INDEX

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.

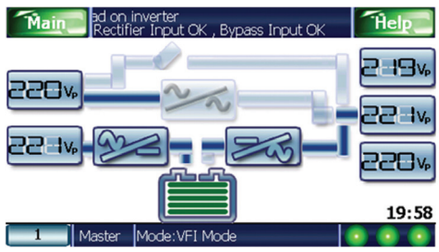
Ablerex takes the global perspective, and constantly increase service spots to build global marketing channels. With real-time tech support, Ablerex builds value of the brand to make clients feel the diligent professional services.

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.

* Some product range may not appear in this catalogue at time of printing. For more information on a specific product which you require, please kindly consult your local Ablerex dealers.

// BRIC Three-Phase On-Line UPS / BRIC 30-120KVA

- Wide Input Voltage 320Vac ~ 480Vac
- High Input Power Factor ≧ 0.99
- Sinusoidal Input Current THDI < 3%
- Output Power Factor 1.0
- Build in Static Switch -- No Single Fault Point
- Power Scalable and Parallel Redundancy Up to 4 Units
- Common Battery Used for Parallel Redundant System
- Wide Batteries Range 32~40 blocks (12V)
- User Friendly Operation Interface--Colorful LCD Touch Screen



BRIC Specification

MODEL		Bric 30K
INPUT	Voltage	320 ~ 480 V **
	Frequency	45Hz ~ 65Hz
	Phase	Three phase Four wire + G
	Power Factor /THDi	≥ 0.99 at linear load / < 3%
Output	Voltage	380/400/415V 3 phase + N ±1%
	Capacity	30KVA
	Power Factor	1.0
	Frequency (Synchronized Range)	± 3Hz or 1Hz (selectable)
	Frequency (Battery Mode)	50Hz/60Hz ± 0.1% unless synchronized to line
	Crest Factor	3:1
	Harmonic Distortion	< 3 % (at full linear load)
	Output Waveform	Pure sine wave
	Transfer time (AC to DC)	0 ms
	Overall Efficiency	> 93%
	DC start	Yes
Battery***	Number of batteries	32~40
	Rated Battery Voltage	384~480Vdc
Display	LCD touch panel	Input Voltage / Input Frequency / Output Voltage / Output Frequency / Load Percentage / Battery Voltage / Temperature
Alarm	Audible and Visual	Line Failure, Battery Mode, Battery Low, Overload, System Fault Conditions
Protection	Overload capacity	110% for 60 min.; 125% for 10 min.; 150% for 1min.
Physical	Dimensions (WxHxD, mm/inch)	440x430x760 / 17.3x16.9x29.9
	Weight (kgs/lbs)	74 / 163.14
Environmental	Operation Temperature	0-40℃
	Noise Level	< 60dBA from 1 meter
	Altitude	1000 m without de-rating
	Humidity	0 to 95% (Without condensation)
Communication Interface	Standard	RS-232, RS-485
	Option Slot	Relay Card, SNMP Card
Standards and Certifications**	Safety	IEC/EN 62040-1
	EMC	IEC/EN 62040-2
	Markings	CE

* Specifications subject to change without notice
** Depending on the model and voltage, more information please contact with Ablerex
*** External Battery bank

// Jupiter Pro Line-Interactive Sine Wave UPS / JP Pro 1-3KVA

- 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
- Patented RS232 and USB Communication Interfaces

JP Pro 1-3K Specifications

Model			JP1000	JP1500	JP2000	JP3000
Input	**Voltage**		110/115/120/220/230/240 +/-25%, DIP Switch Selectable			
	Frequency		50/60 +/-5Hz (Auto Sensing)			
Output	**Voltage**	**AC Mode**	Increase 15%(input -9%~-25%), Decrease 15%(input +9~+25%)			
		Inv. Mode	110/115/120/220/230/240 +3%~-10%			
	Capacity		1000VA/600W	1500VA/900W	2000VA/1200W	3000VA/1800W
	Frequency		50/60Hz +/-0.5Hz (Inverter Mode)			
	Output Waveform		Pure Sine Wave			
	Transfer Time (AC to DC)		2-6ms typical			
	DC Start		Yes			
Battery	**Number of Batteries**		2pcs		4pcs	
	Type		Sealed Lead Acid Maintenance Free			
	Capacity		12V/7AH	12V/9AH	12V/7AH	12V/9AH
	Rated Battery Voltage		24Vdc		48Vdc	
	Recharge Time (to 90%)		2~4 hours			
Display	**LED Panel(2 Buttons)**		LED: Utility Normal, Backup, UPS Fault and Battery's Conditions			
	LCD Panel(3 Buttons)		Numeric: Load Level(%), Battery Level(%), Sign: Bypass, AVR Boost/Buck, Battery Low/Replace/Fault, UPS Fault, Site Wiring Fault, Overload LED: Utility Normal(Green), Backup Mode(Amber), Fault(Red)			
	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 & Shutdown after 10 mins.			
		Inv. Mode	>120% Buzzer Continuously Alarms & Shutdown after 10 secs.			
	Short Circuit	**AC Mode**	Input Fuse & Electronic Circuit			
		Inv. Mode	Electronic Circuit			
Physical	**Dimensions (WxHxD, mm/inch)**		173x247x369 / 6.8x9.7x14.5		173x247x427 / 6.8x9.7x16.7	
	Net Weight (kgs/lbs)		13 / 29	15 / 33	22 / 49	24 / 53
	Outlets (NEMA/IEC)		(6) NEMA 5-15R / (6) IEC-320-C13			
Environment	**Operation Temperature**		0 to 40℃ / 32 to 104 ℉			
	Humidity		0 to 90% (Without Condensation)			
Interface	**Interface Type**		Standard RS232/USB			
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.			
Standard and Certifications**	**Safety**		EN62040-1			
	EMC		EN62040-2, EN61000-3-2, EN61000-3-3			
	Markings		CE			

* Specifications subject to change without notice.
** Depending on the model and voltage, more information please contact with Ablerex

// Janus Line-Interactive Sine Wave UPS / JC & JCXL 1-3KVA

- Line-Interactive Sine Wave UPS
- Rack Tower Convertible Design
- 0.9 Output Power Factor
- State-Of-The-Art Rotating LCD Panel
- Toroidal Transformer Technology
- Automatic Voltage Correction
- Customer Options Slot for Increased Flexibility.
- Patented RS232 and USB Communication Interfaces
- Smart Fan Operation

