

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		BATTERY	
Dual Power Inputs	Yes	Battery Bus Voltage	Nominal: ± 120 VDC, one-side range: 120 VDC - 132 VDC
Energy Saving	Online ECO Mode Efficiency >97.5%	Battery Cabinet	Modular External
Hot Swappable Bypass Module	Yes	Charger Voltage Tolerance	$\leq 1\%$ Float
Hot Swappable Power Module	Yes	Extended Battery Cabinet	BCT3L9N125
Power Module Capacity	3	Hot Swappable Battery Module	Yes
Parallel Expansion	Yes	Recharge Power	Default 10% x UPS Power
Power Module Redundancy Capability	Yes	Recharge Power (Selectable)	1% - 20%
UPS Topology	Online Double Conversion	Ripple Current	$\leq 5\%$ C10
		Ripple Voltage	$\leq 1\%$ VDC Float
		Temperature Compensation (Per Cell)	-3 mV/°C

SMO20KAMFA

SMART APP ONLINE 3-PHASE MODULAR UPS SYSTEM

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

SMO20KAMFA

SMART APP ONLINE 3-PHASE MODULAR UPS SYSTEM

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 ≤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