPS supplies power to the application directly from the mains, filtered but without active conversion. The battery is charged from the mains. In the event of a power failure, the UPS delivers stable power from the battery. Passive standby topology is not suitable if the power supply is of lower quality (industrial sites). Due to the lower protection and less battery lifetime, this type is not recommended/produced by Aunilec.

Average switching time to battery mode : 10ms

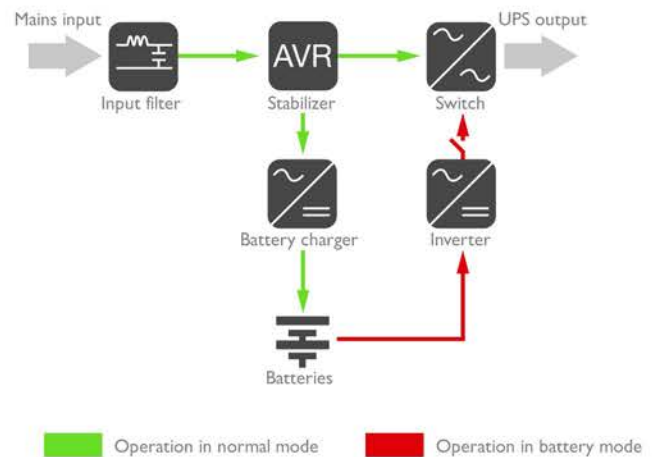


## Technology | Line-Interactive

### VI - Voltage independant

Line interactive technology is mostly used for enterprise networks and IT applications. It protects from **blackout**, **undervoltage** and **overvoltage**. In normal mode, the device is controlled by a microprocessor that monitors the quality of the supply and reacts to fluctuations. A voltage stabilizer (AVR) is enabled to boost or reduce the supply voltage to compensate the input voltage fluctuations. The main advantage of this technology is that it enables compensation of under- and overvoltage without using the batteries.

Average switching time to battery mode : 4-10ms



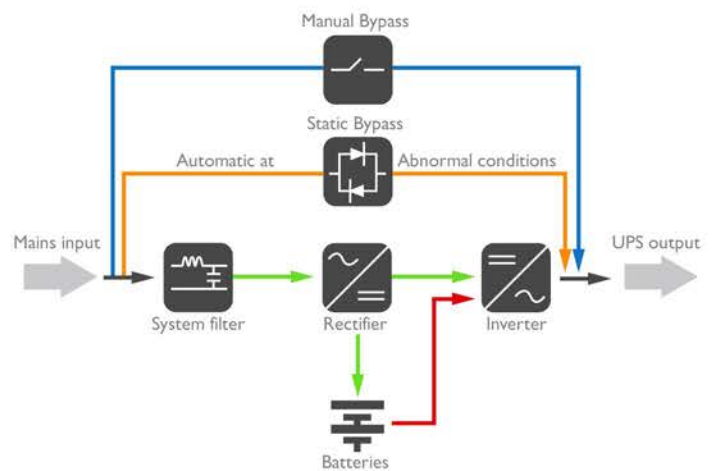
## Technology | On-Line

### VFI - Voltage & frequency independant

Double conversion technology (on-line) is a basis for UPS designed for continuous power protection from all eight power problems: **power failure**, **undervoltage**, **overvoltage**, **frequency variation**, **voltage harmonics**, **voltage distortion**, **high-frequency transient**, (**power surge** with galvanic isolation). It ensures a consistent quality of power supply regardless of disturbances in the incoming mains. The output voltage is entirely regenerated by a sequence of AC to DC conversion followed by DC to AC conversion in order to create a 100% clean power. Double conversion UPSs can be used with any type of equipment as there is no switching when changing over to battery power.

Switching time to battery mode : 0ms

■ Operation in normal mode   
 ■ Operation in battery mode   
 ■ Operation in static Bypass   
 ■ Operation in manual Bypass



# Technical problems | Aunilec solutions

## Technology | Off-Line (VFD)

Protection against :



Blackout

Due to the lower protection level, this type is not recommended/produced by Aunilec.

## Technology | Line-interactive (VI)

Protection against :



Blackout



Overvoltage



Undervoltage

## Technology | On-line (VFI)

Protection against :



Blackout



Overvoltage



Undervoltage



High-frequency  
transient



Frequency  
variation



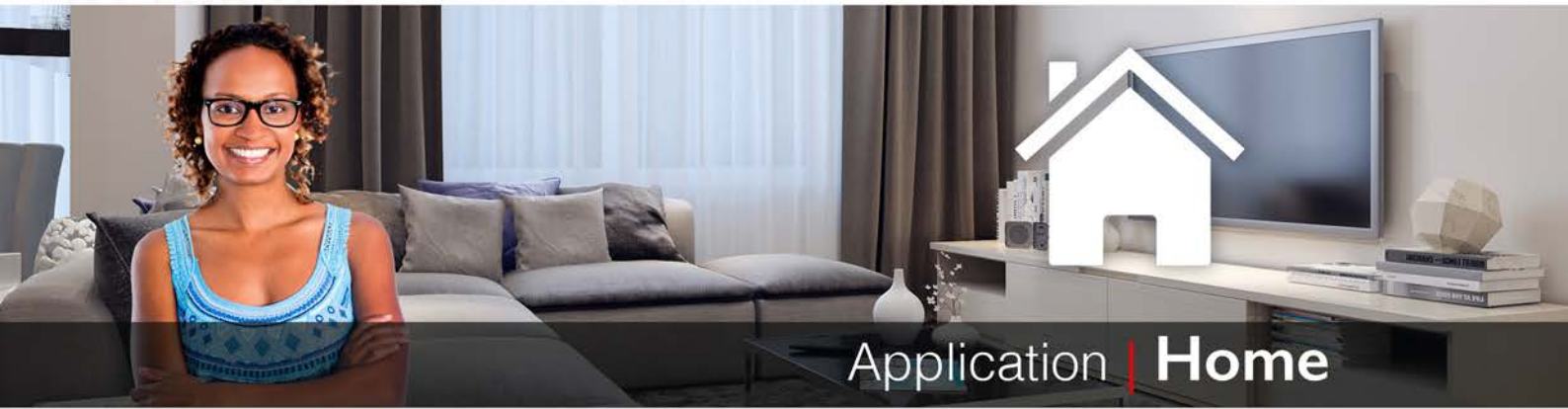
Voltage  
harmonics



Voltage  
distortion



Power surge  
(lightning...)



Application | **Home**



**Home UPS**  
800-1500VA



**ARES Rack 19''**  
750-1600VA



**Série EOS**  
650-2200VA



**Série EOS|D**  
650-2200VA



**Aunisol**  
1000-20000VA



**ARES**  
1000-3000VA



**IRIS**  
1000-3000VA



**IRIS LA**  
1000-3000VA



**Helios 20S**  
20kVA/18kW (3/3)



**MultiPlus DSP0.9H**  
10-500kVA (3/3)  
10-30kVA (3/1)



Application | **Alarm, Computer & SoHo**



**Home UPS**  
800-1500VA



**ARES Rack 19''**  
750-1600VA



**Série EOS**  
650-2200VA



**Série EOS|D**  
650-2200VA



**Aunisol**  
1000-20000VA



**ARES**  
1000-3000VA



**IRIS**  
1000-3000VA



**IRIS LA**  
1000-3000VA





Application | **IT server**



**ARES Rack 19''  
750-1600VA**



**IRIS+RT  
1-3kVA (1/1)**



**IRIS+  
6/10kVA (1/1) (3/1)**



**IRIS+RT  
6/10kVA (1/1) (3/1)**



**IRIS+TT  
10-30kVA (3/3)**



**Helios 20S  
20kVA/18kW (3/3)**



**MultiPlus DSP0.9H  
10-500kVA (3/3)  
10-30kVA (3/1)**



**MiltiNET\_ATS  
16A/32A**



**MiltiNET\_ATS  
32A/63A/120A**



**MiltiNET\_ATS  
50-600A**



Application | **Datacenter**



**IRIS+RT  
1-3kVA (1/1)**



**IRIS+RT  
6/10kVA (1/1) (3/1)**



**Helios 20S  
20kVA/18kW (3/3)**



**MultiPlus DSP0.9H  
10-500kVA (3/3)  
10-30kVA (3/1)**



**Helios STR 19''  
10-80kVA (3/3)**



**Helios modulaire  
6-50kVA (1/1) (3/1)  
20-800kVA (3/3)**



**MiltiNET\_ATS  
16A/32A**



**MiltiNET\_ATS  
32A/63A/120A**



**MiltiNET\_ATS  
50-600A**



Application | **Healthcare**



**IRIS+RT**  
1-3kVA (1/1)



**IRIS**  
1000-3000VA



**IRIS LA**  
1000-3000VA



**IRIS+**  
6/10kVA (1/1) (3/1)



**MPTR**  
10-300kVA (3/3)



**IRIS+TT**  
10-30kVA (3/3)



**MultiPlus DSP0.9H**  
10-500kVA (3/3)  
10-30kVA (3/1)



**Helios STR 19''**  
10-80kVA (3/3)



**Helios modulaire**  
6-50kVA (1/1) (3/1)  
20-800kVA (3/3)



**MultiNET\_ATS**  
50-600A



Application | **Industry**



**Helios 20S**  
20kVA/18kW (3/3)



**MPTR**  
10-300kVA (3/3)



**MultiPlus DSP0.9H**  
10-500kVA (3/3)  
10-30kVA (3/1)



**Helios STR 19''**  
10-80kVA (3/3)



**Helios modulaire**  
6-50kVA (1/1) (3/1)  
20-800kVA (3/3)



**MultiNET\_ATS**  
50-600A

# UPS Models | Capacities

		kVA: 1 2 3 4 6 10 20 40 80 100 200 300 >400...											Page
Line-interactive	Série EOS	0,65-2,2kVA										1/1	12
	Série EOS D	0,65-2,2kVA										1/1	14
	ARES Rack 19''	0,75-1,6kVA										1/1	16
	Home UPS	0,8-1,5kVA										1/1	18
	ARES	1-3kVA										1/1	20
On-line	IRIS	1-3kVA										1/1	22
	IRIS LA	1-3kVA										1/1	24
	IRIS+RT	1-3kVA										1/1	26
	IRIS+RT	6-40kVA										1/1 3/1	28
	IRIS+	6-40kVA										1/1 3/1	30
	IRIS+TT	10-30kVA										3/3	32
	MPTR	10-300kVA										3/3	34
	Helios STR 19''	10-80kVA										3/3	36
	Helios 20S	20-80kVA										3/3	38
	Helios modulaire	6-800kVA										1/1 3/1 3/3	40
Hybrid	MultiPlus DSP0.9H	10-4000kVA										3/3 3/1	44
	Aunisol	1-20kVA										1/1	48

Solution for 19" Rack cabinet

Phase: In/Out

:Your possibility to reduce the energy consumption and at the same time reduce the CO<sub>2</sub> emissions

:Your possibility to improve the efficiency of the UPS

# Série EOS

## 650-2200VA



LINE-INTERACTIVE

### Applications



### LED display



The comprehensive LED display provides easy read-out status of the UPS :

- working on AC or battery mode
- battery level in case of blackout
- fault indicator
- load level

### Specifications

- Line-interactive technology (VI)
- Automatic Voltage Regulator (AVR, "Boost and Buck")
- Transfer to battery at under- and overvoltage
- LED display
- Self-diagnostic function
- Battery cold start
- Genset-compatible
- Auto-charging in Off-mode
- Auto-restart function
- Automatic computer shutdown
- Audible and visible alarm
- Surge protection
- RJ45/11 protection (EMI/RFI filtering)
- USB interface including software
- 2 years warranty

The Série EOS, featured with smart microprocessor control design, AVR boost and buck, smart USB interface and cold start function, is a cost-effective solution to your mission-critical PC and valuable peripherals.

The AVR Boost and Buck automatically corrects either undervoltage or overvoltage condition without unnecessary battery drain and extends the life of the battery.





### Smart USB



It offers real-time power and UPS status monitoring with automatic or scheduled shutdown and many other advanced power management functions.

### Monitoring Software Included



Monitoring software for Windows, Mac, Linux included.

Série EOS	Model					
	650	850	1100	1300	1600	2200
Nominal capacity (VA)	650	850	1100	1300	1600	2200
Power (Watt)	360	480	600	720	900	1200
Voltage	220/230/240Vac / 110/120Vac					
Input voltage range	162-290Vac / 81-145Vac					
Voltage stabilizer-AVR	Boost and Buck					
Input frequency	50/60Hz (auto sensing)					
Output voltage (AC/battery mode)	+/-10%					
Output frequency (battery mode)	50/60Hz +/-1Hz					
Transfer time to battery	Typical : 2-6ms / maximum : 10ms					
Waveform	Simulated sine wave					
Battery (voltage and quantity)	12V (1x7Ah)	12V (1x9Ah)	24V (2x7Ah)		24V (2x9Ah)	
Backup time	5-10 minutes at 70% of nominal load					
Typical recharge time	6-8 hours recover to 90% capacity					
Outlets IEC (Schuko on request)	4 outlets (650-1300VA) / 6 outlets (1600-2200VA) IEC320 C13					
Interface	USB-port					
Protection	Overvoltage, short-circuit, overload, battery deep discharge					
Visual indication-LED	AC or battery mode, load level, battery level, fault					
Acoustic information	Battery mode - low battery - overload - battery replacement alarm - fault					
Humidity / Noise level	0-90% at 0-40°C (non-condensing) / less than 40dB					
Dimensions WxDxH	101x302x142mm		149x338x160mm		158x380x196mm	
Weight	4,3kg	4,9kg	7,8kg	8kg	11,1kg	11,5kg
Warranty	2 years					
Software	For Windows, Mac, Linux					

# Série EOS|D

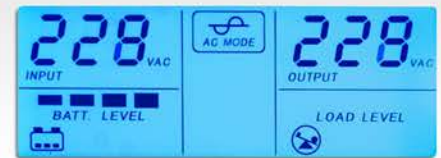
## 650-2200VA



### Applications



### LCD display



The comprehensive graphic display provides easy read-out status of the UPS from the screen, such as input, voltage, load level, battery level...

### Specifications

- Line-interactive technology (VI)
- Automatic Voltage Regulator (AVR, "Boost and Buck")
- Transfer to battery at under- and overvoltage
- Big LCD display
- Self-diagnostic function
- Battery cold start
- Genset-compatible
- Auto-charging in Off-mode
- Auto-restart function
- Automatic computer shutdown
- Audible and visible alarm
- Surge protection
- RJ45/11 protection (EMI/RFI filtering)
- USB interface including software
- 2 years warranty

The Série EOS|D, featured with smart microprocessor control design, AVR boost and buck, smart USB interface and cold start function, is a cost-effective solution to your mission-critical PC and valuable peripherals.

The AVR Boost and Buck automatically corrects either undervoltage or overvoltage condition without unnecessary battery drain and extends the life of the battery.



LINE-INTERACTIVE



### Smart USB



It offers real-time power and UPS status monitoring with automatic or scheduled shutdown and many other advanced power management functions.

### Monitoring Software Included



Monitoring software for Windows, Mac, Linux included.

Série EOS D	Model					
	650	850	1100	1300	1600	2200
Nominal capacity (VA)	650	850	1100	1300	1600	2200
Power (Watt)	360	480	600	720	900	1200
Voltage	220/230/240Vac / 110/120Vac					
Input voltage range	162-290Vac / 81-145Vac					
Voltage stabilizer-AVR	Boost & Buck					
Input frequency	50/60Hz (auto-sensing)					
Output voltage (AC/battery mode)	+/-10%					
Output frequency (battery mode)	50/60Hz +/-1Hz					
Transfer time to battery	Typical : 2-6ms / maximum : 10ms					
Waveform	Simulated sine wave					
Battery (voltage and quantity)	12V (1x7Ah)	12V (1x9Ah)	24V (2x7Ah)		24V (2x9Ah)	
Backup time	5-10 minutes at 70% of nominal load					
Typical recharge time	6-8 hours recover to 90% capacity					
Outlets IEC (Schuko on request)	4 outlets (650-1300VA) / 6 outlets (1600-2200VA) IEC 320 C13					
Interface	USB-port					
Protection	Overvoltage, short-circuit, overload, battery deep discharge					
LCD information	Load and battery level, voltage, working mode					
Acoustic information	Battery mode - low battery - overload - battery replacement alarm - fault					
Humidity / Noise level	0-90% at 0-40°C (non condensing) / less than 40dB					
Dimensions WxDxH	101x302x142mm		149x338x160mm		158x380x196mm	
Weight	4,3kg	4,9kg	7,8kg	8kg	11,1kg	11,5kg
Warranty	2 years					
Software	For Windows, Mac, Linux					

# ARES Rack 19"

## 750-1600VA



### Applications



### The best quality/price ratio

The ARES Rack 19" is an ideal solution for small server IT 19" Racks. Thanks to its small depth (310mm) the UPS can fit in almost any 19" cabinets.

### Specifications

- Line-interactive technology (VI)
- Transfer to battery at under and over voltage
- UPS with intelligent LCD display
- Automatic computer shutdown
- Automatic voltage regulator (AVR, "Boost and Buck")
- Very wide input and voltage range
- Battery (DC) cold start
- Overload and short circuit protection
- RJ11 telephone line protection
- Audible and visible alarm
- USB interface including software

- 2 years warranty

### LCD display indicator

The multi-functional indicator operates with blue backlight LCD and shows all input, output, load and battery parameters.