■ JC 1000/1500

■ JC2000 JC3000

■ JCXL 1000/1500

■ JCXL 2000/3000

Janus Series Specifications

Model			JC750	JC1000	JC1500	JC2200	JC3000	JCXL1000	JCXL1500	JCXL2200	JCXL3000
Input	Voltage		220/230/240Vac	110/120/127Vac or 220/230/240Vac +/-25%							
	Frequency		45~65Hz Auto-Sensing								
	Phase		Single + G								
Output	Voltage		220/230/240Vac	110/120/127Vac or 220/230/240Vac				110/120/127Vac or 220/230/240Vac			
	Capacity		750/675	1000/900	1500/1350	2200/1980	3000/2700	1000/900	1500/1350	2200/1980	3000/2700
	Frequency		50/60Hz +/-0.5Hz (Inverter Mode)								
	Output Waveform		Pure Sine Wave								
	Transfer Time (AC to DC)		4-6ms Typical								
	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	LCD		Line bypass, AVR Boost(Buck), Backup, Battery Level, Battery Low, Load								
			Level, Battery Fault, UPS Fault, etc.								
	LED		Line Mode, Battery Mode & Fault								
	Self-Diagnostics		Upon Power On and Software Control								
Alarms	Acoustics & Display		Mains Fault, Low Battery, Overload and Fault Conditions								
Protection	Short Circuit		Output Breaker/Electronic Circuit								
	EPO		Output Shutdown Immediately								
Physical	Dimensions (WxHxD, mm/inch)		440x88x405 / 17.3x3.5x16			440x88x650 / 17.3x3.5x25.6		440x88x485 / 17.3x3.5x19		440x88x694 / 17.3x3.5x27.3	
	Outlet	120Vac	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		(4) NEMA 5-15R, (2) NEMA 5-20R	(4) NEMA 5-15R, (2) NEMA 5-20R, (1) NEMA L5-30R
		230Vac	(8) IEC-320-C13			(8) IEC-320-C13, (1) IEC-320-C19		(6) IEC-320-C13		(6) IEC-320-C13, (1) IEC-320-C19	
	Net Weight (kgs/lbs)	120Vac	N/A	19.7 / 43.42	21.1 / 46.50	34.6 / 76.26	38.2 / 84.19	25 / 55.1	27.8 / 61.27	41.8 / 92.12	47.8 / 103.3
		230Vac	15 / 30.6	19.4 / 42.76	20.9 / 46.06	33.8 / 74.50	37.2 / 81.99	25 / 55.1	27.8 / 61.27	42 / 92.56	46.2 / 101.82
Environment	Operating Temperature		0 to 40°C / 32 to 104 °F								
	Noise Level		Line Mode: 40 dB Max; Bat. Mode: 45 dB Max.								
	Altitude		1000m/3300ft without De-Rating								
	Humidity		0 to 90% (Without Condensation)								
Interface	Interface Type		Standard RS232 and USB								
	Communication Slot		Option: 2nd RS232, 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, FCC Class A								
	Markings		CE, UL, cUL, FCC								

* Specifications subject to change without notice.
** Depending on the model and voltage, more information please contact with Ablerex

// Mars RT Pro Convertible On-Line UPS

/ MS RT Pro 1-3KVA

- Rack/Tower Design
- Advanced Digital Control Technology
- Wide Input Voltage and Frequency Windows
- Programmable Receptacles
- Unity Input Power Factor
- Double Conversion Technology
- Matching Battery Cabinet
- Extended Runtime Capability
- Super Compact Convertible Design
- Powerful Built-in Charger
- Multi-Mode Operation

■ MP1000

■ MP2000

■ MP3000

MS RT Pro 1-3K Specifications

Model			MP1000	MP2000	MP3000
Input	Voltage		60/70/80~144 or 120/140/160~288Vac**		
	Frequency		50/60Hz ±5Hz (Auto Sensing)		
	Phase		Single + G		
	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		
	Crest Factor		3:1		
	Output Waveform		Pure Sine Wave		
	Transfer Time (AC to DC)		0 ms		
	Efficiency		up to 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	
	Recharge Time (to 90%)		4 hours		
Display	LED (Standard) LCD (Option)		Normal, Battery, Bypass, Programmable Outlet 1, Programmable Outlet 2, Self-Test, Battery Weak & Bad, Site Wiring Fault , Fault, Overload, and Load/Battery Level Conditions		
	Self-Diagnostics		Upon Power On and Software Control		
Alarm	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		AC Mode: Switch to Bypass; Backup Mode: UPS Shutdown Immediately		
Physical	Dimensions (WxHxD, mm/inch)		440x88x405 /17.3x3.5x16	440x88x650 / 17.3x3.5x25.6 440x176x420 /17.3x6.92x16.5(ODIN)	
	Outlet	NEMA 120Vac	(6) NEMA 5-15R	(2) NEMA 5-15R + (2) NEMA 5-20R	(4) NEMA 5-15R + (1) NEMA L5-30R
		IEC/Local 230Vac	(6) IEC320-C13		(4) IEC320-C13 & (1) IEC320-C19
Environmental	Operating Temperature		0 to 40℃ / 32 to 104 ℉		
	Noise Level		< 50dBA		
	Altitude		1000m/3300ft without De-Rating		
	Humidity		0 to 90% (Without Condensation)		
Interface	Interface Type		Standard RS232 and USB		
	Communication Slot		Option: 2nd RS232, 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		
	Markings		CE, UL, cUL, FCC		

* Specifications subject to change without notice.
** Based on load percentage
*** Depending on the model and voltage, more information please contact with Ablerex

Battery Bank Specifications

UPS model	Code	Bat. Type	Max. Quantity	Dimensions (WxHxD, mm/inch)
MP 1KVA	C12M2U07	7AH	12	440x88x650 / 17.3x3.5x25.6
MP 2KVA	C12K2U07	7AH	12	440x88x650 / 17.3x3.5x25.6
MP 3KVA	C12K2U09	9AH	12	440x88x650 / 17.3x3.5x25.6
MP 1KVA	C12M2U07-C200 *	7AH	12	440x88x650 / 17.3x3.5x25.6
MP 2KVA	C12K2U07-C200 *	7AH	12	440x88x650 / 17.3x3.5x25.6
MP 3KVA	C12K2U09-C200 *	9AH	12	440x88x650 / 17.3x3.5x25.6
MP 1KVA (ODIN)	C12M4U07	7AH	12	440x176x405 / 17.3x6.92x16
MP 2KVA (ODIN)	C12K4U07	7AH	12	440x176x405 / 17.3x6.92x16
MP 3KVA (ODIN)	C12K4U09	9AH	12	440x176x405 / 17.3x6.92x16

* C200 means with 200W charger

// Mars II Convertible Redundancy On-Line UPS / MSII RT 4.5-20KVA

- Rack/Tower Convertible Design
- Simple Parallel Installation
- Full-time Digital Signal Processor Control
- LCD/LED Mimic Panel
- Multi-Mode Operation
- Simple and Easy to Use
- Optional Galvanic Isolation Transformer

