

## AS 1000 Series



### AS 1000 Series Technical Specifications 1-3 kVA 1 Phase Input - 1 Phase Output (HF) Online UPS

MODEL	AS 1001	AS 1001L	AS 1002	AS 1002L	AS 1003	AS 1003L					
Rated Power (kVA)	1 kVA		2 kVA		3 kVA						
Active Power (kW)	0,9 kW		1,8 kW		2,7 kW						
<b>INPUT</b>											
Rated Voltage	200/208/220/230/240 Vac (1P+N+PE)										
Voltage Range	125~290±%5@0-60% 155~290±%5@70-80%	Rated Load	135~290±%5@60-70% 175~290±%5@80-100%	Rated Load	135~290±%5@60-70% 175~290±%5@80-100%	Rated Load					
Operating Frequency Range	40/70 Hz										
Power Factor	0,99										
<b>OUTPUT</b>											
Rated Voltage	200/208/220/230/240 Vac (1P+N+PE)										
Voltage Regulation	±1%										
Frequency	Line	47-53 Hz or 57-63 Hz (Synchronized Range)									
	Battery	50/60±0,1 Hz									
Waveform	Pure Sine Wave										
Voltage Distortion (THDv)	<3% (linear load);<6%(Non-linear load)										
Output Power Factor	0,9										
Crest Factor	3:1										
Efficiency	Line Mode	88%		92%							
	Battery Mode	85%	86%	87%	88%	89%					
<b>SYSTEM FEATURES</b>											
UPS Type / Technology	Standalone Tower Type / True Online Double Conversion										
Transfer Time	AC - Battery	Zero									
	INV - Bypass	4 ms (Typical)									
Overload Capability	Ambient Time <35 °C	105%-110%: UPS shuts down after 10 minutes at battery mode or transfer to bypass when the utility is normal 110%-130%: UPS shuts down after 1 minutes at battery mode or transfer to bypass when the utility is normal >130%:UPS shuts down after 3 seconds at battery mode or transfer to bypass when the utility is normal									
	40°C < Ambient Temp <35°C	105%-110%: UPS shuts down after 1 minutes at battery mode or transfer to bypass when the utility is normal >110%:UPS shuts down after 3 seconds at battery mode or transfer to bypass when the utility is normal									
Short Circuit	Hold Whole System										
Overheat	Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately										
Low Battery Voltage	Alarm and Switch Off										
EPO (optional)	Shut down UPS Immediately										
Communication Interface	USB (or Rs232), SNMPcard (optional) Relay card (optional)										
Audible & Visual Alarms	Line Failure, Battery Low Overload, System Fault										
<b>BATTERY</b>											
Rated Voltage / Capacity	2x12V/9 Ah		4x12V/9 Ah		6x12V/9 Ah						
Typical Charge Time	4 Hours to %90 Capacity										
<b>ENVIRONMENT</b>											
Operating Temperature	0°C to 40 °C										
Storage Temperature	-25°C to 55°C										
Relative Humidity	< 20-95% @ 0°- 40 °C (non-condensing)										
Altitude	< 1500 m										
Audible Noise	< 50 dBA										
<b>STANDARDS</b>											
LVD (Safety)	IEC/EN 62040-1 / IEC/EN 60950-1										
EMC	IEC/EN 62040-2/IEC61000-4-2/IEC61000-4-3/IEC61000-4-4/IEC61000-4-5/IEC61000-4-6/IEC61000-4-8										
<b>PHYSICAL</b>											
Dimensions (WxDxH) [mm]	144x293x209		144x399x209		191x460x337	144x399x209					
Weight [kg]	9,8	4,1	17	6,8	27,6	7,4					

### ONLINE UPS

AS 1000 Series, produced with PWM and IGBT technology provide sinusoidal waveform output and contains advanced communication options. These series are 1 phase input, 1 phase output online UPS. AS 1000 Series manufactured in different power ranges, are used to supply vital important equipment's such as medical analysis equipment's, operating rooms in hospitals, ultrasound equipment's, security systems, all kinds of automation systems, computer networks and communication systems. Thanks to higher protection providing technology. AS 1000 series protect them from problems of utility failures and irregular voltage.

### FEATURES

- True double-conversion
- Wide input voltage range (110-300 Vac)
- Input power factor correction 0.99
- Output Power Factor 0.9
- Maximum 12A charger for long-run models
- Charger current can be setting by LCD
- 50Hz/60Hz frequency converter mode
- Emergency power off function (EPO)
- Eco mode operation for energy saving (ECO)
- Generator compatible
- SNMP / USB / RS232 multiple communications
- Smart battery charger design for optimized battery performance
- Selectable output voltage: 200, 208, 220, 230, 240Vac

## AS 1000 Series

### AS 1000 Series Technical Specifications

6-10 kVA 1 Phase Input - 1 Phase Output (HF) Online UPS



#### FEATURES

- N+X Parallel Redundancy
- Online Double Conversion with DSP Control
- Input Current Harmonic: <3%
- Optimization Battery Group, the Quantity of Battery: 16/18/20 pieces (optional)
- Output Power Factor is Changed When Selection Different Battery Quantity  
16 pcs: 0.7PF; 18pcs:0.8PF; 20pcs:0.9PF
- Wide Input Voltage Range: 120-276Vac
- Wide Input Frequency Range (50Hz: 45-55Hz; 60Hz: 54-66Hz)
- Support Generator Input
- Support Economic (ECO) Operation Mode
- Self-Testing When UPS Startup
- Options: SNMP Card/Relay Card/ Parallel Board
- Cold start

MODEL	AS 1006	AS 1006L	AS 1010	AS 1010L
Rated Power (kVA)	6		10	
Active Power (kW)	5,4		9	
<b>INPUT</b>				
Rated Power	220/230/240 VAC 1P+N+PE			
Voltage Range	120~276 VAC			
Operating Frequency Range	50Hz: 45-55Hz; 60Hz: 54-66Hz (Auto Sensing)			
Harmonic Distortion (THD) <sup>i</sup>	<3% (100% Liner Load)			
Power Factor	0,99			
Bypass Voltage Range	Max. Voltage: 220V: +25%(optional +10%, +15%, +20%) 230V: +20%(optional +10%, +15%) 240V: +15%(optional +10%) Min.Voltage: -45% (optional -20%, -30%)			
ECO Range	Same as the Bypass			
Harmonic Distortion (THD) <sup>i</sup>	<3% (100% Linear Load)			
Generator Input	Yes			
<b>OUTPUT</b>				
Rated Voltage	220/230/240 VAC 1P+N+PE			
Voltage Regulation	±1%			
Frequency	Line	±1% / ±2% / 4% / ±5% / ±10% of the Rated Frequency (Optional)		
	Battery	50/60 ± 0,1 Hz		
Waveform	Pure Sine Wave			
Voltage Distortion (THD) <sup>v</sup>	≤ 2% (Liner Load); ≤ 5% (Non-Liner Load)			
Output Power Factor	0,9			
Crest Factor	3:1			
Efficiency	>93,5%			
<b>SYSTEM FEATURES</b>				
UPS Type / Technology	Standalone Tower Type / True Online Double Conversion			
Transfer Time	Mains to Battery: 0 ms. Mains to Bypass: 0 ms.			
Overload	Line Mode	Load≤ 110%: 60min; ≤125%:10min, ≤150%:1min,>150% turn to bypass mode immediately		
Capability	Bypass Mode	40A (Breaker)	60A (Breaker)	
Short Circuit		Hold Whole System		
Overheat		Line Mode: Switch to Bypass: Backup Mode: Shut down UPS immediately		
Low Battery Voltage		Alarm and Switch Off		
Battery		Advanced Battery Management		
LED & LCD Display	Line Mode, Bat Mode, Eco Mode, Bypass Mode, Battery Low, Overload & UPS Fault			
LCD Display	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage, Inner Temperature & Remaining Battery Backup Time			
Self - Diagnostics		Upon Power On and Software Control		
Communication Interface	USB (RS-232), SNMP card (optional), Relay card (optional)			
Audible & Visual Alarms	Line Failure, Battery Low, Overload, System Fault			
<b>BATTERY</b>				
Battery Voltage	±96/108/120 Vdc (Optional)			
Capacity	12V/7Ah/9Ah			
Typical Re-Charge Time	6-8 Hours (to 90% of full capacity)			
Charge Current	1A(Standard unit); long run unit max. current 10A (can be set according to battery capacity insalled)			
<b>ENVIRONMENT</b>				
Operating Temperature	0°C to 40°C			
Storage Temperature	-25°C to 55°C			
Reletive Humidity	0-95% (non-condensing)			
Altitude	<1500m			
Audible Noise	<55 dBA			
<b>STANDARDS</b>				
LVD (Safety)	IEC / EN 62040-1 / IEC / EN 60950-1			
EMC	IEC/EN62040-2/IEC 61000-4-2/IEC61000-4-3/IEC61000-4-4/IEC61000-4-5/IEC61000-4-6/IEC61000-4-8			
<b>PHYSICAL</b>				
Dimensions (WxDxH) (mm)	250X502X616			
Weight (kg)	62	18	64	20