LINE-INTERACTIVE





### Smart USB



It offers real-time power and UPS status monitoring with automatic or scheduled shutdown and many other advanced power management functions.

### Monitoring Software Included



Monitoring software for Windows, Mac, Linux included.

LINE-INTERACTIVE

ARES Rack 19"	Model			
	750VA	1000VA	1200VA	1600VA
Power (Watt)	450	600	720	960
Input voltage range	165-265Vac			
Voltage stabilizer (AVR)	Boost & Buck			
Input frequency	50/60Hz (auto-sensing)			
Output waveform	Simulated sine wave			
Output voltage (AC mode)	220/230Vac (+/-10%)			
Output voltage (battery mode)	220/230Vac (+/-5%)			
Output frequency (battery mode)	50Hz (+/-1%)			
Battery (capacity X quantity)	12V 9Ah x 1	12V 7Ah x 2	12V 9Ah x 2	12V 9Ah x 2
Backup time (typical computer load)	10-35min		10-65min	
IEC 320 C13 outlets (quantity)	3		4	
Interface	USB			
LCD information	Load and battery level, voltage, working mode			
Dimensions HxWxD, mm	2Ux483x310	2Ux483x310	2Ux483x310	3Ux483x310
Weight, kg	8,7	12,5	13,5	15,8
Protection	Overvoltage, short-circuit, overload, battery deep discharge			
Noise suppression	Yes			
Software (UPSilon 2000)	Software for Windows, Mac, Linux			

# Home UPS

## 800-1500VA



### Applications



### Perfect for home applications

Only available with external batteries for long backup time. Perfect for all home and domestic applications.

### Specifications

- Line-interactive technology (VI) with pure sine wave output
- Only with external batteries
- Big charger: 10/20A (adjustable)
- Automatic Voltage Regulator - AVR
- Transfer to battery at under- and overvoltage
- LED indication
- Battery (DC) cold start
- Wide input voltage range: 130-290Vac
- Fully digitalized microprocessor controlled
- Energy saving function with UPS Green Mode
- Audible and visible alarm
- Surge protection
- Wide application range: Charger/Inverter/UPS

- 2 years warranty

### Backup time table (with external battery pack)

UPS with battery pack		Load in Watt						
		150W	300W	400W	600W	800W	1000W	1200W
Home UPS 800VA	BP0265	460min	210min	150min	90min			
	BP02100	750min	360min	240min	160min			
Home UPS 1000VA	BP0465	1300min	560min	330min	210min	160min		
Home UPS 1500VA	BP0465						120min	90min
	BP04100						210min	160min

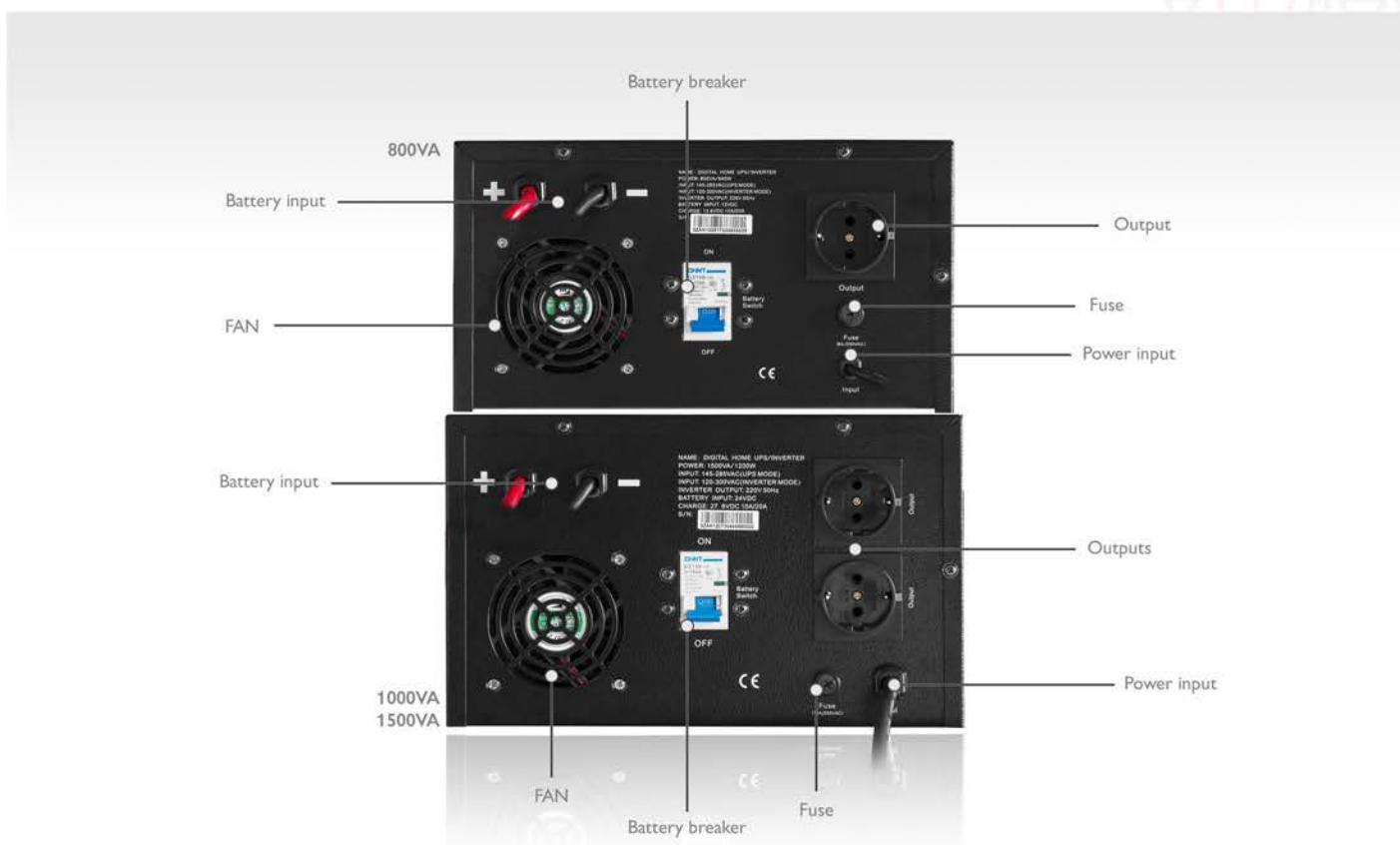
Backup times in minutes

Cabinet for 4 batteries  
BP0465 and BP04100



Cabinet for 2 batteries  
BP0265 and BP02100

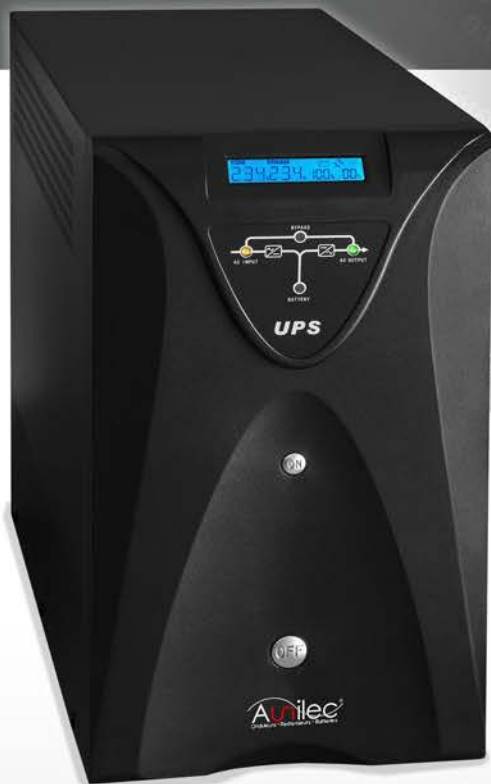
LINE-INTERACTIVE



Home UPS	Model		
	800VA	1000VA	1500VA
Power (Watt)	640W	800W	1200W
Technology	Line-interactive UPS (VI, voltage independent)		
<b>— Input</b>			
Min. voltage UPS-mode/inverter mode	145Vac (computer load) UPS / 120Vac (domestic load) INV		
Max. voltage UPS-mode/inverter mode	285Vac (computer load) UPS / 300Vac (domestic load) INV		
Frequency	38-70Hz		
Battery switching time	8-10ms (computer load), 0,5ms (domestic load)		
<b>— Output</b>			
Voltage	220/230Vac		
Waveform	Pure sine wave		
Frequency	50Hz +/-1Hz		
Voltage regulation	220Vac +/-10%		
Crest factor	2,5 : 1		
Efficiency	≥ 92%		
<b>— Battery</b>			
Type	VRLA, AGM, Gel, OPZv		
Voltage	12Vdc		24Vdc
Internal charger power (without batteries)	10/20A		
<b>— Protection</b>			
Input / Output	Overvoltage, short-circuit, overload, battery deep discharge		
<b>— Alarms - informations</b>			
Audible LED	Battery mode, low battery, overload, battery replacement, alarm fault AC or battery mode, load level, battery level, fault		
<b>— Standard</b>			
Certificates	CE, ISO, GOST		
<b>— Environment</b>			
Temperature / Altitude / Humidity	0-40°C / less than 1500m / 0-95%		
Audible noise at 1m	< 50dB		
<b>— Dimensions</b>			
Weight (without batteries)	13,4kg	15kg	18,6kg
WxDxH	272x285x165mm		320x295x186mm

# ARES

1000-3000VA



LINE-INTERACTIVE

## Applications



## Intelligent LCD display



The intelligent graphic LCD display provides easy read-out status of the UPS from the screen, such as input, output, voltage, load level, battery level...

## Specifications

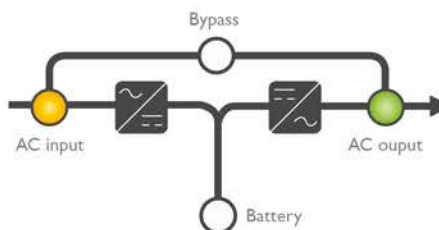
- Line-interactive technology (VI)
- Automatic Voltage Regulator (AVR, "Boost & Buck")
- Battery transfer at under- and overvoltage
- Including software for automatic computer shutdown
- Internal static bypass
- Pure sinewave output
- Intelligent LCD display
- Battery (DC) cold start
- Audible and visible alarm
- Overload and short circuit protection
- RJ11 protection
- Surge protection
- USB interface

### Option:

- SNMP-card (external)

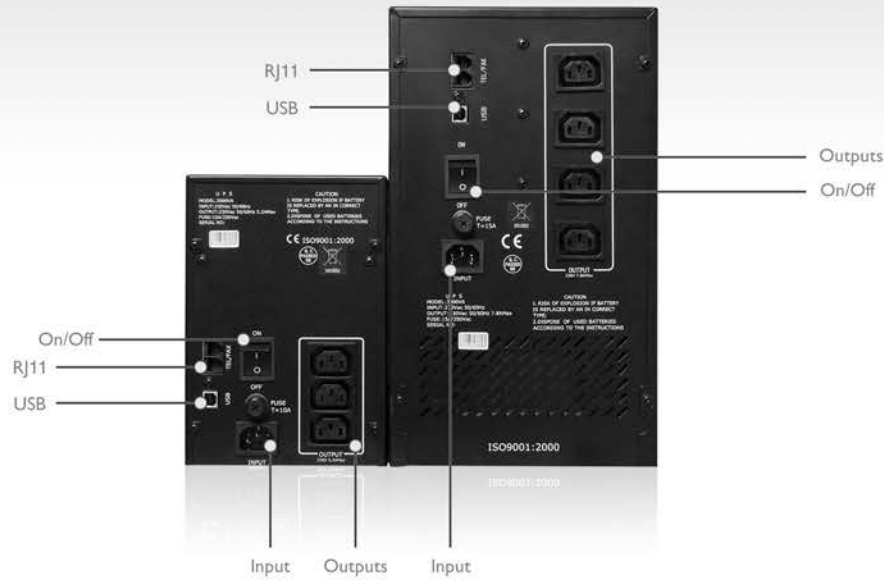
- 2 years warranty

## Internal Static and Automatic Bypass



The ARES is a line-interactive UPS with an internal static bypass. This technology is normally used in on-line UPS to increase the reliability. In case of an internal electronic problem or an overload situation, the UPS automatically switches to bypass mode.





### Smart USB



It offers real-time power and UPS status monitoring with automatic or scheduled shutdown and many other advanced power management functions.

### Monitoring Software Included



Monitoring software for Windows, Mac, Linux included.

ARES	Model			
	1000	1500	2000	3000
Nominal capacity (VA)	1000	1500	2000	3000
Power (Watt)	600	900	1200	1800
Input voltage range	165-280Vac (option : 145-280Vac)			
Voltage stabilizer-AVR	Boost & Buck			
Input frequency range	50/60Hz (auto-sensing)			
Output voltage (AC mode)	190-245Vac			
Output voltage (battery mode)	220/230Vac (+/-5%) - pure sine wave			
Output frequency (battery mode)	50/60Hz +/-1%			
Battery (capacity x quantity)	12V 7Ah x 2	12V 8Ah x 2	12V 8Ah x 3	12V 8Ah x 4
Backup time	10-35min (for typical IT-load)			
IEC 320 C13 outlets (quantity)	3	3	3	4
Interface	USB (standard), SNMP (option)			
RJ11 protection	Standard			
Dimensions WxDxH	145x360x215mm	145x360x215mm	145x430x215mm	200x475x337mm
Weight	11,5kg	13,2kg	17,9kg	26,3kg
Overload protection	Yes			
Short circuit protection	Yes			
Noise suppression	Yes			
Warranty	2 years			
Software	UPSilon 2000 for Windows, Mac, Linux			

LINE-INTERACTIVE

# IRIS

## 1000-3000VA



### Applications



### 2 Sizes and 3 Powers Levels



2000/3000VA      1000VA

### Specifications



- On-line "double conversion" technology (VFI)
- DSP (Digital Signal Processor) technology
- Internal static and manual bypass
- Input power factor up to 0.99
- Battery (DC) cold start
- Site wiring fault indication
- Self testing at UPS startup
- RJ45/11 network protection
- Intelligent management through RS232 & USB
- For extended backup time check IRIS LA series (external batteries)

#### Options:

- SNMP adapter
- Relay card (dry contacts)
- External maintenance bypass
- Additional / external battery packs
- 2 years warranty

### The best quality/price ratio !



The comprehensive graphic display provides easy read-out status of the UPS from the screen, such as input, voltage, load level, battery level, error code...

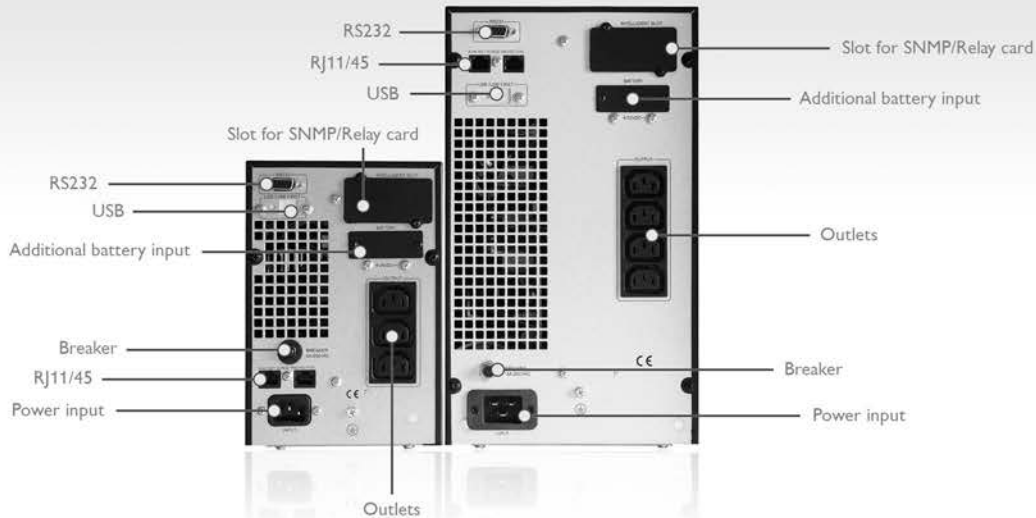
### Monitoring Software Included

#### Smart USB



It offers real-time power and UPS status monitoring with automatic or scheduled shutdown and many other advanced power management functions.

