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ABLEREX

Ablerex

Ablerex is Power Converter

LEADING MANUFACTURER
OF POWER ELECTRONICS

www.ablerex.com.tw

About Ablerex

Ablerex has been concentrating on electricity and electronic fields with its own core technology to develop power converter products that promote electricity usage stability, improve electricity quality and introduce green energy for global market.

We walk steadily with operation spirits of professionalism, teamwork, effectiveness and contribution to build strong innovative ability. With high quality production ability, Ablerex becomes the best partner that clients look for.

Ablerex is the organization investing a lot of resource in technical research and development. The strategy has currently resulted in fruitful intelligent properties with more than a hundred patented techniques. It received the innovative research award by Ministry of Economic Affairs (R.O.C.). A leading market researcher in the world wide also awarded Global Leader to Ablerex.
To deliver products with a high level of reliability and quality, there is a large number of automatic production equipment and precise auto-inspection facilities in Ablerex manufacturing bases. Advanced management in KPI system, covering all continuous improvements on production process and quality control, bring reinforcement in strong competiveness to benefit business partners.

The main products include Uninterruptible Power System, Active Power Filter, Photovoltaic Inverter, Wireless Battery Monitoring System, and Power Monitoring and Management System. By continuously launching new technology and high quality products, Ablerex is able to win the trust and cooperation of all clients.

Ablerex takes the global perspective, and constantly increase service spots to build global marketing channels. With real-time tech support, Ablerex builds value of the brand to make clients feel the diligent professional services.

Ablerex will continue the work in electricity and electronic fields to innovate products with the features from Smart Grid's requirements, and to develop related green products for environment protection in the globe. We look forward to becoming the leading enterprise of the industry in the new era.


INDEX

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 Operation Interface—Colorful 4.3”LCD Touch Screen

A BRIC ST 30KVA/30KW, 60KVA/60KW

B BRIC 30S 30KVA/30KW Module

C Taurus Series 10KVA~60KVA

BRIC Series On-Line UPS

30KW / 60KW

- Wide Input Voltage 320VAC~480VAC
- High Input Power Factor >0.99
- Low Input THDi% <3%
- High Output Power Factor 1.0
- Common Battery Used for Parallel Redundant System
- Wide Batteries Range 32~40 Blocks(12V)
- Dual Input Mains for Manage Independent Power Sources
- Internal Manual Bypass for Easy Maintenance without Power Interruption
- User Friendly Operation Interface—Colorful LCD Touch Screen

Specifications

Model		BRIC 30S	BRIC ST 30	BRIC ST 60
Capacity		30KVA/30KW	30KVA/30KW	60KVA/60KW
Parallel		Up to 120KVA		
Input	Voltage	400V 3 Phase + N		
	Voltage Tolerance	±20%		
	Frequency	45 ~ 65Hz		
	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	<2% with linear load; <5% 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	10A	10A	20A
	Common Battery for Parallel Configuration	Yes		
Efficiency	VFI Mode	>93%		
	ECO Mode	>97%		
Bypass	Voltage	380/400/415V 3 Phase + N		
	Voltage Tolerance	±10%		
	Frequency	50/60Hz		
	Frequency Tolerance	±3Hz		
Physical	Dimensions (W x D x H) mm	440 x 760 x 430	560 x 900 x 1200	
	Weights(Kgs)	74	174	250
	Protection Grade	IP20		
Communication	Display and MMI	4.3" Colorful LCD Touch Screen		
	Built-in Communication Port	RS-232, EPO		
	Optional Communication	2 Communication Slots for SNMP Card, RS-485 Modbus Card, Dry Contact Card		
Environment	Operation Temperature	0~40°C		
	Operation Humidity	0~95% (w/o condensation)		
	Operating Altitude	<1000 m without derating		
	Tested to Standards	LVD: EN62040-1 EMC requirements: EN62040-2		
	Mark	CE		
	Noise (at 1 meter)	<60dBA	<60dBA	<63dBA

