



CyberPower SM040KAMFA 3 Phase Modular Smart Instruction Manual

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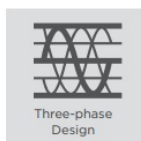
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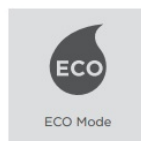
SM040KAMFA 3 Phase Modular Smart



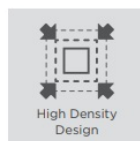
SCALABLE UPS TO GUARANTEE ULTIMATE POWER PROTECTION



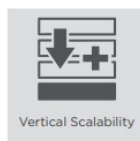
Three-phase
Design



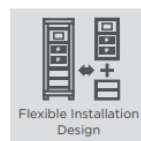
ECO Mode



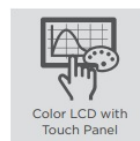
High Density
Design



Vertical Scalability



Flexible Installation
Design



Color LCD with
Touch Panel

SM020KAMFA/SM040KAMFA MODULAR UPS (3-PHASE) SERIES

The 3-Phase Modular UPS with N+X redundancy design and hot-swappable modularity for mission-critical applications

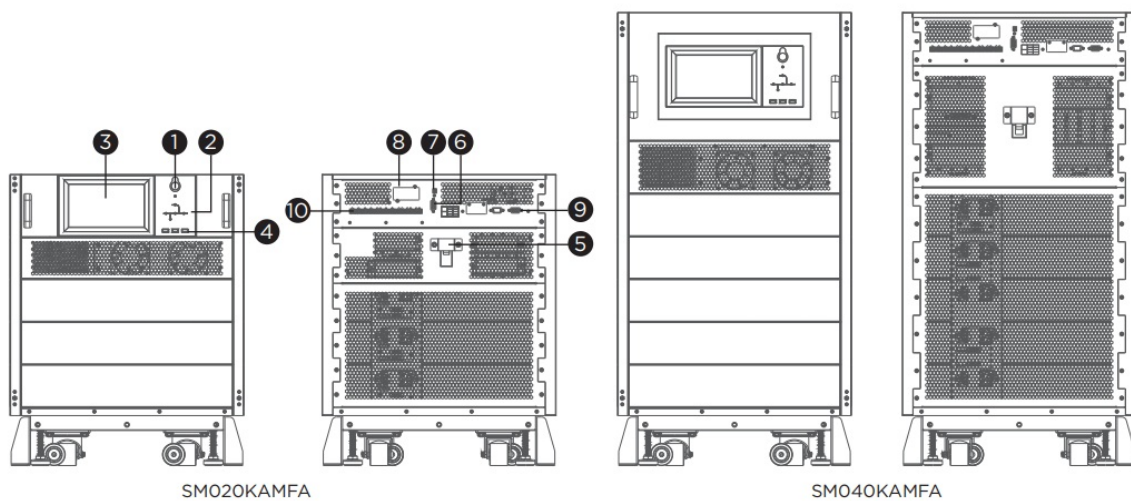
Designed for server room and data center applications, the Modular UPS (3-Phase) Series adopts double-conversion topology to provide seamless Pure Sine Wave output. The modular UPSs support vertical addition of power modules, and horizontal expansion by paralleling multiple systems to achieve even higher capacity, allowing users to customize base on their business needs. The N+1 redundancy design and replaceable modularity enhances the system availability and avoids the risk of single point of failure.

SERIES FEATURES

- Three-phase Design
- Online (Double Conversion) UPS Topology
- ECO Mode

- High Density Design
- Vertical Scalability
- Flexible Installation Design
- Color LCD with Touch Panel
- UPS Parallel Expansion
- Dual Inputs
- Generator Compatible
- Pure Sine Wave Output
- Overload Protection
- Maintenance Bypass Switch
- Smart Battery Management (SBM)
- Emergency Power Off (EPO) Port
- SNMP/HTTP Remote Management Capability
- PowerPanel Management Software

PRODUCT CALLOUTS



1. Emergency Power OFF (EPO) Button
2. LED Status Indicator
3. LCD Display Panel
4. Function Buttons
5. Manual Bypass Breaker
6. RS232
7. RS485
8. SNMP/HTTP Network Slot
9. Parallel Board Slot
10. Dry Contact

TECHNICAL SPECIFICATIONS

Model Name	SM020KAMFA	SM040KAMFA
General		
Phase	Three Phase	
Form Factor	Modular	
Energy Saving Technology	Online ECO Mode Efficiency > 97.5%	
Hot Swappable Bypass Module	Yes	
Normal Mode Efficiency (%)	93%	
Battery Mode Efficiency (%)	92.5%	
Parallel Expansion (Max. Units)	2	
Redundancy Design	Yes	
Input		
Dual Power Inputs	Yes	
Backfeed Protection	Yes	
Default Input Voltage Range (Bypass)	-20% ~ 15%	
Overload Protection (Bypass)	110~130% Load for 5 min, 130~150% Load for 1 min, >150% Load for 300ms	
Rated Input Current (Bypass)	55.6A (208V)	111A (208V)
Default Frequency Tolerance (Bypass)	± 5%	± 10%
Configurable Frequency Tolerance (Bypass)	± 1 %, ± 3 %, ± 5 %	± 2.5 %, ± 5 %, ± 10 %, ± 20 %
Bypass to Inverter Switch Time (ms)	≤1	
Current Rating of Neutral Cable (Bypass) (A)	1.7 x Input Rated Current	
Input Connector	L1, L2, L3, N, G	
Input Frequency (Hz)	50, 60	
Input Frequency Range (Hz)	40 ~ 70	
Nominal Input Voltage (Vac)	Line to Neutral (L-N): 120, 127 Vac, Line to Line (L-L):208, 220	