■ MSII10000RT

Battery Bank Specifications

UPS model	Code	Bat. Type	Max. Quantity	Dimensions (WxHxD, mm/inch)
MSII RT 4.5K / 6KVA	C20J3U07	7AH	20	440x132x680 / 17.3x5.2x26.8
MSII RT 8K / 10KVA	C20N3U09	9AH	20	440x132x680 / 17.3x5.2x26.8
MSII RT 4.5K / 6KVA (ODIN)	C20J4U07	7AH	20	440x176x550 / 17.3x6.9x21.6
MSII RT 8K / 10KVA (ODIN)	C20N4U09	9AH	20	440x176x550 / 17.3x6.9x21.6
MSII RT 15 / 20KVA	C20V3U09	9AH	20	440x132x680 / 17.3x5.2x26.8

Transformer Specifications

UPS model	Code	Weight (kgs/lbs)		Dimensions (WxHxD, mm/inch)
		w/MTBS*	w/o MTBS*	
MSII RT 4.5K / 6KVA	MSII6000RT-GTM	42/92.5	41/90.3	440x88x660 / 17.3x3.5x26.0
MSII RT 8K / 10KVA	MSII10000RT-GTM	49/108.0	48/105.8	440x132x660 / 17.3x5.2x26.0

MSII RT 4.5-20K Specifications

Model		MSII4.5K RT	MSII6K RT	MSII6KC	MSII8K RT MSII8K PRT	MSII10K RT MSII10K PRT	MSII10KC	MSII15KRT	MSII20K RT
Input	Voltage **	160~280Vac			160~280Vac (1Φ) / 277 – 485Vac (3Φ)			190Vac ~ 486Vac (3Φ)	
	Frequency	45 ~ 65 Hz (Auto Sensing)						45 ~ 70Hz (Auto Sensing)	
	Phase	Single + G			Single / Three + G			Three + G	
	Power Factor ****	1Φ/1Φ Model: Up to 0.99 @ Linear Load 3Φ/1Φ Model: Up to 0.95 @ Linear Load							
Output	Voltage	200/208/220/230/240Vac (208/120Vac Optional)						220/230/240Vac	
	Capacity	4050W	5400W		7200W	9000W	9000W	13500W	18000W
	Frequency (Synchronized Range)	±1Hz or ±3Hz (Selectable)							
	Frequency (Battery Mode)	±0.1%							
	Current Crest Ratio	3:1 (Acceptable)							
	Harmonic Distortion	< 3% (at Full Linear Load)							
	Output Waveform	Pure Sine Wave							
	Transfer Time (AC to DC)	0ms							
	Efficiency	Up to 91%			Up to 92%			Up to 93%	
	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.							
	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	Breaker/Fuse/Electronic Circuit							
	EPO	Output Shutdown Immediately							
	Over Temperature	Bypass or Shutdown Immediately							
Physical	Dimensions (WxHxD, mm/inch)	440x88x680 / 17.3x3.5x26.8 440x132x550 / 17.3x5.2x21.6 (ODIN)		440x176x680 /17.3x6.9x26.8	440x132x680 / 17.3x5.2x26.8		440x264x680 / 17.3x10.3x26.8	440x220x720 / 17.3x8.6x28.3	
	Net Weight (kgs/lbs)	24 / 52.9 17.5 / 38.5(ODIN)		52 / 114.6	45 / 99.2 (8K/10KRT) 50 /110.2 (8K/10KRTP)		86 / 189.5	36 / 79.3	
Environment	Operating Temperature	0 to 40℃ / 32 to 104 ℉							
	Noise Level	<50dBA						<60dBA	
	Altitude	1000m/3300ft without De-Rating							
	Humidity	0 to 90% (Without Condensation)							
Interface	Interface Type	Standard RS-232 & EPO							
	Communication Slot	Option: 2nd RS232, USB, RS485, Dry Contact Relay, SNMP/WEB Card							
	Compatible Platforms	Microsoft Windows series, Linux, Mac, etc.							
Standards and Certifications ****	Safety Standard	EN62040-1, UL1778							
	EMC Standard	EN62040-2, EN61000-3-2, EN61000-3-3, FCC Class A							
	Markings	CE, UL, cUL, FCC							

* Specifications subject to change without notice.
** Based on load percentage ***Backup time at 70% load.
**** Depending on the model and voltage, more information please contact with Ablerex

// ARES
DSP-Controlled
On-Line UPS / Ares 1-3KVA

■ AS 1K

■ AS 2K

■ AS 3K

- True On-Line Double Conversion Topology
- Advanced Digital Control Technology
- Wide Range Input Window from 110~300Vac
- Active Harmonic Current Control
- Multi-Mode Operation
- Smart Cooling Fan Design
- Programmable Receptacles (Option)
- Remote Emergency Power Off (Option)
- Personalization & Intelligent Self-diagnostic
- Easy Program Upgrade

Battery Bank Specifications

UPS model	Code	Bat. Type	Max. Quantity	Dimension (WxHxD mm)
AS 1KVA	T04WXX07	7AH	4	236x144x367 / 9.2x5.6x14.4
AS 2KVA	T12XXX07	7AH	12	322x151x444 / 12.6x5.9x17.4
AS 3KVA	T12YXX07	7AH	12	322x151x444 / 12.6x5.9x17.4

Ares 1-3K Specifications

MODEL			AS 1K	AS 2K	AS 3K
Input	Voltage		110Vac--300Vac **		
	Frequency		45Hz ~ 65Hz (Auto Sensing)		
	Phase		Single + G		
	Power Factor		≥ 0.99 at Linear Load		
Output	Voltage		200/208/220/230/240		
	Capacity		1000VA/700W	2000VA/1400W	3000VA/2100W
	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		
	Capacity		12V/7AH		
	Rated Battery Voltage		24Vdc	48Vdc	72Vdc
	Recharge time (to 90%)		3~6 hours		
Display	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		Front Panel or Software Control		
	Button		ON/Alarm Silence Button/ OFF Button/ Test/Level Button		
Alarm	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 (Option)		Output Shutdown Immediately		
	Over Temperature		Bypass or Shutdown Immediately		
Physical	Dimensions (WxHxD, mm/inch)		236x144x367 / 9.2x5.6x14.4	322x151x444 / 12.6x5.9x17.4	322x189x444 / 12.6x7.4x17.4
	Net Weight (kgs/lbs)		10 / 22.04	16.5 / 36.3	22.5 / 49.5
	Outlet		(3) IEC 320-C13	(6) IEC 320-C13	(6) IEC 320-C13
Environmental	Operation Temperature		0 to 40℃ / 32 to 104 ℉		
	Noise Level		<50dBA		
	Altitude		1000m/3300ft without De-Rating		
	Humidity		0 to 90% (Without Condensation)		
Interface	Interface Type		RS232, USB (Option)		
	Communication Slot (Option)		USB, Dry Contact Relay, SNMP/Web Card		
	Compatible Platforms		Microsoft Windows series, Linux, Mac, etc.		
Standards and Certifications	Safety		IEC/EN 62040-1		
	EMC		IEC/EN 62040-2 IEC/EN 61000-4-2/-3/-4/-5/-6/-8, IEC/EN 61000-2-2 ,IEC/EN 61000-3-2/-3		
	Markings		CE		

