

# ABLEX



A LEADING MANUFACTURER  
OF POWER ELECTRONICS

[www.ablerex.com.tw](http://www.ablerex.com.tw)



# About AblereX

AblereX unique ability to combine our technologies, expertise and flexibility enable us to develop green energy solutions and products that promote electrical stability and improve power quality into the global markets.

Committed extensively in research and development to create product innovation and differentiation, AblereX have generated top notch quality-designed products that received industry recognition, awards as well as hundreds of patents.

AblereX products are manufactured using automated precision equipment and fully automated inspection systems installed at our AblereX manufacturing plant. Advanced management KPI system ensure continuous improvements in production process, quality controls and increasing competitiveness in the global market.

Designed and engineered in-house by our 150-strong dedicated R&D team, our main products include Uninterruptible Power System, Active Power Filter, Photovoltaic Inverter, Wireless Battery Monitoring System, Energy Storage System and Power Monitoring and Management System.

AblereX takes the global perspective approach by setting up regional offices to better understand local consumers behaviors and cater to locale-specific requirements, increasing brand awareness and expanding business across the continents.

AblereX is committed to deliver genuine value to our customers and will continue to develop environmental-friendly and highly value-added products that make the most effective use of energy in its pursuit to becoming a global leader in the field of power electronics.

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# Three Phase UPS



- High Input Power Factor >0.99 and Low Input THDi% <3%
- High Output Power Factor 1.0
- Common Battery Used for Parallel Redundant System
- Dual Input Mains for Manage Independent Power Sources
- User Friendly Operator Interface—4.3" Colour LCD Touch Screen

Taurus Series 10000VA~80000VA





# TAURUS Series On-Line UPS

TS10KVA ~ 80KVA



- 3 Level IGBT Technology
- High Efficiency, On-line Mode Efficiency 96%
- High Input Power Factor >0.99
- Low Input Harmonic, THDi% <3%
- Unity Output Power Factor 1.0
- Power Scalable and Parallel Redundancy
- Separate / Common Battery Configuration for Parallel Redundant System
- Iconic design HMI - Colour LCD Touch Screen



## Specifications

Capacity		10KVA	20KVA	30KVA	40KVA	60KVA	80KVA
Input	Voltage	400V 3 Phase + N					
	Voltage Tolerance	±20%					
	Frequency	40 ~ 70Hz					
	Power Factor	≥ 0.99					
	THDi	<3%					
Output	Voltage	380/400/415V 3 Phase + N					
	Voltage Tolerance	±1% (Static Load)					
	Power Factor	1					
	Frequency	50/60Hz					
	Frequency Tolerance	±0.05% (free running)					
	Crest Factor	3:1					
	Voltage Harmonic Distortion	<1% with linear load; <3% with distorting load					
	Overload	110% for 60 minutes, 125% for 10 minutes, 150% for 1minutes					
Battery	Number of Batteries	32~40pcs configurable					
	Max. Charging Current	3.5A	7A	10A	13A	20A	26A
	Common Battery for Parallel Configuration	Yes					
Efficiency	VFI Mode	>94%		>95%		>96%	
	ECO Mode	>98%					
Bypass	Voltage	380/400/415V.3 Phase + N					
	Voltage Tolerance	±5% ~ ±15% (Programmable)					
	Frequency	50/60Hz					
	Frequency Tolerance	±1Hz / ±3Hz (Selectable)					
	Parallel	Up to 6 units					
	Dimensions (W x D x H) mm	440 x 840 x 1390				600 x 827 x 1253 (w/o Wheel) 600 x 827 x 1300 (with Wheel)	
	Weight(kg)	84	86	130	132	194 (w/o Wheel) 200 (with Wheel)	204 (w/o Wheel) 210 (with Wheel)
	Protection Grade	IP20					
	Display and MMI	4.3" Colorful LCD Touch Screen					
	Built-in Communication Port	USB, EPO, Dry Contact					
	Optional Communication	2 Communication Slots for SNMP Card, RS-485 Modbus Card, Dry Contact Card					
	Environment	Operation Temperature	0~40°C / 32~104°F				
Operation Humidity		0~95% (w/o condensation)					
Tested to standards		LVD: EN62040-1, EMC requirements: EN62040-2					
Mark		CE					
Noise (at 1 meter)		<52dBA		<55dBA		<60dBA	

\*Specifications subject to change without notice.  
\*\*Depending on the model and voltage, please contact Ablerex for more information.  
\*\*\*The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.



### Electrical features

- Dual Input mains
- Internal maintenance bypass
- Easy parallel without more PCBs
- External temperature sensor
- DC cold start (option)



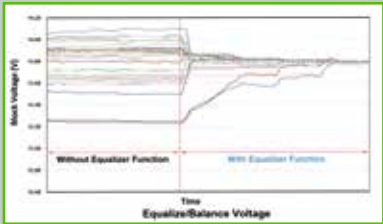
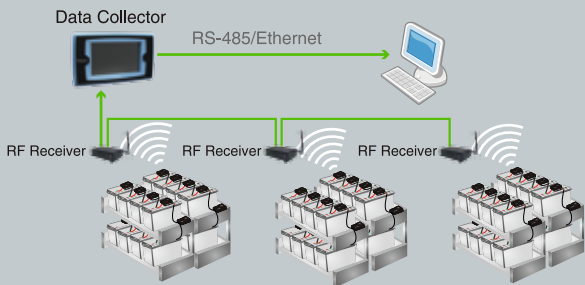


# Enerbatt 3G

## Wireless Battery Monitoring System




- Wireless Communication
- Easy installation and Reduction in Manhours Cost
- Graphic LCD Touch Screen
- Real Time Monitoring: Block Voltage, Block Impedance, Temperature, String Voltage & Current
- Automatic Equalizing and Balance Block Voltage
- Extend Battery Life Expectancy
- Alarm via Email & Dry Contact
- Build in Storage Memory for Battery History Database
- Coloured Bar Charts/Graphical Diagrams
- User-default Configurations & Deviation Levels
- Provides Ethernet/RS-485 for Remote Monitoring



## Specifications

Model	BMS-DC-LCDII (Data Collector)
Display	LCD 7" Graphic Touch Screen
Input Power Supply	12Vdc
Power Consumption	≤ 9W
Communication Ports	Ethernet x 1, RS-485 Modbus RTU x 1 Output Dry Contact Port x 3, Input Dry Contact Port x 1
Monitoring RF Receiver	Up to 63 RF Receivers
Manage Nodes	Maximum 750 nodes
Storage Media	Up to16 Gigabyte SD/MMC Flash Memory Card
Dimensions ( WxHxD )	260 mm x 150 mm x 57 mm/10.2" x 5.9" x 2.2"
Weight	0.85 kg / 1.9 lbs

Model	BMS-RFR (RF Receiver)
Input Power Supply	12Vdc
Power Consumption	≤ 3W
Receiving Interface	RF 2.4 GHz for wireless #1
Monitoring Nodes	Maximum 256 nodes
Dimensions (WxHxD)	129 mm x 70 mm x 35.5 mm / 5.1" x 2.7" x 1.4"
Weight	0.4 kg / 0.9 lbs

Model	BMS-BMK (Battery Measure Kit)				
	Block Voltage	2 V	6 V	12 V	
	Voltage Measurement Range	1.48~4.00 V	4.2~8.0 V	8.5~16.0 V	
	Accuracy	±5 mV	±5 mV	±10 mV	
	Battery Impedance Resolution	2 μΩ	10 μΩ	>65 Ah	<65 Ah
				15 μΩ	25 μΩ
	Temperature Measurement <sup>#2</sup>	0~100°C ±1°C / 32~212°F ± 1.8°F			
	Power Consumption	≦ 0.5 W			
	Input Impedance	≧ 1 MΩ			
	Dimensions (WxHxD)	100 mm x 27 mm x 70 mm / 3.9" x 1.1" x 2.8"			
	Weight	0.1 kg / 3.4 ozs			

Model	BMS-SMK (String Measure Kit)
Voltage Measurement Range	Up to 750Vdc
Accuracy	±0.2% of normal voltage
Temperature Measurement #2	0~100°C ±1°C / 32~212°F± 1.8°F
Current Measurement #3	0~3000 A
Input Power Supply Range	35~60 VDC
Power Consumption	≤ 3 W
Input Impedance	≥ 1 MΩ
Dimensions (WxHxD)	100 mm x 27 mm x 70 mm / 3.9" x 1.1" x 2.8"
Weight	0.09 kg / 3.1 ozs

- #1. Maximum transmitting distance is rated at 50m/164ft in a non-concealed room or cabinet. Recommended distance is less than 20m/65ft for optimal performance.
- #2. Optional Temperature Sensor (TES) is required for temperature measurement.
- #3. Optional Hall Current Transformer (HCT) is required for battery current measurement.
- #4. The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.



# Single Phase UPS



- A** Glamor Line-interactive Simulated Sine Wave UPS, GR450VA~2000VA
- B** Ares Series DSP-Controlled On-Line UPS, ARES Tower 1000VA~3000VA
- C** Ares Plus Tower Series DSP-controlled On-line UPS, ARES Tower Plus 1000VA~3000VA
- D** Ares RT/Ares Plus RT Series DSP-Controlled On-Line UPS, ARES RT / ARES PLUS RT 1000VA~3000VA
- E** Ares RT/Ares Plus RT/ ODIN Plus RT Series True On-line Double Conversion Topology UPS, ARES RT/ARES Plus RT/ODIN Plus RT 1000VA~3000VA
- F** Mars III RT Series Convertible Redundancy On-Line UPS, MSIII RT 4500VA~10000VA
- G** Mars II Series Redundancy On-Line UPS, MSII 4500VA~20000VA
- H** MSIII Tower Series Redundancy On-Line UPS, MSIII Tower 4500VA~10000VAS



# Glamor Series

## Line-Interactive Simulated Sine Wave UPS

GR 450VA~GR 2000VA



- Built-in AVR
- LED/LCD Display(Optional)
- AC Auto Restart
- Cold Start Function



■ GR 450~GR 850



■ GR 1000~GR 2000

### Specifications

Model	GR 450	GR 650	GR 850	GR 1000	GR 1500	GR 2000	
Input	Voltage Range**		160Vac~290Vac				
	Frequency Range		45~65Hz(Auto sensing)				
Output	Capacity	250W	360W	500W	600W	900W	1200W
	Output Voltage (Battery mode)		220/230/240Vac ±10%				
	Frequency Range (Battery mode)		50/60Hz ±1Hz				
	Transfer Time		2~6ms(typical)				
	Output Waveform		Simulated SineWave				
Battery	Type & Number	12V/5Ah x 1	12V/7Ah x 1	12V/9Ah x 1	12V/7Ah x 2	12V/7Ah x 2	12V/9Ah x 2
	Recharge Time (to 90%)		4~6 hours				
Display	LCD (Option)		AC mode, AVR mode, Battery mode, Battery level, Load level, Input voltage, Output voltage, Fault, and Battery weak				
	LED (Standard)	3 LEDs: Line mode, Battery mode and Fault			6 LEDs: Line/Battery mode, Fault, Load/Battery level		
Alarm	Audible or Visual		Battery mode / Battery low / Overload / System Fault				
Protection	Full Protection		Overload, Short circuit, Discharge, overcharge and optional RJ-11/RJ-45 surge protection				
Function	DC Start		Yes				
	Plug-in Charging		Yes				
Physical	Dimension (WxHxD, mm)		100 x 140 x 292		148 x 198 x 315		
	Net Weight (kgs)	4	5	5.5	9	10.5	11.8
Enviornment	Operation Temperature		0~40°C / 32~104°F				
	Operation Humidity		20%~95 %RH (Without condensing)				
	Altitude		1000m / 3280ft without Derating				
	Noise Level		≤ 40dB				
Interface	Interface (Option)		USB, RS-232				
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.				
Standards and Certifications**	Safety		EN62040-1				
	EMC		EN62040-2, EN61000-3-2, EN61000-3-3				
	Marks		CE				

