



SM020KAMFA | SMART APP ONLINE 3-PHASE MODULAR UPS SYSTEM

Safeguard mission-critical applications with seamless, double-conversion power protection

The CyberPower SM020KAMFA Smart App Online 3-Phase Modular UPS System brings flexibility, space savings, and efficiency to 3-Phase power protection technology. Configurable for N+N system or N+1 power module redundancy, the system can intelligently manage individual modules to achieve higher efficiency. The customizable modular design can be configured as a tower, side-by-side, or integrated within a rack. The high-density, scalable 10kVA/10kW power modules are 2U in height, saving space while providing more options for capacity expansion.

The SM020KAMFA features double-conversion topology for seamless power protection and a pre-installed RMCARD205 for remote management. The user-friendly 7" color touchscreen displays key status indicators at-a-glance. Three-stage Smart Battery Management (SBM) equalizes battery voltages and reduces excessive heat to extend battery life. Plus, hot-swappable power modules,



battery and, bypass allow for rapid replacement and minimal impact to system operation. Ideal for high-end data centers, the SM020KAMFA Smart App Online 3-Phase Modular UPS System assures reliable, high-quality AC power and includes a One-Year Limited Warranty.

SPECIFICATIONS

GENERAL	
Dual Power Inputs	Yes
Energy Saving	Online ECO Mode Efficiency >97.5%
Hot Swappable Bypass Module	Yes
Hot Swappable Power Module	Yes
Power Module Capacity	3
Parallel Expansion	Yes
Power Module Redundancy Capability	Yes
UPS Topology	Online Double Conversion

BATTERY	
Battery Bus Voltage	Nominal: ± 120 VDC, one-side range: 120 VDC - 132 VDC
Battery Cabinet	Modular External
Charger Voltage Tolerance	$\leq 1\%$ Float
Extended Battery Cabinet	BCT3L9N125
Hot Swappable Battery Module	Yes
Recharge Power	Default 10% x UPS Power
Recharge Power (Selectable)	1% - 20%
Ripple Current	$\leq 5\%$ C10
Ripple Voltage	$\leq 1\%$ VDC Float
Temperature Compensation (Per Cell)	-3 mV/°C

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SPECIFICATIONS CONT.

INPUT	
Backfeed Protection	Yes
Bypass Input Voltage Range	-20% - +15%
Bypass Input Voltage Range (Selectable)	Lower limit: -10%, -20%, -30%, -40% Higher limit: +10%, +15%, +20%, +25%
Bypass Overload Protection	110% - 130% Load for 5 Min 130% - 150% Load for 1 Min >150% Load for 300ms
Bypass Rated Current	55.6A@ 208V
Bypass Frequency Tolerance (Default)	±10%
Bypass Frequency Tolerance (Selectable)	±2.5%, ±5%, ±10%, ±20%
Bypass to Inverter Switch Time	Synchronized switch: ≤1ms
Current rating of bypass neutral cable (A)	1.7 x Input Rated Current
Input Connector	Hardwire (L1, L2, L3, N, G)
Input Frequency Range	40 Hz - 70 Hz
Input Power Factor	0.99
Input Voltage	208/120 V 220/127 V
Input Voltage Range	187 VAC - 260 VAC
Phase	3-Phase
Synchronization Window	Rated frequency: ±2 Hz
Synchronization Window (Selectable)	±0.5 Hz - ±5 Hz
THDI (%)	< 4% (Full Linear Load)
OUTPUT	
Automatic Voltage Regulation	±1 (Balanced Load) ±1.5 (100% Unbalanced Load)
Bypass	Internal Bypass (Automatic and Manual)
Crest Factor	3:1
Efficiency	92.5% (Battery Mode) 93% (Normal Mode)
Harmonic Distortion	< 1.5% at Linear Load < 6% at Non-Linear Load
Built-in Maintenance Bypass	Yes

OUTPUT CONT.	
Max Change Rate of Synch Frequency	1 Hz/s
Max Change Rate of Synch Frequency (Selectable)	0.1 - 5 Hz/s
Maximum Capacity (VA)	20,000 VA
Maximum Watts Capacity	20,000 W
Neutral Current Capability	170 %
Non-Linear Load Capability	100 %
Outlet Type	1 - Hardwire Terminal Block
Output Connector	Hardwire (L1, L2, L3, N, G)
Output Frequency	50 Hz / 60 Hz (auto-sensing/configurable)
Output Power Factor	1
Output Voltage	208/120 V 220/127 V
Output Voltage Range	±5% VAC
Overload Protection	110% Load, 10 min 125% Load, 1 min 150% Load, 30s >150% Load, 200ms
Short Circuit Protection	300% - 200ms
Synchronization Window (Rated)	±2 Hz
Synchronization Window (Selectable)	±1 Hz - ±5 Hz
Transient Voltage Response	±5%
Typical Transfer Time	0 ms
VA	20,000 VA
Watts	20,000 W

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SPECIFICATIONS CONT.

MANAGEMENT AND COMMUNICATIONS

Dry Contacts	Yes
Emergency Power Off (EPO) Port	Yes
LCD	Multifunction LCD, Touch Screen, Color
LED Status Indicators	Rectifier, Battery, Bypass, Inverter, Output
SNMP / HTTP Remote Monitoring	Yes - RMCARD205 pre-installed
Communication Port/Protocols	1 x RS-232 DB9 Serial 1 x RS-485 Modbus (2-wire Twisted Pair)
Software (Free Download)	PowerPanel® Business

PHYSICAL

Color	Black
Form Factor	Modular
Material of Construction	Metal
Mounting Hardware	Yes
Rack Height	11U

PHYSICAL DIMENSIONS

Physical Dimensions - WxHxD (cm)	48.51 x 60.71 x 77.47 cm
Physical Dimensions - WxHxD (in.)	19.1 x 23.9 x 30.5 in.
Weight (kg)	60.69 kg
Weight (lb)	133.8 lbs.

SHIPPING DIMENSIONS

Shipping Dimensions - WxHxD (cm)	63.2 x 78.74 x 102.24 cm
Shipping Dimensions - WxHxD (in.)	24.88 x 31 x 40.25 in.
Weight (kg)	91.97 kg
Weight (lb)	202.75 lbs.

POWER MODULE DIMENSIONS

Individual Power Module - Rack Units	2U
Individual Battery Module - Rack Units	3U

ENVIRONMENTAL

Audible noise at 1m from surface of unit	56 dBA
Ingress Protection	IP20
Maximum Air Exchange	3.02 m3/min
Online Thermal Dissipation	5,732.16 BTU/hr
Operating Elevation	0 - 10,000 ft (0 - 3,048 m)
Operating Elevation Note	At \leq 1,000m above sea level, de-rate power by 1% per 100m between 1,000m and 3,048m
Operating Relative Humidity	0 - 95 % (non-condensing)
Operating Temperature	32 - 104°F (0 - 40°C)
Operating Temperature Note	Battery life is halved for every 50°F (10°C) increase above 68°F (20°C)
Storage Battery Temperature Note	Optimum battery storage between 5 - 68°F (-15 - 20°C)
Storage Relative Humidity	0 - 95% (non-condensing)
Storage Temperature	-4 - 158°F (-20 - 70°C)

CERTIFICATIONS

Environmental	RoHS Compliant
Safety	cTUVus UL1778, CSA C22.2, No. 107.3-14 CFR 47 FCC Part 15, Subpart B, Class A IEC62040-2

WARRANTY

Product Warranty	1-Year Limited Warranty
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