

# EA990 G4

40-200kVA 3:3

PF 1.0

High frequency on-line double conversion UPS

0.99 Input Power Factor



Power Quality and Control Solutions

# Key Features

## EA990 G4 series 40-200kVA UPS

### High-performance UPSs offering:

- Unity power factor for maximized output capacity
- Active Power Factor Correction(PFC) technology, input power factor up to 0.99
- Compact design for space-saving installation
- High efficiency:  $\geq 95\%$  full load, up to 96% max
- Advanced communication for UPS monitoring (RS232, USB, RS485, NET, dry contacts) with optional expansion (SNMP card, Wi-Fi card, GPRS card, battery sensor, EMD detector, SMS alarms)
- Support T/Mon LNX Remote Alarm Monitoring System

### High Reliability

- Advanced DSP (Digital Signal Processors) control of the IGBT for rectifier, IGBT for PWM inverter, and charger enhances both system performance and reliability.
- Intelligent fan speed control adjusts dynamically based on load and charging current, minimizing noise impact and maximizing fan lifespan. Single-fan redundancy maintains 50% load capacity, while dual-fan redundancy ensures 30% operation, delivering robust fault tolerance.
- The EA990 G4 series provides comprehensive protection against AC input and internal system anomalies, ensuring reliable operation. Multi-functional safeguards include over/under voltage protection, overload/short-circuit protection, over-temperature protection, and battery management features. Robust self-diagnostics further enhance system stability.
- UPS systems coated with conformal coating withstand harsh environments for extended lifespans.
- Advanced digital parallel technology offers redundant connections, enhancing system reliability beyond standalone configurations.



Compact footprint  
Modular design: 60kVA



EA990G4-120kVA

### High Usability

- 5" LCD screen and LED display, clearly presenting UPS status and operating parameters.
- Professional and concise description of background software settings:
  - Intuitive user interface provides access to:
    - Machine information: View comprehensive details directly on the display.
    - Essential parameters: Configure key settings for optimal performance.
    - Battery management: Adjust battery behavior and monitoring.
    - Calibration tools: Ensure accurate measurements and operation.
    - Special functions: Enable customization with mute, shutdown timers, and auto-switching.
  - The accompanying software facilitates historical data downloads, fault analysis, system testing, staged startup, and online firmware updates.
- Compact design: Leveraging full digital control and multiplexed power board design, the EA990 G4 series achieves a compact footprint through miniaturized components.

### High Availability

- Extensive input voltage range (138-385 VAC) with flexible derating ensures reliable operation in challenging grid environments.
- Wide frequency range (40-70 Hz) and auto-sensing capability further enhance suitability for diverse power conditions.
- This reduces battery discharge and extends lifespan, simplifying compatibility with smaller generators.
- Dual-input configuration maximizes availability with independent bypass for seamless transitions.
- Emergency Cold Start: Enables immediate UPS activation with batteries for critical power needs.
- Leveraging pure online double-conversion technology, the EA990 G4 series ensures zero transfer time during utility fluctuations, guaranteeing load safety and reliability.
- Versatile frequency conversion (50/60 Hz input, 60/50 Hz output) caters to diverse user needs.

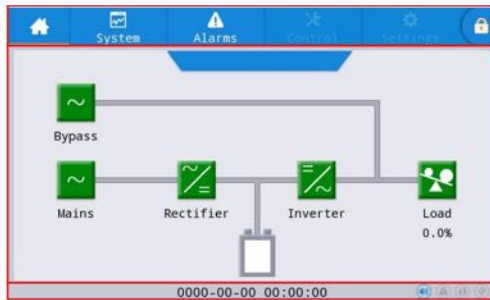
### Application

Ideal for a wide range of applications including ISP data centers, medium-sized network systems, financial institutions, industrial control facilities, and precision equipment.

# EA990G4 UPS Technical Specifications

## User Interface

The comprehensive interface features a 5" LCD screen and LED display, clearly presenting UPS status and operating parameters, monitoring of UPS operational status, 5000 events and alarm history, UPS setting configuration and UPS data.



