Uninterruptible Power Supply Systems

3PS®

- Local Area Networks (LAN)
- Servers
- Data Centers
- Internet Centers (ISP/ASP/POP)
- Industrial PLCs
- Emergency Devices (Lights/Alarms)
- Electro-Medical Devices
- Telecommunications Devices
- Industrial Applications

ePower RT
15-120K Series

15kVA/ 30kVA/ 45kVA/ 60kVA/ 75kVA/
105kVA/ 120kVA, 3 Phase UPS on-line UPS

ePower RT 15-120K Series

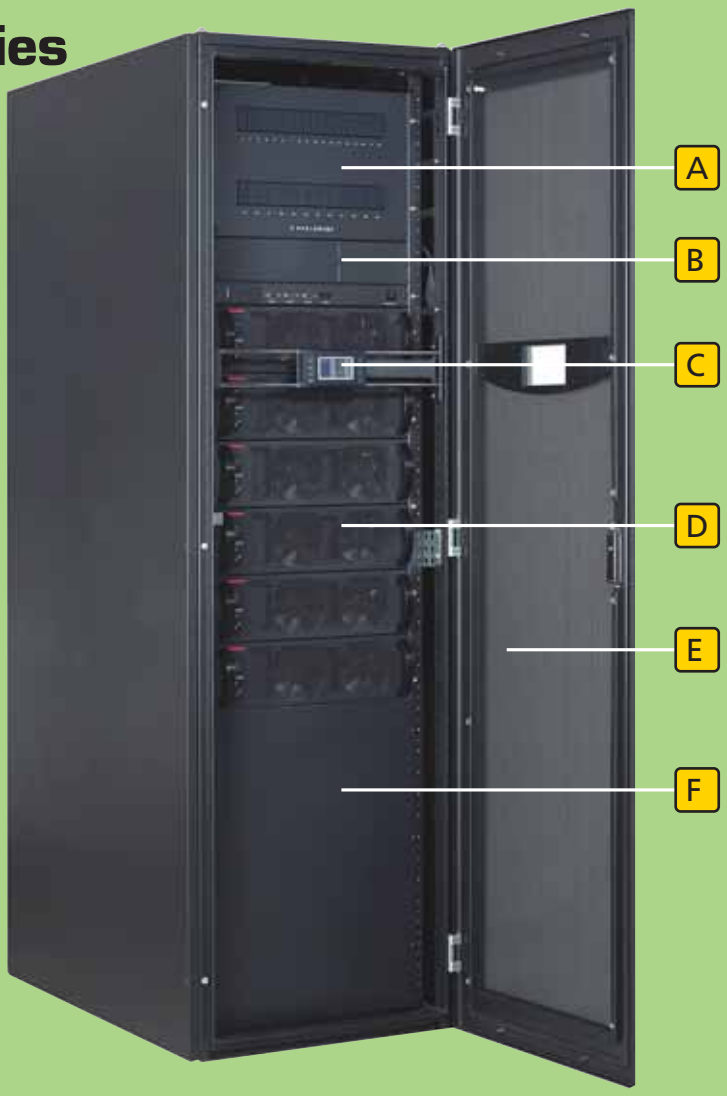
Modular Parallel Redundancy UPS

ePower RT 15-120K modular UPS is a scalable 3 phase/ 3 phase with double-conversion Uninterruptible Power Supply; its power capacity range from 15kVA to 120kVA which delivery the best of combination of reliability; functionality; hot swap capability and flexibility.

ePower RT 15-120K N+X parallel design adopts the drawer-style high intelligent motorization design to achieve maximum power availability and redundancy.

It is specially designed to meet the maximum protection for mission critical load in Data Centre or important application.

Each power capacity is 15kVA per module; standard cabinet can be fitted up to 8 modules to reach 120kVA. If the load is within limits; modules can be hot-swapped and enabled true continuity of power without any interruption.