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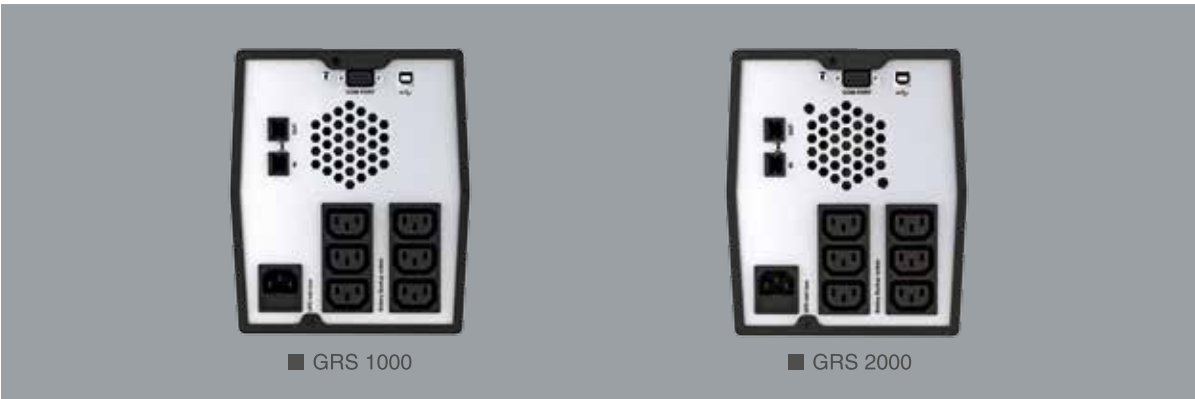
# Glamor-Sinewave Series

## Line-Interactive Sinewave UPS

GRS 500VA~GRS 2000VA



- Pure Sine Wave Output
- Built-in AVR
- LED/LCD Display (Option)
- AC Auto Restart
- Cold Start Function
- USB HID Communication Port



■ GRS 1000

■ GRS 2000

### Specifications

Model	GRS 600	GRS 800	GRS 1000	GRS 1500	GRS 2000	
Input	Voltage Range**		165Vac~290Vac			
	Frequency Range		45~65Hz(Auto sensing)			
Output	Capacity	360W	480W	700W	1050W	1400W
	Output Voltage (Battery mode)		220/230/240Vac ±10%			
	Frequency Range (Battery mode)		50/60Hz ±1Hz			
	Transfer Time		2~6ms (typical)			
	Output Waveform		SineWave			
Battery	Type & Number	12V/7Ah x 1	12V/9Ah x 1	12V/7Ah x 2	12V/7Ah x 2	12V/9Ah x 2
	Recharge Time (to 90%)		4~6 hours			
Display	LCD (Option)	AC mode, AVR mode, Battery mode, Battery level, Load level, Input voltage, Output voltage, Fault, and Battery weak				
	LED (Standard)	3 LEDs: Line mode, Battery mode and Fault				
Alarm	Audible or Visual		Battery mode / Battery low / Overload / System Fault			
Protection	Full Protection		Overload, Short circuit, Discharge, overcharge and optional RJ-11/RJ-45 surge protection			
Function	DC Start		Yes			
	Plug-in Charging		Yes			
Physical	Dimension (WxHxD, mm)		116 x 170 x 309		165 x 198 x 393	
	Net Weight (kgs/lbs)	4 / 8.8	5.5 / 12.1	9.3 / 20.5	12.4 / 27.3	12.6 / 27.8
Enviornment	Operation Temperature		0~40°C			
	Operation Humidity		0%~90%RH (Without condensing)			
	Altitude		1000m/3300ft without Derating			
	Noise Level	≤ 40dB			≤ 45dB	
Interface	Interface (Option)		USB, (RS-232)			
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.			
Standards and Certifications**	Safety		EN62040-1			
	EMC		EN62040-2, EN61000-3-2, EN61000-3-3			
	Marks		CE			

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\*\*\*\* The technical specification remains the same.





# Jupiter Pro

## Line-Interactive Sine Wave UPS

JP PRO 1000VA~3000VA



- AVR Boost and Buck
- Pure Sine Wave Output
- User Friendly LCD Display
- Advanced Battery Management
- Nearly Zero Transfer Time
- 97% High Efficiency in Normal Mode
- Easy Swappable Battery
- Patent RS232 and USB Communication Interfaces



### Specifications

Model	JP1000		JP1500		JP2000	JP3000
Input	Voltage		110/115/120 or 220/230/240 +/-25%, DIP Switch Selectable			
	Frequency		50/60+/-5% (Auto Sensing)			
	Phase		Single phase with ground			
Output	Voltage		110/115/120 or 220/230/240 +3%~-10%			
	Capacity	1000VA/600W	1500VA/900W	2000VA/1200W	3000VA/1800W	
	Output Waveform		Pure Sine Wave			
	Transfer Time (AC to DC)		4-6ms typical			
	DC Start		Yes			
Battery	Number of batteries		2	4		
	Type		Sealed Lead Acid Maintenance Free			
	Capacity	12V/7AH	12V/9AH	12V/7AH	12V/9AH	
	Rated Battery Voltage		24Vdc	48Vdc		
	Recharge Time (to 90%)		4 hours			
Display	LED Panel		Utility Normal, Backup, UPS Fault & Battery's condition			
	LCD Panel		Measurements: Load Level(%), Battery Level(%), LED: Utility Normal(Green), Backup Mode(Amber), Fault(Red) Sign: Bypass, AVR Boost/Buck, Battery Low/Replace/Fault, UPS Fault, Site Wiring Fault, Overload			
	Self-Diagnostics		Upon Power on and Software Control			
Alarms	Audible and Visual		Line Failure, Battery Low, Overload and System Fault Conditions			
Protection	Overload	AC Mode	>110% Buzzer continuously alarms & shuts down after 10 minutes			
		Inv. Mode	>120% Buzzer continuously alarms & shuts down after 10 seconds			
	Short Circuit	AC Mode	Input Fuse & Electronic Circuit			
		Inv. Mode	Inverter shutdown immediately			
Physical	Dimensions (WxHxD, mm/inch)		173x247x369 / 6.8x9.7x14.5		173x247x427 / 6.8x9.7x16.8	
	Weight(kg/lbs)	120V	13/28.6	15/33	22/48.4	24/52.8
		230V				
	Outlets	120V	(6) NEMA5-15R			
230V		(6) IEC-320-C13				
Environment	Operation Temperature		0~40°C / 32~104°F			
	Humidity		20%~90%RH (Without condensation)			
Interface	Interface Type		RS232/USB			
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.			
Standard and Certifications	Safety		EN62040-1-1			
	EMC		EN62040-2, EN61000-3-2, EN61000-3-3			
	Markings		CE			

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# Janus & Janus XL

## Line-interactive Sine Wave UPS

JC &JCXL 1000VA~3000VA



- Line Interactive Sine Wave UPS
- Rack Tower Convertible Design
- 0.9 Output Power Factor
- State-of-the-art Rotating LCD Panel
- Toroidal Transformer Technology
- Faster High Rate Charger
- 95% High Efficiency in Utility Mode
- Automatic Voltage Correction
- Hot Swappable Battery Function
- Customer Options Slot for Increased Flexibility.
- Patent RS232 and USB Communication Interfaces
- Smart Fan Operation



■ JC 1000/1500



■ JC 2000/3000



■ JCXL1000/1500



■ JCXL 2000/3000

## Specifications

Model	JC750	JC1000	JC1500	JC2200	JC3000	JCXL1000	JCXL1500	JCXL2200	JCXL3000		
Input	Voltage		110/120/127Vac or 220/230/240Vac +/-25%								
	Frequency		45~65(auto-sensing)								
	Phase		Single phase with ground								
Output	Voltage	220/230/240Vac +/-25%	110/120/127Vac or 220/230/240Vac +/-25%			110/120/127Vac or 220/230/240Vac +/-25%					
	Capacity	750VA/675W	1000VA/900W	1500VA/1350W	2200VA/1980W	3000VA/2700W	1000VA/900W	1500VA/1350W	2200VA/1980W	3000VA/2700W	
	Frequency (Backup mode)		50/60Hz ±0.5Hz								
	Output Waveform		Pure Sine Wave								
	Transfer Time (AC to DC)		4-6ms typical								
DC Start	DC START		Yes								
Battery	Number of batteries	2	3	3	6	6	4	4	8	8	
	Type		Sealed Lead Acid Maintenance-free								
	Capacity	12V/7AH	12V/7AH	12V/9AH	12V/7AH	12V/9AH	12V/7AH	12V/9AH	12V/7AH	12V/9AH	
	Rated Battery Voltage	24Vdc	36Vdc	36Vdc	72Vdc	72Vdc	24Vdc		48Vdc		
	Recharge Time (to 90%)		5 hours								
Display	LED Panel		Line Mode, Battery Mode & Fault								
	LCD Panel		Line bypass, AVR Boost(Buck), Backup, Battery Level, Battery Low, Load Level, Battery Fault, UPS Fault, Site Wiring Fault, Overload								
	Self-Diagnostics		Upon Power On and Software Control								
Alarms	Audible and Visual		Mains Fault, Low Battery, Overload and Fault conditions								
Protection	Overload	AC Mode	Output breaker / >100% alarms only, >110% for 10min and then shutdown, >120% shutdown immediately								
		Inv. Mode	Output breaker / >100% alarms only, >120% for 10 sec. and then shutdown, >130% shutdown after 1 cycle								
	Short Circuit	AC Mode	Output Breaker/Electronic Circuit								
		Inv. Mode	Inverter shutdown immediately								
Physical	Dimensions (WxHxD, mm/inch)		440x88x405 / 17.3x3.5x16		440x88x650 / 17.3x3.5x26		440x88x485 / 17.3x3.5x19		440x88x694 / 17.3x3.5x27.3		
	Weight(Kg/lbs)	120V	N/A	19.7/43.34	21.1/46.6	34.6/76.1	38.2/84	25/55	27.8/59.8	41.8/92	47.8/105
		230V	15/33	19.4/42.7	20.9/46	33.8/74.4	37.2/81.8	25/55	27.8/59.8	42/92.4	46.2/101.6
	Outlets	120V	N/A	(8) NEMA 5-15R		(6) NEMA 5-15R, (2) NEMA 5-20R	(6) NEMA 5-15R, (2) NEMA 5-20R, (1) NEMA L5-30R	(6) NEMA 5-15R			
230V		(8) IEC-320-C13			(8) IEC-320-C13, (1) IEC-320-C19		(6) IEC-320-C13	(6) IEC-320-C13, (1) IEC-320-C19			
Environment	Operation Temperature		0~40°C / 32~104°F								
	Humidity		20%~90%RH (Without condensation)								
Interface	Interface Type		Standard: RS232 / USB / EPO Option: Dry Contactr Relay / SNMP/WEB Card								
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.								
Standard and Certifications	Safety		UL1778, c-UL Listed								
	EMC		FCC Part 15, Class A, IEC61000-4-6, IEC61000-3-2								
	Markings		CE, UL, cUL, FCC **								

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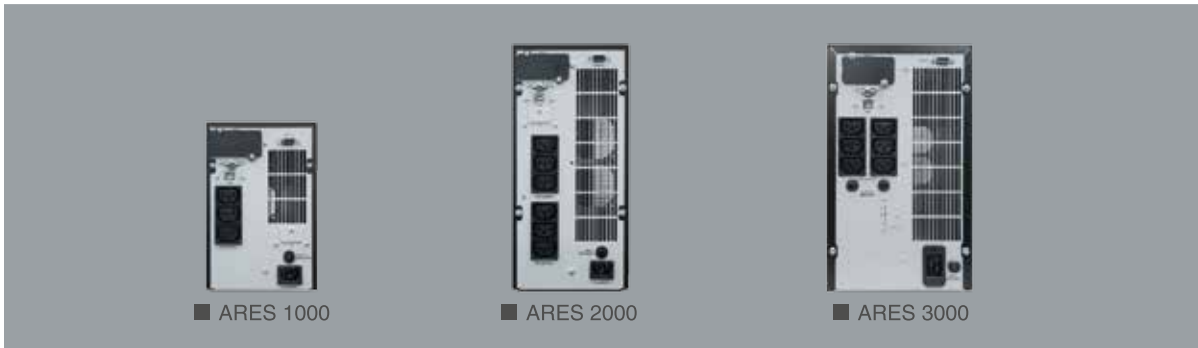


# Ares Series DSP-Controlled On-Line UPS

ARES (RS) 1000VA~3000VA



- True On-line Double Conversion Topology
- Advanced DSP Control Technology
- 0.9 Output Power Factor
- Rack/Tower Design
- Wide Input Voltage Range
- Active Harmonic Current Control
- Multiple Operation Mode Supported
- Easy Firmware Flash Upgrade
- Optional Remote Emergency Power Off (REPO)
- Optional Programmable Outlets