Input Voltage Range (Vac)	Line to Line (L-L): 124.8 ~ 260 Vac	
Synchronization Window (Nominal) (Hz)	± 2	
Synchronization Window (Configurable)	±0.5Hz ~ ±5Hz	
THDI (%)	<4% (Full Linear Load)	
Input Power Factor	0.99	
Output		
Max Change Rate of Sync Frequency (Default) (Hz/sec)	1	
Change Rate Range of Sync Frequency (Configurable) (Hz/sec)	0.1~5	
Capacity (VA)	20000	40000
Capacity (Watts)	20000	40000
Neutral Current Capability (%)	170	
Non-Linear Load Capability (%)	100	
Output Connector	L1, L2, L3, N, G	
Rated Output Voltage (Vac)	Line to Neutral (L-N):120, 127 Vac, Line to Line (L-L):208, 220	
Output Voltage Range (Vac)	± 5%	
Output Frequency (Hz ± %)	50, 60	
Power Factor	1	
Overload Protection (Line Mode)	110% Load for 10 min, 125% Load for 1 min, 150% Load for 30 sec, >150% Load for 200ms	
Crest Factor	3 : 1	
Harmonic Distortion (Linear Load)	THD 1.5%	
Harmonic Distortion (Non-linear Load)	THD 6%	
Short Circuit Protection	300% 200ms	
Synchronization Window (Nominal) (Hz)	± 2	

Synchronization Window (Configurable)	±1Hz ~ ±5Hz
Battery	
Compatible Battery Types	VRLA, AGM, Gel
Charger Voltage Tolerance (%)	≤ 1 %
Recharge Power (%)	Default 10 % (Selectable from 1~20 % x UPS Capacity)
Ripple Current	≤5% C10
Battery Solution	Extended Battery
Battery Voltage (V)	±120
Compatible Extended Battery Module (EBM)	Yes
External Battery Quantity	12V X 20pcs
Management & Communications	
LCD Panel	Yes
LCD Types	Color LCD, LCD Touch Panel
LCD Information Display	Operation Type, Power Status, Battery Status, Load Status, Fault & Warning, Other Information, Event & Log
LCD Setting & Control	Input & Output, Battery Setting, Language
LED Indicators	Power On, Line Mode, Battery Mode, Bypass Mode, Low Battery, Overload, UPS Fault
Serial Port	RS232 x 1 + RS485 x 1 + Dry Contact x1
Emergency Power Off (EPO) Port	Yes
Power Management Software	PowerPanel Business (Recommended)
SNMP/HTTP Remote Monitoring	Yes – RMCARD205 included
Physical	
Ingress Protection	IP20

Physical Size – UPS Module		
Dimensions (WxHxD) (mm.)	485.1 x 607.1 x 774.7	485.1 x 942.3 x 774.7
Weight (kg.)	60.69	80.6
Shipping Dimensions		
Dimensions (WxHxD) (mm.)	632 x 784.4 x 1022.4	632 x 1124 x 988.1
Weight (kg.)	91.97	121.97
Environmental		
Operating Temperature (°C)	0 ~ 40	
Operating Temperature Note	Battery life is halved for every 50°F (10°C) increase above 68°F (20°C)	
Operating Relative Humidity (Non-condensing) (%)	0 ~ 95	
Maximum Air Exchange (m3/min)	3.02	
Operating Elevation (feet/meters)	≤1000, Load Derated 1% per 100m from 1000m and 2000m	
Operating Elevation Note	At ≤1,000m above sea level, de-rate power by 1% per 100m between 1,000m and 3,048m	
Storage Temperature (°C)	-20 ~ 70	
Storage Relative Humidity (Non-condensing) (%)	0 ~ 95	
Audible Noise at 1.0M from Surface of Unit (dBA)	56	
Battery Temperature Compensation	-3mV/ °C	
Certifications		
Certifications*	FCC Class A, UL1778, NOM, cTUVus, ICES-003	
RoHS	Yes	

*Certifications may vary according to different regions. Visit www.cyberpower.com for more information.

#All specifications are subject to change without notice.

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Documents / Resources



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SM040KAMFA 3 Phase Modular Smart, SM040KAMFA, 3 Phase Modular Smart, Modular Smart, Smart

References

- [CP CyberPower | UPS Systems & PDUs | Professional Power Solutions](#)
- [User Manual](#)

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