#### ONLINE UPS

AS 1000 Series, produced with PWM and IGBT technology provide sinusoidal waveform output and contains advanced communication options. These series are 1 phase input, 1 phase output online UPS. AS 1000 Series manufactured in different power ranges, are used to supply vital important equipment's such as medical analysis equipment's, operating rooms in hospitals, ultrasound equipment's, security systems, all kinds of automation systems, computer networks and communication systems. Thanks to higher protection providing technology. AS 1000 series protect them from problems of utility failures and irregular voltage.

## AS 1000R Series



### AS 1000R Series Technical Specifications

1-3 kVA 1 Phase Input - 1 Phase Output (HF) Rack Type Online UPS

MODEL	AS 1001R	AS 1001RL	AS 1002R	AS 1002RL	AS 1003R	AS 1003RL
Rated Power (kVA)	1000		2000		3000	
Active Power (W)	900		1800		2700	
<b>INPUT</b>						
Rated Power			200/208/220/230/240 VAC 1P+N+PE			
Voltage Range			110~300@0-60% Rated Load	160~300@61-100% Rated Load		
Operating Frequency Range			50Hz: 45-55Hz	60Hz: 54-66Hz (Auto Sensing)		
Power Factor				0,99@Nominal Voltage (%100 Load)		
<b>OUTPUT</b>						
Rated Voltage			200/208/220/230/240 VAC 1P+N+PE			
Voltage Regulation				±1%		
Frequency	Line		45-55 Hz or 56-64 Hz (Synchronized Range)			
	Battery			50/60±0,1 Hz		
Waveform			Pure Sine Wave			
Voltage Distortion (THDv)				<3%(Liner Load);<6% (Non-Linear Load)		
Output Power Factor				0,9		
Crest Factor				3:1		
Efficiency	Line Mode		88%	89%	90%	
	Battery Mode		83%	85%	86%	
<b>SYSTEM FEATURES</b>						
UPS Type / Technology					Rack Mount Type / True Online Double Conversion	
Transfer	AC - Battery				Zero	
Time	INV - Bypass				4 ms (Typical)	
Management	RS-232/USB				Supports Windows • 2000/2003XP/2008 Windows 7/8, Linux, FreeBSD and MAC	
	Optional SNMP				Power Management from SNMP Manager and Web Browsee	
LCD Indicators					Load Level, Battery Level, Ac Mode, Battery Mode, Bypass Mode, and Fault Indicators	
Audible Alarms					Battery Mode, Fault, Overload, Battery Low,	
<b>BATTERY</b>						
Standart	Battery Type		2x12V/9Ah		4x12V/9 Ah	
Model	Recharge Time				4 hours recover to 90% capacity	
(KR)	Charge Current				1.0 A	
	Charge Voltage		27,4Vdc±%1		54,7 Vdc±%1	
Long Back-up	Charge Current				6 A/12A (Double Board)	
Model (KRL)	Charge Voltage		27.4Vdc±%1		54,7 Vdc±%1	
					82,1 Vdc±%1	
<b>ENVIRONMENT</b>						
Operating Temperature					0°C to 40 °C	
Storage Temperature					-25°C to 55°C	
Relative Humidity					<20-90%@0°C - 40°C (non-condensing)	
<b>STANDARDS</b>						
LVD (Safety)					IEC/EN 62040-1/IEC/EN 60950-1	
EMC					IEC/EN62040-2/IEC61000-4-2/IEC61000-4-3/IEC61000-4-4/IEC61000-4-5/IEC61000-4-6/IEC61000-4-8	
<b>SYSTEM FEATURES</b>						
Dimensions (WxDxH)(mm)	Standart KR		440x430x86,5		440x552x86,5	
	Long KRL		440x430x86,5		440x552x86,5	
Weight (kg)	Standart KR	13,9	N/A	20,1	N/A	23,3
	Long KRL	8,2		N/A	10,9	N/A
						11,3

### FEATURES

- Rack Tower Convertible Design
- Mimic LCD Display May be Rotated by Simply Pushing Front Button
- True Online Double Conversion
- High Output Power Factor at 0.9PF
- Comprehensive Display Allows Easy Monitoring and Access of UPS Status
- Smart SNMP works with either USB or RS-232 together
- Hot-Swappable Battery
- Efficiency up to 90%
- Estimated Remaining Time Displayed on the LCD
- Support Economic (ECO) Operation Mode
- Matching Battery Pack
- Optional Powerful Charger
- Cold Start
- Power Sheding May Turn off Uncritical Load In Battery Backup
- Emergency Power Off
- Frequency Converter Mode Is Settable

### ONLINE UPS

AS 1000R series online intelligent UPS, adopts DSP all-digital control technology, with more Excellent output index and multi term innovation design, able to provide full protection for high-performance serve, internet equipment telecommunication system, industry process and other key equipment. Tower and Rack Mount conversion function design, greatly improve the UPS adaptability to the Installation modes.

## AS 1000R Series



### FEATURES

- Online-Double conversion
- Non Transfer Time of Output
- PFC Technology
- Full Digital Control (DSP)
- Output Power Factor: 0.9
- Input Current Harmonic<3%
- ECO Function
- Charging/Rectifier/Inverter Fully Digital Control Technology
- Optimization Battery Group, the Quantity of Battery: 16/18/20 pieces (optional)
- Wide Input Voltage Range: 120-276Vac
- Wide Input Frequency Range: 45-55Hz/54-66 Hz
- Self-Testing When UPS Startup
- Input Over/Under Voltage Protection
- Automatic Bypass
- DC Start
- Communication Port: RS232, USB
- Options: SNMP Card/ Relay Card