ON-LINE



IRIS	Model		
	1000VA	2000VA	3000VA
Power (Watt)	800W	1600W	2400W
<b>— Input</b>			
Minimum voltage	160/115Vac (at 100/50% load)		
Maximum voltage	290/295Vac (at 100/50% load)		
Frequency	45-55Hz for 50Hz, 55-65Hz for 60Hz (auto-sensing)		
Input power factor	≥ 0.99		
Bypass voltage range	186-252Vac		
Harmonic distortion (THDi)	≤ 7% at 100% non-linear load		
<b>— Output</b>			
Voltage	208/220/230/240Vac		
Waveform	Pure sine wave		
Harmonic distortion (THD)	< 3% at 100% linear load		
Frequency	50/60Hz +/-0,2%		
Voltage regulation	+/-2% at nominal voltage		
Crest factor	3:1		
Efficiency at 75-100% load	>88% (AC mode) / >90% (battery mode) / >94% (ECO mode)		
<b>— Battery (internal)</b>			
Type	VRLA, AGM		
Voltage	24Vdc (2x9Ah)	48Vdc (4x9Ah)	72Vdc (6x9Ah)
Backup time	5-8min with internal batteries at 80% load / extendable with external batteries		
Internal charger power	1A		
<b>— Protection</b>			
RJ11/45 protection	Yes		
Input / Output	Overvoltage, short-circuit, battery deep discharge, thermal protection		
Overload in battery mode	101-150% : 30sec, > 150% : 300msec before inverter cutt off		
Overload in AC mode	101-150% : 30sec, > 150% : 300msec before switching to bypass		
<b>— Alarms - informations</b>			
Audible	Battery backup, battery low, overload status, fault status		
LED	Mains, inverter, bypass, fault, battery level		
LCD	Input & output voltage, load %, battery voltage, error codes		
<b>— Bypass</b>			
Type	Internal (automatic) static bypass (external manual bypass optional)		
<b>— Environment</b>			
Temperature / Altitude / Humidity	0-40°C / less than 1500m / 0-95% non-condensing		
Audible noise at 1m	< 50dB		
<b>— Interface</b>			
Standard	RS232 / USB (software included)		
Optional	SNMP / Relay card (dry contacts)		
<b>— Dimensions</b>			
Weight	10,5kg	22kg	27kg
WxDxH	144x361x215mm	191x428x337mm	
<b>— Standard</b>			
Certificate	CE		

# IRIS LA

## 1000-3000VA



### Applications



### 2 Sizes and 3 Power Levels



2000/3000VA      1000VA

### Specifications



- On-line “double conversion” technology (VFI)
- Perfect for very long backup time (Marathon)
- DSP (Digital Signal Processor) technology
- ECO-mode for energy-saving
- Internal static and manual bypass
- Intelligent management through USB-interface
- Site wiring fault indication
- Wide input voltage range
- Battery (DC) cold start
- Self testing at UPS startup
- Bypass voltage range can be set
- RJ45/11 network protection
- Input PFC up to 0.99
- Software and USB cable included

#### Options:

- SNMP card
- Dry contacts/relay

- 2 years warranty

### Backup time table (with external battery pack)

		Load in Watt									
UPS with battery pack		150W	300W	400W	600W	800W	1000W	1200W	1600W	2000W	2400W
IRIS LA 1000VA	BP0265-6A	460min	210min	150min	90min	60min					
	BP02100-12A	750min	360min	240min	160min	100min					
IRIS LA 2000VA	BP0465-6A	1300min	560min	330min	210min	160min	120min	90min	60min		
	BP04100-12A	2100min	1000min	600min	380min	260min	210min	160min	100min		
IRIS LA 3000VA	BP0665-6A	2000min	850min	600min	400min	250min	190min	150min	100min	85min	60min
	BP06100-12A	3300min	1450min	1000min	650min	420min	320min	260min	180min	150min	100min

Backup times in minutes

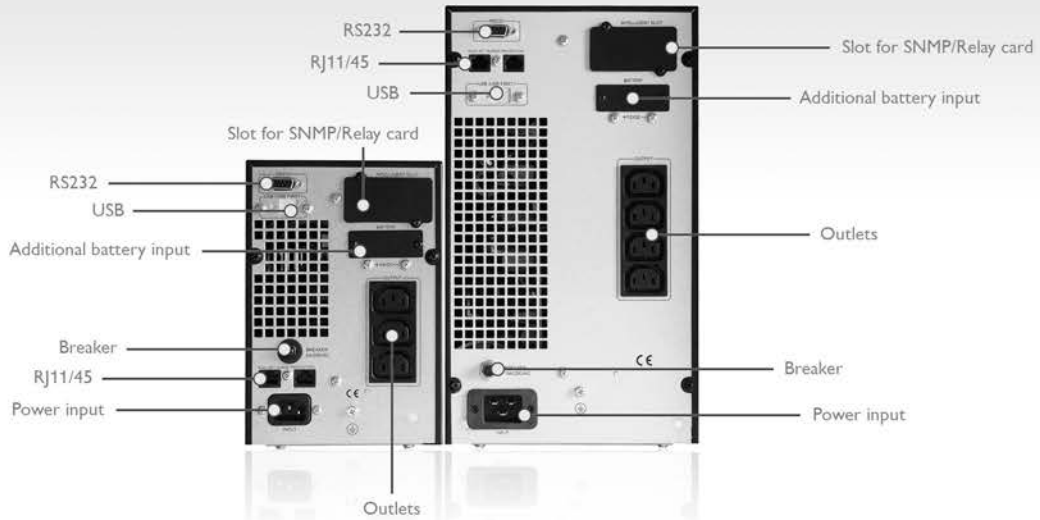
**Dimensions (DxWxH) and weight :**  
 BP0265-6A : 462x470x350mm,54kg  
 BP02100-12A : 462x470x350mm,68kg  
 BP0465-6A : 462x480x660mm,107kg  
 BP04100-12A : 462x480x660mm,136kg  
 BP0665-6A : 630x480x660mm,153kg  
 BP06100-12A : 630x480x660mm,197kg

Cabinet for 6 batteries

Cabinet for 2 batteries





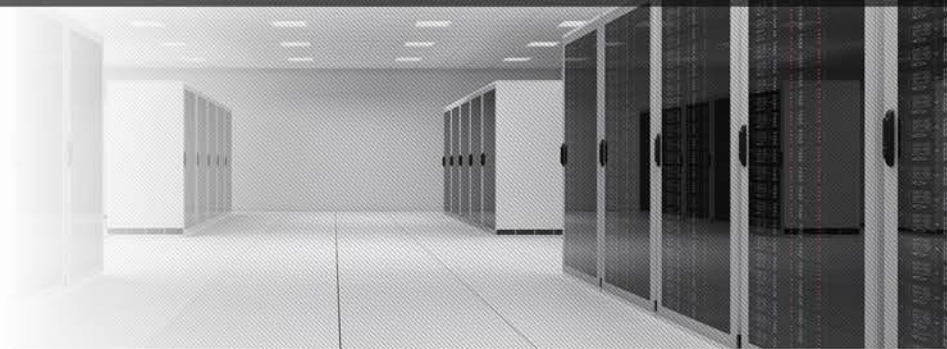


IRIS LA	Model		
	1000VA	2000VA	3000VA
Power (Watt)	800W	1600W	2400W
Technology	On-line		
<b>— Input</b>			
Minimum voltage	160/115Vac (at 100/50% load)		
Maximum voltage	290/295Vac (at 100/50% load)		
Frequency	45-55Hz for 50Hz, 55-65Hz for 60Hz (auto-sensing)		
Input power factor	≥ 0.99		
Bypass voltage range	186-252Vac		
<b>— Output</b>			
Voltage	208/220/230/240Vac		
Waveform	Pure sine wave		
Frequency	50/60Hz +/-0,2%		
Voltage regulation	+/-2% at nominal voltage		
Crest factor	3:1		
Efficiency at 75-100% load	>88% (AC mode) / >90% (battery mode) / >94% (ECO mode)		
<b>— Battery (external)</b>			
Type	VRLA		
Voltage	24Vdc	48Vdc	72Vdc
Internal charger power (without batteries)	6A or 12A		
<b>— Protection</b>			
RJ11/45 protection	Yes		
Input / Output	Overvoltage, short-circuit, battery deep discharge, thermal protection		
Overload in battery mode	101-150% : 30sec, > 150% : 300msec before inverter cutt off		
Overload in AC mode	101-150% : 30sec, > 150% : 300msec before switching to bypass		
<b>— Alarms - informations</b>			
Audible	Battery backup, battery low, overload status, fault		
LED	Battery backup, battery low, overload status, fault		
LCD	Input & output voltage, load %, battery voltage, error codes		
<b>— Bypass</b>			
Type	Internal (automatic) static bypass (external manual bypass optional)		
<b>— Standard</b>			
Certificate	CE		
<b>— Environment</b>			
Temperature / Altitude / Humidity	0-40°C / less than 1500m / 0-95%		
Audible noise at 1m	< 50dB		
<b>— Interface</b>			
Standard	RS232 / USB (software included)		
Optional	SNMP / Relay card (dry contacts)		
<b>— Dimensions</b>			
Weight (without batteries)	5,5kg	10kg	
WxDxH	144x361x215mm	191x428x337mm	

ON-LINE

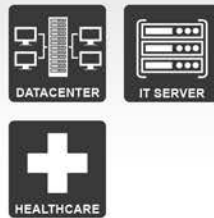
# IRIS+RT

## 1-3kVA (1/1)



ON-LINE

### Applications



### Convertible Rack/Tower



### Specifications



- On-line “double conversion” technology (VFI)
- DSP (Digital Signal Processor) technology
- High output power factor at 0.9
- Internal static bypass
- Very large input voltage range
- Hot-swappable batteries
- Battery backup time on LCD
- Operation on ECO mode
- Frequency converter mode 50/60Hz
- Convertible design for 19” Rack or Tower
- 2 output segments for load scheduling
- RS232, USB, Smart slot, RJ45, EPO
- Battery (DC) cold start
- Software and USB cable included
- High efficiency up to 95%
- Backfeed protection

#### Options:

- SNMP adapter
- Relay card (dry contacts)
- External maintenance bypass
- Additional / external battery packs
- 2 years warranty

The IRIS+RT is designed for IT applications like datacenters, server rooms, communication systems or security equipments.

The multifunction graphical LCD display is convertible for Rack and Tower use. It shows input, output, battery and user helpful parameters.

The UPS is equipped with an internal hot-swappable battery compartment to ensure very easy and fast maintenance.



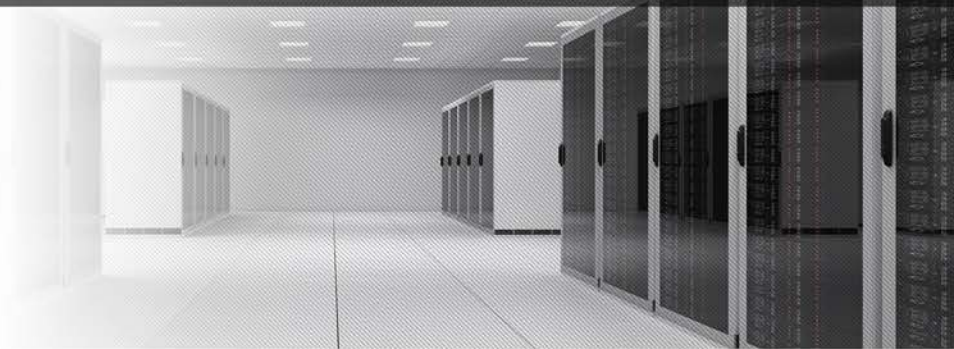


IRIS+RT	Model			
	1kVA	1,5kVA	2kVA	3kVA
Power (VA, Watt)	1000VA / 900W	1500VA / 1350W	2000VA / 1800W	3000VA / 2700W
<b>— Input</b>				
Voltage range	110-290Vac			
Frequency range	45-55Hz for 50Hz / 55-65Hz for 60Hz (auto-sensing)			
Power supply	Single phase			
Power factor	0,99			
Power plug	IEC320 C14-10A	IEC320 C14-10A	IEC320 C14-10A	IEC320 C19-16A
<b>— Output</b>				
Voltage	208/220/230/240Vac selectable			
Power factor	0,9			
Voltage regulation	+/-2% at nominal voltage			
Frequency	50/60Hz +/-0,02Hz			
Efficiency	AC mode : 90%, ECO mode : >95%			
Harmonic distortion (THD)	≤ 3% THD (linear load), ≤ 5% THD (no-linear load)			
Waveform	Pure sine wave			
Outlets (2 segments)	(IEC C13-10A)x6	(IEC C13-10A)x6	(IEC C13-10A)x6	(IECC13-10A)x6 (IECC19-16A)x1
Overload capacity	30s at 100% to 150% and 300ms >150%			
Protection	Overvoltage, short-circuit, battery deep discharge, thermal protection			
<b>— Efficiency</b>				
ON LINE mode	75-100% load > 88%			
Battery mode	75-100% load > 92%			
ECO mode	75-100% load > 95%			
<b>— Battery (internal)</b>				
Type	VRLA, AGM			
Voltage	12V 9Ah x 2	12V 9Ah x 3	12V 9Ah x 4	12V 9Ah x 6
Autonomy	Remaining time on LCD			
Recharge time at 90%	5 hours			
Charge current	1A			
Nominal voltage	24Vdc	36Vdc	48Vdc	72Vdc
Charger mode	3 steps (egalization/boost/floating)			
Backup time	5-10min at nominal load			
<b>— Transfer time</b>				
Mains <---> Battery	0ms			
Mains <---> Bypass	< 4ms			
<b>— Alarms - informations</b>				
LCD, LED	Load / battery / input / output / working mode / error code			
<b>— Physical</b>				
Dimensions (WxDxH), mm	440x430x86,5 (2U)	440x430x86,5 (2U)	440x572x86,5 (2U)	440x696x86,5 (2U)
Weight, kg	13,7	16,2	22	29,2
<b>— Environment</b>				
Temperature	0-40°C			
Humidity	0-90% (non-condensing)			
Audible noise at 1m	<55dB			
<b>— Interface</b>				
Standard	RS232, USB, EPO, intelligent slot			
Optional	SNMP, relay card			
<b>— Battery pack (additional)</b>				
	BPRT2418	BPRT3618	BPRT4818	BPRT7218
Dimensions (WxDxH), mm	440x430x86,5 (2U)	440x430x86,5 (2U)	440x572x86,5 (2U)	440x696x86,5 (2U)
Weight, kg	19,5	25	32,8	46,3

ON-LINE

# IRIS+RT

## 6/10kVA (1/1), (3/1) optional



ON-LINE

### Applications



### Convertible Rack/Tower



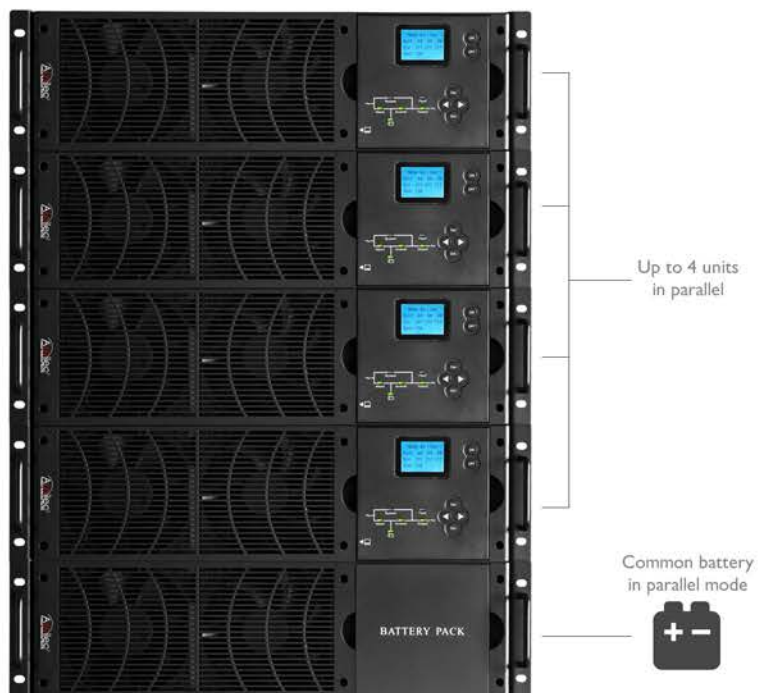
### Specifications



- On-line “double conversion” technology (VFI)
- DSP (Digital Signal Processor) technology
- Wide input voltage range (120-276Vac or 208-478Vac)
- Wide frequency range 40-70Hz +/-0,5Hz
- Input power factor up to 0.99 and high output power factor 0.9
- Parallel connection up to 4 units (N+1)
- Rack/Tower XL design with convertible display
- Input power factor correction (PFC)
- Battery (DC) cold start
- Genset compatible
- ECO-mode for energy saving
- Self testing at UPS startup
- Internal static and manual bypass
- Selectable amount of batteries : 16/18/20pcs
- Common or separate battery in parallel mode
- Backup-time indication on the display
- Adjustable charger 1-10A
- Fixing for tower and rackmount included
- EPO contact (Emergency Power Off)
- Intelligent management through RS232 slot, USB
- Including monitoring software
- Backfeed protection
- Options:
  - SNMP card, relay card
  - External maintenance bypass
  - Galvanic isolation transformer
  - IRIS+RT version (3/1)
- 2 years warranty

### Parallel Redundancy Mode

Up to 4 IRIS+RT systems can be connected in parallel to get maximum power capacity. Only one battery is necessary in the parallel redundancy mode.