* Specifications subject to change without notice.
** Base on load percentage

// Mars Series Intelligent On-Line UPS / MS 1-3KVA

- Double Conversion On-Line Technology
- Unity Input Power Factor
- Single-Chip Microprocessor Control
- Pure Sine Wave Output
- User Friendly Display
- Customer Options Slot
- Matching Battery Cabinet
- Optional Power Charger Available

MS 1-3k Specifications

Model		MS1000	MS2000	MS3000
Input	Voltage	80~140 or 160~280Vac		
	Frequency (Hz)	50/60 +/- 5% (Auto Sensing)		
	Phase	Single + G		
	Power Factor	>0.98 (Full Load)		
Output	Voltage	100/110/120/127 or 200/220/230/240Vac		
	Capacity	1000VA/700W	2000VA/1400W	3000VA/2100W
	Output Waveform	Sine Wave		
	Frequency Stability	±0.5Hz(Free Running)		
	Synchronization	Slew Rate: 1HZ/Sec. Max. Synchronizing window±0.5%		
	Crest Factor	3:1		
	Efficiency(AC to AC)	Up to 88%		
	DC Start	Yes		
Battery	Number of Batteries	3	6	8
	Type	Sealed Lead Acid Maintenance		
	Rated Battery Voltage	36	72	96
	Recharge Time	8 hours to 90%		
	Supplementary Charger	Optional 200W/500W Charger for Extended Backup Application		
Display	LED	Utility, Battery Low, Inverter, Bypass, Self-Test, Overload, Fault , Load/ Battery Level and Fault Conditions.		
	Self-Diagnostics	Push Button (On Demand)		
Alarms	Audible and Visual	Line Failure, Battery Low, Transfer to Bypass, System Fault Conditions		
Protection	Overload Capacity	120% for 60 sec., 150% for 10 sec.		
	Short Circuit	Hold Whole System		
	Over Temperature	Switch to Bypass		
Physical	Dimensions (WxHxD, mm/inch)	147x223x401/5.8x8.8x15.8	130x365x479/5.1x14.4x18.9	190x365x453/7.5x14.4x17.9
	Net Weight (kgs/lbs)	15/33.0	27/59.5	36/70.5
	Outlets (NEMA) 120Vac	(4) NEMA 5-15R	(4) NEMA 5-15R + (2) NEMA 5-20R	(6) NEMA 5-15R + (2) NEMA 5-20R
	Outlets (IEC/Local) 230Vac	(3) IEC-320-C13 / (1) Local	(3) IEC-320-C13 / (2) Local	Terminal / (2) Local
Standards and Certifications**	Safety	EN62040-1, UL1778		
	EMC	EN62040-2, EN61000-3-2, EN61000-3-3, FCC Class A		
	Markings	CE, UL, cUL, FCC		

* Specifications subject to change without notice.
** Depending on the model and voltage, more information please contact with Ablerex

// Mars II Redundancy On-Line UPS / MSII 4.5-20KVA

■ MS II 10KVA 3/1

■ MSII15/20KVA

- Simple Parallel Installation
- Full-time Digital Signal Processor Control
- Programmable Frequency Converter
- LCD/LED Mimic Panel
- Multi-Mode Operation
- Simple and Easy to Use
- Parallel Redundancy
- Optional Galvanic Isolation Transformer
- Optional Hot Swappable Battery

Battery Bank Specifications

UPS model	Code	Bat. Type	Max. Quantity	Dimensions (WxHxD, mm/ inch)
MSII 4.5K / 6KVA	T40JXX07	7AH	40	290x748x631 / 11.4x29.5x24.8
MSII 4.5K / 6KVA	T60JXX07	7AH	60	290x748x631 / 11.4x29.5x24.8
MS II 8K / 10KVA	T40NXX09	9AH	40	290x748x631 / 11.4x29.5x24.8
MS II 8K / 10KVA	T60NXX09	9AH	60	290x748x631 / 11.4x29.5x24.8
MSII15KVA / 20KVA	T60VXX09	9AH	60	290x748x631 / 11.4x29.5x24.8
MSII15KVA / 20KVA	T40VXX12	12AH	40	290x748x631 / 11.4x29.5x24.8

MSII 4.5-20K Specifications

Model			MSII4500	MSII6000	MSII8000 8000P	MSII10000 10000P	MSII15000	MSII20000
Input	Voltage **		160~280Vac		160~280Vac (1Φ) / 277~485Vac (3Φ)		277~485Vac(3Φ R, S, T, N)	
	Frequency		45 ~ 65 Hz (Auto Sensing)					
	Phase		Single + G		Single + G Three + G		Three + G	
	Power Factor ****		1Φ/1Φ model: Up to 0.99 @ linear load 3Φ/1Φ model: Up to 0.95 @ 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 Acceptable					
	Harmonic Distortion		< 3% at Linear Load					
	Output Waveform		Pure Sine Wave					
	Transfer Time (AC to DC)		0ms					
	Efficiency		Up to 91%		Up to 92%		Up to 93%	
	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		Breaker, Fuse / Electronic Circuit					
	EPO		Output Shutdown immediately					
	Over Temperature		Bypass or Shutdown 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		N/A	
	Weight (kgs/lbs) ***		86 / 190		8K: 87 / 192	10K: 96 / 215	60 / 132.2	
					8KP: 92 / 203	10KP: 101 / 223		
Environmental	Operating Temperature		0 to 40℃ / 32 to 104 ℉					
	Noise Level		<50dBA				<52dBA	
	Altitude		1000m/3300ft without De-Rating					
	Interface		0 to 90% (Without Condensation)					
Interface	Interface Type		Standard RS232 ,EPO					
	Communication Slot		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, EN61000-3-2, EN61000-3-3, FCC Class A					
	Markings		CE, cUL, UL FCC					

* Specifications subject to change without notice.
** Based on load percentage
*** Isolation transformer : net weight plus 53kg for 6000VA, 10000VA
Hot-Swappable : net weight plus 26kg for 6000VA, 10000VA
**** Depending on the model and voltage, more information please contact with Ablerex

// Automatic Transfer Switch

/ *ATS Series*

- ITI-Curve Seamless Transfer
- Multiple Outlets
- Elimination of Secondary Rack PDU
- Robust Out-Of-Phase Switching
- Aggregated Monitoring and Alarms
- LCD/LED Display Panel
- Network Management Availability