### AS 1000R Series Technical Specifications

6-10 kVA 1 Phase Input - 1 Phase Output (HF) Rack Type Online UPS

MODEL	AS 1006R	AS 1010R
Rated Power (kVA)	6	10
Active Power (kW)	5,4	9
<b>INPUT</b>		
Rated Voltage	220/230/240 VAC (1P+N+PE)	
Voltage Range	120~276 VAC	
Operating Frequency Range	50 Hz: 45-55 Hz; 60 Hz:54-66 Hz (Auto Sensing)	
Power Factor		≥ 0,99
Bypass Voltage Range	Max. Voltage: 220V: +25% (optional +10%,+15%,+20%) 230V: +20% (optional +10%,+15%) 240V: +15% (optional +10%) Min. voltage: -45% (optional -20%,-30%)	
ECO Range		Same as the Bypass
Harmonic Distortion (THDi)		<3% (100% linear load)
Generator Input		Yes
<b>OUTPUT</b>		
Rated Voltage	220/230/240 VAC 1P+N+PE	
Voltage Regulation	±2%	
Frequency	Line	±1%/±2%/±4%/±5%/±10% of the Rated Frequency (Optional)
	Battery	50/60± 0,1 Hz
Waveform		Pure Sine Wave
Voltage Distortion (THDv)		≤ 2% (Linear load); ≤ 5% (Non-linear load)
Output Power Factor		0,9
Crest Factor		3 :1
Efficiency		>93,5%
<b>SYSTEM FEATURES</b>		
UPS Type / Technology		Rack Type / True Online Double Conversion
Transfer Time		Mains to Battery: Oms; Mains to Bypass: Oms
Overload Capability	Line Mode	Load ≤110%; 60min; ≤125%: 10min, ≤150%: 1min,>150% turn to bypass mode immediately
	Bypass Mode	40A (Breaker)
Short Circuit		Hold Whole System
Overheat		Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately
Low Battery Voltage		Alarm and Switch Off
Battery		Advanced Battery Mangement
LED & LCD Display		Line Mode, Bat. Mode, Eco Mode, Bypass Mode, Battery Low, Overload & UPS Fault
LCD Display		Input Voltage, Input Frequency, Output Voltage,Output Frequency, Load Percentage, Battery Voltage, Inner Temperature & Remaining Battery Backup Time
Self - Diagnostics		Upon Power On and Software Control
Communication Interface		USB (or RS-232), SNMP Card (optional), Relay card (optional)
EPO (Optional)		Shut Down UPS Immediately
<b>BATTERY</b>		
Battery Voltage		±96/108/120Vdc (Optional)
Typical Re-Charge Time		6-8 Hours (to 90% of full capacity)
Charge Current		Maximum Current 6A(Standard unit);Long run unit max. current 10A(can be set according to battery capacity installed)
<b>ENVIRONMENT</b>		
Operating Temperature		0°C to 40 °C
Storage Temperature		-25°C to 55°C
Relative Humidity		0-95% (non-condensing)
Altitude		< 1500m
Audible Noise		< 55 dBA
<b>STANDARDS</b>		
LVD (Safety)		IEC/EN 62040-1/IEC/EN 60950-1
EMC		IEC/EN62040-2/IEC61000-4-2/IEC61000-4-3/IEC61000-4-4/IEC61000-4-5/IEC61000-4-6/IEC61000-4-8
<b>PHYSICAL</b>		
Dimensions (WxDxH) [mm]		443x580x131 (3U)
Weight [kg]	23	25

### ONLINE UPS

AS 1000R series online intelligent UPS, adopts DSP all-digital control technology, with more Excellent output index and multi term innovation design, able to provide full protection for high-performance serve, internet equipment telecommunication system , industry process and other key equipment. Tower and Rack Mount conversion function design, greatly improve the UPS adaptability to the Installation modes.

## AS 1000D Series



### AS 1000D Series Technical Specifications 5-15 kVA 1 Phase Input - 1 Phase Output (LF) Online UPS

MODEL	AS 1005D	AS 1007D	AS 1010D	AS 1015D		
Apparent Power (kVA)	5	7	10	15		
Active Power (kW)	3,25	4,55	7	10,5		
<b>INPUT</b>						
Voltage	220/230 Vac (1P+N+PE)					
Voltage Tolerance	±%15					
Frequency	50 Hz (60Hz On Request)					
Frequency Range	5%					
Current	30A	40A	58A	87A		
<b>OUTPUT</b>						
Voltage	220 Vac (1Ph+N+PE)					
Voltage Regulation	±1%					
Frequency	50 Hz (60 Hz On Request)					
Frequency Tolerance	Synchronized to Network ±2% in Line Mode; ±0,2 Hz in Free Running					
Crest Ratio	3:1					
Efficiency (100% Load)	85 - 87 %		86 - 90 %			
THDv	<3% Linear Load, <5% Non Linear Load					
Overload	%100<load<%125 for 10 min., %125<load<%150 for 1 min, Load> 150:Bypass					
Short Circuit Protection	Electronic Protection					
<b>BATTERY</b>						
Type	Maintenance Free Lead Acid Battery					
Quantity	16	18	20			
Charge Voltage	216VDC	243VDC	270VDC			
End of Discharge Voltage	160VDC	180VDC	200VDC			
Battery Protection	Automatic Circuit Breaker					
Ambient Temperature	25°C					
Battery Cabinet	Internal		External			
<b>COMMUNICATION</b>						
Interface	RS-232 and Dry Contacts					
Software	UPS Management SW (3Client + 1Server)					
<b>ENVIRONMENTAL</b>						
Operating Temperature	0 to 40 °C					
Storage Temperatura	-25 to + 55°C					
Relative Humidity	%0-90 (Non-condensing)					
Altitude	<1000 m					
Protection Level	IP20					
Acoustic Noise	<45 dBA					
<b>PHYSICAL</b>						
Dimensions (WxDxH)	265x600x590	265x660x640	265x740x720	300x810x720		
Weight (kg)	60	75	82	107		
<b>OPTIONS</b>						
Input Transformer	Galvanic Isolation for the Input					
MBS	Maintenance Bypass Switch for Complete Isolation					
Interface	SNMP, MODBUS, Remote Mon. Panel, RS-485					
Parallel Operation	N+1 Unit (Up to 2 Units)					
<b>STANDARDS</b>						
Harmonized Standards	EN 62040-1 (LVD), EN 62040-2 (EMC), EN 62040-3					

#### ONLINE UPS

AS 1000D Series Online UPSs protect mono phase critical loads against utility failures and irregular voltage cases. They produce pure sine wave output via microprocessor controlled, manufactured with the state of the art PWM and IGBT technology. Galvanic isolation transformer, parallel operability, communication port are available. IT applications, small offices, service providers, communication networks, control equipment's, automation systems etc. are the main fields of use with a proved reliable high technology.

#### FEATURES

- Output transformer for galvanic isolation
- Static by-pass through the utility at Overload or UPS breakdown
- Load, battery state and detailed information including advanced LCD front panel
- 64 registered events history
- RS-232 and dry contact output



## AS 2000 Series Technical Specifications

10-20 kVA 3 Phase Input - 1 Phase Output (HF) Online UPS



MODEL	AS 2010 / 2010L	AS 2015	AS 2020		
Rated Power (kVA)	10	15	20		
Active Power (kW)	9	13,5	18		
<b>INPUT</b>					
Rated Power	380/400/415 VAC (3P+N+PE)				
Voltage Range	208~478 VAC				
Operating Frequency Range	50Hz: 45-55Hz; 60Hz: 54-66Hz (Auto Sensing)				
Harmonic Distortion (THD)	<5% (100% Liner Load)				
Power Factor	0,99				
Bypass Voltage Range	Max.Voltage: 380V: +25%(optional +10%, +15%, +20%) 400V: +20%(optional +10%, +15%) 4150V: +15%(optional +10%) Min.Voltage: -45% (optional -20%, -30%)				
ECO Range	Same as the Bypass				
Harmonic Distortion (THD)	<5% (100% Linear Load)				
Generator Input	Yes				
<b>OUTPUT</b>					
Rated Voltage	220/230/240 VAC 1P+N+PE				
Voltage Regulation	±1%				
Frequency	Line	±1% / ±2% / 4% / ±5% / ±10% of the Rated Frequency (Optional)			
	Battery	50/60 ± 0,1 Hz			
Waveform	Pure Sine Wave				
Voltage Distortion (THDv)	≤ 2% (Liner Load); ≤ 5% (Non-Liner Load)				
Output Power Factor	0,9				
Crest Factor	3:1				
Efficiency	>93,5%		>94,5%		
<b>SYSTEM FEATURES</b>					
UPS Type / Technology	Standalone Tower Type / True Online Double Conversion				
Transfer Time	Mains to Battery: 0ms Mains to Bypass: 0ms				
Overload	Line Mode	Load ≤ 110%: 60min; ≤ 125%: 10min, ≤ 150%: 1min, > 150% turn to bypass mode immediately			
Capability	Bypass Mode	63A (Breaker)	100A (Breaker)		
		125A (Breaker)			
Short Circuit	Hold Whole System				
Overheat	Line Mode: Switch to Bypass; Backup Mode: Shut down UPS immediately				
Low Battery Voltage	Alarm and Switch Off				
Battery	Advanced Battery Management				
LED & LCD Display	Line Mode, Bat Mode, Eco Mode, Bypass Mode, Battery Low, Overload & UPS Fault				
LCD Display	Input Voltage, Input Frequency, Output Voltage, Output Frequency, Load Percentage, Battery Voltage, Inner Temperature & Remaining Battery Backup Time				
Self - Diagnostics	Upon Power On and Software Control				
Communication Interface	USB (or RS-232), SNMP card (optional), Relay card (optional)				
Audible & Visual Alarms	Line Failure, Battery Low, Overload, System Fault				
<b>BATTERY</b>					
Battery Voltage	±96/108/120 Vdc (Optional)				
Capacity	12V/7Ah/9Ah				
Typical Re-Charge Time	6-8 Hours (to 90% of full capacity)				
Charge Current	1A (Standard unit); long run unit max. current 10A (Long Run Unit)				
<b>ENVIRONMENT</b>					
Operating Temperature	0°C to 40°C				
Storage Temperature	-25°C to 55°C				
Reletive Humidity	0-95% (non-condensing)				
Altitude	<1500m				
Audible Noise	<55 dBA		<58 dBA		
<b>STANDARDS</b>					
LVD (Safety)	IEC / EN 62040-1 / IEC / EN 60950-1				
EMC	IEC/EN62040-2/IEC 61000-4-2/IEC61000-4-3/IEC61000-4-4/IEC61000-4-5/IEC61000-4-6/IEC61000-4-8				
<b>PHYSICAL</b>					
Dimensions (WxDxH) (mm)	250x597x655(K)/250x502x616(EL)	250x502x616			
Weight (kg)	76(K) / 35(EL)	45	46		