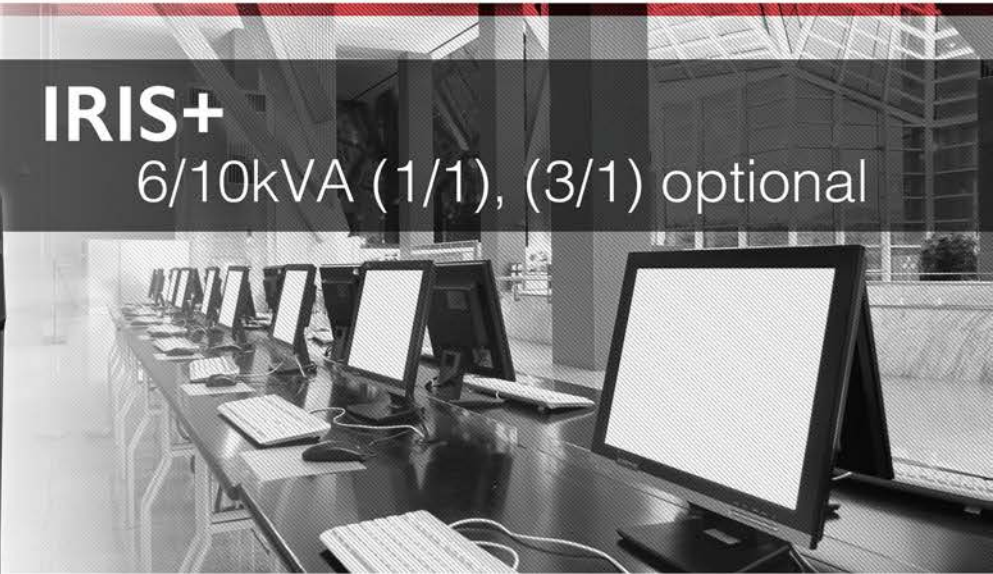


IRIS+RT	Model	
	6kVA	10kVA
Power (kW)	5,4	9
<b>— Input</b>		
Connection	L-N (single phase), optional : 3L-N 4 wires (three phase)	
Nominal voltage	220/230/240Vac, optional 380/400/415VAac	
Input voltage range	120-276Vac (1/1), 208-478Vac (3/1)	
Frequency range	45-55Hz for 50Hz, 55-65Hz for 60Hz (auto-sensing)	
Power factor	0.99	
Harmonic distortion (THDi)	≤ 3 % at 100% non-linear load	
Bypass voltage range	+25% (+10%, +20% - option), -45% (-20%, -30% - option), frequency range : +/-10%	
<b>— Output</b>		
Output connection	2 x IEC-C13	
Voltage	208/220/230/240Vac selectable	
Type of wave	Pure sine wave	
Harmonic distortion (THD)	≤ 2% linear load; ≤ 5% non-linear load	
Frequency	50/60Hz +/-0,1Hz	
Voltage regulation	+/-1% at nominal load	
Crest factor	3:1	
Efficiency at 75-100% load	>92% (AC mode) / >94% (battery mode) / >97% (ECO mode)	
<b>— Battery (external)</b>		
Voltage	16/18/20pcs 12V - only external batteries (modules)	
Charging current	1-10A adjustable	
Parallel systems	Common or separate battery possible	
<b>— Protection</b>		
Input/output	Overvoltage, short-circuit, battery deep discharge, thermal protection	
Overload capability (AC mode)	Load ≤110% : 3min, ≤125% : 30sec, ≤150% : 1sec, >150 : switching to bypass	
Overload capability (battery mode)	Load ≤110% : 30sec, ≤125% : 1sec, ≤150% : 200ms, >150 : shutdown of the UPS	
Overload capability (bypass)	Input fuse 40A	Input fuse 63A
<b>— Alarms - informations</b>		
Audible	Battery backup, battery low, overload, short-circuit, fault and error code	
LED	AC, battery, bypass, working modes, overload, error	
LCD	Voltage / frequency, load %, battery voltage, temperature, remaining backup time	
Audible noise at 1m	<55dB	
<b>— Bypass</b>		
Type	Internal static bypass / external maintenance bypass (option)	
<b>— Certificates</b>		
EMC protection	CE, EN/IEC 62040-2, EN/IEC 62040-1-1	
Protection class	IP20 (up to IP55 on option)	
<b>— Interface</b>		
Standard	USB, EPO, RS232, parallel port, intelligent slot	
Options	SNMP, relay card	
<b>— Dimensions</b>		
UPS, WxDxH, mm	440x580x130mm (3U)	
Weight of the UPS	23kg	25kg
<b>— External battery modules</b>		
Battery	16/18/20 pcs per 12V/9Ah	
Dimensions WxDxH and weight	440x720x132mm (3U) / 67kg	
Connections input/output/battery modules	Terminals	

ON-LINE

# IRIS+

6/10kVA (1/1), (3/1) optional



## Applications



## Estimated Remaining Time (LCD)



The LCD display shows an estimation of the remaining battery backup time.

## Specifications



- On-line “double conversion” technology (VFI)
- DSP (Digital Signal Processor) technology
- Internal static and manual bypass breaker
- Input Power Factor up to 0.99
- Wide input voltage range
- Up to 4 units in parallel
- Battery (DC) cold start
- Common or separate battery in parallel mode
- Charging current 1-10A
- Selectable battery voltage (16/18/20 batteries)
- ECO-mode for energy saving
- Site wiring fault indication
- Self testing at UPS startup
- Intelligent management through RS485, USB, DB9
- Backfeed protection

### Options:

- SNMP adapter
- Relay card (dry contacts)
- Additional / external battery packs
- IRIS+ 6/10kVA version (3/1)

- 2 years warranty

## Parallel Redundancy Mode

Up to 4 IRIS+ systems can be connected in parallel to get maximum power capacity. Only one battery is necessary in the parallel redundancy mode.

Additional battery pack open view



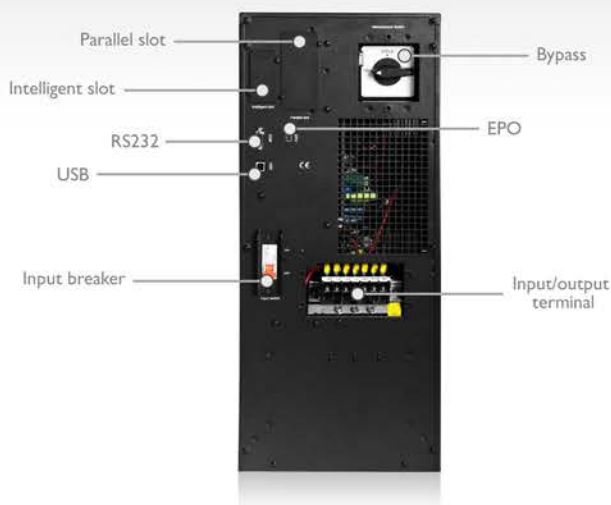
Common battery in parallel mode



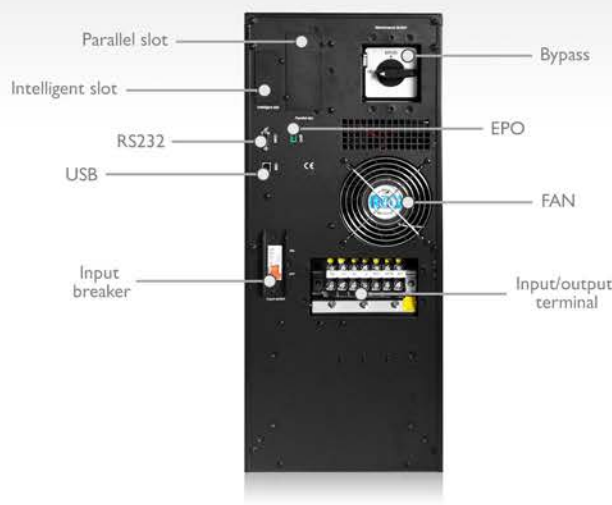
Up to 4 units in parallel

ON-LINE

### IRIS+ 6kVA



### IRIS+ 10kVA



IRIS+	Model	
	6000VA	10000VA
Power (Watt)	5400W	9000W
<b>— Input</b>		
Nominal voltage	220/230/240Vac, optional 380/400/415Vac selectable	
Input voltage range	120-276Vac (1/1), 208-478Vac (3/1)	
Frequency range	45-55Hz for 50Hz, 55-65Hz for 60Hz (auto-sensing)	
Input power factor	≥ 0.99	
Bypass voltage range	- 45% / +15%	
Harmonic distortion (THDi)	≤ 5% at 100% non-linear load	
<b>— Output</b>		
Voltage	208/220/230/240Vac selectable	
Waveform	Pure sine wave	
Harmonic distortion (THD)	< 2% at 100% linear load	
Frequency	50/60Hz +/-0,2%	
Voltage regulation	+/-2% at nominal voltage	
Crest factor	3:1	
Efficiency at 75-100% load	>92% (AC mode) / >95% (battery mode) / >97% (ECO mode)	
<b>— Battery (internal)</b>		
Type	VRLA, AGM	
Voltage	240Vdc (selectable 192/210/240Vdc)	
Standard backup time (internal battery)	6-8min at nominal load	3-5min at nominal load
Power of the internal charger	1-10A adjustable	
<b>— Protection</b>		
Input/output	Overvoltage, short-circuit, battery deep discharge, thermal protection	
Overload capacity AC Mode/Battery Mode	≤110% load 3min/30sec, ≤125% load 30sec/3sec, ≤150% load 1sec / 200ms	
<b>— Alarms - informations</b>		
Audible	Battery backup, battery low, overload status, fault status	
LED	Mains, inverter, bypass, fault, battery level	
LCD	Input and output voltage, load, battery voltage, error codes	
<b>— Bypass</b>		
Type	Internal static (automatic) and manual bypass / External bypass optional	
<b>— Environment</b>		
Temperature / altitude / humidity	0-40°C / less than 1500m / 0-95% non-condensing	
Audible noise at 1m	< 50dB	
<b>— Interface</b>		
Standard	USB / RS232 / EPO	
Optional	SNMP card / parallel card / relay card	
<b>— Dimensions</b>		
Weight (with internal batteries)	70kg	80kg
WxDxH (mm)	250x510x620 (UPS), 250x600x620 (Battery cabinet)	
Standard	CE-certificate, EN/IEC 62040-2, EN/IEC 62040-1, GOST	

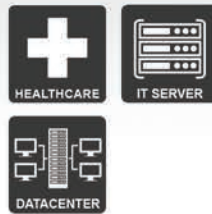
ON-LINE

# IRIS+TT

## 10-30kVA (3/3)



### Applications



### Price-Performance Ratio

The IRIS+TT series is our best "price-performance ratio" 3/3 phase UPS. Based on our modular UPS technology, we are able to offer extremely small UPS 10-30kVA solutions. A combination of our modular based UPS with a special DC/DC converter, the IRIS+TT UPS can work with a battery voltage of only 192 to 240Vdc (adjustable). It allows to reduce space, batteries and price.

### Specifications



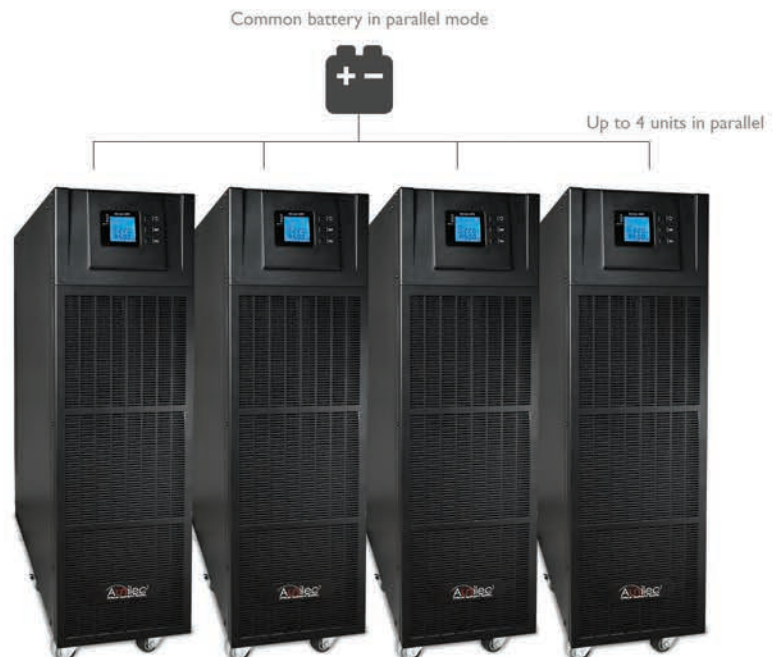
- On-line "double conversion" technology (VFI)
- Parallel redundancy On-line UPS (up to 4 units)
- Input power factor: up to 0,99 (PFC technology)
- DSP (Digital Signal Processor) technology
- Common battery string for parallel units
- IGBT technology (rectifier and inverter)
- Internal static and manual bypass
- 16/18/20pcs 12V batteries per string (adjustable)
- ECO-mode for energy-saving
- Intelligent charging management
- Self-test during UPS startup
- Internal and external batteries
- Unbalanced load acceptable
- Wide input voltage range
- Battery (DC) cold start
- LCD-LED double display with audible/visible alarms
- RS485 and USB ports, dry contacts
- EPO (Emergency Power Off)
- Backfeed protection
- 2 years warranty

#### Options:

- SNMP card
- Relay card
- External maintenance bypass

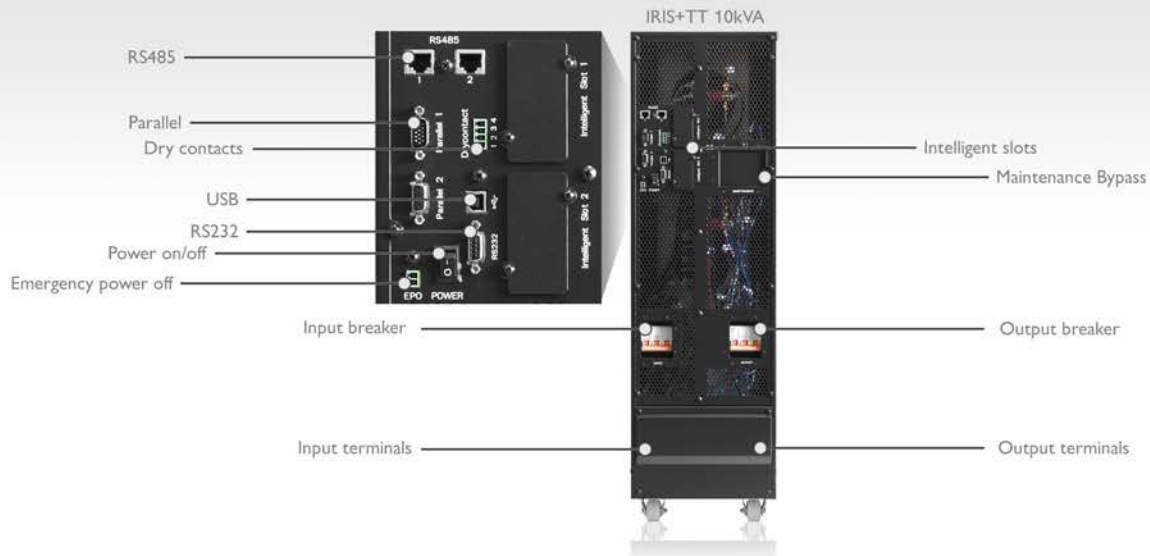
### Parallel Redundancy Mode

Up to IRIS+TT systems can be connected in parallel to get maximum power capacity. Only one battery is necessary with the parallel redundancy mode.