## Specifications

Model		ARES 1000	ARES 2000	ARES 3000
Input	Voltage	110Vac~300Vac **		
	Frequency	45Hz ~ 65Hz		
	Phase	Single phase with ground		
	Power Factor	≥ 0.98 at linear load		
Output	Capacity	1000VA/900W	2000VA/1800W	3000VA/2700W
	Voltage	200/208/220/230/240		
	Frequency (Synchronized Range)	3Hz or 1Hz (selectable)		
	Frequency (Battery Mode)	50Hz/60Hz ± 0.1% unless synchronized to line		
	Current Crest Ratio	3:1		
	Harmonic Distortion	< 3 % (at full linear load)		
	Output Waveform	Pure sine wave		
	Transfer time (AC to DC)	0 ms		
Battery	Efficiency	90% (Line mode)		
	DC start	Yes		
	Number of batteries	2	4	6
	Type	Sealed Lead Acid Maintenance Free		
	Capacity	12V/7AH		
Display	Rated Battery Voltage	24Vdc	48Vdc	72Vdc
	Recharge time (to 90%)	4 hours		
	LED	Standard      Load Level/Battery Level/ Battery Mode/ Normal Mode/Bypass Mode/ Self-Test/ Weak/Bad Battery/Site Wiring Fault/ Fault/ Overload Option      Programmable Outlet1/ Programmable Outlet2		
	Self Diagnostics	By button of the panel or Software Control		
Alarms	Button	(ON/Alarm Silence Button)/ OFF Button/ (Test/Level Button)		
	Audible and Visual	Line Failure, Battery Low, Overload, System Fault Conditions		
	Overload capacity	105% continuous, 120% for 30 sec. , 150% for 10 sec.		
Protection	Short Circuit	Output Breaker/Electronic Circuit		
	EPO	Output shutdown immediately		
	Over Temperature	Normal Mode :Transfer to Bypass Mode      Battery Mode : UPS shuts down immediately		
Physical	Dimensions (HxWxD, mm)	236x144x367	322x151x444	322x189x444
	Weights (kgs)	11.2	18.8	24.9
	Outlet	(3) 10A,IEC 320-C13	(6) 10A,IEC 320-C13	(6) 10A,IEC 320-C13
	Operation Temperature	0~40°C / 32~104°F		
Environmental	Noise Level	< 50dBA		
	Altitude	1000m / 3280ft without Derating		
	Humidity	20%~90%RH (Without condensing)		
Interface	Interface Type	Standard: RS232 / Communication Slot, Option: USB		
	Communication slot option	Dry contact, SNMP/Web Card, etc.		
	Compatible platforms	Microsoft Windows series, Linux, Mac, etc.		
Standard and Certifications	Safety	IEC/EN 62040-1-1		
	EMC	IEC/EN 62040-2 class A		
		IEC/EN 61000-4-2/-3/-4/-5/-6/-8, IEC/EN 61000-2-2 ,IEC/EN 61000-3-2/-3		
	Markings	CE		

## Battery Bank Specification

UPS model	Code	Bat. Type	Max. Quantities	Dimensions (HxWxD, mm)
ARES 1000	T04WXX07	7AH	4	236x144x367
ARES 2000	T12XXX07	7AH	12	322x151x444
ARES 3000	T12YXX07	7AH	12	322x151x444

\* Specifications subject to change without notice.  
\*\* Maximum, range will be adjusted according to load level automatically.  
\*\*\* The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.





# Ares RT Series DSP-Controlled On-Line UPS

ARES RT (RS-RT) 1000VA~3000VA



- True On-line Double Conversion Topology
- Advanced DSP Control Technology
- 0.9 Output Power Factor
- Rack/Tower Design
- Wide Input Voltage Range
- Active Harmonic Current Control
- LCD/LED Display
- Multiple Operation Mode Supported
- Remote Emergency Power Off (REPO)
- Programmable Outlets
- Easy Firmware Flash Upgrade



■ ARES RT 1000VA



■ ARES RT 2000VA & ARES RT 3000VA

## Specifications

Model	ARES RT 1000		ARES RT 2000	ARES RT 3000
Input	Phase		Single + G	
	Voltage Range**		110~300Vac	
	Frequency Range		45~55Hz / 55~65Hz (Auto sensing)	
	Input Power Factor		≥ 0.99 @ Full Load	
Output	Capacity	1000VA/900W	2000VA/1800W	3000VA/2700W
	Output Voltage208/220/230/240 Vac			
	Output Power Factor***0.9			
	Output Voltage Distortion		≤3% @ 100% Linear load    ≤7% @ 100% non-linear load	
	Output Voltage Regulation		±1%	
	Frequency Range		±1Hz or ±3Hz (Selectable)	
	Crest Factor		3:1	
	Output Waveform		Pure Sine Wave	
Efficiency	Line Mode		Up to 92%	
	ECO Mode		Up to 96.5%	
Battery	Battery TypeSealed Lead Acid Maintenance Free 12Vdc			
	Battery Number	2	4	6
	Battery Voltage	24	48	72
	Recharge Time (to 90%)		4 hours	
Display	LEDLoad Level/Battery Level/ Battery Mode/ Normal Mode/Bypass Mode/ Self-Test/ Weak/Bad Battery/Site Wiring Fault/ Fault/ Overload Output status/Programmable Outlet1/ Programmable Outlet2			
	LCD measures		Volatge / Frequency / Load level / Battery level	
	Self-DiagnosticsUpon Power-on, Front Panel Setting & Software Control, 24 hours routine check			
Alarms	Audible or VisualLine Failure / Battery Low / Transfer to Bypass / System Fault			
Protection	Full ProtectionOverload, Over temperature, Short circuit, Discharge, overcharge			
Function	Multi-ModeNormal/ ECO/ CVCF			
	DC start		Yes	
	Programmable Outlet		Option	
Physical	Dimensions	440x88x390	440x88x475	440x88x600
	(WxHxD, mm/inch)	17.3x3.5x15.4	17.3x3.5x17.8	17.3x3.5x23.7
	Net Weight (kgs/lbs)	12/26.4	17/37.4	26.5/58.4
Environmental	Operation Temperature		0~40°C / 32~104°F	
	Operation Humidity		20%~95%RH (Without condensing)	
	Altitude		1000m/3280ft without Derating	
	Noise Level		≤50dBA @ 1 meter front	
Interface	Standard		RS-232	
	Option		EPO, USB, Dry Contact Relay, SNMP/WEB Card	
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.	
Standards and Certifications****	Safety		EN62040-1	
	EMC		EN62040-2, EN61000-3-2, EN61000-3-3	
	Marks		CE	

## Battery Bank Specification

Contents	BC08024X	BC08048X	BC12072X
Rated Battery Voltage	24	48	72
Number of batteries	8	8	12
Battery type	Lead Acid Maintenance Free 12V 7Ah/9Ah		
Dimensions (WxHxD in mm/inch)	440x88x650 / 17.3x3.5x25.6		
Charging Capability	Optional Universal 200W Charger		

\* Specifications subject to change without notice.  
\*\* Based on load percentage  
\*\*\* Depending on the model and voltage, more informaion please contact with Ablerex  
\*\*\*\* The same technical specification products could be sold as different model names in different countries, please consult Ablerex for more information.



# Ares Plus Tower Series

## DSP-Controlled On-Line UPS

ARES PLUS (RS PLUS) 1000VA~3000VA



- True On-line Double Conversion Topology
- Advanced DSP Control Technology
- Rack / Tower Convertible
- 0.9 Output Power Factor
- Wide Input Voltage Range
- Active Harmonic Current Control
- LCD/LED display
- Patent Backup Runtime Estimation
- Multiple Operation Mode
- Remote Emergency Power Off (REPO)
- Remote On Off control (ROO)
- Optional Programmable Outlets
- Easy Firmware Flash Upgrade



■ ARES PLUS 1000VA    ■ ARES PLUS 2000VA    ■ ARES PLUS 3000VA    ■ ARES PLUS 3000VA x 12P BAT

## Specifications

Model	ARES PLUS 1000			ARES PLUS 2000			ARES PLUS 3000			ARES PLUS 1000		ARES PLUS 1500		ARES PLUS 2000		ARES PLUS 3000		
Input	Phase						Single + G						Single + G					
	Voltage Range**						110~300Vac						55~150 Vac					
	Frequency Range						44-66Hz (Auto sensing)						44-66Hz (Auto sensing)					
	Input Power Factor						>0.99@ 100% linear load						>0.99@ 100% linear load					
Output	Capacity		1000VA/900W	2000VA/1800W	3000VA/2700W		1000VA/900W	1500VA/1350W	2000VA/1800W	3000VA/2700W								
	Output Voltage***						200/208/220/230/240 Vac						100/110/115/120/127 Vac					
	Output Power Factor***						0.9						0.9					
	Output Voltage Distortion		<3% @ 100% Linear load				<7% @ 100% non-linear load				<3% @ 100% Linear load		<7% @ 100% non-linear load					
	Output Voltage Regulation						±1%						±1%					
	Frequency Range						±1Hz or ±3Hz (Selectable)						±1Hz or ±3Hz (Selectable)					
	Crest Factor						3:1						3:1					
Efficiency	Output Waveform						Pure Sine Wave						Pure Sine Wave					
	Line Mode						Up to 92%						Up to 92%					
	High Efficiency Mode						Upt to 96.5%						Upt to 96.5%					
Battery	Capacity			12Vdc/7AH			12Vdc/9AH			12Vdc/9AH								
	Battery Number		3	6	6	12	8	2	3	4	6							
	Battery Voltage		36	72	72	72	96	24	36	48	72							
	Recharge Time (to 90%)						4 hours											
Display	LCD measures						Volatge / Frequency / Load level / Battery level / Output current / Estimated autonomy											
Alarm	Self-Diagnostics						Upon Power-on, Front Panel Setting & Software Control, 24 hours routine check											
	Audible or Visual						Line Failure / Battery Low / Transfer to Bypass / System Fault											
Protection	Full Protection						Overload, Over temperature, Short circuit, Discharge, overcharge											
Function	Multi-Mode						Normal/ ECO/ CVCF											
	DC start						Yes											
	Programmable Outlet						Option			Yes								
Physical	Dimensions (WxHxD) mm/inch (****Slim Version)		154x211x382.4 6.1x8.3x15.1	192x250x470 7.6x9.8x18.5	192x319.9x451 7.6x12.6x17.8 (192x250x524.8) (7.6x9.8x20.7)	192x319.9x552.8 7.6x12.6x21.8	192x319.9x486 7.6x12.6x19.1	154x 258 x 404 6.1 x 10.2 x 15.9	154 x 258 x 404 6.1 x 10.2 x 15.9	171 x 288 x 441 6.73 x 11.3 x 17.4	192 x 320 x 553 7.6 x 12.6 x 21.8							
	Net Weight(kgs/lbs) (****Slim Version)		11.6/25.6	22.2/48.9	29.8/66.7 (25.4/56)	42.4/93.5	35.2/77.6	12.3/27.1	15/33.1	21.5/47.4	30.5/67.2							
Environmental	Operation Temperature						0~40°C / 32~104°F											
	Operation Humidity						20%~95%RH (Without condensing)											
	Altitude						1000m/3280ft without Derating											
	Noise Level						≤50dBA @ 1 meter front											
Interface	Standard						RS-232, EPO			RS-232, USB, EPO, RJ11-RJ45								
	Option						USB, Dry Contact Relay, SNMP/WEB Card			Dry Contact Relay, SNMP/WEB Card								
	Compatible Platforms						Microsoft Windows series, Linux, Mac, etc.			Microsoft Windows series, Linux, Mac, etc.								
Standards and Certifications***	Safety						EN62040-1, UL1778			UL1778								
	EMC						EN62040-2, EN61000-3-2, EN61000-3-3, FCC class A			FCC Class A								
	Marks						CE			cTUVus, FCC, cULus								

## Battery Bank Specifications

Contents	BT08024X	BT06036X	BT08048X	BT12072X	BT18072X	BT16096X
Rated Battery Voltage	24	36	48	72	72	96
Number of batteries	8	6	8	12	18	16
Battery type*	Lead Acid Maintenance Free 12V 7Ah/9Ah					
Dimensions (WxHxD)	mm	171 x 287.6 x 440.6	154 x 258.2 x 403.6	171 x 287.6 x 440.6	192 x 319.9 x 552.8	192 x 319.9 x 552.8
	inch	6.7 x 11.3 x 17.3	6.1 x 10.2 x 15.9	6.7 x 11.3 x 17.3	7.6 x 12.6 x 21.8	7.6 x 12.6 x 21.8

\* Specifications subject to change without notice.

\*\* Based on load percentage.

\*\*\* The same technical specification products could be sold as different model names in different countries, please consult Ablerex for more information.

\*\*\*\* Slim Version.