ATS Series Specifications

Model		ATS-216	ATS-232	ATS-120	ATS-130
Input	Input Voltage	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	
	Input Frequency	50/60Hz(±5%/10%/15%/20%)			
	Maximum Input Current	16A	32A	20A	30A
Output	Output Voltage	200/208/220/230/240		100/110/115/120/127	
	Maximum Output Current	16A	32A	20A	30A
	Overload Protection	Yes			
	Efficiency	99%(with full linear load)			
Connection	Input	(2) IEC-C20	Terminal	(2) NEMA 5-20R	(2) NEMA L5-30R
	Output	(8) IEC-C13 (1) IEC-C19	(16) IEC-C13 (2) IEC-C19	(8) NEMA 5-15/20R	(16) NEMA 5-15/20R (1) NEMA L5-30R
Interface	Standard Port	RS-232, USB, Dry Contact Relay			
	Communication Slot	Option: SNMP and RS-485 Card			
	Compatible Platforms	Microsoft Windows series			
Display	Status on LED + LCD	Source A, Source B, Fault, Overload, Alarm, Silence			
	LCD	Voltage, Current, Frequency, Load Percentage, Error Code			
Physical	Dimensions (WxHxD, mm/inch)	440x44x275 / 17.5x1.75x10.83	440x88x275 / 173x3.5x10.83	440x44x275 / 17.5x1.75x10.83	440x88x275 / 173x3.5x10.83
	Net Weight (kgs/lbs)	4 / 8.8	6 / 13.2	4 / 8.8	6 / 13.2
Environment	Operating Temperature	-5~40℃			
	Humidity	20 to 90% (Without Condensation)			
	Altitude	0 ~ 3000 meters			
Standard and Certifications	Safety	IEC 60950-1		UL 60950-1/CAN/CSA C22.2 No. 60950-1	
	EMC	EN 55022+EN 55024		FCC Part 15	

* Specifications subject to change without notice.

// External Bypass Switch Box

RacPDU 115A-230F

The RacPDU maintenance bypass and power output distribution switch allows you to manually transfer the connected equipment to utility power via a maintenance bypass switch and vice versa. It is also a type of plug-and-play power output distribution for Mars, Mars Convertible and MSRT Pro series. With attached brackets, you may fix the unit in Tower or Rack Mount direction.

■ RacPDU-130H

■ RacPDU-115A

■ RacPDU-210D

■ RacPDU-120B

■ RacPDU-216G

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 5-15P	NEMA 5-15P x1 Attached 6-foot cord	NEMA 5-15Rx8
RacPDU-120B	120V 2KVA	NEMA 5-20P Attached 10-foot cord	NEMA 5-20P	NEMA 5-20P x1 Attached 6-foot cord	NEMA 5-15Rx4 NEMA 5-20Rx4
RacPDU-130H	120V 3KVA	NEMA L5-30P Attached 10-foot cord	NEMA L5-30P	NEMA L5-30P x1 Attached 6-foot cord	NEMA 5-20Rx6 with 20A circuit breakerx2 NEMA 5-30Rx1
RacPDU-210D	230V 2KVA	N/A	IEC C14	IEC C14 x1 Attached 6-foot cord	IEC C13x8
RacPDU-216G	230V 3KVA	N/A	IEC C20	IEC C20 x1 Attached 6-foot cord	IEC C19x2 IEC C13x6
RacPDU-230F	230V 4.5K/6KVA	Terminal	NEMA L6-30R	Terminal	Terminal

TowPDU 260-2200

The TowPDU maintenance bypass and power output distribution switch allows you to manually transfer the connected equipment to utility power via a maintenance bypass switch and vice versa. For different UPS in parallel, you may choose one of the appropriated models listed below. With attached brackets, you may fix the unit in Tower or Rack Mount direction.

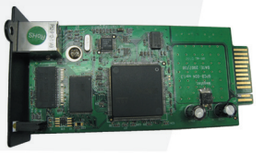
■ TowPDU-2200

TowPDU-260	Max. 60A	440x176x124/17.3x7.0x4.9	Max. 2pcs 4.5K/6K or 1pce 8K/10K
TowPDU-2120	Max. 120A		Max. 4pcs 4.5K/6K or 2pcs 8K/10K
TowPDU-2200	Max. 200A		Max. 4pcs 8K/10K

// UPS Accessories

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.



■ **SNMP Card**

for Janus, Janus XL, Mars, MSRT, MSRT Pro and MSII

■ **Dry Contact Board**

for Janus, Janus XL, Mars, MSRT, MSRT Pro and MSII

■ **USB Card**

for Janus, Janus XL, Mars, MSRT, MSRT Pro and MSII

■ **2nd RS232 Card**

for Janus, Janus XL, Mars, MSRT, MSRT Pro and MSII

■ **RS485 Card**

to provide a RS485 communication port for MSII series.

Charger Series

■ **200W Charger**

It provides 36~96Vdc voltage adjustable features by jumper setting, which can be widely used in Mars, MSRT, MSRT pro series.

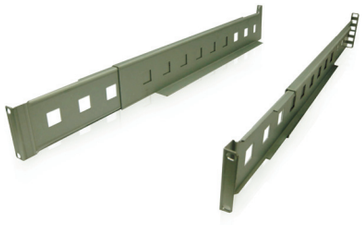
■ **500W Charger**

With minor components change, this charger might provide 72Vdc, 96Vdc and 120Vdc, which is suitable for current Mars and MSRT series.

■ **Optional External 1000W Charger**

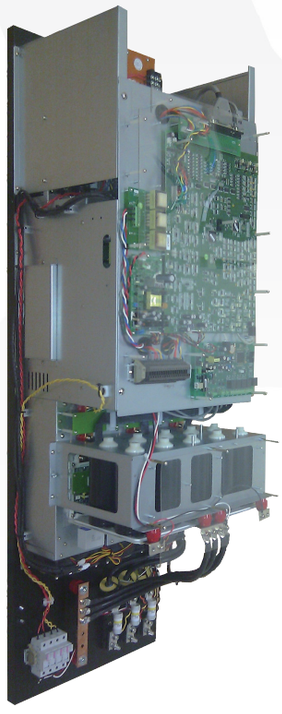
With it is isolation conversion technology plus precision control, this charger might provide 240Vdc which is suitable for current MSII series, the optional charge can be installed in parallel operation up to 4 units.

Rail Kit



It can be widely used in MSRT, MSRT Pro and MSII , JC XL, JC series.