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

TAURUS Series
On-Line UPS

10KVA ~ 60KVA

- 3 Level Technology
- High Efficiency, On-line Mode Efficiency 96%
- High Input Power Factor >0.99
- Low Input Harmonic, THDi% <3%
- High Output Power Factor 1.0
- Power Scalable and Parallel Redundancy
- Common Battery Used for Parallel Redundant System
- Advanced Operation Interface—Colorful LCD Touch Screen

Specifications

Capacity		10KVA	20KVA	30KVA	40KVA	60KVA
Input	Voltage	400V 3 Phase + N				
	Voltage Tolerance	±20%				
	Frequency	45 ~ 65Hz				
	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
	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 1400				600 x 827 x 1253 (w/o Wheel) 600 x 827 x 1300 (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				
	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

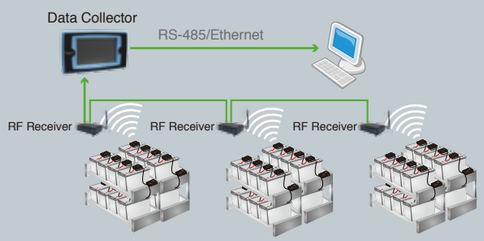
*Specifications subject to change without notice.
**Depending on the model and voltage, please contact Ablerex for more information.
***The same technical specification may be sold in different countries under different model names, please consult Ablerex for more information.

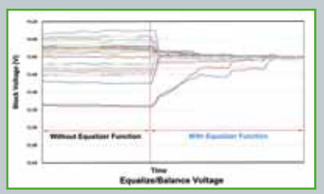
Electrical features

- 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 & Save Cost
- Graphic LCD Touch Screen
- Real Time Monitoring: Block Voltage, Block Impedance, Temperature, String Voltage & Current
- Equalize and Balance Block Voltage.
- Extend Battery Life Time
- Alarm via Email & Dry Contact
- Build in Storage Memory for Battery History Database
- Colorful Bar/Curve 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 #2	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
- B Ares Series DSP-Controlled On-Line UPS ARES 1KVA~3KVA
- C Ares RT Series DSP-Controlled On-Line UPS ARES RT 1KVA~3KVA
- D Mars III Series Convertible Redundancy On-Line UPS MSIII RT 4.5KVA~10KVA
- E Mars II Series Redundancy On-Line UPS MSII 4.5KVA~20KVA
- F Mars II Series Convertible Redundancy On-Line UPS MSII RT 4.5KVA~20KVA

Glamor Series

Line-Interactive Simulated Sine Wave UPS

GR 450VA~GR 2000VA

- Built-in AVR
- LED/LCD Display(Option)
- 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					
	Operation Humidity	20%-95 %RH (Without condensing)					
	Altitude	1000m 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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** Depending on the model and rating 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.

Jupiter Pro
Line-Interactive Sine Wave UPS

JP PRO 1KVA~3KVA

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

Janus & Janus XL

Line-interactive Sine Wave UPS

JC &JCXL 1KVA~3KVA

- 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 +/-5%	110/120/127Vac or 220/230/240Vac +/-5%				110/120/127Vac or 220/230/240Vac +/-5%			
	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, etc.								
	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	>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			440x88x405 / 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	7.8/59.8	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	(5) 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 Contacr Relay / SNMP/WEB Card								
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.								
Standard and Certifications	Safety		EN62040-1-1,UL1778								
	EMC		EN62040-2, EN61000-3-2, FCC Class A								
	Markings		CE, UL, cUL, FCC **								

* 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.