### FEATURES

- N+X Parallel Redundancy
- Online Double Conversion with DSP Control
- Input Current Harmonic: <5%
- Optimization Battery Group, the Quantity of Battery: 16/18/20 pieces (optional)
- Output Power Factor is Changed When Selection Different Battery Quantity  
16 pcs: 0.7PF; 18pcs:0.8PF; 20pcs:0.9PF
- Wide Input Voltage Range: 208-478Vac
- Wide Input Frequency Range (50Hz: 45-55Hz; 60Hz: 54-66Hz)
- Support Generator Input
- Support Economic (ECO) Operation Mode
- Self-Testing When UPS Startup
- Options: SNMP Card/Relay Card/ Parallel Board
- Cold start

### ONLINE UPS

AS 2000 Series of three phases in / single phase out with high frequency online double conversion UPS is a stable and reliable UPS system which was designed by ASPower Company according to international power grid environment and network systems requirements. Its excellent quality and perfect usability provide safe network power supply with reliable protection and satisfy the users' requirements of protecting overall equipment.

## AS 2000D Series



### FEATURES

- IGBT Rectifier and Inverter
- Active Input Current Correction < %5
- DSP Controlled
- Up to 0.99 Input Power Factor Correction
- Static Bypass at UPS Overload or UPS Failure
- Advanced LCD Panel
- Up to 500 Event History
- Optional SNMP

### AS 2000D Series Technical Specifications 3 Phase Input - 1 Phase Output (HF) Online UPS

MODEL	AS 2010D	AS 2015D	AS 2020D	AS 2030D
Power (kVA)	10	15	20	30
Active Power (kW)	8	12	16	24
<b>INPUT</b>				
Voltage	380/400/415 Vac (3 Ph+N+PE)			
Voltage Tolerance	±%20			
Frequency	50 Hz (On Request 50Hz)			
Frequency Tolerance	±6%			
THDi	<%5			
Input Power Factor	0,99			
<b>OUTPUT</b>				
Voltage	220 Vac (1Phase+N+PE)			
Voltage Regulation	<±1%			
Frequency	50 Hz (60 Hz On Request)			
Frequency Range	Synchronized to Network ±2% in Linemode; ±0,05 Hz in Free Running			
Crest Ratio	3:1			
Efficiency (100% Load)	Up to %91			
THDv	<3% Linear Load, <5% Non Linear Load			
Overload	%100<load<%125 for 10 min., %125<load<%150 for 1 min,			
Short Circuit Protection	Electronic Protection			
<b>BYPASS</b>				
Voltage Range	220 Vac ±%15			
Frequency Range	50 Hz ± %10			
<b>BATTERY</b>				
Type	Maintenance Free Lead Acid Battery (On request other types)			
Quantity	60			
Charge Voltage	810 Vdc			
End of Discharge Voltage	630 Vdc			
Protection	Deep Discharge Protection			
<b>DISPLAY PANEL</b>				
LCD	Graphic LCD Panel, Mimic Diagram and Control Panel			
LED	Line,Battery, Inverter, Load, Fault Indications			
<b>COMMUNICATION</b>				
Interface	Dry Contacts (Battery Low, Input Failure, System Bypass)			
<b>ENVIRONMENTAL</b>				
Operating Temperature	-20 °C ~ +50°C			
Storage Temperatura	-20 °C ~ +60°C			
Relative Humidity	%0-95 (non condensing)			
Altitude	<1000m			
Cooling	Air Cooling			
Protection Level	Ip20			
Acoustic Noise	<55dBA			
<b>PHYSICAL</b>				
Dimensions (WxDxH) (mm)	350x795x1280			
Weight	95	100	100	105
<b>OPTIONS</b>				
Functions	Eco Mode, Parallel Operation, EPO Emergency Stop, Isolation Transformer			
Communication	SNMP, Modem, Modbus			
<b>STANDARDS</b>				
Standards	EN 62040-1 (LVD), EN 62040-20 (EMC), EN 62040-3			

### ONLINE UPS

AS 2000D Series Online UPS's protect mono phase critical loads against utility failures and irregular voltage cases where you have three phase electricity. They produce pure sine wave output via microprocessor controlled, manufactured with the state of the art PWM and IGBT technology. Industrial automation, integrated facilities, building security automation, medical, communication and laboratory equipment, etc. are the main fields of use with a proved reliable high technology.

## AS 3000 Series



### FEATURES

- IGBT Rectifier and Inverter
- Active Input Current Correction < %5
- Regenerative Operating
- Re-adjustable Battery Charge Current
- Built-in Self-Test
- Silent Performance
- Up to 6 Parallel Operation
- DSP Controlled
- Up to 0.99 Input Power Factor Correction
- Static Bypass at UPS Overload or UPS Failure
- Advanced LCD Panel
- Up to 500 Event History
- CE Certificate
- Patented Technology

### AS 3000 Series UPS

10-800 kVA 3 Phase Input - 3 Phase Output (HF) Online UPS

MODEL	AS 3100	AS 3120	AS 3160	AS 3200	AS 3250	AS 3300	AS 3400	AS 3500	AS 3600	AS 3800
Apparent Power (kVA)	100	120	160	200	250	300	400	500	600	800
Active Power (kW)	80	96	128	160	200	240	320	400	480	640
<b>INPUT</b>										
Voltage	380(Optional 400/415/440) Vac 3 PH+N+PE									
Voltage Tolerance	±%5...%20 (Adjustable with 1% step)									
Frequency	50 Hz (On Request 60 Hz)									
Frequency Range	%5									
THDi	<5%									
Input Power Factor	0,99									
<b>OUTPUT</b>										
Voltage	380 (Optional 400/415/440) Vac 3Ph+N+PE									
Voltage Regulation	<±1%									
Frequency	50 Hz(On Request 60 Hz)									
Frequency Range	Synchronized to Newwork ±2% in Line mode; ±0,05 Hz in Free Running									
Crest Ratio	3:1									
Efficiency (100% Load)	> %93									
Power Factor	0,8									
THDv	<3% Linear Load, <5% Non Linear Load									
Owerload	%100<load<%125 for min., %125<load<150for 1 min., load>150: Bypass									
Short Circuit Protection	Electronic Protection									
<b>BYPASS</b>										
Voltage Range	380 Vac ±%15(Optional 400/415/440 Vac)									
Frequency Range	50 Hz±10%									
<b>BATTERY</b>										
Type	Maintenance Free Lead Acid Battery									
Quantity	60									
Charge Voltage	810 Vdc									
End of Discharge Voltage	630 Vdc									
Battery Protection	Deep Discharge Protection									
Battery Test	Automatic / Manuel									
<b>DISPLAY PANEL</b>										
LCD	Graphic LCD Panel, Mimic Panels and Control Panel									
LED	Line, Battery, Inverter, Load, Fault Indications									
<b>COMMUNICATION</b>										
Interface	Dry Contacts (Battery Low, Input Failure, System Bypass)									
<b>ENVIRONMENTAL</b>										
Operating Temperature	0-40°C									
Storage Temperature	-25~+70°C									
Relative Humidity	%0-95 (Non- Condensing)									
Altitude	<1000 m									
Cooling	Air Cooling									
Protection Level	IP 20									
Acoustic Noise	<65dBA	<70 dBA	<74 dBA							<75 dBA
<b>PHYSICAL</b>										
Dimesions (WxDxH)cm	55x80x134	68x101x175	78x126x190	160x87x180	219x81x203	322x87x180				
Weight without Batteries(kg)	240	250	380	400	820	850	950	990	1400	2100
<b>OPTIONS</b>										
Connections	Without Neutral for Input and / or Output									
Functions	Up to 6 Units Parallel Operation, EPO, Emergency Stop, Split Bypass, Battery Temperature Compensation, Transportable LCD Panel									
Communication	SNMP, Modem, RS232, RS485									
<b>STANDARS</b>										
Harmonized Standars	EN 62040-1 (LVD), EN 62040-2 (EMC), EN 62040-3									

