

SMART MODULE XL

SERIES

10-7200 kVA **3:3**
PHASE

MODULAR ONLINE UPS



DATA CENTER



MEDICAL



TRANSPORT



INDUSTRY



EMERGENCY



UPS ONLINE



MODULAR SYSTEM



POWER FACTOR



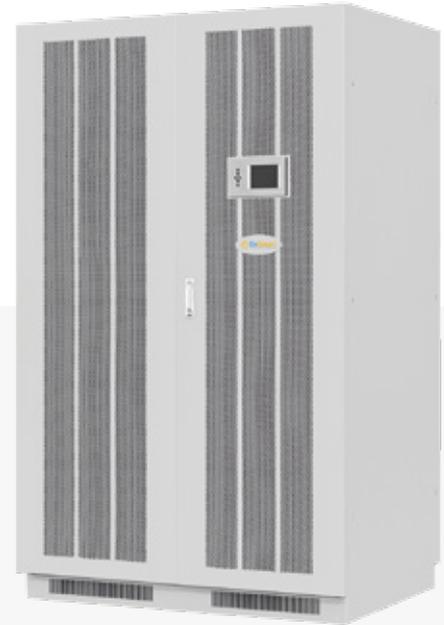
SERVICE



kW=kVA



96%
Efficiency



Modular UPS Design for High Density Data Centers

- + **SMART MODULE XL** Series is a scalable, redundant Modular UPS system designed to cost effectively provide high level availability for high density data centers and critical applications.
- + True Online Double Conversion and advanced DSP control technology.
- + Modular Architecture can scale power and runtime as demand grows or as higher levels of availability required.
- + Combines the modular design with the N+X parallel redundancy technology.
- + The maximum capacity of a single cabinet is 520kVA. Cabinets can operate in parallel configuration to build a system of up to 2080kVA.



- + High Performance, Modular 3-Phase Power Protection
- + Scalable up to 2080kVA, with 96% High Efficiency



Scalable Modular Architecture

Scalable up to the highest active power rating available through two dimensional modularity: Vertical and Horizontal.

- Capacity of single power module is 10-15-20-25-30-40kVA
- The height of single hot swappable power module is 3U
- Standard 1.4m cabinet can hold up to 5 of power modules
- Standard 2m cabinet can hold up to 13 of power modules
- The single UPS cabinet capacity can reach 1200KVA and Ups cabinets can operate in parallel configuration to build a system of up to 7200kVA

Modules	Output Power	Dimensions (WxHxD)	Weight
SM 3310-RM	10kVA 3/3 Module	443x131x580mm 3U	26kg
SM 3315-RM	15kVA 3/3 Module	443x131x580mm 3U	30kg
SM 3320-RM	20kVA 3/3 Module	443x131x580mm 3U	31kg
SM 3325-RM	25kVA 3/3 Module	443x131x580mm 3U	31kg
SM 3330-RM	30kVA 3/3 Module	443x131x580mm 3U	32kg
SM 3340-RM	40kVA 3/3 Module	443x131x580mm 3U	33kg

"Size What You Need Now and Pay as You Grow"

Up to 1200kW
with additional
60kW modules



Standart Electrical Features

- Output Power Factor: 0.9 (Optional 1.0)
- Hot Swappable Maintenance (UPS & Battery)
- Separated Bypass
- Maintenance Bypass
- Parallelable up to 4 Cabinets
- Common Battery
- Control of On/Off State of each Module
- Freely Set the Charge Current
- Intelligent Charging
- Mid or Small Power Distributing System
- Selectable Battery Voltage 3 Input 3 Output $\pm 216\text{VDC}/\pm 228\text{VDC}/\pm 240\text{VDC}$ (32/34/36/38/40pcs)

Advanced Communication Features

- RS232 (USB)
- RS485 Communication Interface
- SNMP Card (Optional)
- Relay Card (Optional)
- Centralized Monitor Module that is Hot Swappable
- Single Module LCD Display
- Control Monitoring with 5" Color LCD Graphic Display



UPS Cabinet Control Panel



Module Control Panel

Hot Swappable Battery Modules

Plug and play battery modules ensures uninterrupted power to protected equipment while batteries are being replaced.

Allows quick and easy battery replacement.

- Each Battery Module Consists of 18 pcs 7Ah/9Ah
- Only 3U Height
- Simply Plug into UPS System



3 U Battery Box Optional



19" Matching Battery Cabinets (Optional)

N+X Parallel Redundancy

SMART MODULAR Series UPS adopts N+X parallel redundancy design, users can set different redundancy according to the importance of the load. While the number of redundancy modules are more than two, the availability of UPS system will achieve 99.999% and the MTBF will be more than 15,000,000 hours which can satisfying the reliability requirement of critical load. The UPS redundancy degree can be set through the LCD, when the load exceeds the set value, the UPS will alarm in time.