Ares Series
DSP-Controlled On-Line UPS

ARES 1KVA~3KVA

- 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

■ ARES 1000

■ ARES 2000

■ ARES 3000

Specifications

Model		ARES 1000	ARES 2000	ARES 3000
Input	Voltage	110Vac~300Vac **		
	Frequency	45Hz ~ 65Hz		
	Phase	Single phase with ground		
	Power Factor	≧ 0.99 at linear load		
Output	Capicity	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		
	Efficiency	90% (Line mode)		
	DC start	Yes		
Battery	Number of batteries	2	4	6
	Type	Sealed Lead Acid Maintenance Free		
	Capicity	12V/7AH		
	Rated Battery Voltage	24Vdc	48Vdc	72Vdc
	Backup time (80% load)	>5min.	>5min.	>5min.
	Recharge time (to 90%)	4 hours		
Display	LED — Standard	Load Level/Battery Level/ Battery Mode/ Normal Mode/Bypass Mode/ Self-Test/ Weak/Bad Battery/Site Wiring Fault/ Fault/ Overload		
	LED — Option	Programmable Outlet1/ Programmable Outlet2		
	Self Diagnostics	By button of the panel or Software Control		
	Button	(ON/Alarm Silence Button)/ OFF Button/ (Test/Level Button)		
Alarms	Audible and Visual	Line Failure, Battery Low, Overload, System Fault Conditions		
Protection	Overload capacity	105% continuous, 120% for 30 sec. , 150% for 10 sec.		
	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
Environmental	Operation Temperature	0~40°C		
	Noise Level	＜50dBA		
	Altitude	2000 m without de-rating		
	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 1KVA~3KVA

- 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
- Patent Backup Runtime Estimation
- Multiple Operation Mode Supported
- Remote Emergency Power Off (REPO)
- Programmable Outlets
- Easy Firmware Flash Upgrade

■ ARES RT 1KVA & ARES RT 2KVA

■ ARES RT 3KVA

Specifications

Model		ARES RT 1000	ARES RT 2000	ARES RT 3000	ARES RT 1000	ARES RT 1500	ARES RT 2200	ARES RT 3000
Input	Phase	Single Phase with Ground						
	Voltage Range**	110~300Vac			55~150 Vac			
	Frequency Range	45~60Hz / 50~70Hz (Auto sensing)			45-70Hz			
	Input Power Factor	≧0.99 @ Full Load			>0.98@ 100% linear load			
Output	Capacity	1000VA/900W	2000VA/1800W	3000VA/2700W	1000VA/900W	1500VA/1350W	2200VA/1980W	3000VA/2700W
	Output Voltage	208/220/230/240 Vac			100/110/115/120/127 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%			>90%			
	High Efficiency Mode	Up to 96%			>96%			
Battery	Battery Type	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						
Display	LED	Load Level/Battery Level/ Battery Mode/ Normal Mode/Bypass Mode/ Self-Test/Weak/ Bad Battery/ Site Wiring Fault/ Fault/ OverloadOutput status/Programmable Outlet1/ Programmable Outlet2						
	LCD measures	Volatge / Frequency / Load level / Battery level						
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						
Physical	Dimensions (WxHxD, mm/inch)	440x88x390 / 17.3x3.5x15.4	88 x 440 x 405 / 17.3x3.5x16.0	440x88x475 / 17.3x3.5x17.8	440x88x600 / 17.3x3.5x23.7	440x88x600 / 17.3x3.5x23.7	440x88x695 / 17.3x3.5x23.7	88 x 440 x 390 / 17.3x3.5x15.4	88 x 440 x 405 / 17.3x3.5x16.0	88 x 440 x 475 / 17.3x3.5x17.8	88 x 440 x 600 / 17.3x3.5x23.7
	Net Weight (kg/lbs)	12/26.4	14.5/31.9	17/37.4	21.5/47.4	26.5/58.4	31.5/69.4	11/24.2	14.5/32	20/44	27/59.5
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			RS-232, USB, EPO			
	Option	Dry Contact Relay, SNMP/WEB Card						
	Compatible Platforms	Microsoft Windows series, Linux, Mac, etc.						
Standards and Certifications**	Safety	ENG62040-1			UL1778			
	EMC	ENG62040-2, EN61000-3-3			FCC Class A			
	Marks	CE			UL, cUL, FCC			