### ONLINE UPS

AS 3000 Series are, 3 Phase in/3 Phase out 10-800 kVA True Online, Transformer-less, Double Conversion UPS Systems with IGBT rectifier providing high input power factor and low input current THD. They produce microprocessor controlled pure sine wave output to critical loads. Industrial manufacturing machines, hospital and monitoring equipment, heavy, medical, communication and laboratory equipment, etc. are the main fields of use with a proved reliable high technology.

## AS 3000PF Series



### FEATURES

- IGBT Rectifier and Inverter
- Active Input Current Correction < %5
- Regenerative Operating
- Re-adjustable Battery Charge Current
- High Efficiency ( $\text{Cos}\theta:0,9$ )
- Built-in Self-Test
- Silent Performance
- Up to 6 Parallel Operation
- DSP Controlled
- Up to 0.99 Input Power Factor Correction
- Static Bypass at UPS Overload or UPS Failure
- Advanced LCD Panel
- Up to 500 Event History
- CE Certificate
- Patented Technology

### AS 3000PF Series UPS

10-800 kVA 3 Phase Input - 3 Phase Output 0,9 PF Online UPS

MODEL	3010PF	3015PF	3020PF	3030PF	3040PF	3060PF	3080PF
Apparent Power (kVA)	10	15	20	30	40	60	80
Active Power (kW)	9	13,5	18	27	36	54	72
<b>INPUT</b>							
Voltage	380(Optional 400/415/440) Vac (3 Ph+N+PE)						
Voltage Tolerance	$\pm 5\ldots \pm 20$ (Adjustable with %1 Step)						
Frequency	50 Hz (On Request 60 Hz)						
Frequency Range	%5						
THDi	<5%						
Input Power Factor	0,99						
<b>OUTPUT</b>							
Voltage	380 (Optional 400 / 415 / 440) Vac (3 Ph+N+PE)						
Voltage Regulation	<±1%						
Frequency	50 Hz(On request 60 Hz)						
Frequency Range	Synchronized to Network ±2% in Line mode; ±0,05 Hz in Free Running						
Crest Ratio	3:1						
Efficiency (100% Load)	>%92						
Power Factor	0,9						
THDv	<3% Linear Load, <5% Non Linear Load						
Owerload	%100<load<%125 for 10 min %125<load<150 for 1 min., load>150: Bypass						
Short Circuit Protection	Electronic Protection						
<b>BYPASS</b>							
Voltage Range	380 Vac ± 20						
Frequency Range	50 Hz±10%						
<b>BATTERY</b>							
Type	Maintenance Free Lead Acid Battery						
Quantity	60						
Charge Voltage	810 Vdc						
End of Discharge Voltage	630 Vdc						
Battery Protection	Deep Discharge Protection						
Battery Test	Automatic / Manual						
<b>DISPLAY PANEL</b>							
LCD	Graphic LCD Panel, Mimic Panels and Control Panel						
LED	Line, Battery, Inverter, Load, Fault Indications						
<b>COMMUNICATION</b>							
Interface	Dry Contacts (Battery Low, Input Failure, System Bypass)						
<b>ENVIRONMENTAL</b>							
Operating Temperature	0-40°C						
Storage Temperature	-25~+55°C						
Relative Humidity	%0-95 (Non- Condensing)						
Altitude	<1000 m						
Cooling	Air Cooling						
Protection Level	IP 20						
Acoustic Noise	<55 dBA				<60 dBA		
<b>PHYSICAL</b>							
Dimensions (WxDxH)cm	350x795x1110				500x806x1213		
Weight without Batteries(kg)	100	105	110	110	135	140	155
<b>OPTIONS</b>							
Functions	Parallel Operation, EPO, Emergency Stop						
Communication	SNMP, Modem, RS-232, RS485						
<b>STANDARDS</b>							
Harmonized Standards	EN 62040-1 (LVD), EN 62040-2 (EMC), EN 62040-3						

### ONLINE UPS

AS 3000PF Series are, 3 Phase in/3 Phase out 10-800 kVA True Online, Transformer-less, Double Conversion UPS Systems with IGBT rectifier providing 0,9 Output Power factor and very low input current THD. They produce microprocessor controlled pure sine wave output to critical loads. Industrial manufacturing machines, hospital and monitoring equipment, heavy, medical, communication and laboratory equipment, etc. are the main fields of use with a proved reliable high technology.

## AS 3000PF Series



### AS 3000PF Series UPS

10-800 kVA 3 Phase Input - 3 Phase Output 0,9 PF Online UPS

MODEL	3100PF	3120PF	3160PF	3200PF	3250PF	3300PF	3400PF	3500PF	3600PF	3800PF
Apparent Power (kVA)	100	120	160	200	250	300	400	500	600	800
Active Power (kW)	90	108	144	180	225	270	360	450	540	720
<b>INPUT</b>										
Voltage	380(Optional 400/415/440) Vac (3 Ph+N+Pe)									
Voltage Tolerance	±%5...%20 (Adjustabe with %1 Step)									
Frequency	50 Hz (On Request 60 Hz)									
Frequency Range	%5									
THDi	<5%									
Input Power Factor	0,99									
<b>OUTPUT</b>										
Voltage	380(Optional 400/415/440) Vac (3 Ph+N+Pe)									
Voltage Regulation	<±1%									
Frequency	50 Hz (On Request 60 Hz)									
Frequency Range	Synchronized to Network ±2% in line mode;±0,05 Hz in Free Running									
Crest Ratio	3:1									
Efficiency (100% Load)	≥%93									
Power Factor	0,9									
THDv	<3% Linear Load, <5% Non Linear Load									
Owerload	%100<load<125 for 10 min., %125<load<%150 for 1 min., load>150: Bypass									
Short Circuit Protection	Electronic Protection									
<b>BYPASS</b>										
Voltage Range	380 Vac ± 15									
Frequency Range	50 Hz ±10%									
<b>BATTERY</b>										
Type	Maintenance Free Lead Acid Battery									
Quantity	60									
Charge Voltage	810 Vdc									
End of Discharge Voltage	630 Vdc									
Battery Protection	Deep Discharge Protection									
Battery Test	Automatic / Manual									
<b>DISPLAY PANEL</b>										
LCD	Graphic LCD Panel, Mimic Panels and Control Panel									
LED	Line, Battery, Inverter, Load, Fault Indications									
<b>COMMUNICATION</b>										
Interface	Dry Contacts (Battery Low, Input Failure, System Bypass)									
<b>ENVIRONMENTAL</b>										
Operating Temperature	0-40°C									
Storage Temperature	-25~+70°C									
Relative Humidity	%0-95 (Non Condensing)									
Altitude	<1000 m									
Cooling	Air Cooling									
Protection Level	IP 20									
Acoustic Noise	<65dBA	<70 dBA	<74 dBA							<75 dBA
<b>PHYSICAL</b>										
Dimensions (WxDxH)cm	550x800x1335	680x1010x1750	780x1280x1900	1600x870x1800	2190x801x2030	3220x870x1800				
Weight (kg)	290	315	490	540	870	1300	1370	1480	1700	1750
<b>OPTIONS</b>										
Functions	Parallel Operation, EPO Emergency Stop									
Communication	SNMP, Modem, RS-232, RS-485									
<b>STANDARDS</b>										
Harmonized Standars	EN 62040-1 (LVD), EN 62040-2 (EMC), EN 62040-3									