## Available options:

Standard Features:

- RS232, USB, RS485, CAN, and NET connectivity
- Dry contacts, parallel port, and LBS port
- EPO and battery temperature compensation

Optional Features:

- SNMP card, Wi-Fi card, and GPRS card
- Parallel cable, LBS cable, and battery temperature sensor
- EMD detector and SMS alarms

## High Intelligent

- Supports various communication interfaces (RS232, USB, NET, etc.) for UPS monitoring. Real-time monitoring via mobile app is possible with optional WIFI, GPRS, or 4G card configuration.
- Smart battery management with automatic charge control and sleep mode enhances charger reliability. Regular self-testing ensures battery health
- Support T/Mon LNX Remote Alarm Monitoring System

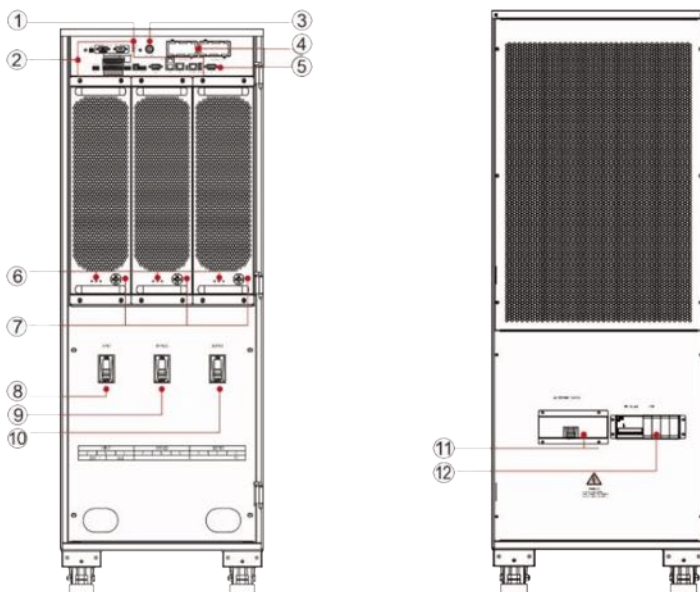
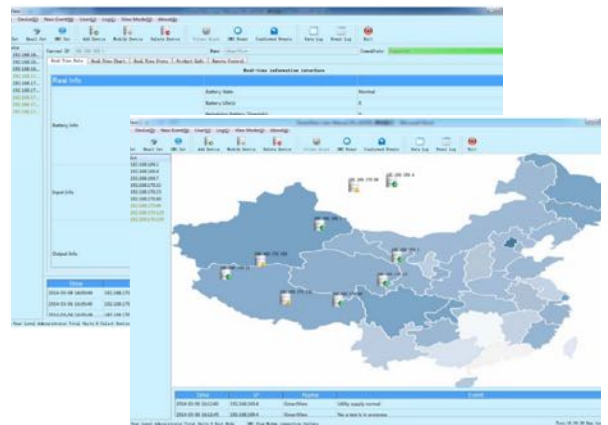
## Software

iStars and iSmartView Software Suite incorporates two important applications for ensuring quality power and uptime: monitoring and management of power devices across the network combined with automatic, graceful shutdown when faced with an extended power outage.

- Monitor and manage multiple power devices across your network
- Extend the uptime of dual-powered servers with redundancy capabilities
- Enable server shutdown and live migration events
- Status notice update by Email and Line

Application platform

- Windows



- (1) SystemsStatus indicator light
- (2) Communication interface
- (3) Cold start button
- (4) Smart card slot
- (5) Monitoring display unit interface
- (6) Power unit indicator light
- (7) Power unit switch
- (8) Mains input breaker
- (9) Bypass input breaker
- (10) Output breaker
- (11) Maintenance bypass breaker
- (12) Lightning protector

EA990G4-80/100/120kVA

Front viewed

Back viewed



## Power

Ratings	40kVA/40kW 60kVA/60kW 80kVA/80kW 100kVA/100kW 120kVA/120kW 160kVA/160kW 200kVA/200kW
Topology	Double-conversion online UPS
Operating Frequency	50/60 Hz (40 to 70 Hz)
Input Power Factor	≥ 0.99
Total Harmonic Distortion	≤ 3% THDi