// Enersine ESD34 Active Power Filter / ESD34 100A & 150A



- True Harmonic Solution
- IP00 Design
- Compact Size Design
- Easy to Install in Small Cabinet
- Up to 51st Harmonic
- Close/Open Loop Control
- Programmable Harmonic Compensation and Power Factor Correction
- Load Balancing Function
- Full-time DSP Control System
- Up to 8 Units in Parallel
- Parallel Operation in Various Current Ratings
- User Friendly Operation Interface --7" Colorful LCD Touch Screen

General Characteristics

Storage Temperature	-20 ℃ to + 70 ℃
Operating Temperature	+0 ℃ to +40 ℃
Relative Humidity	<95%
Operating Altitude	<1000 m
Reference Harmonic Standard	EN61000-3-4, IEEE 519-1992
Reference Design Standard	EN60146
Safety Standard	EN50178

HMI & Communication

Display	7 inch, 800×400 dots, LCD touch screen
Dry Contact	3 Output Dry Contacts
	1 Input Dry Contact
Communication	USB, RS-485, Ethernet
Monitoring Software (Optional)	ESD-Link34
Communication Protocol	J-Bus/Modbus RTU Protocol

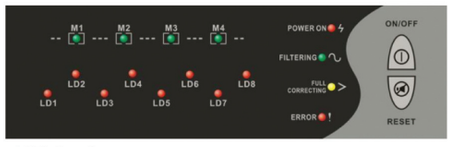
Electrical Specification

Model		ESD34-100-400	ESD34-150-400
Input Voltage		400V +15%,-20%	
Phase/Wires		3 phase 4 wires/3wires	
Frequency		50/60±3 Hz (Auto Sensing)	
Maximum Compensation Current/Phase		100 Arms	150 Arms
Maximum Compensation Current of Neutral		300 Arms	450 Arms
Compensated Harmonic Orders		From 2nd to 51st order. Up to 12 orders actives simultaneously (2nd ~31st). Higher Order Compensation (32nd~51st) Disable/Enable operation.	
Power Factor Correction		Compensate both lagging and leading reactive power.	
		Power factor can be programmed from 0.7 lagging to 0.7 leading	
CT Ratio		Can be set. Primary Current: 100A~10000A Secondary Current: 1A(Standard)/5A (Optional)	
CT Location		Source Side: Close Loop Control Load Side: Open Loop Control	
Response Time		< 20 ms	
Inrush Current		Less than rated current	
Current Limitation		Yes, at full correcting	
Parallel		Up to 8 Units	
Maximum Heat losses		2300 Watts	3200 Watts
Dimensions (WxHxD, mm/inch)	IP00	440x441x1500 / 17.3x17.3x59.0	
	IP20	600x600x1900 / 23.6x23.6x74.8	
Net Weight (kgs/lbs)	IP00	110/112.2	120/164.4
	IP20	195/429.8	205/451.8

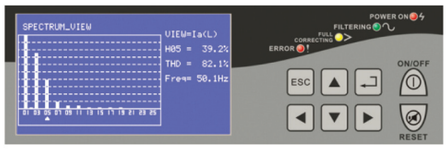
// Enersine ESD34 Modular Active Power Filter

/ ESD34 35A~960A

- True Harmonic Solution
- Modular Design, Easy to Extend
- Up to 51st Harmonic
- Close/Open Loop Control
- Programmable Harmonic Compensation and Power Factor Correction
- Load Balancing Function
- Full-time DSP Control System
- Up to 8 Units in Parallel
- Parallel Operation in Various Current Ratings
- User Friendly Operation Interface - LCD Screen



▲ LED Panel



▲ LCD Panel Optional

General Characteristics

Storage Temperature	-20℃ to + 70℃
Operating Temperature	+0℃ to +40℃
Relative Humidity	<95%
Operating Altitude	<1000 m
Reference Harmonic Standard	EN61000-3-4, IEEE 519-1992
Reference Design Standard	EN60146
Safety Standard	EN50178

Control Module Specification

Model Number	ESD34-CX035-400E-X	ESD34-CX035-480B-X
Input Voltage	400V +15%,-20%	480V +10%,-20%
Phase/Wires	3 phase 4 wires/3wires	3 phase 3 wires
Frequency	50/60±3 Hz (Auto Sensing)	
Compensated Harmonic Orders	From 2nd to 51st order. Up to 12 orders actives simultaneously (2nd ~31st). Higher Order Compensation (32nd~51st) Disable/Enable operation.	
Power Factor Correction	Compensate both lagging and leading reactive power.	
	Power factor can be programmed from 0.7 lagging to 0.7 leading	
CT Ratio	Can be set. Primary Current: 100A~10000A Secondary Current: 1A(Standard)/ 5A (Optional)	
CT Location	Source or Load side	
Response Time	< 20 msec	
Number of controllable Power Module	Up to 4 Power Modules.	
Parallel	Up to 8 Control Modules.	
Maximum Heat losses	50 Watt	
Color	RAL9011(PANTONE Process Black C)	
Protection Index	IP20	
Dimensions (WxHxD, mm/inch)	440 × 710 × 86 / 17.3 × 28.0 × 3.4	
Net Weight (kgs/lbs)	14 / 30.9	

Power Module Specification

Model Number	ESD34-PX035-400E	ESD34-PX035-480B
Input Voltage	400V +15%,-20%	480V +10%,-20%
Phase/Wires	3 phase 4 wires/3wires	3 phase 3 wires
Frequency	50/60±3 Hz	
Maximum Compensation Current/Phase	35 Arms	
De-rating Compensation Current/Phase (1)	30 Arms	
Maximum Compensation Current for Natural	105 Arms	N/A
Inrush Current	Less than rated current	
Current Limitation	Yes, at full correcting	
Maximum Heat losses	650 Watt	
Color	RAL9011(PANTONE Process Black C)	
Protection Index	IP20	
Dimensions (WxDxH in mm)	440 × 710 × 131 / 17.3 × 28.0 × 5.2	
Weight (kgs)	31 / 68.3	

(1)When 2 and above Power Modules work in power scalable configuration, the power module will downgrade

DC Equalizer Module Specification(1)

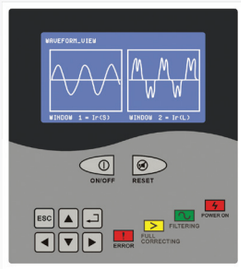
Number of controllable	Up to 4 Power Modules.
Number of controllable Power Modules	Up to 4 Power Modules.
Color	RAL9011(PANTONE Process Black C)
Protection Index	IP20
Dimensions (WxHxD, mm/ inch)	440 × 332.5 × 42 / 17.3 × 13.1 × 1.7
Net Weight (kgs/lbs)	4.5 / 9.9

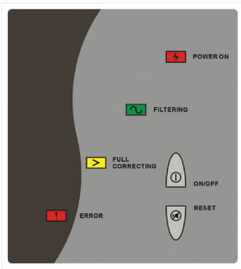
(1) Only for the 480V model.