ON-LINE





IRIS+TT	Model			
	10kVA	15kVA	20kVA	30kVA
Power (kW)	9	13,5	18	27
<b>— Input</b>				
Nominal voltage	380/400/415Vac (3ph+N+PE)			
Maximum voltage	208-478Vac			
Frequency range	45-55Hz for 50Hz, 55-65Hz for 60Hz (auto-sensing)			
Input power factor	0.99			
Harmonic distortion (THDi)	<3% (at 100% non-linear load)			
Bypass voltage range	-45% +15%			
Bypass frequency range	+/-10%			
<b>— Output</b>				
Voltage regulation	380/400/415V +/-1% at nominal load			
Harmonic distortion (THD)	<2% linear load, <5% non-linear load			
Frequency	50/60Hz +/- 0,1Hz			
Crest factor	3:1			
Efficiency at 75-100% load	93% (AC mode) / 94% (battery mode) / 97% (ECO mode)			
Bypass	Internal static (automatic) and manual bypass / External bypass optional			
Transfer time	Mains to battery : 0msec, mains to bypass : 0msec			
<b>— Battery</b>				
Voltage	Adjustable (192/216/240Vdc)			
Internal battery (VRLA, AGM)	20x12V 9Ah	2x20x12V 9Ah	2x20x12V 9Ah	3x20x12V 9Ah
Charging current extendable	1,35A	2,7A	2,7A	10A
<b>— Protection</b>				
Input / output	Overvoltage, short-circuit, battery deep discharge, thermal protection			
Overload	≤110% : 60min, ≤125% : 10min, ≤150% : 1min, >150 : turn to bypass mode			
<b>— Alarms - information</b>				
Audible alarm	Line failure, battery low, bypass-overload status, fault status			
LED	Line-/backup-/ECO-/bypass-mode, battery low/bad/disconnected, overload, fault			
LCD	Voltage/frequency, load %, battery voltage/runtime			
<b>— Standard</b>				
Safety	IEC/EN62040-1, IEC/EN60950-1			
EMC	IEC/EN62040-2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-8			
Protection class	IP20			
<b>— Environment</b>				
Temperature / humidity	0-40°C / 0-95% (non-condensing)			
Audible noise at 1m	< 55dB			< 58dB
<b>— Interface</b>				
Standard	USB, dry contacts, intelligent slot, parallel port RS485, RS232, EPO			
Optional	SNMP card, relay card			
<b>— Dimensions</b>				
Weight (without batteries)	42kg	45kg	67kg	
WxDxH, mm	250x828x868			

ON-LINE

# MPTR

## 10-300kVA (3/3)



### Applications



### Different Size and Power Level

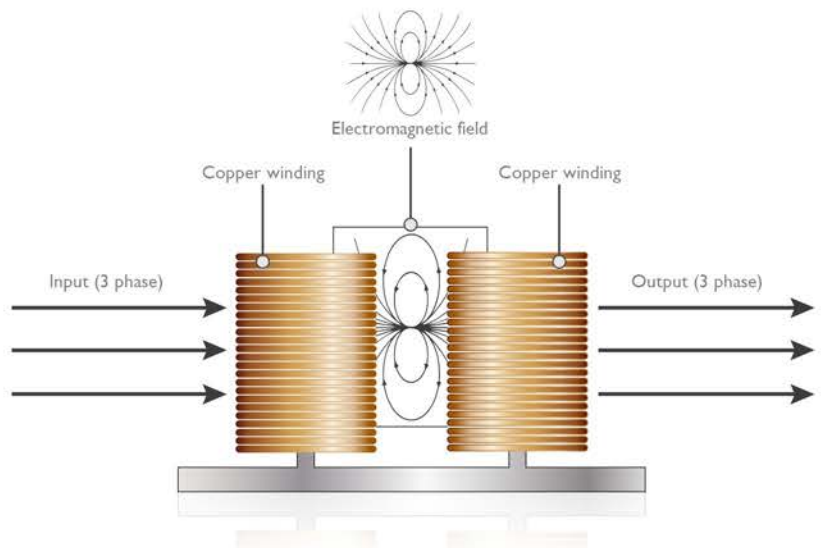


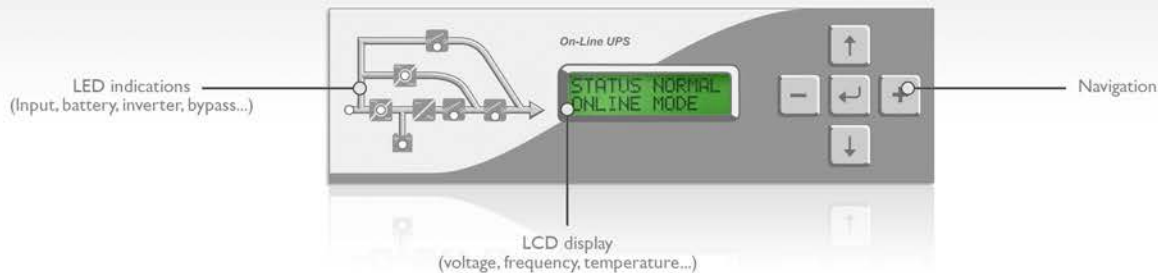
### Specifications

- On-line “double conversion” technology (VFI)
  - Galvanic isolation transformer
  - LCD-LED display
  - IGBT technology (inverter)
  - Optional battery runtime
  - Inductive load acceptable
  - Wide input voltage range
  - Parallel redundancy (optional)
  - Internal static and manual bypass
  - Self testing at UPS startup
  - 128 events alarm memory
  - Intelligent management via RS232
  - EPO (Emergency Power Off)
  - Relay card (dry contacts)
  - Software and USB cable included
  - Backfeed protection from 60 to 300kVA
- Options:**
- SNMP / AS400 card
  - External maintenance bypass
- 2 years warranty

### Galvanic Isolation Transformer +

This high-quality online UPS from Aunilec is provided with a galvanic isolation transformer, which means that the electric circuits before and after the UPS are not connected physically, but via an electromagnetic field. This increases the reliability of the protection essentially. Spikes and disturbances can not pass the magnetic field of the galvanic isolation transformer.





MPTR	Model														
	MPTR 10	MPTR 15	MPTR 20	MPTR 30	MPTR 40	MPTR 60	MPTR 80	MPTR 100	MPTR 120	MPTR 160	MPTR 200	MPTR 250	MPTR 300		
<b>Power (kVA)</b>															
<b>— Input</b>															
Voltage	380/400Vac 3-phase +N, +/-15%														
Internal bypass	380/400Vac 3-phase, +/-12%														
Input frequency	50Hz (60Hz on request), +/-5%														
<b>— Output</b>															
Power (kW)	8	12	16	24	32	48	64	80	96	128	160	200	240		
Power factor	0,8														
Voltage	380/400Vac 3-phase +N														
Voltage regulation	Balanced load: +/-1%, unbalanced load: +/-2%, step load: +/-5%														
Recovery time (voltage)	< 25ms (load step 0-100%)														
Frequency	50Hz (60Hz optional)														
Frequency regulation	Line synchronized: +/-2%, free running: +/-0,2%														
Efficiency at 100% load	90-91%			90-93%											
Crest factor	3:1														
Overload protection	10min: 100% to 125%, 1min: 125% to 150%, bypass: more than 150%														
Short circuit protected	electrical														
Total harmonic distortion (THD)	Linear load: <3%, non-linear load: <5%														
<b>— Batteries (external)</b>															
Type	AGM/Gel - maintenance free														
Number of batteries	30 x 12V											32 x 12V			
Ambient temperature	25°C														
Battery protection	circuit breaker														
Battery test	Automatic and interval time selectable (1-3 days)														
<b>— General</b>															
Regulations	EN62040-2														
Serial communication	Dry contacts & RS232														
Communication	UPS management software included														
Temperature range	0-40°C														
Ventilation	Forced air cooling														
Relative humidity	< 90% (non-condensed)														
Protection degree	IP20														
Altitude	< 1000m. above sea level														
Audible noise at 1m	< 56dB				< 60dB			< 65dB			< 70dB				
Weight without batteries (kg)	225	255	265	295	410	460	590	795	895	1125	1155	1595	1775		
Dimensions (mm), HxWxD	1155x505x655				1395x575x820			1455x720x825	1655x1110x810			1735x1195x870		1885x1565x925	
<b>— Options</b>															
Input/output voltage	208/220Vac 3-phase														
Transformer	Galvanic isolation transformer at the bypass														
Input harmonic filter	10% with 12 pulse rectifier, 5% with 18 pulse rectifier														
IPF	Up to 0,97 with 18 pulse rectifier														
Communication	SNMP, MODBUS, RS485														
Parallel operation	Up to 4 units														

ON-LINE

# Helios STR 19"

## 10-80kVA (3/3)



### Specifications

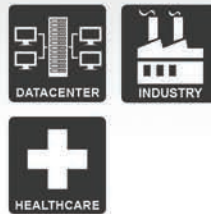


- On-line "double conversion" technology (VFI)
- Input power factor up to 0.99
- Output power factor 0.9 (1 optional)
- DSP (Digital Signal Processor) technology
- Internal static and manual bypass
- Wide input voltage range (208-478Vac)
- Parallel connection up to 4 units (80kVA)
- Automatic load sharing for all units in parallel
- Adjustable 6A charger per module
- Genset compatibility
- Various monitoring systems
- For long backup time
- For 19" racks and cabinets
- Adjustable battery voltage from 384-480Vdc (32 to 40 batteries 12Vdc)
- Common or separate batteries
- Backfeed protection
- RS232/RS485
- EPO (Emergency Power Off)

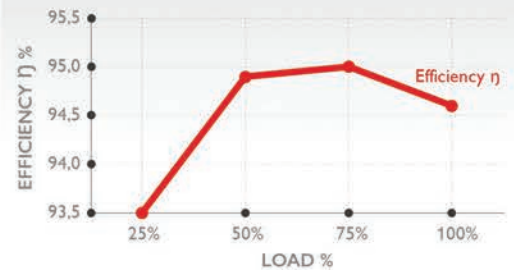
#### Options:

- SNMP card
- External maintenance bypass
- Relay / AS400 card
- Modbus interface
- 2 years warranty

### Applications



### Efficiency



### Modules for 19" Racks & Cabinets

Each power module is an independent UPS with rectifier, inverter and bypass. To be placed in a standard 19" cabinet.

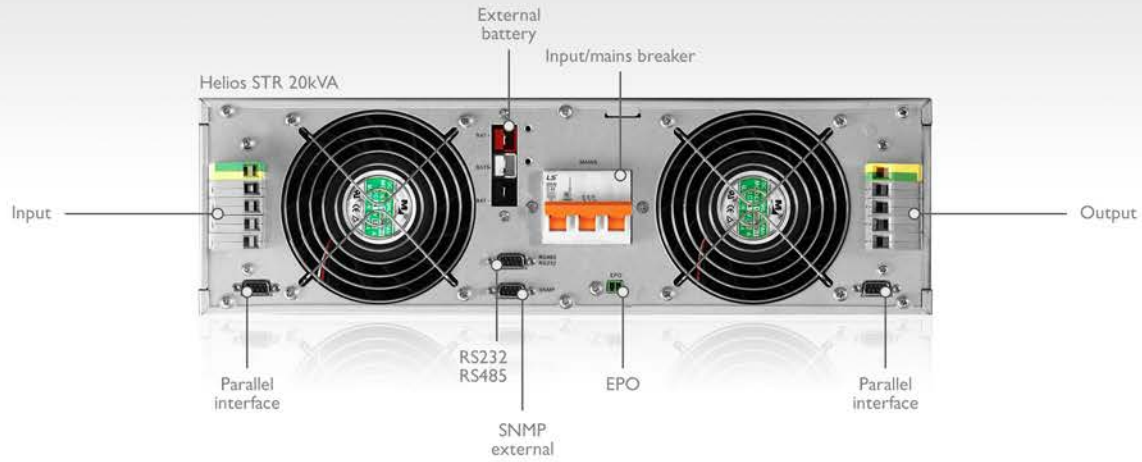


Up to 4 units in parallel



Common battery in parallel mode (hot swap)

ON-LINE



Helios STR 19"	Model	
Nominal capacity / Power per module	10 kVA/9kW and 20kVA/18kW (optional 20kVA/20kW)	
<b>Input</b>		
Rated voltage	380/400/415Vac	
Voltage range	208-478Vac	
Frequency range	45-55Hz for 50Hz, 55-65Hz for 60Hz (auto-sensing)	
Input power factor	> 0.99	
Harmonic distortion (THDi)	<3% (at 100% non-linear load)	
<b>Output</b>		
Voltage	380/400/415Vac +/-2% at nominal voltage	
Frequency	50/60Hz +/-0,2%	
Harmonic distortion (THD)	<2% (linear load) / <5% (non-linear load)	
Crest factor	3:1	
Efficiency at 75-100% load	ECO mode >98% / AC mode up to 95%	
<b>Battery (external)</b>		
Type	VRLA / AGM / Gel / OPZv	
Voltage	384-480Vdc (32-40 batteries)	
Maximum charging current	6A per module (adjustable)	
Backup time	According battery module or external battery cabinet for long backup	
<b>Protection</b>		
Input/output	Overvoltage, short-circuit, battery deep discharge, thermal protection	
Overload AC-Mode	≤110% - 60min / ≤125% - 10min / ≤150% - 1min	
Overload battery mode	≤110% - 30sec / ≤125% - 1sec / ≤150% - 200msec	
Overload bypass mode	Input breaker 40A	
<b>Alarms - informations</b>		
Audible	Line failure, battery low, bypass - overload status, fault status	
LED	Line-/backup-/ECO-/bypass-mode, battery low/bad/disconnected, overload, fault	
LCD	Voltage, frequency, load %, battery voltage/runtime, error code	
<b>Bypass</b>		
Type	Internal static (automatic) bypass / External bypass optional	
Bypass voltage range	+15%(optional +5/10/25%) / -45%(optional -20/30%) / Frequency range: ±10%	
<b>Standards</b>		
Certificates	CE, EN62040-1-1 (ESD), EN62040-2 (EMI)	
Protection class	IP20	
<b>Environment</b>		
Temperature	0-40°C	
Humidity / Altitude	0-95% non-condensing / < 1500m	
Audible noise at 1m	< 60dB	
<b>Interface</b>		
Power module	RS232 / RS485 / EPO / parallel port	
Optional	SNMP / relay card	
<b>Dimensions of the module</b>		
Dimensions WxDxH	Power module 443x580x131mm (3U)	Battery module 443x580x131mm (3U)
Weight	31kg	Empty : 15kg, 3 shelves hot swap 23kg/shelve

ON-LINE

# Helios 20S

## 20kVA/18kW (3/3)



### Applications



### Backup Table Time

	Load in Watt				
	4KW	6KW	8KW	12KW	16KW
BP3626	120min	60min	45min	25min	20min
BP3645	180min	120min	90min	45min	30min

Backup time in minutes

### Specifications



- On-line "double conversion" technology (VFI)
- Input power factor up to 0.99
- Output power factor 0.9 (1 optional)
- DSP (Digital Signal Processor) technology
- Internal static and manual bypass
- Wide input voltage range (208-478Vac)
- Parallel connection up to 4 units (80kVA)
- Automatic load sharing for all units in parallel
- Adjustable 6A charger per module
- Genset compatibility
- Various monitoring systems
- For long backup time (45min/100%, 100min/50%)
- Adjustable battery voltage from 384-480Vdc (32 to 40 batteries 12Vdc)
- Common or separate batteries
- RS232/RS485
- EPO (Emergency Power Off)
- Backfeed protection
- 2 years warranty
- **Options:**
- SNMP card
- External maintenance bypass
- Relay / AS400 card
- Modbus interface

### 20kVA/18kW power module (up to 4 cabinets in parallel)



Open side view with available space for batteries



Open front view





Helios 20S	
Nominal capacity (kVA) / Power (Watt)	20kVA / 18kW
<b>— Input</b>	
Rated voltage	380/400/415Vac
Voltage range	208-478Vac
Frequency range	45-55Hz for 50Hz, 55-65Hz for 60Hz (auto-sensing)
Input power factor	> 0.99
Harmonic distortion (THDi)	2% (at 100% non-linear load)
<b>— Output</b>	
Voltage regulation	380/400/415Vac +/-2% at nominal voltage
Frequency	50/60Hz +/-0,2%
Harmonic distortion (THD)	<2% (linear load) / <5% (non-linear load)
Crest factor	3:1
Efficiency	ECO mode >98% / Normal mode up to 95%
<b>— Battery (internal)</b>	
Type	VRLA, AGM, Gel, OPZv
Voltage	Battery quantity : 384-480Vdc (32-40 batteries)
Maximum charging current	6A per module (adjustable)
Backup time	According batteries (check table page 38)
<b>— Protection</b>	
Input/output	Overvoltage, short-circuit, battery deep discharge, thermal protection
Overload AC-Mode	≤110% - 60min / ≤125% - 10min / ≤150% - 1min
Overload battery mode	≤110% - 30sec / ≤125% - 1sec / ≤150% - 200msec
Overload bypass mode	Input breaker 40A
<b>— Alarms - informations</b>	
Audible alarm	Line failure, battery low, bypass - overload status, fault status
LED	Line-/backup-/ECO-/bypass-mode, battery low/bad/disconnected, overload, fault
LCD	Voltage / frequency, load %, battery voltage, temperature
<b>— Bypass</b>	
Type	Internal static (automatic) and manual bypass / External bypass optional
Bypass voltage range	+25%(optional +10/15/20%) / -45%(optional -20/30%), Frequency range: ±10%
<b>— Standards</b>	
Certificates	CE, EN62040-1-1 (ESD), EN62040-2 (EMI)
Protection class	IP20
<b>— Environment</b>	
Temperature	0-40°C
Humidity / Altitude	0-95% non-condensing / <1500m
Audible noise at 1m	< 55dB
<b>— Interface</b>	
Cabinet	RS232 / RS485 / EPO / REPO
Optional	SNMP, relay card
<b>— Dimensions</b>	
Dimensions WxDxH	Power module 443x580x131mm (3U)      Cabinet with module (without batteries) 600x780x1200mm
Weight	Power module 31kg      Cabinet with module (without batteries) 127kg

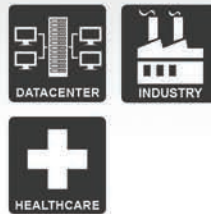
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# Helios modulaire

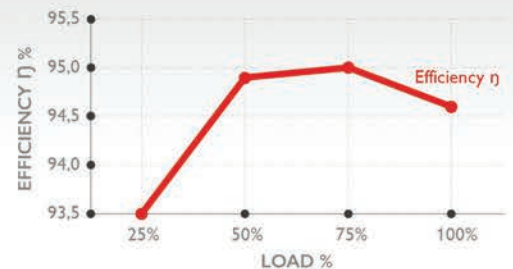
## 6-50kVA (1/1)(3/1) & 20-800kVA (3/3)



### Applications



### Efficiency



### Specifications



- On-line "double conversion" technology (VFI)
- Input power factor up to 0.99
- Output power factor 0.9 (1 optional)
- DSP (Digital Signal Processor) technology
- Internal static and manual bypass in each module (no centralized bypass required)
- Hot swappable power and battery modules
- Wide input voltage range (208-478Vac)(3/3)
- Adjustable battery voltage (384-480Vdc)(3/3)
- Only one battery string for N+1 application
- 6A charging current per module
- Adjustable charging current
- Automatic load sharing
- Genset compatibility
- Big touchscreen LCD display
- Various monitoring systems
- Additional bypass input
- Small footprint and very silent
- RS232/RS485 Interface
- EPO (Emergency Power Off)
- Backfeed protection
- Options: SNMP card, relay card (dry contacts)
- 2 years warranty