## Electrical input

Input wiring	3P5W(3Φ+N+PE)
Nominal input voltage	380/220,400/230,415/240Vac
Input voltage range	138-304V(downgrading 40%-100% , 304-485V at 100% without derating)
Bypass voltage range	-60% ~ +20% (settable)

## Electrical output

Nominal output voltage	380/220,400/230,415/240Vac
Output voltage regulation	± 1%
Output frequency	50/60 Hz ± 0.1% in Battery mode
Waveform	Sinusoidal
Power factor	1
Voltage distortion THDv	≤ 1% linear load, ≤ 4% non-linear load
Crest factor	3:1
Overload	105%-110% for 60 min, 110%-125% for 10 min 125%-150% for 1 min, 150%-200% for 200ms

## Battery

Battery type	VRLA, Ni-Cd, Lithium-ion
DC Voltage	± 192Vdc (± 180 ~ ± 264Vdc settable)
Number of batteries	32 pcs (30 ~ 44 pcs settable) 40kVA built-in battery: ± 240 Vdc (80pcs 9Ah/12V)
Charging current/voltage	Charging current (settable): 12A : 40kVA 24A : 60~100kVA 36A : 120~160kVA 48A : 200kVA Charging voltage (settable): 2.23 ~ 2.40Vdc
Self-test function	Automatic Battery self-test mode Battery self test by voltage Battery self test by time
Display Battery Capacity	Battery remain capacity Battery backup time

## System

Efficiency	≥ 99% ECO mode ≥ 96% Double conversion mode
Delay start of rectifier	10s (1~300s settable)
Transfer time	0ms
ECO interruption time	≤ 10ms
Surge protection	Meet IEC60664-1: class I Capacity withstanding 1.2/50us+8/20us Mixed wave at least 6kV/3kA
Parallel technology	N+X Redundancy Parallel Operation with up to 4 Units

## General

Cabinet rating	IP 20
Dimensions WxDxH(mm)	360 x 850 x 885 40kVA 360 x 850 x 950 60kVA 360 x 850 x 1200 80kVA 440 x 850 x 1200 100kVA 120kVA 600 x 850 x 1200 160kVA 200kVA
Weight	95kg, 295kg (Built-in BAT) 40kVA 130kg 60kVA 156kg 80kVA. 158kg 100kVA 198kg 120kVA 250kg 160kVA 300kg 200kVA

## Communication Interfaces

Display	5 inches Graphic LCD LED 1 status for notice and alarm
Audible alarms	Yes
EPO	EPO (NO+NC)
Dry contact	2 Input dry contacts(customizable) 2 Input dry contact(default) 2 Input dry contact(reserved) 5 Output dry contacts(customizable) 1 Output dry contact for battery low capacity
Communication ports	(1)LBS (1)RS232, (1)RS485, (1)USB, (1)RJ45 (1) CAN (1)NET, (1) Battery temperature compensation (1)USB Host, (1)Monitoring Display (1)Intelligent slot for SNMP,WIFI,4G card

## Environmental

Operating temperature	0°C ~ 40°C Batteries recommended max.+25°C
Storage temperature	-25°C ~ 55°C without batteries +15°C to +25°C with batteries
Relative humidity	0-95%, non-condensing
Audible noise	<62dB 40-80kVA, < 65dB 100kVA-120kVA at 1m typical
Altitude	≤ 1000m. above 1000m, derating 1% for additional 100m

## Certifications

EMS Standards	IEC61000-2-2, IEC61000-3-4
EMI compliance	IEC 62040-1,IEC 62040-2
Quality	ISO9001:2015, ISO14001:2015
TIS	TIS1291: 1-2553, 2-2552, 3-2553

## Software

iStars	Real-time Monitoring and management of UPS across the network
iSmartView	Centralized monitoring and management software running on PC platform for UPS
iSearch	Monitoring and management SNMP cards in LAN

Due to continuous product improvements, specifications are subject to change without notice.

For more information visit: [cbcinter.com](http://cbcinter.com)



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