Communication Interface

Dry Contact (Standard Configuration)	a. 5 Output Dry Contacts. b. 1 Input Dry Contact c. 1 EPO
Communication Interface	Standard : RS232/USB Optional: RS485/RS422 Ethernet Card
Monitoring Software (Optional)	ESD-Link34
Communication Protocol	J-Bus/MOD Bus Protocol

// Enersine ESD33 & ES34 Active Power Filter / *ESD33 & ES34 25A~200A*





- True Harmonics Solution
- Active Harmonics Compensation
- Improve Power Quality
- Easy Selection
- Minimum Heat-Loss during Operation
- Instantaneous Dynamic Response
- Up to 6 Units in Parallel
- User Friendly Operation Interface - LCD Screen

Electrical Specification

Category	Unit	25A	50A	100A	150A	200A
Line Voltage	V	208/380/400/415/480 ±15%				
Phase/Wires		ESD33 series for 3 phase 3 wires, ES34 series for 3 phase 4 wires				
Frequency	Hz	50/60 ±3				
Compensating Current in Phase	Arms	25	50	100	150	200
Compensating Current in Neutral(1)	Arms	75	150	300	450	600
Transient Response Time(2)	msec	Global mode<1ms, Selected mode<20ms				
Inrush Current		Less than rated current				
Current Limitation		Yes, at full correcting				
Soft Start	Sec	10				
Heat-losses	Watt	550	950	2000	3000	4100
Audible Noise from 1 Meter	dBA	60	60	63	63	65

(1) Applicable for ES34 series only.
(2) It is the total time from detection to steady compensation at 100% step load is less than 40 msec.

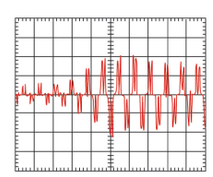
General Characteristics

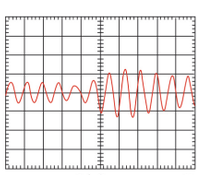
Equipment Storage Temperature	-20℃ ~ + 70℃
Operating Temperature	+0℃ ~ + 40℃
Relative Humidity	< 95%
Operating Altitude	< 1000 m
Reference Harmonic Standard	EN 61000-3-4 , IEEE 519-1992
Reference Design Standard	EN60146
Safety Standard	EN50178
Electromagnetic Compatibility	EN55011, EN50081-2, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-6-2

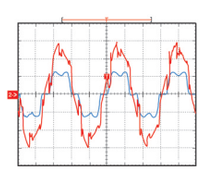
Mechanical Specification

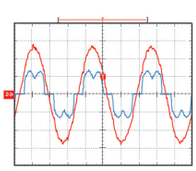
Category		25A	50A	100A	150A	200A
Color		RAL9001				
Protection Index		IP20				
Dimensions (WxHxD, mm/inch)	ESD33 series	410x880x390 / 16.1x34.7x15.4		600x1930x810 / 23.7x76x31.9		1200x1930x810 / 47.3x76x31.9
	ES34 series	490x920x400 / 19.3x36.3x15.8		700x1930x810 / 27.6x76x31.9		1400x1930x810 / 55.2x76x31.9
Net Weight (kgs/lbs)	ESD33 series	55/121	70/154	230/507	260/573	430/947
	ES34 series	60/132	75/165	270/595	300/661	540/1190

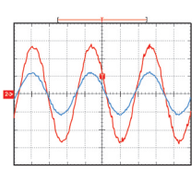
* Specifications subject to change without notice.


load current (before compensation)


source current (after compensation)

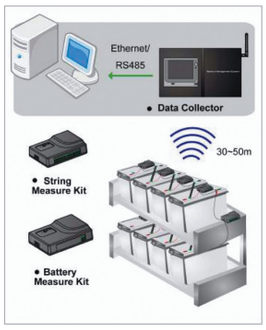

V & Is/Ir while Enersine off
THDV=17.4%

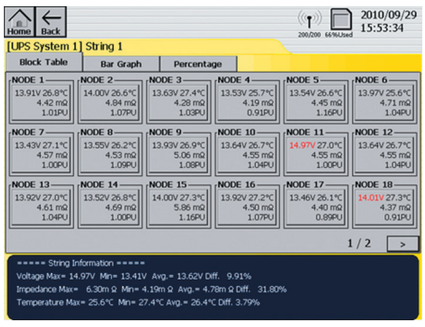

V & Ir while Enersine on
THDV=3.1%, THDIr=30.0%


V & Is while Enersine on
THDIs=2.5%

// Enerbatt 3G Wireless Battery Monitoring System

- Wireless Communication
- Easy Installation
- Cost Saving Design
- Graphic LCD Touch Screen
- Real Time Monitoring: Block Voltage, Block Impedance, Temperature, String Voltage & Current
- Alarm via Email & Dry Contact
- Build in Storage Memory for Battery History Database
- Colorful Bar/Curve Diagrams
- User-default Configurations & Deviation Levels
- Ethernet/RS-485 for Remote Monitoring





BMS-DC Data Collector

Input Power Supply	12Vdc, 35~60Vdc
Power Consumption	12W, Max.
Measurement Communication	RF 2.4G for Wireless*
Communication	Ethernet TCP/IP, RS 485
	Alarm Output Contact x1
	External Trigger Contact x 1
Max. Monitoring Kits	256 Kits**
Display	6.4" LCD Touch Screen
Store Media	SD/MMC Flash Memory Card, 2 Gigabyte
Dimensions (WxHxD, mm/inch)	378 x 249 x 81 / 14.9x98.3x32.0
Weight (kgs)	3 / 6.6

BMS-SMK String Measure Kit

Voltage	**Range**	Up to 750VDC
	Accuracy	±0.2%
Current	**Range**	Up to 3000A
	Resolution	±3%
Temperature	**Range**	0~100℃
	Accuracy	±1℃
Measurement Communication		RF 2.4G for Wireless*
Sample Rate		1Hz
Input Power Supply		35~60Vdc
Power Consumption		3.0W, Max.
Input Impedance		>1MΩ
Dimensions (WxHxD, mm/inch)		100 x 27 x 70 / 3.94x1.07x2.76
Weight (gs)		89 / 3.1

BMS-BMK Battery Measure Kit

Block Voltage		2V	6V	12V	
Input Impedance		>1MΩ			
Voltage	**Range**	1.48~4V	4.2~8V	8.5~16V	
	Accuracy	±10mV			
Current	**Battery Capacity**	Full range		<65Ah	>66Ah
	Resolution	0.01mΩ	0.03mΩ	0.10mΩ	0.03mΩ
Temperature	**Range**	0~100℃			
	Accuracy	±1℃			
Measurement Communication		RF 2.4G for Wireless*			
Sample Rate		1Hz			
Power Consumption		0.5W, Max.			
Dimensions (WxHxD, mm/inch)		100 x 27 x 70 / 3.94x1.07x2.76			
Weight (gs)		97 / 3.4			

Accessories

BMS-DPS	DC Power Supply Input: 90~260Vac Output: 48Vdc, 15Watt
BMS-TES	Temperature Senor 0~100℃ ±1℃
BMS-HCT	Hall effect Current Transformer 50A, 100A, 300A, 600A, 2000A
BMS-BTA	Battery Terminal Auxiliary Connector 6Φ, 8Φ, 10Φ
BMS-ANT	2.4G Antenna

* The maximum distance of transmission is 50 meters for open site and less then 30 meters is recommended.
** The total number of Battery Measure Kit and String Measure Kit would not be more than 256.
*** An additional temperature sensor is required for temperature measurement.
**** An additional current transformer is required for current measurement.