### Graphical LCD/LED display



### Hot swappable module



### Battery module (hot swap)



ON-LINE



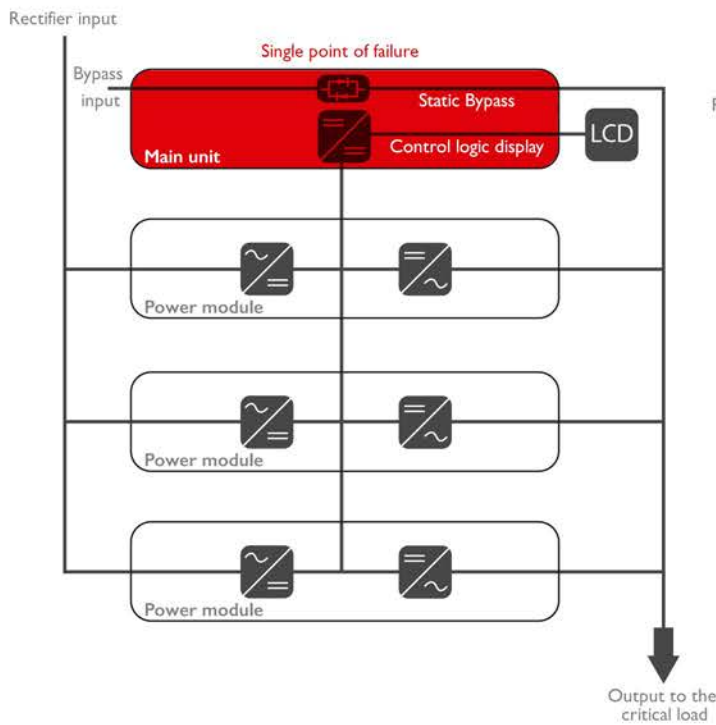
# Helios Modulaire

## Decentralized Modular Technology

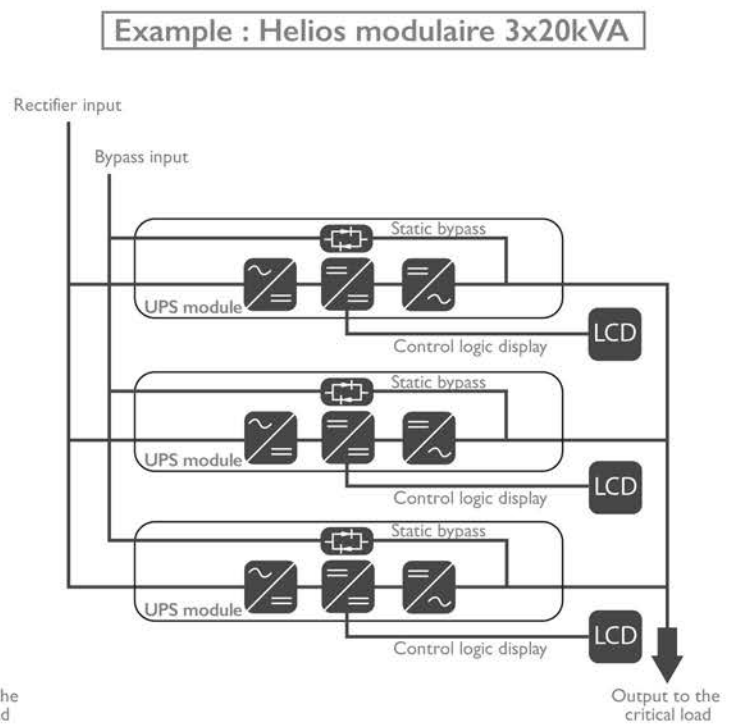
Aunilec Modular UPS with multiplied components also called decentralized technology is the only possibility to work without the risk of a "single point of failure". Each UPS module has all, - rectifier; inverter; static bypass switch, back-feed protection, battery fuse and control logic LCD display - to garranty autonomous operation.

### Centralized UPS with common components

### Decentralized UPS with multiplied components



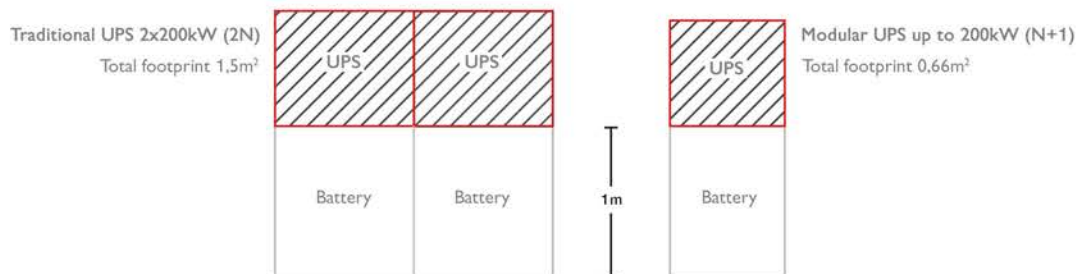
Single point of failure, one single static bypass and/or control logic can result in a total system blackout



No single point of failure. All components/parts are multiplied by the number X of used power modules

## Reduce installation and maintenance costs

- The modular UPS reduces space requirements (in our example, 55% of space is saved)



- The maintenance and service parts costs are easy to calculate and extremely transparent: only one module !

ON-LINE





Helios modulaire	Model	
	1/1 - 3/1 phase	3/3 phase
Nominal capacity / Power per module	6kVA/4,8kW - 10kVA/8kW	20kVA/18kW (optional 20kVA/20kW)
<b>Input</b>		
Rated voltage	220/230Vac or 380/400Vac	380/400/415Vac
Voltage range	120-276Vac (1/1) or 208-478Vac (3/1)	208-478Vac
Frequency range	45-55Hz for 50Hz, 55-65Hz for 60Hz (auto-sensing)	
Input power factor	> 0.99	
Harmonic distortion (THDi)	<5% (at 100% non-linear load)	<3% (at 100% non-linear load)
<b>Output</b>		
Voltage regulation	220/230Vac +/-2% at nominal voltage	380/400/415Vac +/-2% at nominal voltage
Frequency	50/60Hz +/-0,2%	
Harmonic distortion (THD)	<2% (linear load) / <5% (non-linear load)	
Crest factor	3:1	
Efficiency	ECO mode >98% / Normal mode up to 95%	
<b>Battery</b>		
Type	VRLA, AGM, Gel, OPZv	
Voltage	142-240V (16-20 batteries 12Vdc)	384-480V (32-40 batteries 12Vdc)
Maximum charging current	6A per module (adjustable)	
Backup time	Internal batteries for short backup time or external battery cabinet for long backup	
<b>Protection</b>		
Input/output	Overvoltage, short-circuit, battery deep discharge, thermal protection	
Overload AC-Mode	≤110% - 60min / ≤125% - 10min / ≤150% - 1min	
Overload battery mode	≤ 110% - 30sec / ≤ 125% - 1sec / ≤ 150% - 200msec	
Overload bypass mode	Input breaker 40A(6kVA) & 60A(10kVA)	Input breaker 40A
<b>Alarms - informations</b>		
Audible	Line failure, battery low, bypass - overload status, fault status	
LED	Line-/backup-/ECO-/bypass-mode, battery low/bad/disconnected, overload, fault	
LCD	Big touchscreen display 5" front door + LCD on each power module	
<b>Bypass</b>		
Type	Internal static (automatic) and manual bypass / External bypass optional	
Bypass voltage range	+15%(optional +5/10/25%) / -45%(optional -20/30%), frequency range: ±10%	
<b>Standards</b>		
Certificates	CE, EN62040-1-1 (ESD), EN62040-2 (EMI)	
Protection class	IP20	
<b>Environment</b>		
Temperature	0-40°C	
Humidity / Altitude	0-95% non-condensing / <1500m	
Audible noise at 1m	< 60dB	
<b>Interface</b>		
Communication module	RS232 / RS485 / 2 intelligent slots / dry contacts / EPO	
Optional	SNMP / relay card	
<b>Dimensions of internal module</b>		
Dimensions WxDxH (power & batteries)	443x580x131mm (3U)	
Weight	Power: 31kg, battery : 2x70kg	
<b>Dimensions &amp; max. power 1/1,3/1</b>		
	for max. 5 modules (30kVA)	for max. 10 modules (50kVA)
Dimensions WxDxH of the cabinet	600x840x1400mm	600x840x2000mm
Weight of the cabinet	150kg	213kg
<b>Dimensions &amp; max. power 3/3</b>		
	for max. 5 modules (100kVA)	for max. 10 modules (200kVA)
Dimensions WxDxH of the cabinet	600x840x1400mm	600x840x2000mm
Weight of the cabinet	170kg	230kg

ON-LINE

# MultiPlus DSP0.9 Hybrid

10-500kVA (3/3) 10-30kVA (3/1)

## Applications



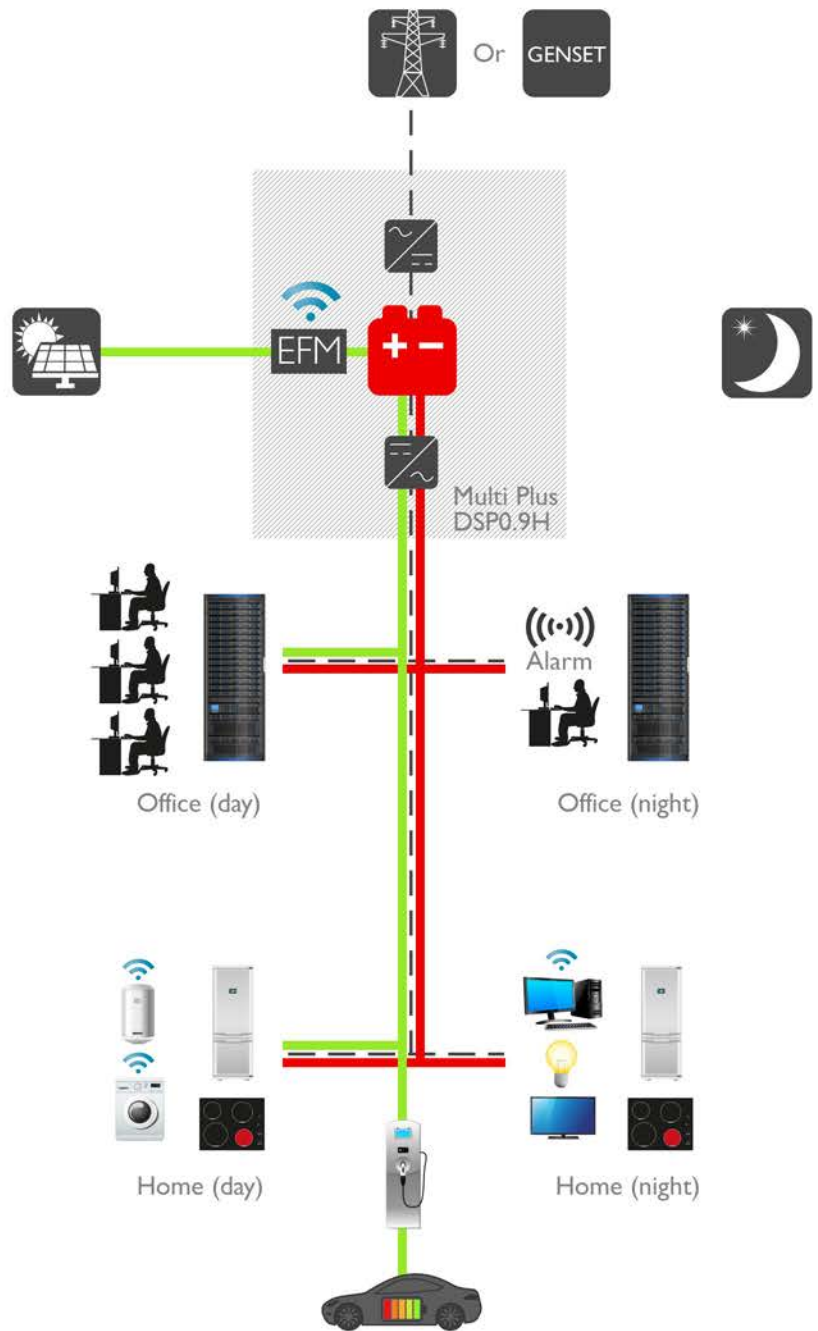
## Specifications

- Hybrid function (optional/scalable)
- On-line "double conversion" technology (VFI)
- High efficiency > 94%
- Cold start function
- Output power factor 0,9
- Output short circuit and overload protection
- Emergency power off (EPO)
- Big graphic LCD screen
- Automatic battery test
- High capacity charging current in the battery
- Temperature compensated battery charging
- 512 events memory (more than 46000 alarms)
- 2 serial ports RS232 and dry contacts
- Functionality remote control via Teamviewer
- Split bypass input
- Internal batteries up to 80kVA (6-12kWh)
- Very small footprint
- Up to 8 units in parallel
- Relay contacts (programmable)
- Backfeed protection

### Options:

- SNMP card, MODBUS adapters

• 2 years warranty



Average energy production - auto consumption (Western & Central Europe)

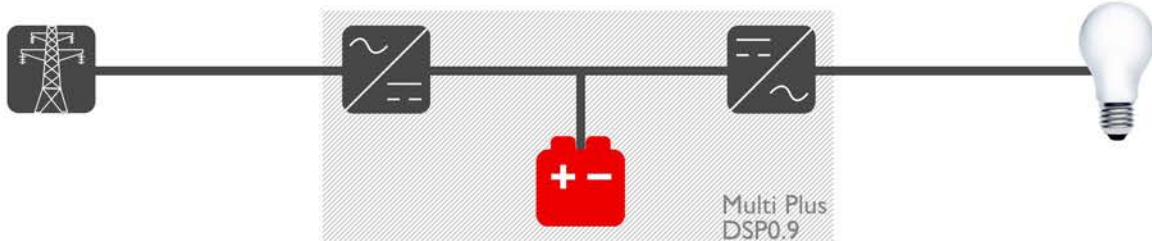


HYBRID

# MultiPlus DSP0.9 Hybrid

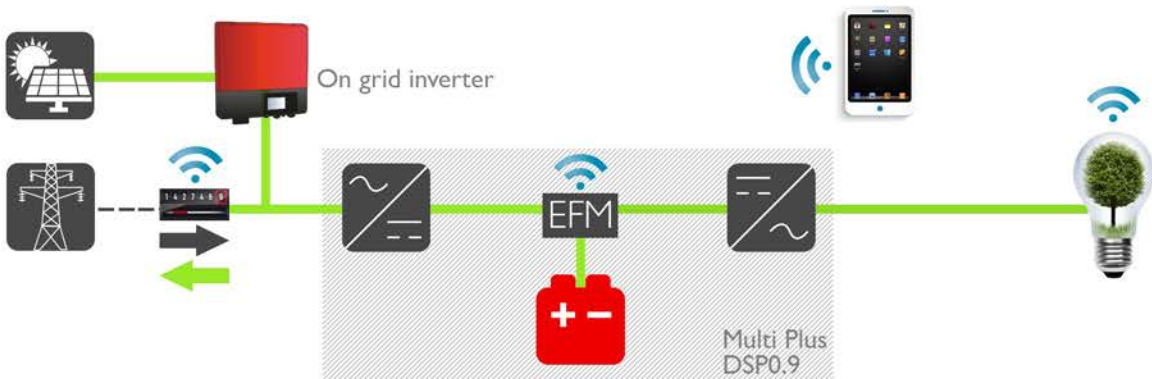
One UPS, multiple choices. The possibilities :

## Traditional UPS (DSP0.9)



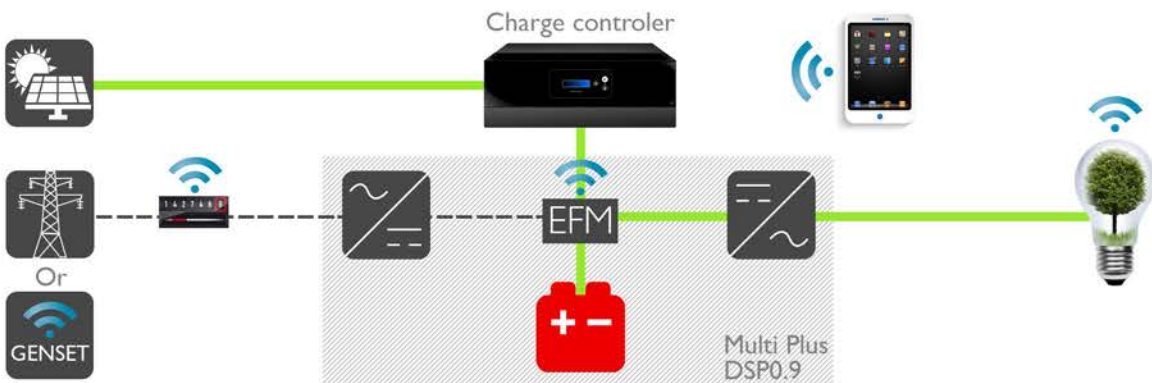
The connected load is powered and protected by our Multi Plus DSP0.9, online double conversion UPS with the latest state-of-the-art technology. The energy provided from the grid or from the batteries in case of a power blackout.