# Ares Plus RT Series

## DSP-Controlled On-Line UPS

ARES PLUS RT (RS PLUS RT) 1000VA~3000VA  
ODIN PLUS RT 1000VA~3000VA

■ ODIN Plus RT Series



■ ARES Plus RT Series(LCD)

- True On-line Double Conversion Topology
- Advanced DSP Control Technology
- Rack / Tower Convertible
- 0.9 Output Power Factor
- Wide Input Voltage Range
- Active Harmonic Current Control
- LCD/LED Display
- Patent Backup Runtime Estimation
- Multiple Operation Mode
- Remote Emergency Power Off (REPO)
- Remote On Off control (ROO)
- Optional Programmable Outlets
- Easy Firmware Flash Upgrade



■ 120V ARES PLUS RT 1000,1500VA



■ 120V ARES PLUS RT 2200VA



■ 120V ARES PLUS RT 3000VA



■ 230V ARES PLUS RT 1000VA



■ 230V ARES PLUS RT 2000VA



■ 230V ARES PLUS RT 3000VA

## Specifications

Model (Short version)		ARES PLUS RT 1000 (ODIN Plus RT 1000)		ARES PLUS RT 2000 (ODIN Plus RT 2000)		ARES PLUS RT 3000 (ODIN Plus RT 3000)		ARES PLUS RT 1000		ARES PLUS RT 1500		ARES PLUS RT 2000		ARES PLUS RT 3000	
Input	Phase		Single + G				Single + G								
	Voltage Range**		110~300Vac				55~150 Vac								
	Frequency Range		44-66Hz (Auto sensing)				44-66Hz (Auto sensing)								
	Input Power Factor		>0.99@ 100% linear load				>0.99@ 100% linear load								
Output	Capacity**	1000VA/900W	2000VA/1800W	3000VA/2700W		1000VA/900W	1500VA/1350W	2000VA/1800W	3000VA/2700W						
	Output Voltage***		200/208/220/230/240 Vac				100/110/115/120/127 Vac								
	Output Power Factor		0.9				0.9								
	Output Voltage Distortion		<3% @ 100% Linear load <7% @ 100% non-linear load				<3% @ 100% Linear load <7% @ 100% non-linear load								
	Output Voltage Regulation		±2%				±2%								
	Frequency Range		±1Hz or ±3Hz (Selectable)				±1Hz or ±3Hz (Selectable)								
	Crest Factor		3:1				3:1								
	Output Waveform		Pure Sine Wave				Pure Sine Wave								
	Line Mode		Up to 92%				Up to 90%								
	High Efficiency Mode		Upt to 96.5%				Upt to 96.5%								
Efficiency	Battery Type		Sealed Lead Acid Maintenance Free 12Vdc				Sealed Lead Acid Maintenance Free 12Vdc								
	Battery Number	2/3	4/6	6	8	2	3	4	6						
	Battery Voltage	24/36	48/72	72	96	24	36	48	72						
	Recharge Time (to 90%)		4 hours												
	LCD measures		Volatge / Frequency / Load level / Battery level / Output current / Estimated autonomy												
Display	Self-Diagnostics		Upon Power-on, Front Panel Setting & Software Control, 24 hours routine check												
	Audible or Visual		Line Failure / Battery Low / Transfer to Bypass / System Fault												
Alarm	Full Protection		Overload, Over temperature, Short circuit, Discharge, overcharge												
Protection	Multi-Mode		Normal/ ECO/ CVCF												
	DC start		Yes												
	Programmable Outlet		Option				Yes								
Physical	Dimensions	440 x 88 x 405	440 x 88 x 600	N/A		88 x 440 x 405	88 x 440 x 405	88 x 440 x 485	88 x 440 x 600						
	(WxHxD, mm/inch)	17.3x3.5x16.0	17.3x3.5x23.7			17.3x3.5x15.4	17.3x3.5x16	17.3x3.5x17.5	17.3x3.5x23.7						
	Net Weight (kgs/lbs)	14.5/31.9	21.5/47.4			11/24.2	14.5/32	21/46	27/59.5						
Physical (Shoter Version)	Dimensions	440 x 88 x 405	440 x 132 x 432	440 x 176 x 432	440x176.4x486.5	N/A	N/A	N/A	N/A						
	(WxHxD, mm/inch)	17.3x3.5x16.0	17.3x3.5x17	17.3x6.9x17	17.3x3.5x19.2	N/A	N/A	N/A	N/A						
	Net Weight (kgs/lbs)	11.7/25.8	23/50.7	25/55.1	31/68.3	N/A	N/A	N/A	N/A						
Environmental	Operation Temperature		0~40°C / 32~104°F												
	Operation Humidity		20%~95%RH (Without condensing)												
	Altitude		1000m/3280ft without Derating												
	Noise Level		≤50dBA @ 1 meter front												
Interface	Standard		RS-232, EPO				RS-232,USB, EPO, RJ11-RJ45								
	Option		USB, Dry Contact Relay, SNMP/WEB Card				Dry Contact Relay, SNMP/WEB Card								
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.				Microsoft Windows series, Linux, Mac, etc.								
Standards and Certifications***	Safety		EN62040-1				UL1778								
	EMC		EN62040-2, EN61000-3-2, EN61000-3-3				FCC Class A								
	Marks		CE				cTUVus, cULus, FCC								

## Battery Bank Specifications

Contents****		BC08024-2U	BC06036-2U	BC12036-2U	BC12036-4U	BC08048-2U	BC12072-2U	BC12072-4U	BC08096-4U
Rated Battery Voltage		24	36	36	36	48	72	72	96
Number of batteries		8	6	12	12	8	12	12	8
Battery type****		Lead Acid Maintenance Free 12V 7Ah/9Ah							
Dimensions (WxHxD)	mm	440 x 88 x 430	440 x 88 x 430	440 x 88 x 581	440x176x430	440 x 88 x 430	440x88x581	440 x 176 x 430	440 x 176 x 485
	inch	17.3 x 3.5 x 16.9	17.3 x 3.5 x 16.9	17.3 x 3.5 x 22.9	17.3 x 6.9 x 16.9	17.3 x 3.5 x 16.9	17.3 x 3.5 x 22.9	17.3 x 6.9 x 16.9	17.3 x 6.9 x 19

\* Specifications subject to change without notice.

\*\* Based on load percentage.

\*\*\* The same technical specification products could be sold as different model names in different countries, please consult AblereX for more information.

\*\*\*\* Battery capacity can be changed



# Mars RT Pro Series Convertible On-Line UPS

MP 1000VA~3000VA



- True On-line Double Conversion Topology
- Advanced DSP Control Technology
- 0.8 Output Power Factor
- Rack/Tower Design
- Wide Input Voltage Range
- Active Harmonic Current Control
- LCD/LED Display
- Multiple Operation Mode Supported
- Remote Emergency Power Off (REPO)
- Programmable Outlets



■ MP1000



■ MP2000



■ MP3000

## Specifications

Model	MP1000	MP2000	MP3000
Input	Voltage60/70/80~144 or 120/140/160~288Vac**		
	Frequency50/60Hz ±5% (Auto Sensing)		
	PhaseSingle Phase with Ground		
	Power Factor>0.99(Full Linear Load)		
Output	Voltage100/110/115/120/127 or 200/208/220/230/240		
	Capacity	1000VA / 800W	2000VA/1600W3000VA/2400W
	Frequency (Synchronized Range)	3Hz or 1Hz (selectable)	
	Frequency (Battery Mode)	50Hz / 60Hz ±0.1% unless synchronized to line	
	Current Crest Ratio	3:1	
	Output Waveform	Pure Sine Wave	
	Transfer Time (AC to DC)	0 ms	
	Efficiency	88% (Line mode)	
	DC Start	Yes	
Battery	Number of batteries	3	6
	Type	Sealed Lead Acid Maintenance Free	
	Capacity	12V/7Ah	12V/7Ah12V/9Ah
	Rated Battery Voltage	36Vdc	72Vdc72Vdc
	Recharge Time (to 90%)	3 hours	
Display	LED (Standard)	Normal, Battery, Bypass, Programmable Outlet 1, Programmable Outlet 2, Self-Test, Battery Weak & Bad, Site Wiring Fault , Fault, Overload, and Load/Battery Level conditions.	
	LCD (Option)		
	Self-Diagnostics	Upon Power On and Software Control	
	Button	On button / Off button / Test / Alarm silence button	
Alarms	Audible and Visual	Line Failure, Battery Low, Overload, System Fault Conditions	
Protection	Overload	105% continuous, 106%-120% for 30 sec. , 121%-150% for 10 sec.	
	Short Circuit	Output Breaker/Electronic Circuit	
	EPO	Output shutdown immediately	
	Over Temperature	AC Mode: Switch to Bypass ; Backup Mode: UPS shuts down immediately	
	Dimensions (WxDxH, mm/inch)	440x88x405 (2U)17.3x3.5x16 (2U)	440x88x650 / 17.5x3.5x25.6 (2U)440x176x405 / 17.3x6.9x16 (4U)
Physical	Outlet	120Vac6 x 5-15R230Vac6 x IEC320-C13	2x5-15R + 2 x 5-20R4x5-15R + 1xL5-30R4 x IEC320-C13 & 1 x IEC320-C19
	Operating Temperature	0~40°C / 32~104°F	
Environmental	Noise Level	< 50dBA	
	Altitude	1000m / 3280ft without Derating	
	Humidity	0 to 90% (Without condensation)	
	Interface Type	Standard: RS232 / USB / Communication Slot	
Interface	Communication Slot Option	Relay Contact board, SNMP/WEB card	
	Compatible Platforms	Microsoft Windows series, Linux, Mac, etc.	
	Safety	IEC/EN 62040-1-1,UL1778,EN62040-3 complied	
Standard and Certifications	EMC	IEC/EN 62040-2 class A, FCC Part15 Subpart B ClassA,IEC/EN55011,CISPR 11, IEC 61000-4-2/-3/-4/-5,IEC61000-2-2 ,IEC 61000-3-2/-3	
	Markings	CE, UL, cUL, FCC***	

## Battery Bank Specifications

UPS model	Code	Bat. Type	Max. Quantities	Dimensions (HxWxD, mm/inch)
MP 1000VA	C12M2U07	7AH	12	88x440x650 / 3.4x17.3x25.6
MP 2000VA	C12K2U07	7AH	12	88x440x650 / 3.4x17.3x25.6
MP 3000VA	C12K2U09	9AH	12	88x440x650 / 3.4x17.3x25.6
MP 1000VA	C12M2U07-C200 *****	7AH	12	88x440x650 / 3.4x17.3x25.6
MP 2000VA	C12K2U07-C200 *****	7AH	12	88x440x650 / 3.4x17.3x25.6
MP 3000VA	C12K2U09-C200 *****	9AH	12	88x440x650 / 3.4x17.3x25.6
MP 1000VA (ODIN)	C12M4U07	7AH	12	176x440x425 / 6.9x17.3x16.7
MP 2000VA (ODIN)	C12K4U07	7AH	12	176x440x425 / 6.9x17.3x16.7
MP 3000VA (ODIN)	C12K4U09	9AH	12	176x440x425 / 6.9x17.3x16.7

\* Specifications subject to change without notices.

\*\* Based on load precentage.

\*\*\* Depending on the model and voltage, please contact Ablerex for more information.

\*\*\*\* The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.

\*\*\*\*\* C200 means with 200W charger.