Battery Bank Specifications

Contents	BC120240	BC120360	BC080480	BC120720	BC080960
Rated Battery Voltage	24	36	48	72	96
Number of batteries	8	12	8	12	8
Battery type	Lead Acid Maintenance Free 12V 7Ah/9Ah				
Dimensions (WxHxD,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, 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 RT Pro Series Convertible On-Line UPS

MP 1KVA~3KVA

- 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	Voltage	60/70/80~144 or 120/140/160~288Vac**		
	Frequency	50/60Hz ±5% (Auto Sensing)		
	Phase	Single Phase with Ground		
	Power Factor	>0.99(Full Linear Load)		
Output	Voltage	100/110/115/120/127 or 200/208/220/230/240		
	Capacity	1000VA / 800W	2000VA/1600W	3000VA/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	90% (Line mode)		
	DC Start	Yes		
Battery	Number of batteries	3	6	
	Type	Sealed Lead Acid Maintenance Free		
	Capacity	12V/7Ah	12V/7Ah	12V/9Ah
	Rated Battery Voltage	36Vdc	72Vdc	72Vdc
	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, 120% for 30 sec. , 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		
Physical	Dimensions (WxDxH, mm/inch)	440x88x405 (2U) 17.3x3.5x16 (2U)	440x88x650 / 17.5x3.5x25.6 (2U)	
			440x176x420 / 17.3x6.9x16.5 (4U)	
	Outlet 120Vac	6 x 5-15R	2x5-15R + 2 x 5-20R	4x5-15R + 1xL5-30R
	Outlet 230Vac	6 x IEC320-C13		4 x IEC320-C13 & 1 x IEC320-C19
Environmental	Operating Temperature	0~40°C / 32~104°F		
	Noise Level	< 50dBA		
	Altitude	2000m/6500ft without de-rating		
	Humidity	20%~90%RH (Without condensation)		
Interface	Interface Type	Standard: RS232 / USB / Communication Slot		
	Communication Slot Option	Relay Contact board, SNMP/WEB card		
	Compatible Platforms	Microsoft Windows series, Linux, Mac, etc.		
Standard and Certifications	Safety	EN62040-3 complied		
	EMC	EN62040-2, EN61000-3-2, EN61000-3-3, FCC Class A		
	Markings	CE, UL, cUL, FCC***		

Battery Bank Specifications

UPS model	Code	Bat. Type	Max. Quantities	Dimensions (HxWxD, mm/inch)
MP 1KVA	C12M2U07	7AH	12	88x440x650 / 3.4x17.3x25.6
MP 2KVA	C12K2U07	7AH	12	88x440x650 / 3.4x17.3x25.6
MP 3KVA	C12K2U09	9AH	12	88x440x650 / 3.4x17.3x25.6
MP 1KVA	C12M2U07-C200*****	7AH	12	88x440x650 / 3.4x17.3x25.6
MP 2KVA	C12K2U07-C200 *****	7AH	12	88x440x650 / 3.4x17.3x25.6
MP 3KVA	C12K2U09-C200 *****	9AH	12	88x440x650 / 3.4x17.3x25.6
MP 1KVA (ODIN)	C12M4U07	7AH	12	176x440x425 / 6.9x17.3x16.7
MP 2KVA (ODIN)	C12K4U07	7AH	12	176x440x425 / 6.9x17.3x16.7
MP 3KVA (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 III Series

Convertible Redundancy On-Line UPS

MSIII RT 4.5KVA~10KVA

- Rack/Tower Convertible Design
- Power Factor 1.0
- Patent Backup Runtime Estimation
- Flexibible 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