## Hybrid UPS (DSP0.9H)+on-grid



The connected load is powered and protected by our Multi Plus DSP0.9H, online double conversion UPS with the latest state-of-the-art technology. In combination with an on-grid inverter and according to actual and future local or country legislation, our Hybrid UPS and the Energy Flow Manager (EFM) will automatically optimize the different energy flows (solar;grid, battery) to minimize your "return of investment" time.

## Hybrid UPS (DSP0.9H)+off-grid



The connected load is powered and protected by our Multi Plus DSP0.9H, online double conversion UPS with the latest state-of-the-art technology. The primary energy is produced by the solar panel installation. Our special off-grid charge controller supplies the necessary solar energy to power simultaneously the connected load and to recharge the batteries. The grid and the batteries do only supply the missing energy if solar energy is not available (at night) or not strong enough (according to weather and load conditions). The web based intelligent Energy Flow Manager (EFM) provides "real time" status information. We do continuously optimize the DSP Hybrid and will provide - free - of - charge - updates with new features, such as e.g. energy flow according to local weather forecast, adjustable customer profile and even energy prices ! As such your system is future-proof.

HYBRID

# MultiPlus DSP0.9 Hybrid

## Advantages

	DSP0.9	DSP0.9H+on-grid	DSP0.9H+off-grid
Return of investment	●	✓	✓
Solar energy storage	●	✓	✓
On grid combination	●	✓	●
Scalable Solar + UPS power	●	✓	✓
CO <sub>2</sub> reduction	●	✓	✓✓
Computer and data loss protection (Online UPS)	✓	✓	✓
EFM-Energy flow manager	●	✓	✓
Web based remote management compatible	●	✓	✓
<b>Emergency backup at power failure (0 msec switching time)</b>			
- Supplied by solar	●	●	✓
- Supplied by batteries	✓	✓	✓
<b>Batteries</b>			
- Internal storage	6-12 kWh (scalable)		
- External storage	6-300 kWh (scalable)		
- Technology	Off-the-shelf, user friendly. Lead acid AGM, Gel, OPzV/S		
- Security level	Proven long term reliability in UPS applications		
- Cycle use	Up to 2500 cycles at depth of discharge 50%		
- Recyclate rate	More than 97%		
- Lithium ion	Optional (lower safety level)		
- Lifetime	3-20 years (according to technology, usage and manufacturer)		
<b>Installation</b>			
- No consumer load restriction	✓	✓	✓
- 3 phase input/output	✓	✓	✓
- 1 phase input/output	-/✓	-/✓	-/✓
- Genset compatibility	✓	✓	✓
- Retrofittable on existing PV installation	✓	✓	✓

✓ = Yes    - = No    ● = Optional

HYBRID



MultiPlus DSP0.9 Hybrid	Model															
	MLM-MLT DSP10	MLM-MLT DSP15	MLM-MLT DSP20	MLM-MLT DSP30	MLT-DSP40	MLT-DSP60	MLT-DSP80	MLT-DSP100	MLT-DSP120	MLT-DSP160	MLT-DSP200	MLT-DSP250	MLT-DSP300	MLT-DSP400/500		
Power (kVA)	10	15	20	30	40	60	80	100	120	160	200	250	300	400/500		
<b>— Input</b>																
Voltage	380/400/415Vac 3-phase +N, +/-20% (415Vac +15% -25%)															
Frequency range	50/60Hz selectable, +/-10Hz															
Power factor	0,99															
Harmonic distortion (THDi)	<3															
Additional bypass input	yes															
Bypass voltage range	380/400/415Vac 3phase +N, +/-10%															
Solar charge controller	yes - hybrid function															
<b>— Output</b>																
Power factor	0,9															
Power (kW)	9	13,5	18	27	36	54	72	90	108	144	180	225	270	360/400		
Voltage regulation	380/400/415Vac 3-phase +N, +/-1% or 230Vac single phase for MLM serie															
Frequency	50Hz or 60Hz adjustable															
Frequency regulation	line synchronized +/-2%, battery mode +/-0,1% adjustable															
Efficiency	up to 94%															
Crest factor	3:1															
Overload protection	100-125% 10min, 125-150% 60sec															
Additional protection	short circuit, voltage and current range															
THD (at 100% linear load)	<3%															
<b>— Battery</b>																
Type	VRLA AGM / GEL or other types															
Nominal voltage	+/-360Vdc (2x30-12vdc)															
Float or end of discharge DC voltage	+/- 405Vdc, +/-300Vdc															
Battery	internal							external								
Protection	overcharging, battery fuses, Temperature compensation															
Automatic test	daily, weekly (adjustable)															
<b>— General</b>																
Standard	EMC / LYD/EMI - EN62040-1/2, EN60950															
User interface	Multi language graphical LCD															
LCD information	Phase to phase voltage to phase to neutral voltage/current, power, frequency, crest factor, T°, error code															
Advanced	Auto diagnostics, different maintenance alarms and calibration through RS232															
Communication	2x RS232 ports, 4 dry contact (in option 8 dry contacts)															
Input	Generator contact and emergency power off															
Genset kit	User programmable															
Software	Management software															
Alarm	200 events (time and date) / in option 500 events															
Protection	Over-temperature, over-current, over-temperature alarm															
Temperature range	0°C - 40°C															
Protection degree	IP20 (IP54 optional)															
Humidity / Altitude	90% max without condensation / < 1000m															
Audible noise at 1m	≤ 56dB			≤ 61dB			≤ 64dB			≤ 67dB			≤ 72dB			
Weight (kg)	86	92	98	175	182	196	218	259	480	560	650	770				
Dimensions (mm), HxWxD	1037x398x812					1437x513x852					1797x882x763					1797x1246x763
<b>— Hybrid controller</b>																
Power	5/10 kW (up to 10 units in parallel)															
MPPT Input	270-640Vdc															
Input min/max Voc	200 Vdc / 750Vdc															
Efficiency	≥ 97%															
Communication	RS232, 4 dry contacts, EPO, multi language graphical LCD															
Dimensions HxDxW / weight	3Ux500x440mm / 13kg (5kW), 17kg (10kW)															

# Aunisol

## 1-20kVA



### Applications



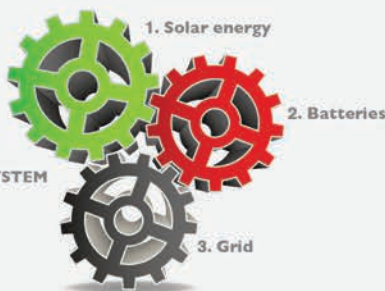
### 4 available power levels



### Specifications

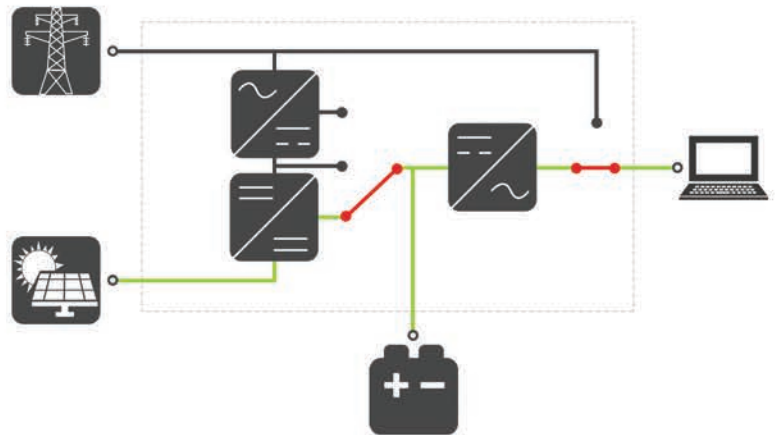
- Auto priority logic
- Pure Sine Wave output
- Phase reversal protection
- Auto wakeup & sleep mode
- High efficiency
- For long backup time
- Intelligent charger ensuring more battery life
- 10% more solar energy by using MPPT charger
- Overload, short circuit protection and auto recovery
- Battery (DC) cold start
- Genset compatibility
- 2 years warranty

#### Working priorities

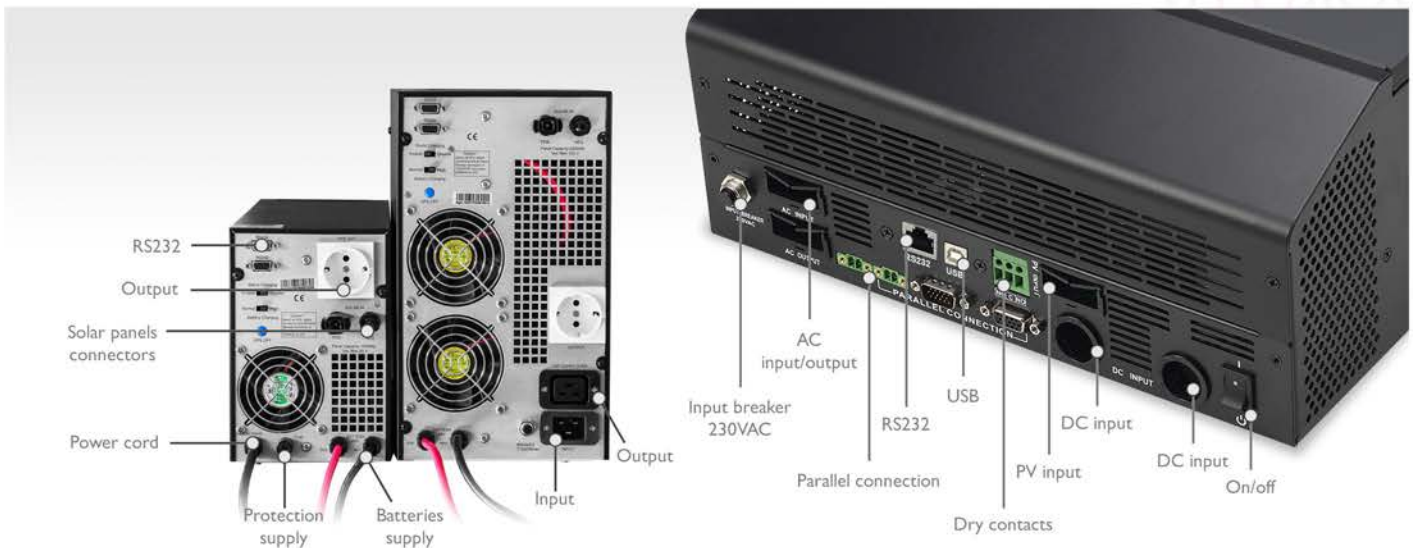


### Aunilec Hybrid System

During normal day operation, the connected load is powered by solar energy. If the solar energy is not strong enough, all missing energy is supplied by the batteries. If both energies are not available, the system automatically switches to normal AC supply.







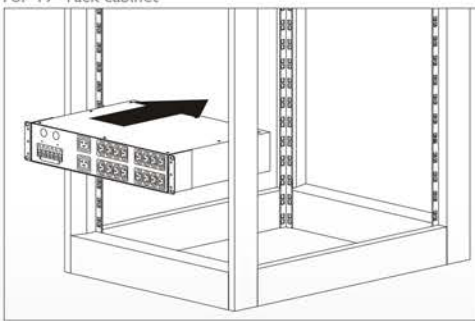
Hybrid solar UPS	Model			
	AUNISOL1	AUNISOL2	AUNISOL3	AUNISOL5
<b>— Input</b>				
Voltage range	150-275Vac		90-280Vac	
Frequency	50/60Hz (auto-sensing)			
<b>— Output</b>	Pure Sine Wave			
Max. power	1000VA	2000VA	3000VA	5000VA
Max. power AC	1000W	2000W	2400W	4200W
Output voltage	230Vac +/-5			
Harmonic distortion (THDi)	<5%			
Frequency	50/60Hz			
Max. output current	9A	14A	20A	30A
Overload in bypass mode	120% for 180sec / 150% for 3sec			
Overload in battery mode	110% for 60sec / 130% for 30sec			
<b>— Charger</b>				
Max. PV power	1000W	2000W	3000W	3000W
MPPT voltage min/max	24/85Vdc	48/120Vdc	60/120Vdc	
Max. charge current	40A		60A	
Max. efficiency	96%		98%	
<b>— Battery (external)</b>				
Battery voltage	24Vdc		48Vdc	
Max. AC charger	6A		15A	60A
Max discharge current	50A		60A	100A
Battery capacity	24Vdc 200Ah	48Vdc 260Ah	48Vdc 400Ah	48Vdc 400Ah
High voltage alarm	28,4Vdc		57Vdc	
Shutdown voltage	29,2Vdc		58,5Vdc	
Low voltage alarm	22,0Vdc		44Vdc	
Shutdown undervoltage	20,0Vdc		40Vdc	
<b>— Environment</b>				
Protection degree	IP20			
Operating temperature	0-45°C		0-55°C	
Audible noise at 1m	< 50dB		< 55dB	
Relative humidity	0 to 90% non-condensing		5 to 95% non-condensing	
Altitude	0-2000m			
<b>— Communication</b>				
Communication port (optional)	RS232/USB/Relays			
<b>— Physical (UPS)</b>				
Dimensions (WxHxD), mm	144x210x405	190x330x464	145x300x480	145x300x560
Net weight (only Hybrid UPS)	13kg	18kg	13kg	16kg
<b>— Protection</b>				
Input/output	Overvoltage, short-circuit, overload, battery deep discharge			
<b>— Options</b>				
Solar panel kits	3 à 4 x 250Wc	6 à 9 x 250Wc	4 à 12 x 250Wc	
Battery kits	24Vdc 170-200Ah	48Vdc 200-260Ah	48Vdc 65-400Ah	
Parallel kits	-		Up to 4 units	

HYBRID

# MultiNET\_ATS Static Transfer Switch 16A/32A



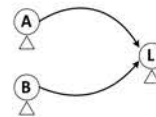
For 19" rack cabinet



## Applications



## LCD Display



The digital LCD display shows input/output power connected to load

## Specifications

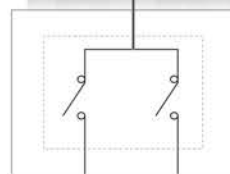
- Uninterruptible transfer between 2 independent sources
- Can be powered by 2 different UPS and power sources
- Can be used as external maintenance bypass
- LCD and LED display
- For 19" rack cabinet
- Redundant power supply
- Intelligent communication interface through RS-232, USB and 5 dry contacts
- Flexibility to use
- Input voltage : 200/208/220/230/240Vac (+/-5%/10%/15%/20%)
- Input voltage range : 150Vac~300Vac
- Input frequency : 50/60Hz(+/-5%/10%/15%/20%)
- Input current : 16A or 32A
- Output voltage : 200/208/220/230/240Vac
- Electronic circuit protection
- Transfer time : 8~12ms (typical)
- Efficiency : 99% (with full linear load)
- Standard : EN62310-2
- 2 years warranty

## Version 16A (1U)

Front 16A (1U)



Back 16A (1U)



Output 3  
Maximum 16A

Output 2  
Maximum 10A

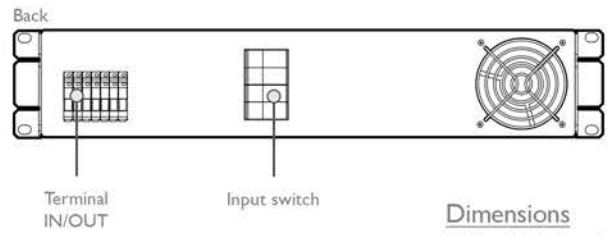
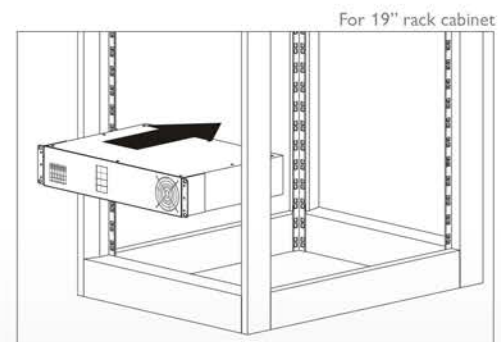
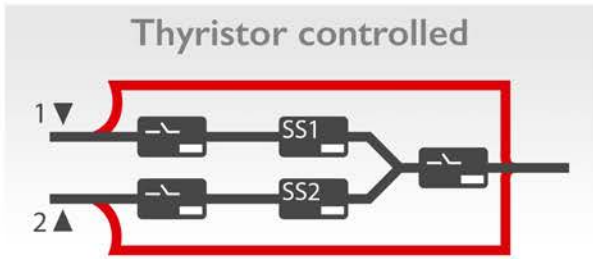
Output 1  
Maximum 10A