# Mars II Series

## Redundancy On-Line UPS Tower model

MSII 4500VA~20000VA



- Simple Parallel Installation
- Full-time Digital Signal Processor Control
- Frequency Converter Operation Mode
- Smart ECO Mode
- LCD Mimic Panel
- Power Range and Runtime Scalability
- Maintenance Bypass Switch Embedded
- Optional Galvanic Isolation Transformer
- Optional Hot Swappable Battery
- Compact Design



## Specifications

Model	MSII4500		MSII6000	MSII8000 / 8000P	MSII10000 / 10000P	MSII 15000	MSII 20000
Input	Voltage	160~280Vac(1Φ)		160~280Vac (1Φ) / 277 – 485Vac (3Φ)**		277~485Vac(3Φ)**	
	Frequency			45 ~ 65 Hz			
	Phase	1Φ, Line + Neutral + Ground		1Φ, Line + Neutral + Ground; 3Φ, R, S, T + Neutral + Ground		3Φ, R, S, T + Neutral + Ground	
	Power Factor	Up to 0.99(1Φ) / 0.95(3Φ) at Linear Load					
Output	Voltage	200/208/220/230/240Vac Selectable(208/120Vac optional)					
	Capacity	4050W	5400W	7200W	9000W	13500W	18000W
	Frequency (Battery Mode)	±1Hz or ±3Hz (Selectable)					
	Current Crest Ratio	3:1					
	Harmonic Distortion	< 3% at Linear Load					
	Output Waveform	Pure sine wave					
	Transfer Time (AC to DC)	0ms					
	Efficiency						
	DC Start	Up to 90% (Line Mode)		Yes	Up to 90% (without Transformer)		
	Battery	Number of batteries	20pcs				
Type		Sealed Lead Acid Maintenance Free					
Capacity		12V/5AH or 12V/7AH		12V/7AH	12V/9AH	N/A	
Rated Battery Voltage		240Vdc					
Recharge Time + 90%		5 hours				N/A	
Display	Status On LED + LCD	Line Mode / Backup Mode / ECO Mode / Bypass Supply / Battery Low / Battery Fault / Overload / Transferring with interruption / UPS Fault					
	LCD	Input Voltage / Input Frequency / Output Voltage / Output Frequency / Load Percentage / Battery Voltage / Temperature					
Alarms	Self-Diagnostics	Upon Power-on / Front Panel Setting & Software Control / 24-hour routine checking					
	Audible and Visual	Line Failure / Battery Low / Transfer to Bypass, System Fault Conditions					
Protection	Overload Capacity	Inverter Supply: 105%~150% for 160 seconds ~ 2 cycles before switching bypass. Bypass Supply: 105%~200% for 500 seconds ~8 cycles before stopping supply load.					
	Short Circuit	Breaker / Electronic Circuit					
	EPO	Output shutdown immediately					
	Over Temperature	Normal Mode : Transfer to Bypass Mode Battery Mode : UPS shuts down immediately					
PHYSICAL Tower model	Dimensions (WxHxD,mm/inch)	w/o transformer	290x748x645 / 11.4x25.4x29.5				290x748x645 / 11.4x25.4x29.5
		with transformer	290x748x645 / 11.4x25.4x29.5		290x881x645 / 11.4x25.4x34.7		290x1014x645 / 11.4x25.4x39.9
	Weight (kg/lbs)	Standard Unit/ (w/o transformer)	86/190	8K:87/192      10K: 96/215		60/132	
		Hot Swappable unit		8KP:92/202.4      10KP: 101/223			
	Weight (kg/lbs)	Standard Unit/ (with transformer)	120/264	8K:140/308      10K: 149/327.8		130/286	
		Hot Swappable unit		8KP:145/319      10KP: 154/228.8			
PHYSICAL Mini Tower Model 1Φ/1Φ	Dimensions (WxHxD,mm/inch)	220x440x658 / 8.66x17.3x25.9					N/A
	Weight (kg/lbs)	69.5/153.2 (7AHx20)	74.5/164.3 (9AHx20)			N/A	
PHYSICAL Mini Tower model 3Φ/1Φ	Dimensions (WxHxD,mm/inch)	N/A		290x615x645 / 11.4x24.2x25.4		290x748x524 / 11.4x29.4x20.6	
	Weight (kg/lbs)	N/A		96/211.6 (9AHx20)		41/90.4	
Environmental	Operating Temperature	0~40°C / 32~104°F					
	Noise Level (1m front)	<50dBA				<60dBA	
	Altitude	1000m / 3280ft without Derating					
	Humidity	20%~90%RH (Without condensation)					
Interface	Interface Type	Standard RS232 Interface				Standard RS232, EPO	
	Communication Slots	2 <sup>nd</sup> RS232, USB, RS485, Relay Contact, SNMP/WEB Card, etc.					
	Compatible platforms	Microsoft Windows series, Linux, Mac, etc.					
Standard and Certifications	Safety	EN62040-1-1, UL1778					EN62040-1-1
	EMC	EN62040-2, EN61000-3-2, EN61000-3-3, FCC Class A					EN62040-2
	Markings	CE, cUL, UL ***					CE

## Battery Bank Specifications

UPS model	Code	Bat. Type	Max. Quantities	Dimensions (WxHxD, mm/inch)
MSII 4500 / 6000VA	T40JXX07	7AH	40	290x748x631 / 11.4x29.4x24.8
MSII 4500 / 6000VA	T60JXX07	7AH	60	290x748x631 / 11.4x29.4x24.8
MS II 8000 / 10000VA	T40NXX09	9AH	40	290x748x631 / 11.4x29.4x24.8
MS II 8000 / 10000VA	T60NXX09	9AH	60	290x748x631 / 11.4x29.4x24.8
MSII15000VA / 20000VA	T60VXX09	9AH	60	290x748x631 / 11.4x29.4x24.8
MSII15000VA / 20000VA	T40VXX12	12AH	40	290x748x631 / 11.4x29.4x24.8

\* Specifications subject to change without notice.

\*\* Based on load precentage.

\*\*\* Depending on the model and voltage, Please contact Ablerex for more information.

\*\*\*\* The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.



# Mars II Series

## Convertible Redundancy On-Line UPS

MSII RT 4500VA~20000VA



- Simple Parallel Installation
- Full-time Digital Signal Processor Control
- Frequency Converter Operation Mode
- Smart ECO Mode
- LCD Mimic Panel
- Power Range and Runtime Scalability
- Maintenance Bypass Switch Embedded
- Optional Galvanic Isolation Transformer
- Optional Hot Swappable Battery



## Specifications

Model	MSII4500RT		MSII6000RT		MSII6000C		MSII8000RT / 8000PRT		MSII10000RT / 10000PRT		MSII10000C		MSII 15000RT		MSII 20000 RT					
Input	Voltage			160~280Vac			160~280Vac (1Φ) / 277 ~ 485Vac (3Φ)**						277~485Vac(3Φ)**							
	Frequency						45 ~ 65 Hz													
	Phase				1Φ, Line + Neutral + Ground				1Φ, Line + Neutral + Ground 3Φ, R, S, T + Neutral + Ground				3Φ, R, S, T + Neutral + Ground							
	Power Factor						Up to 0.99(1Φ) / 0.95(3Φ) at Linear Load										Up to 0.95 at Linear Load			
Output	Voltage						200/208/220/230/240Vac Selectable(208/120Vac optional)										220/230/240Vac Selectable			
	Capacity		4050W		5400W		7200W		9000W		13500W				18000W					
	Frequency (Battery Mode)						±1Hz or ±3Hz (Selectable)													
	Current Crest Ratio						3:1													
	Harmonic Distortion						< 3% at Linear Load													
	Output Waveform						Pure Sine Wave													
	Transfer Time (AC to DC)						0ms													
	Efficiency						90%						91%							
	DC Start						Yes													
	Battery	Number of batteries						20pcs (without Battery in RT power module type)												
		Type						Sealed Lead Acid Maintenance Free												
		Capacity		12V/7AH		12V/5AH		12V/9AH												
Rated Battery Voltage						240Vdc														
Recharge Time		N.A.		N.A.		4 hours to 90%		N.A.		N.A.		4 hours to 90%		N.A.		N.A.				
Display		Status On LED + LCD						Line Mode, Backup Mode, ECO Mode, Bypass Supply, Battery Low, Battery Bad/Disconnect, Overload, and Transferring with interruption & UPS Fault.												
	Readings on LCD						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													
Alarms	Audible and Visual						Line Failure, Battery Low, Transfer to Bypass, System Fault Conditions													
Protection	Overload Capacity		Inverter Supply: 105%~150% for 160 sec. ~ 2 cycles before switching bypass.								105%-150% for 600sec. ~ 1 sec.before switching bypass.									
			Bypass Supply: 105%~200% for 500 sec. ~8 cycles before stopping supply load.								105%-150% for 600sec. ~ 1 sec.before stopping supply load.									
	Short Circuit						Output Breaker/Electronic Circuit													
	EPO						Output shuts down immediately													
	Over Temperature						AC Mode: Switch to Bypass / Backup Mode: Switch off the UPS													
Physical	Dimensions (WxHxD, mm/inch)		440x88x680/17.3x3.5x26.8		440x176x680/17.3x6.9x26.8		440x132x680/17.3x5.2x26.8		440x264x680/17.3x10.3x26.8		440x220x720/ 17.3x8.6x28.2									
	ODIN: Dimensions (Short Version)		440x132x550/17.3x5.2x21.6 (ODIN)																	
	Weight (kg/libbs)		24/52.9		52/114.6		45/99.2(8K/10KRT)		96/211.2		36/79.2									
	ODIN: Weight (Short version)		17.5/38.5 (ODIN)				50/110.2 (8K/10KRTP)													
Environmental	Operating Temperature						0~40°C/ 32~104°F													
	Noise Level						<50dBA						<60dBA							
	Altitude						1000m / 3280ft without Derating													
	Humidity						20%~95%RH (Without condensation)													
Interface	Interface Type				Standard RS232						Standard RS232 & EPO									
	Communication Slots						2 <sup>nd</sup> RS232, USB, RS485, Relay Contact, SNMP/WEB Card													
	Compatible Platforms						Microsoft Windows series, Linux, Mac, etc.													
Standards and Certifications	Safety Standard				EN62040-1-1, UL1778								EN62040-1-1							
	EMC Standard				EN62040-2, EN61000-3-2, EN61000-3-3, FCC Class A								EN62040-2							
	Marks				CE, cUL, UL ****								CE							

## Battery Bank Specifications

UPS mode	Code	Bat. Type	Max. Quantities	Dimensions (HxWxD, mm/inch)
MSII RT 4500 / 6000VA	C20J3U07	7AH	20	132x440x680 / 5.2x17.3x26.8
MSII RT 8000 / 10000VA	C20N3U09	9AH	20	132x440x680 / 5.2x17.3x26.8
MSII RT 4500 / 6000VA (ODIN)	C20J4U07	7AH	20	176x440x550 / 6.9x17.3x21.7
MSII RT 8000 / 10000VA (ODIN)	C20N4U09	9AH	20	176x440x550 / 6.9x17.3x21.7
MSII RT 15000 / 20000VA	C20V3U09	9AH	20	132x440x680 / 5.2x17.3x26.8

\* Specifications subject to change without notice.

\*\* Based on load percentage.

\*\*\* Standard configuration - back-up time at 70% of the load.

\*\*\*\*Depending on the model and voltage, please contact Ablerex for more information.

\*\*\*\*\*The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.





# Mars III Series

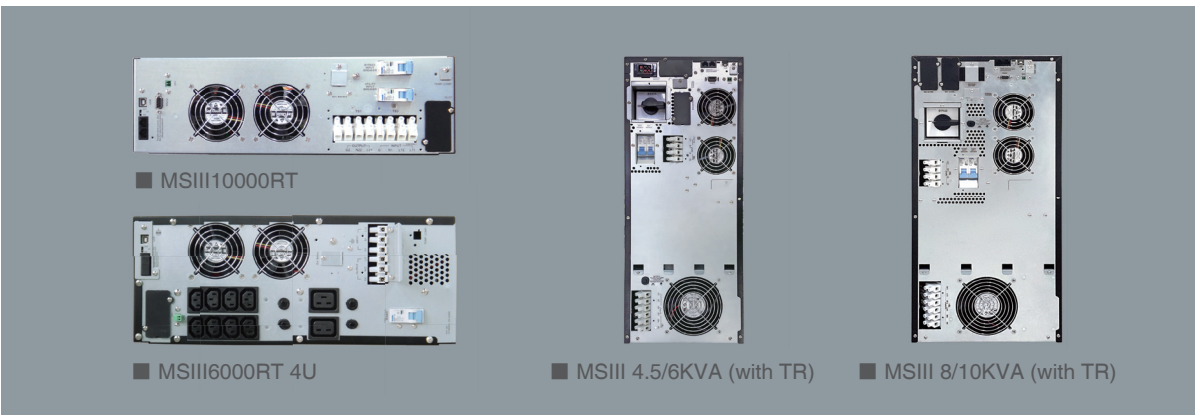
## High Performance Redundancy On-Line UPS

MSIII Tower (MSII PLUS) 4500VA~10000VA

MSIII RT (MSII PLUS RT) 4500VA~10000VA



- Rack/Tower Convertible Design
- Power Factor 1.0
- Patent Backup Runtime Estimation
- Flexible Battery Configuration
- Easy Parallel Installation
- Frequency Converter Operation Mode
- Smart ECO Mode
- Generator Compatible Mode
- Full-time Digital Signal Processor (DSP) Control
- LCD Mimic Panel
- Power Range and Runtime Scalability
- Optional Galvanic Isolation Transformer Module / MTBS Box