■ MSIII6000RT

Specifications

Model			MSIII4500RT	MSIII6000RT	MSIII8000RT	MSIII10000RT
Input	Phase		Single Phase with Ground			
	Voltage Range**		110Vac~280Vac			
	Frequency Range		45~70Hz (Auto Sensing)			
	Input Current Distortion		≦3%			
	Input Power Factor		≧0.99 @ Full Load			
Output	Capacity		4500VA/4500W	6000VA/6000W	8000VA/8000W	10000VA/10000W
	Voltage		200/208/220/230/240Vac (240/208Vac+120Vac w/output transformer option)			
	Output Power Factor		1			
	Output Voltage Distortion		≦1% @ 100% Linear load ≦3% @ 100% non-linear load with PF=0.9			
	Output Voltage Regulation		±1%			
	Frequency Range (Synchronized Range)		±1Hz or ±3Hz (Selectable)			
	Crest Factor		3:1			
	Output Waveform		Pure Sine Wave			
Efficiency	Line Mode		93%		94%	
	High Efficiency Mode (ECO)		98%			
Battery	Number of Battery		12~20 (16/20 standard)		16~20 (20 standard)	
	Battery Type		Sealed Lead Acid Maintenance			
	Recharge Time (to 90%)		4 hours			
	Charger		2-mode operation, 2.1A(max.), Temperature compensation(Option)			
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, Charging failure, Battery Disconencted			
Function	Multi-Mode		Normal/ ECO/ CVCF			
	DC start		Yes			
	Parallel capacity		up to 4 units			
	Parallel redundancy		3+1			
Physical	Tower Mode	Dimensions (WxHxD, mm/inch)	290x788x645 / 11.4x29.5x25.4			
		Net Weight(kg/lbs)	86/190		96/215	
	RT Model	Dimensions (WxHxD, mm/inch)	2U: 440x88x680 / 17.3x3.5x26.8		3U: 440x132x680 / 17.3x5.2x26.8	
		Net Weight(kg/lbs)	24/52.9		45/99.2	
	RT Model(w/B)	Dimensions (WxHxD, mm/inch)	4U: 440x176x680 / 17.3x6.9x26.8		6U: 440x264x680 / 17.3x10.4x26.8	
		Net Weight (kg/lbs)	52/115		96/212	
Environmental	Operation Temperature		0~40°C / 32~104°F			
	Operation Humidity		20%~95%RH (Without condensing)			
	Altitude		1000m/3280ft without Derating			
	Noise Level		≦55dBA @ 1 Meter		≦60dBA @ 1 Meter	
Interface	Standard		USB, EPO, Expansion slot			
	Protocol supported		J-Bus, Modbus, SEC			
	Slot Option		RS232, 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, EN61000-3-2, EN61000-3-3, FCC Class A			
	Performance		EN62040-3			
	Marks		CE, UL, cUL, FCC			

* Specifications subject to change without notice, and the final explanation rights are reserved by Ablerex.
** Depending on load percentage.
*** 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
Redundancy On-Line UPS