### FEATURES

- IGBT Rectifier and Inverter
- Active Input Current Correction < %5
- Regenerative Operating
- Re-adjustable Battery Charge Current
- High Efficiency (CosΦ:0,9)
- Built-in Self-Test
- Silent Performance
- Up to 6 Parallel Operation
- DSP Controlled
- Up to 0,99 Input Power Factor Correction
- Static Bypass at UPS Overload or UPS Failure
- Advanced LCD Panel
- Up to 500 Event History
- CE Certificate
- Patented Technology

### ONLINE UPS

AS 3000PF Series are, 3 Phase in/3 Phase out 10-800 kVA True Online, Transformer-less, Double Conversion UPS Systems with IGBT rectifier providing 0,9 Output Power factor and very low input current THD. They produce microprocessor controlled pure sine wave output to critical loads. Industrial manufacturing machines, hospital and monitoring equipment, heavy, medical, communication and laboratory equipment, etc. are the main fields of use with a proved reliable high technology.

## AS 3000L Series



### AS 3000L Series Technical Specifications

Three Level (3L) High Efficiency 3 Phase Input - 3 Phase Output Online UPS

MODEL	3010L	3020L	3030L	3040L	3060L	3080L	3100L	3120L	3160L	3200L	3250L	3300L
Rated Power (kVA)	10	20	30	40	60	80	100	120	160	200	250	300
Active Power (kW)	9	18	27	36	54	72	90	108	144	180	225	270
<b>INPUT</b>												
Voltage	380 (Optional 400/415/440) Vac (3 Ph+N+PE)											
Voltage Tolerance	±%5...%20 (Adjustable with %1 Step)											
Frequency	50 Hz (On Request 60 Hz)											
Frequency Range	5%											
THDi	<%3											
Input Power Factor	0,99											
<b>OUTPUT</b>												
Voltage	380 (Optional 400/415/440) Vac (3 Ph+N+PE)											
Voltage Regulation	<±1%											
Frequency	50 Hz (On request 60 Hz)											
Frequency Range	Synchronized to Network ±2% in line mode; ±0,05 Hz in Free Running											
Crest Ratio	3:1											
Efficiency (100% Load)	Up to %96											
Power Factor	0,9											
THDv	<2%											
Overload	%100<load<%125 for 10 min., %125<load<%150 for 1 min., load>150 :Bypass											
Short Circuit Protection	Electronic Protection											
<b>BYPASS</b>												
Voltage Range	380/400/415 Vac ± %20 (3Ph+N+PE)											
Frequency Range	50 Hz ± %10											
<b>BATTERY</b>												
Battery Type	Maintenance Free Lead Acid Battery											
Quantity	60											
Charge Voltage	810 Vdc											
End of Discharge Voltage	630 Vdc											
Battery Test	Automatic / Manual											
Battery Protection	Deep Discharge Protection											
<b>DISPLAY PANEL</b>												
LCD	Graphic LCD Panel, Mimic Panels and Control Panel											
LED	Line,Battery,Inverter, Load, Fault Indications											
<b>COMMUNICATION</b>												
Interface	Dry Contacts (Battery Low, Input Failure, System Bypass)											
<b>ENVIRONMENTAL</b>												
Operating Temperature	0-40°C											
Storage Temperature	-25~+70°C											
Relative Humidity	%0-95 (Non Condensing)											
Altitude	<1000 m											
Cooling	Forced Air Cooling											
Protection Level	IP 20											
Acoustic Noise	<55 dBA	<60 dBA	<65 dBA	<70 dBA								
<b>PHYSICAL</b>												
Dimesions (WxDxH)cm	350x795x1110	500x806x1213	500x880x1360	605x936x1605	780x1260x1900							
Weight (kg)	105	110	140	155	240	300	380	400	820	850		
<b>OPTIONS</b>												
Functions	Parallel Operation, EPO, Emergency Stop, Isolation Transformer											
Communication	SNMP, Modem, Rs232, RS485											
<b>STANDARS</b>												
Harmonized Standards	EN 62040-1 (LVD), EN 62040-2 (EMC), EN 62040-3											

### FEATURES

- 3L UPS Technology
- High Efficiency Up to %96
- IGBT Rectifier and Inverter
- Active Input Current Harmonic Correction
- Up to 0,999 Input Power Factor
- Very Low THDv <%2
- Advanced LCD Panel
- Up to 500 Event Log History

### ONLINE UPS

AS 3000L Series are, 3 Phase in/3 Phase out 3 Level, High Efficiency True Online, Transformer-less, UPS Systems with IGBT rectifier providing highest input power factor and lowest input current THD. They produce microprocessor controlled pure sine wave output to critical loads. Industrial manufacturing machines, hospital and monitoring equipment, heavy, medical, communication and laboratory equipment, etc. are the main fields of use with a proved reliable high technology.

## AS 4000 Series



### AS 4000 Series Technical Specifications

10-300 kVA 3 Phase Input - 3 Phase Output (HF) Online UPS with Transformer

MODEL	AS 4010	AS 4015	AS 4020	AS 4030	AS 4040	AS 4060	AS 4080
Apparent Power (kVA)	10	15	20	30	40	60	80
Active Power (kW)	8	12	16	24	32	48	64
<b>INPUT</b>							
Voltage	380/400/415 Vac (3 Ph+N+PE)						
Voltage Tolerance	±%20						
Frequency	50 Hz (Optional 60 Hz)						
Frequency Range	±5%						
THDi	<%5						
<b>OUTPUT</b>							
Voltage	380/400/415 Vac (3 Ph+N+PE) (Optional 440 Vac)						
Voltage Regulation	<±1%						
Frequency	50 Hz (Optional 60 Hz)						
Frequency Range	Synchronized to Network ±%2 in Line Mode: ± 0,05 Hz in Free Running						
Power Factor	0,8						
Efficiency (100% Load)	Up to %91						
Crest Ratio	3:1						
THDv	<3% Linear Load, <5% Non Linear Load						
<b>BYPASS</b>							
Voltage Range for Bypass	380/400/415 Vac (3 Ph+N+PE) (Optional 440 Vac)						
Frequency Range for Bypass	50 Hz ±%10						
<b>BATTERY</b>							
Battery Type	Dry Type 12 Vdc						
Quantity	60						
Float Charge Voltage	630 Vdc						
Min. Discharge Voltage	810 Vdc						
Battery Protection	Deep Discharge Protection						
<b>GENERAL</b>							
Display	Graphic LCD Monitor, Control Panel, Mimic Diagram						
LED	Line, Battery, Inverter, Load, Fault Indications						
Operating Type	Static, Online,DSP Control						
Topology	High Frequency PWM, IGBT Technology, Output Isolation Transformer						
<b>ENVIRONMENTAL</b>							
Operating Temperature	0~40°C						
Storage Temperature	-25~70°C						
Relative Humidity	%20-%90 (Non-Condensing)						
Altitude	<1000 m						
Protection Level	IP20						
Acoustic Noise (from 1m.)	<55 dBA						
<b>PHYSICAL</b>							
Dimesions (WxDxH)mm	350x800x1650				500x810x1900		
Weight (kg)	195	205	215	225	260	290	410
<b>OPTIONS</b>							
Functions	Eco Mode,Parallel Operation, Emergency Stop (EPO)						
Communication	SNMP or Modbus,Modem						
<b>STANDARS</b>							
Harmonized Standars	EN 62040-1 (LVD), EN62040-2(EMC), EN62040-3						

### FEATURES

- Output Isolation Transformer
- IGBT Rectifier and Inverter
- Active Input Current Correction < %5
- DSP Controlled
- Up to 0.99 Input Power Factor Correction
- Static Bypass at UPS Overload or UPS Failure
- Advanced LCD Panel
- Up to 500 Event History
- Optional SNMP

### ONLINE UPS

AS 4000 Series are, 3 Phase in/3 Phase out 10-300 kVA True Online, with isolation transformer, Double Conversion UPS Systems with IGBT rectifier providing high input power factor and low input current THD. They produce microprocessor controlled pure sine wave output to critical loads. Industrial manufacturing machines, hospital and monitoring equipment, heavy, medical, communication and laboratory equipment, etc. are the main fields of use with a proved reliable high technology.