## Specifications

MODEL		MSIII 4.5K / MSIII-RT 4.5K		MSIII 6K / MSIII-RT 6K	MSIII 8K / MSIII-RT 8K	MSIII 10K / MSIII-RT 10K
Input	Phase	1Φ, Line + Neutral + Ground				
	Voltage Range**	110-280VAC				
	Frequency Range	Output 50Hz	40~60Hz			
		Output 60Hz	50~70Hz			
	Input Current Distortion	≤5%				
Input Power Factor	Up to 0.99 @Linear Load					
Capacity	4500VA/4500W		6000VA/6000W	8000VA/8000W	10000VA/10000W	
Output	Voltage	without Transformer	200/208/220/230/240Vac, settable			
		with Transformer	120/208 or 110/220 or 115/230 or 120/240			
	Output Power Factor***	1				
	Output Voltage Distortion	≤2% @ 100% Linear load				
		≤3% @ 100% non-linear load(PF=0.9)		≤7% @ 100% non-linear load(PF=0.7)		
	Output Voltage Regulation	without Transformer	±1%			
		with Transformer	±3%			
	Frequency Range (Synchronized Range)	±1Hz or ±3Hz (Selectable)				
Crest Factor	3:1					
Output Waveform	Pure Sine Wave					
Efficiency	Line Mode	without Transformer	93%	94%		
		with Transformer	90%	91%		
	High Efficiency Mode	without Transformer	98%			95%
		with Transformer	94%	95%		
Battery	Number of Battery	12/14/16/18/20			16/18/20	
	Battery Type	VRLA, Sealed Maintenance Free Lead Acid				
	Recharge Time (to 90%)	4hours				
	Charger	12/14/16 Model	2-step(CC-CV), 1.9A(max.)			N/A
16/18/20 Model		2-step(CC-CV), 1.7A(max.)				
Display	Status On LED + LCD	Line Mode, Backup Mode, ECO Mode, Bypass Supply, Battery Low, Battery Bad/Disconnect, Overload, and Transferring with interruption & UPS Fault				
	Readings On LCD	Input Voltage, Input Frequency, Output Voltage, Output Current, Output Frequency, Load Percentage, Battery Voltage, Inner Temperature, Backup time estimation				
	Self-Diagnostics	Upon Power-on, Manual control by panel & communication, self routine check				
Alarm	Audible or Visual	Line Failure / Battery Low / Transfer to Bypass / System Fault				
Protection	Full Protection	Overload, Over temperature, Short circuit, ABDM, overcharge				
Function	Multi-Mode	Normal/ ECO/ CVCF				
	DC start	Yes				
	Parallel capacity	up to 4 units				
	Parallel redundancy	3+1				
Physical	Tower Model (with Batt)	Dimensions (WxHxD, mm/inch)	240x509x700 / 9.5x27.6x20			288x509x700 / 11.3x20x27.6
		Net Weight (kgs/lbs)	76/167			91/200
	Tower Model (with Transformer & Batt)	Dimensions (WxHxD, mm/inch)	240x657x700 / 9.5x25.9x20			288x657x700 / 11.3x25.9x27.6
		Net Weight (kgs/lbs)	119 / 262.3			133 / 293.2
	RT Model	Dimensions (WxHxD, mm/inch)	440x88x685 / 17.3x3.5x26.0			440x132x685 / 17.3x5.2x26.0
		Net Weight (kgs/lbs)	18.5 / 40.8			21.5/47.4
	RT Model (with Battery)	Dimensions (WxHxD, mm/inch)	440x176x685 / 17.3x6.9x26.0			N/A
		Net Weight (kgs/lbs)	60/132.3 (5Ahx20)			N/A
RT Transformer Module	Dimensions (WxHxD, mm/inch)	440x88x660 / 17.3x3.5x26.0			440x132x660 / 17.3x5.2x26.0	
	Net Weight (kgs/lbs)	42 / 92.6			58 / 127.9	
Environmental	Operation Temperature	0~40°C/ 32~104°F				
	Operation Humidity	20%~95%RH (Without condensing)				
	Altitude	1000m/3280ft without Derating				
	Noise Level	≤60dBA @ 1 Meter			≤60dBA @ 1 Meter	
Interface	Standard	USB, EPO/ROO				
	Option	2nd RS232, USB, RS485, Dry Contact Relay, SNMP/WEB Card				
	Compatible Platforms	microsoft Windows series, Linux, Mac, etc.				
Standards and Certifications****	Safety	EN62040-1, UL1778				
	EMC	EN62040-2, FCC part 15 Class A, EN61000-2-2, EN61000-3-2/3,				
	Marks	CE/TUV, cULus				

## Battery Bank Specifications

UPS model	Code	Max Battery number / String	Max Battery Quantities	Dimensions(HxWxD,mm)
MSIII 4.5K~10K Tower	BT602403	20	60	700x288x657 / 27.6x11.3x25.9
MSIII 4.5K~6K RT	BC202406	20	20	88x440x483.5 / 3.5x11.3x26.9
MSIII 8K~10K RT	BC202403	20	20	132x440x685 / 5.2x11.3x27.9

\* Specifications subject to change without notice, and the final explanation rights are reserved by AblereX.

\*\* Depending on load percentage : 176-280 VAC, without derating ; 160-176 VAC, derating to 75% Load ; 110-160 VAC , derating to 50% Load

\*\*\* Max. depending on number of battery. PF:1.0-10K(20S),6K(20S/18S/16S) ; PF:0.9/0.8-10K(18S),6K(14S) ; PF:0.7-10K(16S),6K(12S)

\*\*\*\* Depending on the model and voltage, more information please contact with AblereX.

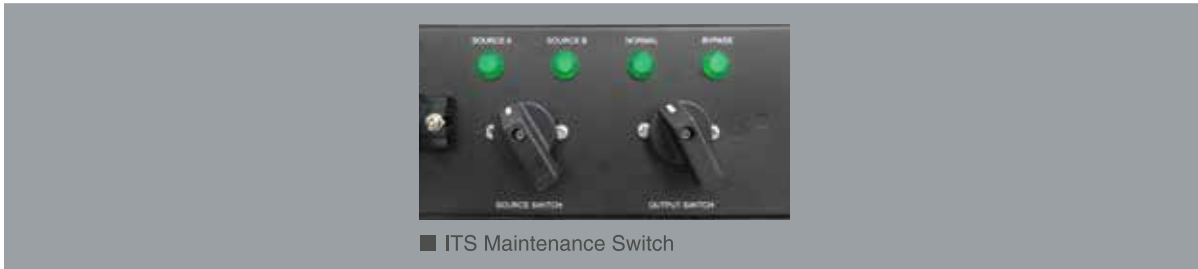


# Automatic Transfer Switch

ATS & ITS Series



- Two Separate Independent Source
- Provide Redundant Power Supply to Single corded Equipment
- Fast Automatic Switch Between Two Source
- High Reliability
- User Friendly Operation with LCD/LED Display
- Single Phase 16A / 32A
- 19" Rack Design
- Hot Swappable Maintenance Frame (ITS)



## Specifications

Model	ATS-216		ATS-232	ATS-120	ATS-130	ITS-232	ITS-232F	ITS-130	ITS-130F	
Input	Input Voltage	200/208/220/230/240 (±5%/10%/15%/20%)		100/110/115/120/127 (±5%/10%/15%/20%)		200/208/220/230/240 (±5%/10%/15%/20%)		100/110/115/120/127 (±5%/10%/15%/20%)		
	Acceptable Input Voltage	150Vac~300Vac		75Vac~150Vac		150Vac~300Vac		75Vac~150Vac		
	Input Frequency	50/60Hz(±5%/10%/15%/20%)					50/60Hz(±5%/10%/15%/20%)			
	Maximum Input Current	16A	32A	20A	30A	32A		30A		
Output	Output Voltage	200/208/220/230/240		100/110/115/120/127		200/208/220/230/240		100/110/115/120/127		
	Maximum output current	16A	32A	20A	30A	32A		30A		
	Transfer time(ms)	8~12ms (Sensitivity adjustable)					8~12ms (Sensitivity adjustable)			
	Efficiency	99%(with full linear load)					99%(with full linear load)			
Protection	Input Breaker(option)/Electronic Circuit					Input Breaker(option)/Electronic Circuit				
Interface	Communication	RS-232, USB, Dry contact and external slot for option card(SNMP, RS-485)					RS-232, USB, Dry contact and external slot for option card(SNMP, RS-485)			
	Display	LCD+LED					LCD+LED			
Physical	Inlet	IEC-C20 inlets x 2	30A terminal 3P x 2	NEMA 5-20 x 2	NEMA L5-30 x 2	30A terminal 3P x 2		30A terminal 3P x 2		
	Outlet	IEC-C13 x 8 IEC-C19 x 1	IEC-C13 x16 IEC-C19 x2	NEMA 5-20 x 8	NEMA 5-20 x 16 NEMA L5-30R x 1	IEC-C13 x 8 IEC-C19 x 2	NEMA L6-30R x 2	NEMA 5-15 x 8	NEMA L5-30R x 2	
	Dimensions (W x H x D in mm/inch)	440x44x275 17.3x1.7x10.8	440x88x275 17.3x3.5x10.8	440x44x275 17.3x1.7x10.8	440x88x275 17.3x3.5x10.8	440x88x325 / 17.3x3.5x12.8				
	Net Weight (kg/lbs)	4 / 8.82	6 / 13.23	4 / 8.82	6 / 13.23	6 / 13.23				
Environment	Operating temperature	-5~40°C @ 20%~95%RH (non-condensing)					-5~40°C @ 20%~95%RH (non-condensing)			
	Standards compliance	Safety	UL 60950-1 / CAN / CSA C22.2 No.60950-1 / IEC 60950-1					UL 60950-1 / CAN / CSA C22.2 No.60950-1 / IEC 60950-1		
		EMC	FCC Part 15 / EN62310-2					FCC Part 15 / EN62310-2		

\* Specifications subject to change without notice.  
\*\* The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.





# External Bypass Switch Box



■ RacPDU-115A



■ RacPDU-120B



■ RacPDU-130H



■ RacPDU-210D



■ RacPDU-216G



■ MPDU-250

## Maintenance Bypass PDU 15A ~ 50A

The maintenance bypass switch with power output distribution allows you to manually transfer the connected equipment from UPS output to utility power and vice versa. It is also a type of plug-and-play power output distribution for the MSRT Pro and Ares Series. With included brackets, you may install the unit in a Tower or Rack Mount configuration.

Model Name	Rating	AC Input Plug (Receptacle)& cord length	Connect to UPS Input	Connection to UPS Output & cord length	Output Receptacles/ protection
RacPDU-115A	120V 1KVA	NEMA 5-15P Attached 10-foot cord	NEMA	NEMA 5-15P * 1 Attached 6-foot cord	NEMA 5-15R * 8
			5-15P	NEMA 5-15P * 1 Attached 6-foot cord	NEMA 5-15R * 8
RacPDU-120B	120V 2KVA	NEMA 5-20P Attached 10-foot cord	NEMA	NEMA 5-20P * 1 Attached 6-foot cord	NEMA 5-15R * 4
			5-20P	NEMA 5-20P * 1 Attached 6-foot cord	NEMA 5-20R * 4
RacPDU-130H	120V 3KVA	NEMA L5-30P Attached 10-foot cord	NEMA	NEMA L5-30P * 1 Attached 6-foot cord	NEMA 5-20R * 6 with 20A circuit breaker * 2
			L5-30P	NEMA L5-30P * 1 Attached 6-foot cord	NEMA 5-30R * 1
RacPDU-210D	230V 2KVA	N/A	IEC C14	IEC C14 * 1 Attached 6-foot cord	IEC C13 * 8
			IEC C14	IEC C14 * 1 Attached 6-foot cord	IEC C13 * 8
RacPDU-216G	230V 3KVA	N/A	IEC C20	IEC C20 * 1 Attached 6-foot cord	IEC C19 * 2
					IEC C13 * 6
RacPDU-230F	230V 4.5K/6KVA	Terminal	NAMA L6-30R	Terminal	Terminal
MPDU-250	230V 4.5K~10K	Terminal	Terminal	Terminal	Terminal + IEC C19 * 4 + IEC C13 * 8



■ Parallel Kit

## Parallel Bypass Box 60A-200A

The parallel maintenance bypass switch allows you to manually transfer the connected equipments from UPS output to utility power and vice versa. For different capacity of UPS in parallel, you may choose one of the appropriated models listed below considered to the total current. Included brackets allow the units to be installed in a Tower or Rack configuration.

Model Name	Description	Dimensions(WxHxD, mm/inch)	Application
RacPDU-260	Max. 60A	440x176x124/17.3x7.0x4.9	Max. 2pcs 4.5K/6K or 1pce 8K/10K
RacPDU-2120	Max. 120A	440x176x124/17.3x7.0x4.9	Max. 4pcs 4.5K/6K or 2pcs 8K/10K
RacPDU-2200	Max. 200A	440x176x124/17.3x7.0x4.9	Max. 4pcs 8K/10K
Parallel Kit	Parallel Function kit	440x132x129/17.3x6.9x5.1	6K/10K

# UPS Accessories

## Communication Flexibility

We offer a complete set of communication solutions and accessories designed for different series of AblereX UPS used in electrical and computer applications.