MSII 4.5KVA~20KVA

- 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

■ MSII 10KVA 3/1

■ MSII 15/20KVA

Specifications

Model			MSII4500	MSII6000	MSII8000 / 8000P	MSII10000 / 10000P	MSII 15000	MSII 20000
Input	Voltage		160~280Vac		160~280Vac (1Φ) / 277 – 485Vac (3Φ)**		277~485Vac(3Φ R, S, T, N)**	
	Frequency		45 ~ 65 Hz					
	Phase		Single, Line + Neutral + Ground		Single, Line + Neutral + Ground; Three, R, S, T + Neutral + Ground		Three + G	
	Power Factor		Up to 0.99 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		Up to 90% (Line Mode)				Up to 90% (without Transformer)	
	DC Start		Yes					
Battery	Number of batteries		20pcs					
	Type		Sealed Lead Acid Maintenance Free					
	Capacity		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					
	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 seconds ~ 2 cycles before switching bypass. Bypass Supply: 105%~200% for 500 seconds ~8 cycles before stopping supply load.					
	Short Circuit		Output Breaker / Electronic Circuit					
	EPO		Output shutsdown immediately					
	Over Temperature		Normal Mode : Transfer to Bypass Mode Battery Mode : UPS shuts down immediately					
Physical	Dimensions (WxHxD,mm/inch)	w/o transformer	290x748x645 / 11.4x29.5x25.4				290x748x645 / 11.4x29.5x25.4	
		with transformer	290x748x645 / 11.4x29.5x25.4		290x881x645 / 11.4x34.7x25.4		290x1014x645 / 11.4x39.9/25.4	
	Weight (kg/lbs) (w/o transformer)	Standard Unit/ Hot Swappable unit	86/190		8K:87/192 8KP:92/202.4	10K:96/215 10KP:101/223	60/132	
	Weight (kg/lbs) (with transformer)	Standard Unit/ Hot Swappable unit	120/264		8K:140/308 8KP:145/319	10K:149/327.8 10KP:154/338.8	130/286	
Environmental	Operating Temperature		0~40°C / 32~104°F					
	Noise Level (1m front)		<50dBA				<52dBA	
	Altitude		2000m/6500ft without de-rating					
	Humidity		20%~90%RH (Without condensation)					
Interface	Interface Type		Standard RS232 Interface				Standard RS232, EPO	
	Communication Slots		2nd 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

UPS model	Code	Bat. Type	Max. Quantities	Dimensions (HxWxD, mm/inch)
MSII 4.5K / 6KVA	T40JXX07	7AH	40	290x748x631 / 11.4x29.4x24.8
MSII 4.5K / 6KVA	T60JXX07	7AH	60	290x748x631 / 11.4x29.4x24.8
MS II 8K / 10KVA	T40NXX09	9AH	40	290x748x631 / 11.4x29.4x24.8
MS II 8K / 10KVA	T60NXX09	9AH	60	290x748x631 / 11.4x29.4x24.8
MSII15KVA / 20KVA	T60VXX09	9AH	60	290x748x631 / 11.4x29.4x24.8
MSII15KVA / 20KVA	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 4.5KVA~20KVA

- 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

■ Battery Bank

■ MSII 10KVA RT

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)**			190Vac ~ 486Vac (3Φ)**	
	Frequency	45 ~ 65 Hz						45 ~ 70Hz	
	Phase	Single + G			Single / Three + G			Three + G	
	Power Factor	Up to 0.99 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		6300W	9000W	9000W	13500W	18000W
	Frequency (Synchronized Range)	±1Hz or ±3Hz (Selectable)							
	Frequency (Battery Mode)	±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)	0ms							
	Efficiency	90%						91%	
	DC Start	Yes							
Battery	Number of batteries	20pcs						16 or 20pcs	
	Type	Sealed Lead Acid Maintenance Free							
	Capacity	12V/7AH		12V/5AH	12V/9AH			12V/9AH	
	Rated Battery Voltage	240Vdc						192 or 240Vac	
	Backup time	N.A.	N.A.	> 3 mins. ***	N.A.	N.A.	> 5 mins. ***	N.A.	N.A.
	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.							
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 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 440x132x550 (ODIN) 17.3x5.2x21.6	440x176x680/ 17.3x6.9x26.8		440x132x680/ 17.3x5.2x26.8		440x264x680/ 17.3x10.3x26.8	440x220x720/ 17.3x8.6x28.3	
	Weight(kg/lbs)	24/52.9 17.5/38.5 (ODIN)	52/114.6		45/99.2(8K/10KRT) 50/110.2 (8K/10KRTP)		96/211.2	36/79.2	
Environmental	Operating Temperature	0~40°C / 32~104°F							
	Noise Level	<50dBA						<60dBA	
	Altitude	2000m/6500ft without de-rating							
	Humidity	0 to 90% (Without condensation)							
Interface	Interface Type	Standard RS232						Standard RS232 & EPO	
	Communication Slots	2nd 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 4.5K / 6KVA	C20J3U07	7AH	20	132x440x680 / 5.2x17.3x26.8
MSII RT 8K / 10KVA	C20N3U09	9AH	20	132x440x680 / 5.2x17.3x26.8
MSII RT 4.5K / 6KVA (ODIN)	C20J4U07	7AH	20	176x440x550 / 6.9x17.3x21.7
MSII RT 8K / 10KVA (ODIN)	C20N4U09	9AH	20	176x440x550 / 6.9x17.3x21.7
MSII RT 15 / 20KVA	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.