## Version 32A (2U)

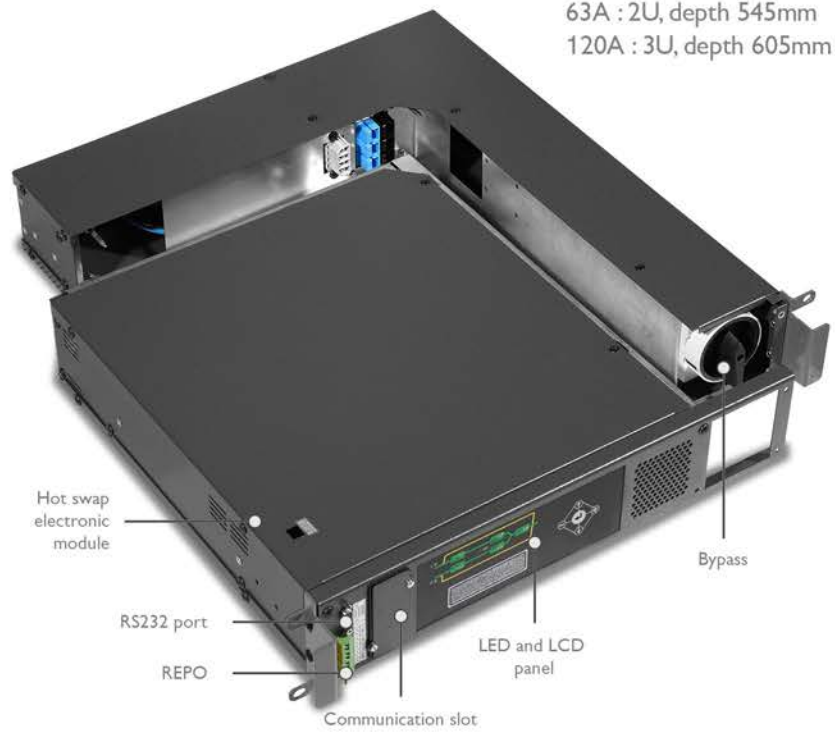


# MultiNET\_ATS Static Transfer Switch

## 32A/63A/120A



**Dimensions**  
 63A : 2U, depth 545mm  
 120A : 3U, depth 605mm



### Specifications

- Uninterruptible transfer between 2 independent sources - Thyristor controlled
- Can be used as external maintenance bypass
- Input voltage : 220/230/240Vac
- Input voltage range : 180/264Vac Ph-N
- Input frequency : 50Hz or 60Hz
- Source priority selection
- Increase power quality
- Microprocessor controller
- Power redundancy
- Internal manual bypass
- Automatic static switch
- Transfer time :  $\leq 4ms$  for synchronous sources and:  $\leq 10ms$  for non-synchronous sources
- RS232 standard and STS NET TCP/IP option
- Current distortion level less than 1%
- Power event log
- For 19" rack cabinet

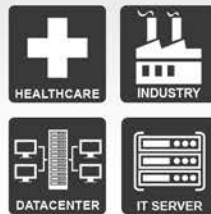
- Options:**
- Hot swap (electronic module)
  - 2 years warranty

STATIC TRANSFER SWITCH

# MultiNET\_ATS 50-600A Static Transfer Switch



## Applications



## Redundant System

Power is supplied by 2 separate supply circuits that are fully independent and that can be replaced during normal operation (hot replacement mode) without any risk of causing power supply interruptions to the load. In the unlikely event of a failure at one of both power supplies, the full operation is provided by the "Power Supply backup" function, which offers auxiliary power supply to the circuits from an external, independent power source. The MultiNET\_ATS is equipped with a redundant ventilation system.

## Specifications

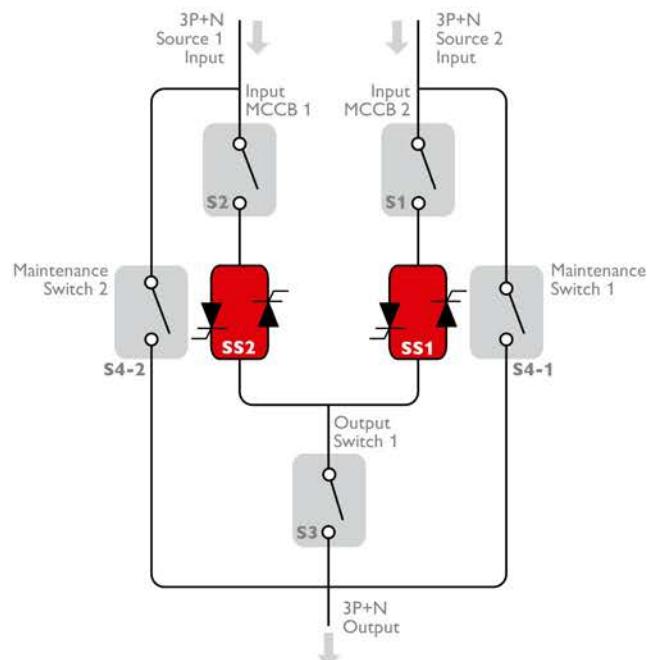
- High reliability
- Increase of the power quality
- Hot swap function (electronic)
- Automatic static switching
- Superior short circuit protection
- Protection against power supply faults
- Protection against overloads and load faults
- Redundant power mode
- Total control by microprocessor
- Advanced communication LCD display such as status, alarms, information...
- Power event log

### Options:

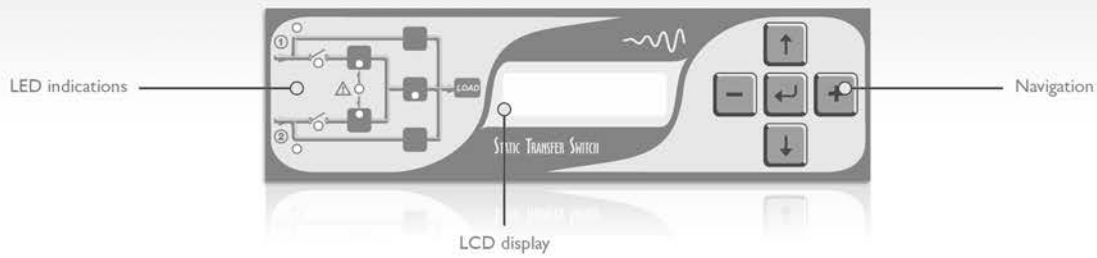
- RS485
- TCP/IP connection
- 2 serial ports
- 2 years warranty

## Working Principle

The MultiNET\_ATS allows the load to switch between alternative and independent power sources for guaranteed redundant power. The switch can be automatic (when a source falls outside the acceptable tolerance) or manually through the front panel control.



STATIC TRANSFER SWITCH



### 3 different sizes

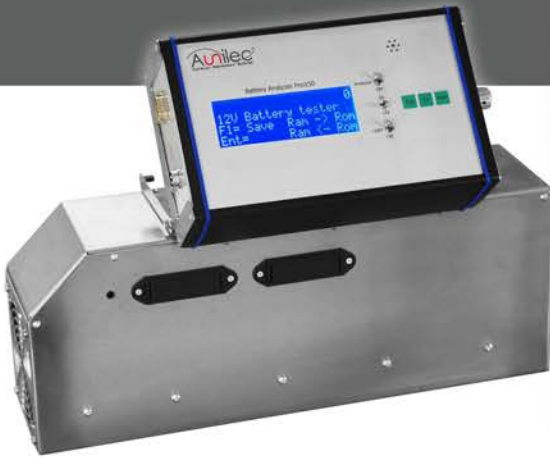


STATIC TRANSFER SWITCH

MultNET_ATS	Model							
	MLN50	MLN100	MLN150	MLN200	MLN250	MLN300	MLN400	MLN600
Nominal current	50A	100A	150A	200A	250A	300A	400A	600A
<b>— Input</b>								
Nominal voltage	380-400-415Vac 3-phase + N							
Voltage range	180-264 Vac phase to neutral							
Switched input phases	3ph or 3ph+N							
Frequency	50/60Hz							
Frequency range	+/-10%							
Compatibility	TT, IT, TNC, TNS							
<b>— Electrical</b>								
Transfer type	“break before make” by electronic thyristor							
Available transfer methods	Automatic / manual / remote							
Transfer time	<4ms (S1/S2 synchronised) and 10ms (S1/S2 non-synchronised)							
<b>— Environment &amp; communication</b>								
Efficiency at full load	>99%							
Audible noise at 1m	55 dB							57 dB
Operating temperature	0°C - 40°C							
Humidity	95% non-condensing							
Altitude	Max 4000m							
Standards	EN62310-1 & EN62310-2							
Interface	RS485, TCP/IP, 2 serial ports							
<b>— Physical</b>								
Weight (kg)	140	155	160	205	210	235	240	375
Dimensions, WxDxH (mm)	685x530x1500			685x580x1770			950x730x1900	
IP	IP20							

# Battery Analyzer

## For 6/12Vdc batteries



### Application



MAINTENANCE

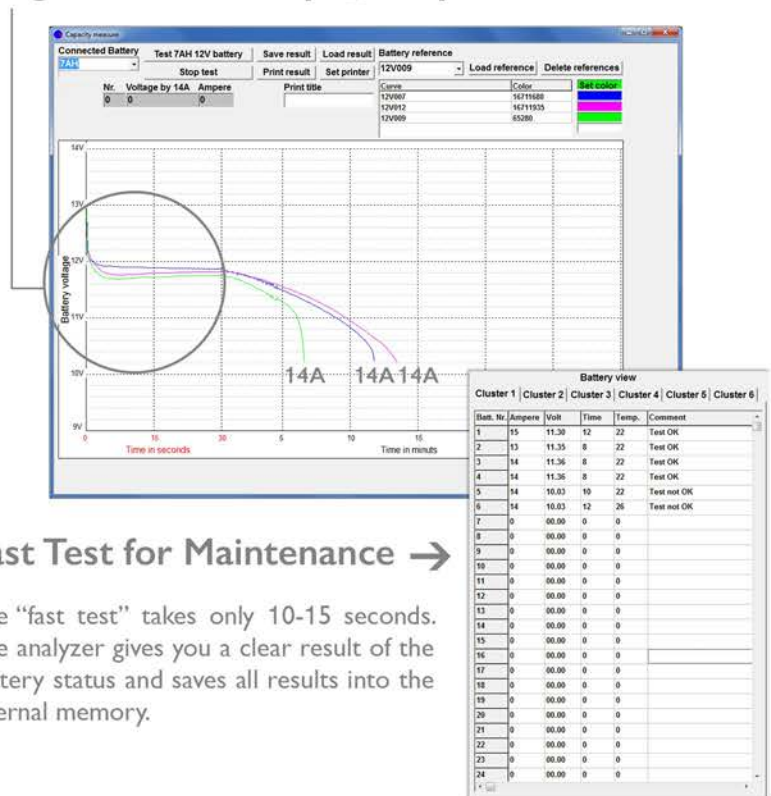
### LCD Display



### Monitoring Software Included

The monitoring software supplies all important information about the battery. You can export and print a report or simply save the information in the internal memory of the analyzer.

### Long Test for Battery Quality :



### Fast Test for Maintenance →

The “fast test” takes only 10-15 seconds. The analyzer gives you a clear result of the battery status and saves all results into the internal memory.

### Specifications

- Reliable - quick - portative
- Compatible Windows
- Adjustable discharge current from 5-150Amp
- Extremely fast test result (10-15 seconds)
- Large LCD display
- For 6 & 12Vdc batteries
- RS232 communication port
- Possible “hot swapping” test
- Internal memory for 288 datas
- Data transfer to PC (tables, statistics)
- Ideal for maintenance use or long backup test
- Datas export through CSV or TXT files
- 2 years warranty

MAINTENANCE

# Batteries AGM / Gel / OPZv

## 2V/6V/12V 7-3000Ah



UPS

### AGM: 12V7Ah to 12V200Ah



>26Ah lifetime\* : 10 years  
 <26Ah lifetime\* : 5 years

The AGM battery series are designed with advanced technology, super heavy duty grid, high performance plates and electrolyte. The AGM battery series have long and reliable standby life and high consistency for better performance in series use.

UPS

### Gel: 12V40Ah to 12V250Ah



Lifetime\* : 12 years

The GEL batteries avoid corrosion and stratification. The special separator properly prevents short-circuit. It offer high deep discharge ability, super thermal stability, good recovery ability after deep discharging. The deep discharge cycles of GEL batteries are up to 50% higher compared with other normal AGM batteries.

UPS

### OPZv: 2V200Ah to 2V3000Ah



Lifetime\* : 15-20 years

The OPZv batteries are designed for long lifetime and have excellent deep cycle performance. The constant power discharge capability and the low current discharge of the OPZv batteries are superior to normal batteries.

## Applications

- Auto control system & ATM machine
- Electronic apparatus and equipment
- Emergency light & emergency backup power supply & alarm/security system
- Power generation system (solar and wind power system, etc.)
- Communication power & DC power
- Electric Power System (EPS)
- Uninterruptible Power System (UPS)

## Battery Cabinet

Cabinet available  
 up to 60 batteries 12V100Ah



\*Lifetime estimated at optimal conditions of use and environment



## Relay card / AS400 / Modbus

Relay cards are based on dry contacts. The AS400 and Modbus card provide the corresponding protocols to the interface.



## Web / SNMP adapter / GPRS

SNMP adapters provide monitoring of the UPS via ethernet or WLAN including email notifications. The monitoring software allows connection with the IP address of every UPS. For example all servers in a network can be shutdown. SMS can be sent without LAN connection by using a GSM modem.



## Remote control panel

The remote control panel is physically connected with the UPS by cable and allows distant monitoring and management of the system. The panel can be installed as far as 500m from the UPS and will be power supplied by the interface cable.



## Galvanic isolation transformer

With the galvanic isolation transformer the electric circuits before and after the UPS are not connected physically but via an electromagnetic field. This increases the reliability of the protection. Spikes and disturbances can not pass the galvanic isolation transformer.



## External bypass

External manual bypass modules (singlephase & threephase) allow service and maintenance work without interruption of the power supply. The UPS can be disconnected after the power supply is switched to bypass line. All the Aunilec MultiNET\_ATS range can also be used as external bypass.



## Additional chargers

External and internal chargers for batteries of higher capacity and faster charging time.



## NetFeeler sensor

They are mostly used in server cabinets and their monitoring. They inform about temperature and humidity over IP address. The sensors can also be connected to a three port SNMP adapter offered by Aunilec.



## Spike protection

The spike protection protects electrical devices from high voltage. It attempts to limit the voltage supplied to an electric device by either blocking or by shorting to ground any unwanted voltages above a safe threshold.



## Customized products



Outdoor UPS /IP65 / IP55

GPRS / IP based remote controller with internal webservice.  
Solar + generator power supply for windspeed analyzer.



## Rail for 19" rack cabinet

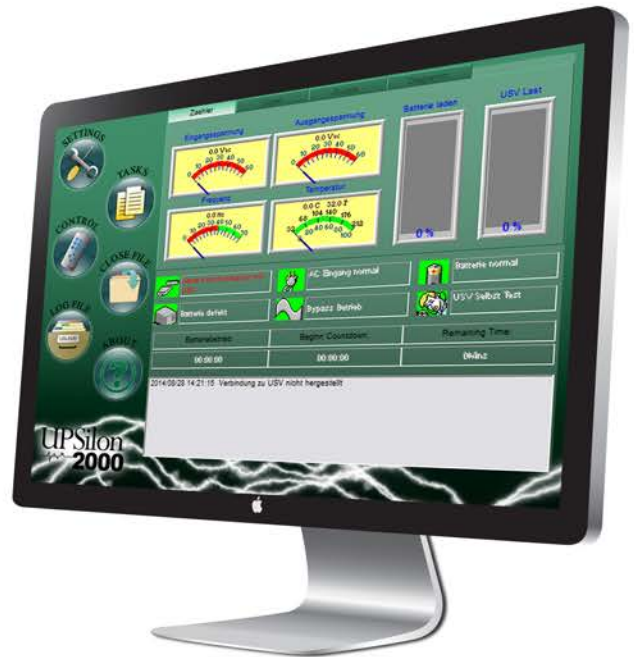
The rail is the perfect tool to fix the UPS or battery pack in a 19" rack cabinet. The additional gliding function ensures a very easy and fast access to the different cabinets.



# Monitoring | UPS Management Software



The UPS-Management Software is a client/server application for networks and local workstations. The UPS-Management Software is connected with the UPS by RS-232/485/USB cable. The software collects the messages sent from the UPS as a background software.



If the software detects voltage variations or a power loss, it can execute different system event routines, which for example, may shutdown the server or send warnings to connected users. These system event routines, which are part of the UPS-Management Software, are fully customisable. You can program UPS routines (e.g. define dates for automatic UPS tests, shutdown the system at defined dates, etc.), check the status of the UPS, execute different UPS tests or create power quality statistics. You can also constantly monitor and evaluate the event protocol (log file) that is permanently updated. It is also possible to perform a simultaneous shutdown of several servers that are all supported by the same UPS.

- Low battery warning, on-screen backup time, battery time countdown, UPS temperature such as battery and internal temperature, defect battery warning, time and date stamp event logging, extensive logging of all UPS activity and user messaging.
- Battery management, surveillance and counter for power events.
- SMTP compatible system with messaging service for e-mail, e-mail to SMS or other external services.
- Client/server software for heterogeneous networks with one-phased and three-phased UPS.
- "Look & feel" is identical on all platforms.
- Integrated SNMP agent for Mac, NetWare, MS-WINDOWS™ NT/2000, Linux and SUN.
- Supports all important network protocols for the graphical control of the UPS from every Windows Station in the network.
- Automatic unattended shutdown of local and remote computers in networks (Master/Slave via RCCMD module)
- Selftest functions such as economy mode, UPS temperature, battery load, power socket switching and UPS emergency cut-off.
- Shutdown and test functions can be executed with a scheduler.
- Graphic display quality of incoming power load frequency in minimum-maximum or average values.

Check actual compatibilities and updates on Generex and Megatec's websites.

# More than UPS...



**Rectifiers,  
battery chargers**



**Security lightning**



**Batteries  
and capacitors**



**Active power filter**



**Voltage regulators  
and network conditioners**



**Batteries and analysers**



**Solar technology**



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