■ Dry Contact Board (DCE-B)



■ Dry Contact Board (DCE-C)



■ USB Card



■ External Dry Contact Box (DCE-E)



■ 2nd RS232 Card



■ RS485 Card (MSII/MSIII)



■ SNMP Card



■ MINI SNMP Card

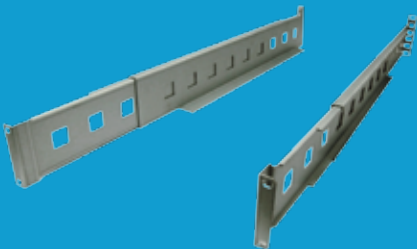


## 200W/250W Charger

It provides 36~96Vdc Voltage adjustable features by jumper setting, which can be widely used in variable series of UPS models.

## Optional External 1000W Charger

With its isolation conversion technology plus precision control, this charger provides 192/240Vdc which is suitable for the MSII/MSIII series, the optional charger may be installed in parallel up to 4 units.



## Rail Kit

It can be widely used in supporting rack and convertible type UPS and battery banks in 19" rack system.

# Enersine Active Power Filter



- True Active Harmonic Mitigation Solutions
- Compensate Up to the 51st Harmonics
- Leading / Lagging Power Factor Correction
- Correct Unbalance Three Phase Utility
- User Friendly HMI

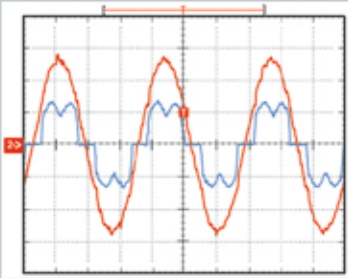
- A** Enersine ESD34 30A Modular Series
- B** Enersine ESD34 100A & 150A Standalone Series
- C** Enersine ESD34 100A & 150A Open Chassis Series
- D** Enersine Pro 60A & 80A Modular Series



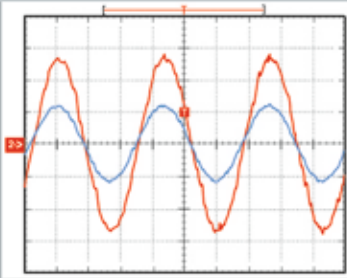




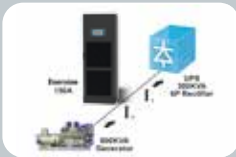
■ **True Harmonic Solution & Power Factor Correction**  
Enersine not only compensates harmonic current but also improves power factor. It will also correct for either a leading or lagging power factor.



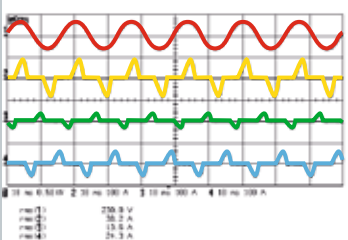
Before Enersine On  
THDi%=30%, PF=0.81



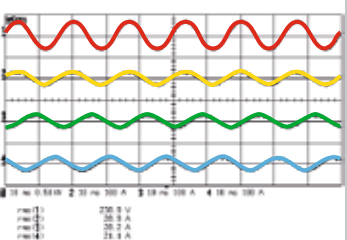
After Enersine On  
THDi%=4.3%, PF=1.0



■ **Corrects Unbalance Three Phase Utility**  
Enersine also includes a load balancing function between phases and between phases and neutral.



Before Enersine On



After Enersine On

■ **User Friendly HMI**  
Enersine is equipped with a user friendly control panel. A simple On or Off function and features buzzer silence and system status inductors. The LCD control and display panel offers mutiple advanced features.

- ▶ Complete with V, I, Freq., PF, KVA, THD parameters
- ▶ Waveforms and harmonic spectrum
- ▶ Control command
- ▶ Configure settings
- ▶ Status and alarms
- ▶ Event log



## Specifications

Model	ESD34 30A	ESD34 100A&150A	Enersine Pro 60A&80A	
General	Equipment Storage Temperature		-20°C to + 70°C	
	Operating Temperature		-10°C to +40°C without derating	
	Relative Humidity		<95%	
	Operating Altitude		<1000 m without derating	
	Reference Harmonic Standard		EN61000-3-4, IEEE 519	
	Reference Design Standard		EN60146	
	Safety Standard		EN50178; UL508	
	Electromagnetic Compatibility		EN61000-6-4, EN55011, CISPR 11, IEC 61000-3-12, IEC 61000-3-11, IEC 61000-6-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, EN 61000-4-8, EN61000-4-34	
	Electrical	Input Voltage		400V +15%,-20%; 480V +10%, -20%
Phase/Wires		3 phase 4 wires/3wires		
Frequency		50/60±3 Hz		
Harmonic Compensation		From 2nd to 51st order		
Power Factor Correction		Both lagging and leading can be programmable.		
Load Balancing		Both phase to phase and phase to neutral		
Response Time		<300us Global Mode < 20 ms Selective Mode		
Control Algorithm		CT at Source Side: Closed Loop Control CT at Load Side: Open Loop Control		
Parallel		Up to 960A Up to 1200A Up to 1920A		
Communication	Display		LED Panel or 4.3” Graphic LCD 7” Colorful LCD Touch Screen	
	Dry Contact		3 Output Dry Contacts, 1 Input Dry Contact, 1 EPO	
	Communication		USB, RS-485 Modbus RTU Port, Ethernet Port	
	Software		ESD-Link34 Monitoring Software (Option)	
Physical	Type	Modular Rack/ Wall Mount	Standalone/Open Chassis	Modular Rack Mount
	Dimensions (WxHxD,mm/inch)	CM: 440x710x86 /17.3x28x3.4 (2HU)	Standalone (IP20):	CM: 440x630x86/17.3x24.8x3.4 (2HU)
		PM: 440x710x131/17.3x28x5.2 (3HU)	600x600x1900 / 23.6x23.6x74.8	PM: 440x630x176/17.3x24.8x6.9 (4HU)
		120A Frame: 600x1000x1500 / 23.6x39.4x59	Open Chassis (IP00):	320A Frame: 600x900x1500/23.6x35.4x59.1
		240A Frame: 660x1000x1950 / 23.6x39.4x76.8	440x441x1500/17.3x17.4x59.1	480A Frame: 600x900x1950/23.6x35.4x76.8
	Weight (kg/lbs)	CM: 14/30.8	Standalone (IP20): 100A 195/429	CM: 10/22
PM: 31/68.2		150A 205/451	PM: 43/94.6	
120A Frame(IP21): 146/321.2 (w/o PM)		Open Chassis (IP00): 100A 110/242	320A Frame(IP21): 161/354.2(w/o PM)	
	240A Frame (IP21): 422.4/192 (w/o PM)	150A 120/264	480A Frame(IP21): 207/455.4(w/o PM)	

\* Specifications subject to change without notice.  
\*\* Depending on the model and voltage, please contact Ablerex for more information.  
\*\*\* The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.



# Energolis Series Photovoltaic Inverter



- A Buck-1000W / Buck-1500W
- B EnerSolis ES3000HC~ES4600HC
- C EnerSolis ES6000HC~ES12000HC
- D EnerSolis ES25600HC



# EnerSalvis Series

## Energy Storage System Single Phase

ESS2000



- Hybrid PV Inverter
- Pure Sine Wave Output voltage
- Enhance High Current Charger
- Advance DSP Control Technology
- Integrated MPPT Technology
- Wind Input AC Voltage Range
- LCD Display
- Smart ECO Mode
- UPS power
- Smart Fan Operation
- Hot Swappable Battery Function
- Cold start function
- Smart battery charger design for optimized battery performance
- Overload and short circuit protection
- Auto restart while AC is recovering
- Compatible to mains voltage or generator power
- Selectable input voltage range for home appliances and personal computers

### Specifications

MODEL	ITEM	ESS-2000
CAPACITY	VA	2000 VA
	W	1600W
	Rated Voltage	40~120Vdc
	MPPT Range	60~120Vdc
PV	Max. Input Current	35A
	Max. PV Array Open Circuit Voltage	150Vdc
	PV Array Polarity Error Protection	Yes
	Connection	terminal HP-T3061-1-3P
Battery	Number of batteries	4
	Rated Voltage	48 VDC
	Charge Current (Max.)	10.8A
	Floating Mode Charging Voltage	54.6Vdc±1%
AC Input	DC leakage current	≤30μA with no AC applied and the unit in the off position
	Connection	terminal HP-T3061-1-3P
	Voltage Rating	55/75/90-150 VAC (Based on load percentage 0-25% / 0-75% / 0-100%) 110/140/160-300 VAC (Based on load percentage 0-25% / 25-50% / 50-100%)
	Frequency Rating	45-65 Hz
AC Output	Phase	Single phase with ground
	Power Factor	≥ 0.99 (with full linear load)
	Generator Input	Supported
	Connection	terminal HP-T3061-1-3P
Efficiency	Voltage	120 V, adjustable to 100/110/115/120/127 230 V, adjustable to 200/208/220/230/240
	Voltage Regulation	within ±1% until low-battery warning
	Frequency(Synchronized Range)	3 Hz or 1 Hz (selectable)
	Frequency (PV Mode)	50/60 Hz ±0.2% unless synchronized to line
Front Panel	Current Crest Ratio	3:1
	Harmonic Distortion	< 3% at full linear load
	Output Waveform	Pure sine wave
	Connection	terminal HP-T3061-1-3P
Physical	ECO mode	97%
	LCD	Normal, Battery, Bypass, Self-Test, Weak & Bad, Site Wiring Fault , Fault, Overload, and Load/Battery Level
	Button	ON(Silence) / OFF / Enter / Function / UP / Down
	Dimensions(D x W x H in mm)	480 x 445 x 185
Environmental	Weight	11Kg
	Orating Temperature	0~40°C
	Noise Level	≤ 50dB
	Relative Humidity	0-90% (without condensation)
Interface	Standard	USB
	Compatible Platforms	Microsoft Windows series, Linux, Mac, etc.
	Safety	UL1778 V4 ( cTUVus ) IEC/EN 62040-1
	EMC	FCC Part 15 Class A EN62040-2, EN61000-3-2, EN61000-3-3
Standards and Certifications	Markings	FCC , cTUVus CE

### Battery Bank Specification

ESS Model	Bat.Type	Max. Quantities	Demensions(HxWxD,mm)
ESS2000	100AH	4	830x600x500
ESS2000	150AH	4	830x600x500

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# EnerSalvis Series

## Energy Storage System Single Phase

ESS3300~5000



- Energy Self-Consumption
- Peak Hour Shaving
- On-grid Application
- All-in-One Solution
- Intelligence MPPT Technology
- 97.3% high Efficiency DC/DC converter
- User Friendly LCD Display
- Panasonic Li-ion battery
- Battery is Insulation with system
- Without Fan,<25db
- IP65, can install in both indoor or outdoor
- Back up Power
- EnerSalvis Cloud-based Monitoring and Maintenance Platform
- Wall-Mount Design
- Anti-islanding Technology
- VDE Product Safety Certified

### Specifications

MODEL	ESS-3300	ESS-4000	ESS-5000
DC Input	Nominal DC input power	3300 W	4000 W
	Maximum DC input Voltage	500 VDC	
	Max DC input current Per MPPT	13A	
	MPPT Range	150 - 450VDC	
	MPPT Trackers	1	2
AC Output	Nominal AC output power	3300 W	3680 W
	Nominal AC output voltage	230Vac 50/60Hz 184~264Vac	
	Frequency Voltage range		
	Maximum AC output current	15A	20A
Battery	Current Distortion	Total Harmonic current: <3%	
	Manufacturer	Panasonic	
	Battery Type	Li-ion	
	Size (height x width x depth):	810*366*270mm	
	Weight	60kg	
	Enclosure type	IP65	
	Capacity	6kWh(3 modules) or 12kWh(6 modules)	
Efficiency	Battery Charge Stages	CC,CV	
	Maximum Efficiency of the whole system (PV-Grid)	>97.1%	
	Maximum Efficiency of the whole system (Battery-Grid)	>95%	
Environmental	Operating ambient temperature	-25°C to +50°C	
	Relative Humidity	0~100% non-condensing	
	Altitude	0~2000M 0~6600ft	
Mechanical	Size (height x width x depth)	810*455*270mm	
	Weight	30kg	
	Cooling	Natural	
	Enclosure type	IP65	
	Audible Noise	<25dBA	
	Mounting	Wall Mount (mounting bracket included)	
Communication/ Front Panel	Comm. Interface	RS485	
	Display	Graphic LCD+LED panel(2.9")	
Certifications	Grid standard	VDE-AR-N 4105, AS4777.2:2015	
	Safety	EN 62109-1,EN62109-2	
	EMC	EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12,	