Automatic Transfer Switch

ATS & ITS Series

- Two Separate Independent Source
- Provide Redundant Power Supply
- 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 Base (ITS)

ITS Maintenance Switch

Specifications

Model			ATS16A-230V	ATS32A-230V	ATS20A-120V	ATS30A-120V	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		Circuit Breaker				Circuit Breaker			
	Output		Circuit Breaker				Circuit Breaker			
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	40A terminal 3P x 2	NEMA 5-20 x 2	NEMA L5-30 x 2	40A terminal 3P x 2		40A terminal 3P x 2	
	Outlet		IEC-C13 x 8 IEC-C19 x 1	IEC-C13 x16 IEC-C19 x2	NEMA 5-15 x 8 NEMA 5-20 x 1	NEMA 5-15 x 16 NEMA L5-30 x 2	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)		3.5 / 7.7	4 / 8.8	3.5 / 7.7	4 / 8.8	8 / 17.6			
Environment	Operating temperature		-5~40°C or 23~104°F @ 20%~90%RH (non-condensing)				-5~40°C or 23~104°F @ 20%~90%RH (non-condensing)			
	Standards compliance	Safety	IEC 60950-1		UL 60950-1/CAN CSAC22.2 No. 60950-1		IEC 60950-1		UL 60950-1/CAN CSAC22.2 No. 60950-1	
		EMC	EN 55022+EN 55024		FCC Part 15		EN 55022+EN 55024		FCC Part 15	

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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 MSRT Pro and Ares series. With attached brackets,you may fix the unit in Tower or Rack Mount accordingly.

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

■ TowPDU 2200

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. With attached brackets, you may fix the unit in Tower or Rack Mount accordingly.

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

UPS Accessories

■ Dry Contact Board (DCE-B)

■ Dry Contact Board (DCE-C)

■ USB Card

■ 2nd RS232 Card

■ RS485 Card

■ SNMP Card

Communication Flexibility

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

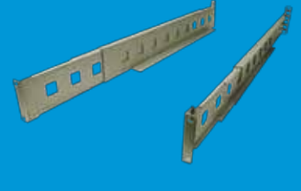
Dry Contact Board	For Janus/XL Series, MSRT Pro, Ares, MSII and MSIII series
SNMP Card	For Janus/XL Series, MSRT Pro, Ares, MSII and MSIII series
USB Card	For Janus/XL Series, MSRT Pro, Ares, MSII and MSIII series
2nd RS232 Card	For Janus/XL Series, MSRT Pro, Ares, MSII and MSIII series
RS485 Card	For MSII / MSIII in supporting J-Bus/Mod-Bus applications

200W 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 it is isolation conversion technology plus precision control, this charger might provide 192/240Vdc which is suitable for current MSII/MSIII series, the optional charge can be installed in parallel operation 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 Harmonic Solution
- Compensate Up to 51st Harmonics
- Power Factor Correction
- Correct Unbalance Three Phase Utility
- User Friendly HMI

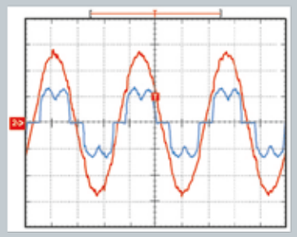
Ⓐ Enersine ESD34 30A Modular Series

Ⓑ Enersine ESD34 100A & 150A Standalone Series

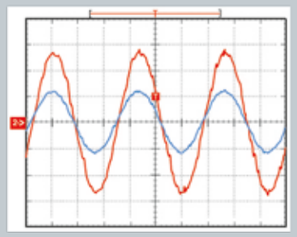
Ⓒ Enersine ESD34 100A & 150A Open Chassis Series

Ⓓ Enersine Pro 80A Modular Series

■ **True Harmonic Solution & Power Factor Correction**
Enersine not only compensate harmonic current but also improve power factor.
It is able to correct for either a leading or lagging power factor.