## AS 4000 Series



### AS 4000 Series Technical Specifications

10-300 kVA 3 Phase Input - 3 Phase Output (HF) Online With Transformer

MODEL	AS 4100	AS 4120	AS 4160	AS 4200	AS 4250	AS 4300		
Apparent Power (kVA)	100	120	160	200	250	300		
Active Power (kW)	80	96	128	160	200	240		
<b>INPUT</b>								
Voltage	380/400/415 Vac 3 Ph+N+PE (Optional 440 Vac)							
Voltage Range	±%5...%20 (Adjustable with %1 Step)							
Frequency	50 Hz (Optional 60 Hz)							
Frequency Range	±5%							
THDi	<%5							
<b>OUTPUT</b>								
Voltage	380/400/415 Vac 3 Ph+N+PE (Optional 440 Vac)							
Voltage Regulation	<±1%							
Frequency	50 Hz (Optional 60 Hz)							
Frequency Range	Synchronized to Network ± %2 in Line Mode; ± 0.05Hz in Free Running							
Power Factor	0,8 (Full Load)							
Efficiency (100% Load)	Up to % 92							
Crest Factor	3:1							
THDI	Linear Load for <3%, Nonlinear Load for <5%							
<b>BYPASS</b>								
Voltage	380/400/415 Vac ±%20							
Frequency	50 Hz ±%10							
<b>BATTERY</b>								
Battery Type	Maintenance Free Lead Acid Battery 12 Vdc (On request other types)							
Quantity	60							
Float Charge Voltage	810 Vdc							
Min. Discharge Voltage	630 Vdc							
Battery Protection	Deep Discharge Protection							
<b>GENERAL</b>								
Display	Graphic LCD, Control Panel, Mimic Diagram							
LED	Line, Battery, Inverter, Load Fault Indication							
Operating Type	Static, Online DSP Control							
Topology	High Frequency PWM, IGBT Technology, Output Isolation Transformer							
<b>ENVIRONMENTAL</b>								
Operating Temperature	0~40 °C							
Storage Temperature	-25~+70°C							
Relative Humidity	%20-%90 (Non-condensing)							
Altitude	<1000 m							
Protection Level	IP 20							
Acoustic Noise (from 1m.)	<65 dBA		<70 dBA		<75 dBA			
<b>PHYSICAL</b>								
Dimensions (WxDxH) mm	550x810x2040			1610x870x1900				
Weight (kg)	600	680	900	1030	1640	1720		
<b>OPTIONS</b>								
Functions	Eco Mode, Parallel Operation, Emergency Stop (EPO)							
Communication	SNMP or Modbus, Modem							
<b>STANDARDS</b>								
Harmonized Standards	EN 62040-1 (LVD), EN 62040-2 (EMC), EN 62040-3							

### FEATURES

- Output Isolation Transformer
- IGBT Rectifier and Inverter
- Active Input Current Correction < %5
- DSP Controlled
- Up to 0.99 Input Power Factor Correction
- Static Bypass at UPS Overload or UPS Failure
- Advanced LCD Panel
- Up to 500 Event History
- Optional SNMP

### ONLINE UPS

AS 4000 Series are 3 phase input, 3 phase output with transformer true online double conversion UPS series, featured with IGBT Rectifier and Inverter, DSP Control, is an ideal solution to your server, bank, industrial equipment, internet data center, telecom, IT equipment and other Mission-critical application.

## AS 3000 Series



### FEATURES

- IGBT Rectifier and Inverter
- Active Input Current Correction < %5
- Regenerative Operating
- Re-adjustable Battery Charge Current
- Built-in Self-Test
- Silent Performance
- Up to 6 Parallel Operation
- DSP Controlled
- Up to 0.99 Input Power Factor Correction
- Static Bypass at UPS Overload or UPS Failure
- Advanced LCD Panel
- Up to 500 Event History
- CE Certificate
- Patented Technology

### AS 3000 Series UPS 10-800 kVA 3 Phase Input - 3 Phase Output (HF) Online UPS

MODEL	AS 3010	AS 3015	AS 3020	AS 3030	AS 3040	AS 3060	AS 3080
Apparent Power (kVA)	10	15	20	30	40	60	80
Active Power (kW)	8	12	16	24	32	48	64
<b>INPUT</b>							
Voltage	380 (Optional 400/415/440) Vac 3PH+N+PE						
Voltage Tolerance	±%5...%20 Adjustable with 1% step						
Frequency	50 Hz (On Request 60 Hz)						
Frequency Range	%						
THDi	<5%						
Input Power Factor	0,99						
<b>OUTPUT</b>							
Voltage	380 (Optional 400/415/440) Vac 3Ph+N+PE						
Voltage Regulation	<±1%						
Frequency	50 Hz(On request 60 Hz)						
Frequency Range	Synchronized to Network ±2% in Line mode; ±0,05 Hz in Free Running						
Crest Ratio	3:1						
Efficiency (100% Load)	Up to %93						
Power Factor	0,8						
THDv	<3% Linear Load, <5% Non Linear Load						
Owerload	%100<load<%125 for 10 min., %125<load<150 for 1 min., load>150: Bypass						
Short Circuit Protection	Electronic Protection						
<b>BYPASS</b>							
Voltage Range	380 (Optional 400/415/440) Vac 3Ph+N+PE						
Frequency Range	50 Hz±10%						
<b>BATTERY</b>							
Type	Maintenance Free Lead Acid Battery						
Quantity	60						
Charge Voltage	810 Vdc						
End of Discharge Voltage	630 Vdc						
Battery Protection	Deep Discharge Protection						
Battery Test	Automatic / Manual						
<b>DISPLAY PANEL</b>							
LCD	Graphic LCD Panel, Mimic Panels and Control Panel						
LED	Line, Battery, Inverter, Load, Fault Indications						
<b>COMMUNICATION</b>							
Interface	Dry Contacts (Battery Low, Input Failure, System Bypass)						
<b>ENVIRONMENTAL</b>							
Operating Temperature	0-40°C						
Storage Temperature	-25~+70°C						
Relative Humidity	%0-95 (Non- Condensing)						
Altitude	<1000 m						
Cooling	Air Cooling						
Protection Level	IP 20						
Acoustic Noise	<55 dBA					<60 dBA	
<b>PHYSICAL</b>							
Dimensions (WxDxH)cm	350x795x1110					500x806x1213	
Weight without Batteries(kg)	100	105	110	110	135	140	155
<b>OPTIONS</b>							
Connections	Without Neutral for Input and / or Output						
Functions	Up to 6 Units Parallel Operation, EPO, Emergency Stop, Split Bypass, Battery Temperature Compensation, Transportable LCD Panel						
Communication	SNMP, Modem, RS232, RS485						
STANDARDS	EN 62040-1 (LVD), EN 62040-2 (EMC), EN 62040-3						

### ONLINE UPS

AS 3000 Series are, 3 Phase in/3 Phase out 10-800 kVA True Online, Transformer-less, Double Conversion UPS Systems with IGBT rectifier providing high input power factor and low input current THD. They produce microprocessor controlled pure sine wave output to critical loads. Industrial manufacturing machines, hospital and monitoring equipment, heavy, medical, communication and laboratory equipment, etc. are the main fields of use with a proved reliable high technology.