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# EnerSolis Series Grid-Connected Single Phase

ES3000HC~ES4600HC



- Compact Size & Low Weight
- User Friendly LCD Display
- Uses High MTBF Component
- Convection Cooling (Fan-less)
- Intelligent DSP Controller
- Protection Class IP65
- Wide MPPT Range of 150 to 450 Vdc
- Intelligence MPPT Technology
- Anti-islanding Technology
- RS485 Communication
- De-rating Function
- High MPPT Tracker Efficiency
- Easy Installation

## Specifications

Model	ES3000HC		ES3680HC		ES4000HC		ES4600HC	
Item	Inverter Technology	Conversion Mode	Sine-wave, Current source, High frequency PWM					
		Isolation Method	Transformer-less Design					
	DC Input Data	Nominal DC Voltage	370 VDC					
Max. DC Input Voltage		500 VDC						
Working Range		120VDC~500VDC*						
Max. DC Input current		1x15.8 Amp	2x9.7Amp	2x10.5 Amp	2x12.1 Amp			
MPPT Range		150 VDC ~ 450 VDC						
MPPT Tracker		1	2					
Efficiency Data	Max. Efficiency	>97.2%						
	Euro Efficiency	>96%						
	CEC efficiency	>96%						
Environmental	Operating Temperature	-25°C ~ +50°C / -13°F~122°F						
	Humidity	0 to 90%(Without condensation)						
	Altitude	0 ~ 2000 M / 0 ~ 6600 ft						
Mechanical	Dimensions (WxHxD,mm/inch)	439x531x157 / 19.4x20.9x6.2						
	Weight (kg/lbs)	20 / 44						
	Protection Class	IP65, outdoor						
	Cooling	Convection						
	AC Connection	Screw Terminals						
	DC Connection	MC4						
Communication	Communication Interface	Standard : RS485    Optional: USB, Dry contact, WiFi, TCP/IP						
Front Panel	LCD	Boost input Voltage/Boost input Current/Boost input Power/AC output Voltage /AC output frequency/AC output current / AC output power/AC Energy yield/Inner Temperature/Heat sink Temperature /Status message/ Error message						
	LED	Leakage current fault or DC input isolation fault						
		Spec. of Utility is not matches with the Utility specifications of the inverter						
		Solar Cell power is greater or smaller than sleep power						
	Key Pad	UP key/ Down key/ Function key/ Enter key						
Protection	Utility	Over/under Voltage, Over/under Frequency, Ground fault, DC Isolation fault						
	Islanding operation detection	Passive : Voltage phase jump detection						
		Active : Reactive power control						
	Over Temperature	Reduced output power						
	Certification	On-Gird Performance	VDE0126-1-1/A1, VDE-AR-N 4105					
Safty		IEC 62109-1, IEC 62109-2 , IEC 60730-1						
EMI/EMC		EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3, EN 61000-3-11, EN 61000-3-12						

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# EnerSolis Series Grid-Connected Three Phase

ES6000HC~ES12000HC



- Three-phase Inverter
- Acceptable Input Voltage up to 1000 Vdc
- Transformer-less Topology
- Maximum Efficiency 97.6%
- Protection Class IP65
- Dual Independent MPP Trackers
- Intelligent MPPT Technology
- Active and Passive Anti-islanding Technology
- Compact Design
- User Friendly LCD Display
- High MTBF Components
- Temperature-dependent Fan Cooling
- Integrated DC Switch
- High Performance DSP Controller
- Built-in RS485 Communication Port
- Firmware Upgradability
- Wide MPPT Voltage Range with Nominal Power
- Allowable De-rating Operation
- Maximum Output Power Clamping
- Multi-Operation Mode
- Multi-Country Certifications

## Specifications

Model	ES6000HC		ES8000HC	ES10000HC	ES12000HC
Input	Inverter Technology	Conversion Mode	Sine-wave, Current source, High frequency PWM		
		Isolation Method	Transformer-less Design		
DC Input Data	Nominal DC Voltage		620 Vdc		
	Max. DC Input Voltage		1000 Vdc		
	Working Range		300 ~ 1000 Vdc		
	Max. DC Input current	2 x 8.5 Amp	2 x 11.4 Amp	2 x 14.3 Amp	2 x 14.3 Amp
	MPPT Range (Nominal Output)	370 ~ 850 Vdc			450 ~ 850 Vdc
	MPPT Tracker	1	2		
AC Output Data	Nominal AC Power	6,000 Watt	8,000 Watt	10,000 Watt	12,000 Watt
	Max. AC Apparent Power	6,600 VA	8,800 VA	11,000 VA	12,000 VA
	Nominal AC Voltage		AC 230V x 3		
	Output Connect Method		3-Phase / 4-Wires (L1, L2, L3, N, PE)		
	AC Voltage Rang		184V ~ 264.5V (Base on 230 Vac)		
	Nominal AC Current	8.69Amp x 3	11.59Amp x 3	14.49Amp x 3	2 x 17.39 Amp
	Frequency	50/60Hz Auto-Selection (47.5 ~ 51.5Hz or 59.3 ~ 60.5Hz)			
	Power Factor	Leading 0.9 ~ Lagging 0.9			
	Current Distortion	Total Harmonic current : Less than 5%			
		Single Harmonic current : Less than 3%			
Efficiency Data	Max. Efficiency		97.60%		
	Euro Efficiency	96.20%	96.60%	97.00%	97.25%
Environmental	Operating Temperature		-20 °C ~ +60 °C (-4 °F ~ 139 °F)		
	Pollution degree classification		PD3		
	Overvoltage category (IEC 60664 - 1)	DC side	Category II		
		AC side	Category III		
	Humidity		0 to 100% (Without condensation)		
	Altitude		0 ~ 2000 m / 0 ~ 6600 ft		
Mechanical	Dimensions (H x W x D mm /in)		595 x 451 x 247 / 23.4" x 17.7" x 9.72"		
	Net Weight (kg / lbs)		41 / 90.4		
	Gross Weight (kg / lbs)		44 / 97.0		
	Protection Class		IP65, outdoor		
	Cooling		Temperature-dependent fan		
	AC Connection		Connector		
	DC Connection		MC4		
Communication	Communication Interface	Standard	RS485		
		Optional	USB, RS485, Dry contact, TCP/IP		
Front Panel	LCD		Boost input Voltage ∙ Boost input Current ∙ Boost input Power ∙ AC output Voltage ∙ AC output frequency ∙ AC output current ∙ AC output power ∙ AC Energy ∙ yield ∙ Inner Temperature ∙ Heat sink Temperature ∙ Status message ∙ Error message		
	LED	RED	On: Ground fault or DC input insulation fault		
		Yellow	On: Unit Error or Alarm		
		Green	Flash: Standby or Sleeping mode On: Normal Operation		
Key Pad		UP key/ Down key/ Function key/ Enter key			
Protection	Utility	Over/under Voltage, Over/under Frequency, Ground fault, DC Isolation fault			
	Islanding operation detection	Passive : Voltage phase jump detection			
		Active : Reactive power control			
	Over Temperature		Downgraded output power		
Certification	On-Grid Performance		VDE 0126-1-1, VDE AR-N 4105, AS 4777.2/3, ENEL 2010,		VDE 0126-1-1, VDE AR-N 4105
	Safety		EN 62109-1, EN 62109-2, EN 60730, AS 3100		EN 62109-1, NE 62109-2, EN 60730
	EMI/EMC		EN 61000-6-1, EN 61000-6-2, EN 61000-6-3, EN 61000-3-2, EN 61000-3-3		EN 61000-6-2,EN 61000-6-4, EN 61000-3-2,EN 61000-3-3

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# EnerSolis Series Grid-Connected Three Phase

ES25600HC



- High Maximum Efficiency up to 98.1%
- Wide Input Voltage range 300~1000Vdc
- Dual Independent MPP Trackers
- High Performance DSP Controller
- Integrated DC Switch
- Protection Class IP65
- Automatic Convection Cooling Switch
- Compact Design and Easy to Install
- User Friendly LCD Display
- Built-in RS485 Interface Port
- TUV Rhineland Product Safety Certified
- EnerSolis Cloud-based Monitoring and Maintenance Platform

Model	ES25600HC	
Inverter Technology	Conversion Mode	Sine-wave, Current source, High frequency PWM
	Isolation Method	Transformer-less Design
	Nominal DC Voltage	620 Vdc
DC Input Data	DC Voltage Range	300Vdc~1000Vdc
	Max. Input Current	22.7Amp
	MPPT Voltage Range	370Vdc~950Vdc
	Number of MPPT	2
	Module Capacity	1.2 times (Max.)
AC Output Data	Nominal AC Power	25600VA/25600W
	Nominal AC Voltage	220/380 or 230/400 Vac
	Output Wiring	3 Phase 4 Wires (L1,L2,L3,N,PE)
	Nominal AC Current	37.1 Amp x 3
	Frequency	50 or 60 Hz (Selectable)
	Power Factor	0.8 leading ~ 0.8 lagging
	Current Distortion	Total Harmonic current: Less than 5%
Frequency	Peak Efficiency	>98.1%
Environment	Operation Temperature	-25°C ~ 60°C
	Humidity	0 ~ 100% (non-condensing)
	Altitude	0 ~ 2,000m
Physical	Dimension (WxDxH)	457 x 279 x 805mm
	Weight	62Kg
	Protection Class	IP65, outdoor
	Cooling	Convection cooling
Interface Ports	Standard	RS485
	Optional	USB, Dry Contact, TCP/IP
Protection	Utility	Over/under Voltage, Over/under Frequency, Ground Fault, DC Isolation Fault
	Islanding operation detection	Passive: Voltage phase jump detection
		Active: Reactive power control
Certifications	Safety	EN 62109-1, EN 62109-2
	Grid	VDE-AR-N 4105
	EMC/EMI	EN61000-6-2, EN61000-6-4
	Harmonics	IEEE-519-1992
	Waterproof	CNS 14165

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# EnerSolis Series Off-Grid Photovoltaic Charger

Buck-1000W/Buck-1500W



- Universal for 12,24,36 and 48 Battery System
- Board Input Range for Various PV Modules
- Integrated MPPT Technology
- Three-Stage Fast Charge
- Operates in Harsh Ambient Temperatures
- LCD/LED Operational Interface



## Specifications

Model	Buck-1000W		Buck-1500W
Input	Voltage	40V~120V	
		40~120V @ 12Vbat	
		40~120V @ 24Vbat	
	MPPT Range / Operating Voltage	50~120V @ 36Vbat	
		60~120V @ 48Vbat	
		Current(Max.)	25A
	Max. PV Array Open Circuit Voltage	150Vdc	
Output	Nominal Battery Voltage	12/24/36/48Vdc	
	Max. Charger/Output Current	40A	60A
	Max. PV Array Power	1000W	1500W
	Ripple Voltage	<±1V	
	Max. Efficiency	95%	
	Charge mode	Bulk/Pulse/Float1/Float2 or Bulk/Float1/Float2	
Display	Status on LCD	Solar Cell Input Voltage / Solar Cell Input Current/Solar Cell Input Power / Bat. Voltage /Bat. Current /Bat. Ampere-hours/ IGBT temperature /Bat. temperature/Voltage setting table, etc.	
	Status on LED	Normal/Fault/PV Low	
Protection	Overload	>110% shutdown	>105% shutdown
	Short Circuit at load side	Output current>60A shutdown	
	Solar Cell Polarity Error Protection	Yes	
	Battery Temperature Compensation(Optional)	(-3.3mV/□/cell)	
	Standby Power Consumption	0W	
	Total Power Consumption while operating	3.5W	
	Alarms	Visible	Fault, PV Low, Bat. Abnormal, etc.
Physicals Characteristics	Mechanical Dimensions WxHxDmm	165x330x85mm	
	Input/Output Connectors	Hardwire(Terminal Block)	
	Enclosure Type	IP20	
	Net Weight(Kgs)	3.2	
Environment	Operating Temperature	-20°C to +60°C	
	Storage Temperature	-40°C to +85°C	
	Altitude	0~2000M up to 60□; 0~3000M up to 55□	
	Humidity	100% RH Maximum, No Condensing	
Interface Computer	Type	Standard RS232	
Compliance	Quality	ISO9001	
	Standard EMC	EN61000-6-1, EN61000-6-3	
	Marking	CE	
Patent Pending		Taiwan: 97147246	
	Patent No.	China: 200810180491.7	
		USA: 12/273,669	

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