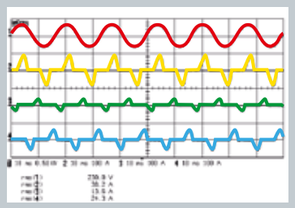


Before Enersine On
THDi%=30%, PF=0.81

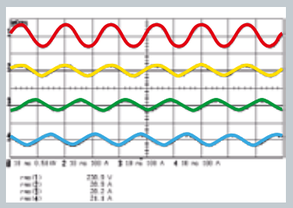


After Enersine On
THDi%=4.3%, PF=1.0

■ **Correct Unbalance Three Phase Utility**
Enersine also offer 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. It's simple to turn on or off and features buzzer silence and system status inductors. The LCD control and display panel offers more advantage 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 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) PM: 440x710x131/17.3x28x5.2 (3HU) 120A Frame: 600x1000x1500 / 23.6x39.4x59 240A Frame: 660x1000x1950 / 23.6x39.4x76.8	Standalone (IP20): 600x600x1900 / 23.6x23.6x74.8 Open Chassis (IP00): 440x441x1500/17.3x17.4x59.1	CM: 440x630x86/17.3x24.8x3.4 (2HU) PM: 440x630x176/17.3x24.8x6.9 (4HU) 320A Frame: 600x900x1500/23.6x35.4x59.1 480A Frame: 600x900x1950/23.6x35.4x76.8
	Weight (kg/lbs)	CM: 14/30.8 PM: 31/68.2 120A Frame(IP21): 146/321.2 (w/o PM) 240A Frame (IP21): 422.4/192 (w/o PM)	Standalone (IP20): 100A 195/429 150A 205/451 Open Chassis (IP00): 100A 110/242 150A 120/264	CM: 10/22 PM: 43/94.6 320A Frame(IP21): 161/354.2(w/o PM) 480A Frame(IP21): 207/455.4(w/o PM)

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Enersolis Series
Photovoltaic Inverter

A Buck-1000W / Buck-1500W

B EnerSolis ES3000HC~ES4600HC

C EnerSolis ES6000HC~ES120000HC

EnerSolis Series
Grid-Connected Single Phase

ES3000HC~4600HC

- Compact Size & Low Weight
- User Friendly LCD Display
- Use High MTBF Component
- Convection Cooling (Fan-less)
- Intelligence 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			
	Inverter Technology — 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	7.9 Amp	9.7Amp	10.5 Amp	12.1 Amp
	MPPT Range	150 VDC ~ 450 VDC			
	MPPT Tracker	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~ES120000HC

- 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 RS232 and RS485 Communication Ports
- 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		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)		451 x 595 x 247 / 17.7 x 23.4 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		Connector			
Communication	Communication Interface	Standard	RS232 & RS485			
		Optional	USB, RS485, Dry contact, TCP/IP, WiFi			
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
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
- Operation Under Harsh Ambient Tempperature
- LCD/LED Operational Interface

Specifications

Model		Buck-1000W	Buck-1500W
Input	Voltage	40V~120V	
	MPPT Range / Operating Voltage	40~120V @ 12Vbat 40~120V @ 24Vbat 50~120V @ 36Vbat 60~120V @ 48Vbat	
	Current(Max.)	25A	35A
	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/°C/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 to +85°C	
	Altitude	0-2000M up to 60°C; 0~3000M up to 55°C	
	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	Patent No.	Taiwan: 97147246	
		China: 200810180491.7	
		USA: 12/273,669	

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