Independent Control System

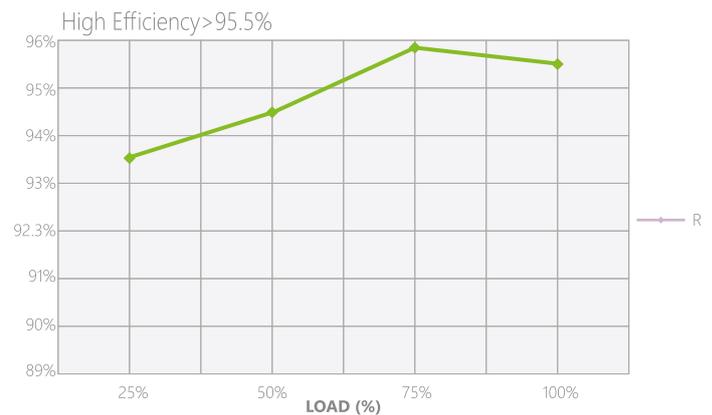
Every power module is equipped independent control system, and control itself independently according to the sharing message, and the fault module separates from the system automatically.



High Efficiency and Low Total Cost of Ownership

SMART MODULAR Designed for highly economical energy consumption and is a perfect fit in your data center and server room. Offering efficiency of up to 96%, THDi of 2% and unity Input Power Factor without harmonic filters PM delivers:

- Significant energy savings
- Lower cooling costs
- Smaller generator sizing



- High input power factor (>0.99) and low input Total Harmonic Distortion (THDi<2%) minimizes installation costs by enabling the use of smaller generators and cabling.
- Fully-rated power kVA equals kW feature option reduces cost by eliminating the need for an oversized UPS for Power Factor Corrected (PFC) loads.



10kVA/15kVA/20kVA/25kVA/
30kVA 3:3 phase



40kVA 3:3 phase

MODEL														
CAPACITY														
UPS Cabinet	10~100 kVA	20~100 kVA	20~200 kVA	25~250 kVA	30~150 kVA	30~300 kVA	40~200 kVA	40~320 kVA	40~520 kVA	40~800 kVA	40~1040 kVA	40~1560 kVA		
Paralleling	Up to 6 Frame	Up to 6 Frame	Up to 6 Frame	Up to 6 Frame	Up to 6 Frame	Up to 6 Frame	Up to 6 Frame	Up to 6 Frame	Up to 4 Frame	Up to 2 Frame	Up to 2 Frame	Up to 1 Frame		
PM Module	10kVA/10kW, 15kVA/15kW, 20kVA/20kW, 25kVA/25kW, 30kVA/30kW, 40kVA/40kW, 50kVA/50kW													
INPUT														
Phase	3 Phase 4 Wires and Ground													
Rated Voltage	380/400/415 VAC													
Voltage Range	208~478 VAC or 120 VAC~276 VAC													
Frequency Range (Hz)	40~70 Hz													
Power Factor	>0.99													
Bypass Voltage Range	Max. Voltage: +15% (Optional +5%, +10%, +25%) Min. Voltage: -45% (Optional -20%, -30%)													
Current Harmonic	Frequency Protection Range: ±10%													
Generator Input	<2% (100% Non-Linear Load)													
Support	Support													
OUTPUT														
Phase	3 Phase 4 Wires and Ground													
Rated Voltage	220/240 VAC 380/400/415 VAC													
Power Factor	1													
Voltage Precision	±1%													
Output Frequency	±1%, ±2%, ±4%, ±5%, ±10% of the Rated Frequency (Optional) (50/60±0.2) Hz													
Crest Factor	3:1													
THD	≤1% With Linear Load ≤4% With Non-Linear Load													
Efficiency	96%													
COMMUNICATION														
UPS Cabinet	RS232, RS485, Intelligent Slot x 2 (SNMP Card, Relay Card, Dry Contact Optional)													
INTERFACE														
PM Series UPS Module	RS232													
BATTERY														
Voltage	±192V / ±204V / ±216V / ±228V / ±240V DC; Battery Quantity (Optional)													
Charge Current (A)	UPS Cabinet	60A Max	30A Max	60A Max	60A Max	50A Max	100A Max	50A Max	80A Max	130A Max	200A Max	260A Max	390A Max	
Module	6A/10A/(20A Optional) Max (Charge Current can be Set According to Battery Capacity Installed)													
Crest Factor	Backup Time	Depends on the Capacity of External Batteries												
THD	Transfer Time	Utility to Battery : 0ms; Utility to Bypass: 0ms												
PROTECTION														
Overload	Normal Mode	Load ≤110%: Last 60min, ≤125%: Last 10min, ≤150%: Last 1min, ≥150% Shut Down UPS Immediately												
	Battery Mode	Load ≤110%: Last 10min, ≤125%: Last 1min, ≤150%: Last 1s ≥150% Shut Down UPS Immediately												
ENVIRONMENTAL														
Operating Temperature	0°C ~ 40°C													
Storage Temperature	-25°C ~ 55°C													
Humidity	0 ~ 95% Non-Condensing													
Noise	Number of Modules ≤5	<55 dBA (1m)												
	Number of Modules >5	<65 dBA (1m)												
Altitude	<1500m													
DIMENSIONS & WEIGHT														
Unit Dimensions	UPS Cabinet	600x840 x1400	600x840 x1400	600x1100 x2000	600x1100 x2000	600x840 x1400	600x1100 x2000	860x600 x2000	860x600 x2000	860x1200 x2000	860x1800 x2000	860x3000 x2000	1100x4800 x2000	
WxDxH (mm)	Module	443 x 580 x 131 (3U)												
Weight (kg)	UPS Cabinet	170	170	270	275	152	280	205	310	514	1600	1810	2800	
	Module	10kVA: 26kg; 15kVA: 30kg; 20kVA: 31kg; 25kVA: 31kg; 30kVA: 32kg; 40kVA: 33kg												
INDUSTRY STANDARD														
	CE, IEC 62040-2, IEC 62040-1, IEC 62040-3, IEC61000-4, IEC60950-1													