## AS-MOD MODULAR UPS Series Technical Specifications

10-1560 kVA 3 Phase Input - 3 Phase Output Modular UPS



### FEATURES

- High Frequency and Double Conversion on-line Technology
- Advanced PFC technology
- 3U Frame, Rack-Mounted and Tower Convertible
- EPO Function
- Wide Input Voltage Range
- Fully Digitized Microprocessor Control
- Parallel Redundancy
- Advanced Battery Management
- Lightning and Surge Protection, Short Circuit and Overload Protection
- Multilingual LCD and LED display
- EMI RFI Noise Filter
- Smart RS232 Communication with Monitoring Software
- Optional SNMP Card Slot

MODEL		MOD 3060	MOD 3100	MOD 3200	MOD 3060	MOD 3060	MOD 3060	MOD 3060
Capacity (kVA/kW)	UPS Cabinet MEDI Module	10-60k/9-54k 10kVA/9kW; 15kVA/13,5Wk; 20kVA/18kW	10-100k/9-90k 10-200k/9-180k 25kVA/22,5kW	250k/225k 25kVA/22,5kW	90k/81k 25kVA/22,5kW	150k/135k 30kVA/27kW	300k/270k 30kVA/27kW	
<b>INPUT</b>								
Rated Voltage					380/400/415 VAC 3P+N+PE			
Voltage Range					208~478 Vac			
Operating Frequency Range					40~70 Hz			
Harmonic distortion (THDi)					<3% (100% Linear Load)			
Power Factor					≥0,99			
Bypass Voltage Range				Max. Voltage: 220V: +25%(Optional +10%, +15%, +20%) 240: +15%(Optional +10%) Min.Voltage: +45%(Optional -20%, -30%)	230V: +20%(Optional +10%, +15%) Frequency Protection Range 10%			
Harmonic Distortion (THDi)				<2% (100% Nonlinear Load)	<3% (100% Nonlinear Load)			
Generator Input					Yes			
<b>OUTPUT</b>								
Rated Voltage					380/400/415 Vac 3P+N+PE			
Voltage Regulation					±1%			
Frequency	Line				±1%/±2%/±4%/±5%/±10% of the Rated Frequency (Optional)			
	Battery				50/60 ± 0,1 Hz			
Voltage Distortion (THDv)					≤2% (Linear Load); ≤5% (Non-Linear Load)			
Output Power Factor					0,9			
Crest Factor					3:1			
Efficiency			95,5%			95%		
<b>SYSTEM FEATURES</b>								
UPS Type / Technology					Modular Type / True Online Double Conversion			
Transfer Time					Mains to Battery: 0ms; Mains to Bypass: 0ms			
Overload Capability	Line Mode				Load ≤110%: 60min; ≤125%: 10min, ≤150%: 1min, >150% turn to bypass mode immediately			
	Battery Mode				Load ≤110%: 10min; ≤125%: 1min, ≤150%: 1sec >150% turn to bypass mode immediately			
	Bypass Mode				Breaker (10k:20A, 15k:32A, 20k:40A) Breaker(25k:40A, 30K:60A)			
Short Circuit					Hold Whole System			
Noise Suppression					Complies with EN62040-2			
Communication Interface	UPS Cabinet			RS232, RS485, Dry Contact, 2x Intelligent Slot (SNMP Card, Relay Card optional)				
	MEDI Module				RS232			
<b>BATTERY</b>								
Battery Voltage					±192/204/216/228/240Vdc (Battery quantity Optional)			
Chage Current	UPS Cabinet	Max. 18A	Max. 30A	Max. 60A	Max. 60A	Max. 30A	Max. 50A	Max. 100A
	MEDI Module			Max. 6A	Max. 6A	25 kVA: 6A Max; 30 kVA: 10A Max		
<b>ENVIRONMENT</b>								
Operating Temperature					0°C to 40 °C			
Storage Temperature					-25°C to 55°C			
Relative Humidity					0-95% (non-condensing)			
Altitude					< 1500 m			
Audible Noise				< 65 dB			< 70 dB	
<b>STANDARDS</b>								
LVD (Safety)					IEC/EN 62040-1 / IEC/EN 60950-1			
EMC					IEC/EN 62040-2 / IEC61000-4-2 / IEC61000-4-3 / IEC61000-4-4 / IEC61000-4-5 / IEC61000-4-6 / IEC61000-4-8			
<b>PHYSICAL</b>								
Dimensions (WxDxH) [mm]	UPS Cabinet	600x840x1400		600x1100x2000		840x600x1400		1100x600x2000
	MEDI Module			580x443x131 (3U)				
Weight [kg]	UPS Cabinet	149	152	290		158	170	307
	MEDI Module	10 kVA:26; 15 kVA:30; 20 kVA:31		32		25 kVA:32; 30 kVA:33,5		



## AS-MOD Series



### AS-MOD MODULAR UPS Series Technical Specifications 10-1560 kVA 3 Phase Input - 3 Phase Output Modular UPS

MODEL		MOD 3400	MOD 3520	MOD 3800	MOD 31040	MOD 31560
Capacity (kVA/kW)	UPS Cabinet MEDI Module	400kVA/360kW	520kVA/468kW	800kVA/720kW	1040kVA/936kW	1560kVA/1404kW
<b>INPUT</b>						
Rated Voltage		380/400/415 Vac 3P+N+PE				
Voltage Range		208~478 Vac				
Operating Frequency Range		40~70 Hz				
Harmonic distortion (THDi)		<3% (100% Linear Load)				
Power Factor		0,99				
Bypass Voltage Range		Max. Voltage: 220V: +25%(optional +10%,+15%,+20%) 240V: +15%(optional +10%)	230V: +20%(optional +10%,+15%) Min.Voltage: -45% (optional -20%, -30%)	Frequency Protection Range 10%		
Harmonic Distortion (THDi)		<3% (100% nonlinear load)				
Generator Input		Yes				
<b>OUTPUT</b>						
Rated Voltage		380/400/415 Vac 3P+N+PE				
Voltage Regulation		±1%				
Frequency	Line Battery	±1%/±2%/±4%/±5%/±10% of the Rated Frequency (Optional)				
		50/60 ± 0,1 Hz				
Voltage Distortion (THDv)		≤2% (Linear Load); ≤5% (Non-Linear Load)				
Output Power Factor		0,9				
Crest Factor		3:1				
Efficiency		95%				
<b>SYSTEM FEATURES</b>						
UPS Type / Technology		Modular Type / True Online Double Conversion				
Transfer Time		Mains to Battery: 0ms; Mains to Bypass: 0ms				
Overload Capability	Line Mode Battery Mode Bypass Mode	Load ≤110%: 60min; ≤125%: 10min, ≤150%: 1min, >150% turn to bypass mode immediately Load ≤110%: 10min; ≤125%: 1min, ≤150%: 1sec >150% turn to bypass mode immediately Breaker (40k:95A)				
Short Circuit		Hold Whole System				
Noise Suppression		Complies with EN62040-2				
Communication Interface	UPS Cabinet MEDI Module	RS232, RS485, Dry Contact, 2x Intelligent Slot (SNMP Card, Relay Card optional) RS232				
<b>BATTERY</b>						
Battery Voltage		±192/204/216/228/240Vdc (Battery quantity Optional)				
Chage Current	UPS Cabinet MEDI Module	Max. 100A Max. 130A Max. 200A Max. 260A Max. 390A Max. 10A				
<b>ENVIRONMENT</b>						
Operating Temperature		0°C to 40 °C				
Storage Temperature		-25°C to 55°C				
Relative Humidity		0-95% (non-condensing)				
Altitude		< 1500 m				
Audible Noise		< 73 dB				
<b>STANDARDS</b>						
LVD (Safety)		IEC/EN 62040-1 / IEC/EN 60950-1				
EMC		IEC/EN 62040-2 / IEC61000-4-2 / IEC61000-4-3/ IEC61000-4-4 / IEC61000-4-5 / IEC61000-4-6 / IEC61000-4-8				
<b>PHYSICAL</b>						
Dimensions (WxDxH) [mm]	UPS Cabinet MEDI Module	860x1200x2000 580x443x131 (3U)	860x1800x2000	860x3000x2000	1100x4800x2000	
Weight [kg]	UPS Cabinet MEDI Module	750 34	860	1300	1810	2800



### FEATURES

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