// Enersolis Series Grid-Connected Photovoltaic Inverter / ES1800-ES5000

- Compact Size & Light Weight
- User Friendly LCD Display
- User High MTBF Component
- Convection Cooling
- Intelligence DSP Controller
- Protection Class IP65
- Intelligence MPPT Technology
- High MPPT Tracker Efficiency

■ **ES1800 / ES2000**

■ **ES4200 / ES5000**

ES1800-ES5000 Specifications

Model			ES 1800	ES 2000	ES2200 ES2200 US-240	ES3300 ES3300 US-240	ES4200 ES4200 US-240	ES5000 ES5000 US-240
Inverter Technology	Conversion Mode		Sine-wave, Current source, High frequency PWM		Sine-wave, Current source, High frequency PWM			
	Isolation Method		Transformer-less Design					
DC Input Data	Nominal DC Voltage		365 VDC		360 VDC			
	Max. DC Input Voltage		450VDC		500 VDC			
	Working Range		80 ~ 450VDC		120VDC~500VDC*			
	Max. DC Input current		10.0 Amp		14.6 Amp	22 Amp	14.6 Amp	18.3 Amp
	MPPT Range		100 ~ 400 VDC		150 VDC ~ 450 VDC			
	MPPT Tracker		1		1		2	
Efficiency Data	Max. Efficiency		>96%					
	Euro Efficiency		>94%					
Environmental	Operating Temperature		-25 ℃ ~ +40 ℃		-25 ℃ ~ +50 ℃ / -13 ℉ ~ 122 ℉			
	Humidity		0 to 90% (Without condensation)					
	Altitude		0 ~ 2000 M					
Mechanical	Dimensions (WxHxD, m/inch)		352 x 302 x 125 mm 13.9 x 11.9 x 4.93 inch		455x430x190mm 18x24.8x7.5 inch		455x510x190mm 18x27.8x7.5 inch	
	Weight		9kgs/19.8lbs		26kgs/61.6lbs		28kgs/74.8lbs	
	Protection Class		IP65, outdoor		IP65, outdoor NEMA 3R, outdoor		IP65, outdoor NEMA 3R, outdoor	
	Cooling		Convection		Convection			
	AC Connection		Terminal					
	DC Connection		Connector		Connector Terminal		Connector Terminal	
Communication	Communication Interface		RS232 /RS485/EPO		RS232,EPO(Standard)/USB,RS485,Dry contact, TCP/IP (Optional)			
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 of 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		Downgraded output power			
Certification	On-Gird Performance		VDE 0126 -1-1:2006+A1:A11, ENEL2010, AS4777.2/.3, UKG83/1		VDE 0126-1-1, VDE-AR-N 4105, ENEL2010, AS4777.2/.3, ER G83/1, G59, CGC, CEI-021, UL1741			
	Safety		EN62109-1, AS3100		EN62109-1, AS3100			
	EMI/EMC		EN 61000-6-3, EN 61000-6-4, EN 61000-3-2, EN 61000-3-2 EN 61000-6-1, EN 61000-6-2		EN 61000-6-3, EN 61000-6-4, EN 55022, EN 62040-2 EN 61000-6-1, EN 61000-6-2			

*** Specifications subject to change without notice.**

**** Depending on the model and voltage, more information please contact with Ablerex**

// Enersolis Series Grid-Connected Photovoltaic Inverter / ES6KW-10KW

- Three-phase Inverter
- Acceptable Input Voltage up to 1000 Vdc
- Transformer-less Topology
- Maximum Efficiency 97.5%
- 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
- Maximum Output Power Clamping
- Multi-Operation Mode
- Multi-Country Certification
- 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

ES6KW-ES10KW Specifications

Model			ES 6000	ES 8000	ES 10000
Inverter Technology	Conversion Mode		Sine-wave, Current source, High frequency PWM		
	Isolation Method		Transformer-less Design		
DC Input Data	Nominal DC Voltage		740 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
	MPPT Range		370 ~ 850 Vdc		
	MPPT Tracker		2		
AC Output Data	Nominal AC Power		6,000 Watt	8,000 Watt	10,000 Watt
	Max. AC Apparent Power		6,600 VA	8,800 VA	11,000 VA
	Nominal AC Voltage		AC 230 V x 3		
	Output Connect Method		3-Phase / 4-Wires (L1, L2, L3, N, PE)		
	Nominal AC Current		8.69 Amp x 3	11.59 Amp x 3	14.49 Amp x 3
	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		97.50%		
	Euro Efficiency		96.20%	96.60%	97.00%
Environmental	Operating Temperature		-20 ℃ ~ +60 ℃		
			-4 ℉ ~ 139 ℉		
	Pollution degree classification		PD3		
	Overvoltage category (DC side)		Category II		
	(IEC 60664 - 1) (AC side)		Category III		
	Humidity		0 to 100% (Without condensation)		
	Altitude		0 ~ 2000 m / 0 ~ 6600 ft		
Mechanical	Dimension (WxHxD in mm)		595 x 451 x 247		
	Net Weight (kgs)		41		
	Gross Weight (kgs)		44		
	Protection Class		IP65, outdoor		
	Cooling		Temperature-dependent fan		
	AC Connection		Connector		
	DC Connection		Connector		
Communication	Communication Interface		RS232 & RS485 (Standard)		
			USB, Dry Contact, TCP/IP, WiFi card(Optional)		
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 of 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		Reduced output power		
Certification	On Grid Performance		VDE 0126 -1-1, VDE AR-N 4105, ENEL 2010, AS4777.2/3, UKG83/1, CGC		
	Safety		EN 62109-1, AS3100		
	EMI/EMC		EN 61000-6-1, EN 61000-6-2 , EN 61000-6-3, EN 61000-6-4 , EN61000-3-2 , EN61000-3-3		

* Specifications subject to change without notice.

// Enersolis Series Off-Grid Photovoltaic Charger / Buck-1000W Buck-1500W

- Universal for 12, 24, 36 and 48V Battery System
- Broad Input Range for Various PV Modules
- Integrated MPPT Technology
- Three-Stage Fast Charge
- Operation under harsh ambient temperature
- LCD/LED Operational Interface

PV Charger 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	30A
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/Cw/cell)	
Standby Power Consumption	0W	
Total Power Consumption while operating	3.5W	
ALARMS		
Visible	Fault, PV Low, Bat. Abnormal, etc.	
PHYSICALS CHARACTERISTICS		
Dimension (WxHxD in mm)	165x330x85	
Input/Output Connectors	Hardwire(Terminal Block)	
Enclosure Type	IP20	
Net Weight(Kgs)	3.2	
ENVIRONMENT		
Operating Temperature	-20 ℃ to +60 ℃	
Storage Temperature	-40 ℃ to +85 ℃	
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		
Part No.	Taiwan: 97147246	
	China: 200810180491.7	
	USA: 12/273,669	

* Specifications subject to change without notice.
** Depending on the model and voltage, more information please contact with Ablerex

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