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MODEL		60-300kVA	60-420kVA	60-480kVA	60-600kVA	60-960kVA	60-1200kVA
Capacity (VA/Watts)	UPS Cabinet	60k~300k/60k~300k	60k~420k/60k~420k	60k~480k/60k~480k	60k~600k/60k~600k	60k~960k/60k~960k	60k~1200k/60k~1200k
	Power Module	60kVA					
	Max. Number	5	7	8	10	16	20
INPUT							
Nominal Voltage		380/400/415 VAC, (3Ph+N+PE)					
Voltage Range		138~305 VAC for 40% Load; 305~485 VAC for 100% Load;					
Frequency Range (Hz)		40~70 Hz					
Power Factor		>0.99					
Harmonic Distortion (THDi)		3% (100% Linear Load)					
Bypass Voltage Range		Max. Voltage: 220V: +25% (Optional +10%, +15%, +20%); 230V: +20% (Optional +10%, +15%); 240V: +15% (Optional +10%) Min. Voltage: -45% (Optional -10%, -20%, -30%)					
Bypass Frequency Range		Frequency Protection Range: ±10%					
Generator Input		Support					
OUTPUT							
Rated Voltage		380/400/415 VAC (3Ph+N+PE)					
Power Factor		0.9 or 1					
Voltage Regulation		±1%					
Output Frequency		Line Mode: ±1%/±2%/±4%/±5%/±10% of the Rated Frequency (Optional) Bat. Mode: (50/60±0.1%) Hz					
Crest Factor		3:1					
Harmonic Distortion (THDi)		≤2% With Linear Load ≤4% With Non-Linear Load					
Efficiency		95.5%					
BATTERY							
Voltage		Optional Voltage: ±180/±192/±204/±216/±228/±240/±252/±264/±276/±288/±300VDC (30/32/34/38/40/42/44/46/48/50pcs Optional); 360VDC~600VDC (30~50pcs, 36pcs Define, 36 and 50pcs No Power Derating; 32~34pcs Output Power Factor 0.9; 30pcs Output Power Factor 0.8)					
Charge Current (A)	UPS Cabinet	100A (Max.)	140A (Max.)	160A (Max.)	200A (Max.)	320A (Max.)	400A (Max.)
	Power Module	20A (Max.)					
SYSTEM FEATURES							
Transfer Time		Utility to Battery: 0ms; Utility to Bypass: 0ms					
Charge Current (A)	Line Mode	110% Overload for 60min; 125% Overload for 10min; 150 Overload for 1 min					
	Bypass Mode	135% Overload for Long Term; >1000% Overload for 100ms					
Overheat		Line Mode: Switch to Bypass; Backup Mode: Shut Down UPS Immediately					
Low Battery Voltage		Alarm and Switch Off					
Self-Diagnostics		Upon Power On and Software Control					
Backfeed		Support					
EPO		Shut Down UPS Immediately					
Battery		Advanced Battery Management					
Noise Suppression		Complies with EN62040-3					
Audible & Visual Alarms		Line Failure, Battery Low, Overload, System Fault					
Communication Interface		RS232, CAN, RS485, Parallel, Dry Contact Port, Relay Card (Optional), SNMP Card (Optional), Battery Temperature Sensor Optional)					
ENVIRONMENTAL							
Operating Temperature		0°C ~ 40°C					
Storage Temperature		-25°C ~ 55°C					
Humidity		0 ~ 95% Non-Condensing					
Altitude		<1500m					
Noise Level (From 1m Distance)		<65dB	<68dB	<70dB			<73dB
DIMENSIONS & WEIGHT							
Dimensions WxDxH (mm)	UPS Cabinet	600x850x1600/ 600x850x2000	600x850x2000/ 1200x850x2000	1200x850x2000	1200x850x2000	2000x850x2000	2400x850x2000
	Power Module	440 x 620 x 130 (3U)					
Weight (kg)	UPS Cabinet	260/400	280/450	480	550	980	1150
	Power Module	35					
STANDARDS							
Safety		IEC/EN62040-2, IEC61000-4-2, IEC61000-4-3, IEC61000-4-4, IEC61000-4-5, IEC61000-4-8,					
EMC		-25°C ~ 55°C					

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