- A *Optional PDU (Power Distribution Unit)*
- B *Communication Module*
- C *LCD Display*
- D *15kVA UPS Module*
- E *19" UPS Rack*
- F *Optional ISO Transformer*

System Features

1. Maximum capacity in a 19" rack at 90kVA with build-in isolation transformer, and maximum capacity in a 19" rack at 120kVA without internal isolation transformer.
2. 15kVA per module with hot-swappable feature.
3. Optional PDU (Power Distribution Unit) on the UPS chassis is available up to 36 set single phase MCB slots.
4. LCD display at front panel for displaying all necessary information & status, such as input and output rating; capacity; temperature. Also multi-languages selectivity and after-sales phone numbers selection are available.
5. Communication port is available for RS232, RS485, SNMP & AS400.
6. Regular battery strings for the DC power without using particular battery modules.
7. DSP Technology.
8. Charging current is up to 36 DC Amp constant current on 90kVA system, suitable for several hours back up battery.
9. High output power availability up to 99.999%, MTBF more than 1,000,000 hours & MTTR < 5mins Input power factor >0.99 and THDi <5%

Other Advantages

Advanced modular design

The **ePower RT 15-120K** system contains UPS modules, LCD Display module, PDU and oth er accessories. Each UPS module is a fully functional 15KVA, 3 phase UPS.

Through the advanced parallel control technology and smart communication modulation, UPS and LCD module can be replaced or expanded at any time without interruption to the UPS operation.

No complicated UPS setup or adjustments after adding new UPS module into the system. It is user friendly, easy operation in capacity expansion or maintenance.

The most reliable N+X parallel redundancy

ePower RT 15-120K de-centralises its controller in each UPS Module. The LCD Display module is only for display and communication purposes. Even if the LCD Display module fails, the UPS system would still function and support the load without any interruption.

High MTBF ability

Each UPS module in the ePower RT 15-120K UPS system is a fully functional UPS. There is no additional controlling module for parallel and load sharing. System MTBF for two modules in parallel is more than 1,000,000 hours and power availability is above 99.999%.

MTTR < 5mins

In a parallel redundancy ePower RT 15-120K UPS system, it will keep working even one of the UPS modules fails. The module replacement procedure only need 5 minutes for system recover.

Superior Electrical Characteristic

Pure Sine Wave input current with THDi≤5% and unity input power (≥0.99). The output voltage distortion is ≤1.5%.

High Power density

Standard 2 meters height rack can install for 8 UPS modules up to 120kVA include the PDU which occupy only 0.8m² of floor area.

Intelligent charging system

The ePower RT 15-120K UPS system applies the two-step intelligent charging system. The first stage constant charging current can recharge the battery capacity to 90% in a short time. Then transfer to constant voltage mode to guarantee the battery can be full charged all the time.

The intelligent charging system not only can reduce the battery recharging time but also can extend the battery applying time to save the cost on the batteries for the users.

UPS Power Selection

ePower RT 15-120K can be configured from 1 up to 8 modules in its cabinet to form the most suitable N+ X configuration. As N represents the minimum number of modules need to power the load; X represents the number of redundant modules, the bigger X is, the higher power availability will be.

Module / Capacity	1	2	3	4	5	6	7	8
15kVA / 12kW	N	N + 1	N + 2	N + 3	N + 4	N + 5	N + 6	N + 7
30kVA/ 24kW	N		N + 1	N + 2	N + 3	N + 4	N + 5	N + 6
45kVA/ 36kW	N			N + 1	N + 2	N + 3	N + 4	N + 5
60kVA/ 48kW	N				N + 1	N + 2	N + 3	N + 4
75kVA/ 60kW	N					N + 1	N + 2	N + 3
90kVA/ 72kW	N						N + 1	N + 2
105kVA/ 84kW	N							N + 1
120kVA/ 96kW	N							

Advanced Modular Design

The **ePower RT 15-120K** system contains UPS modules, LCD Display module, PDU and other accessories. Each UPS module is a fully functionable 15kVA UPS.

Through the advanced wire-less parallel control technology and smart communication modulation, UPS module and LCD display module can be replaced easily at any time without affecting operation of the UPS.

User friendly design. Simply “plug & play” without complicated procedures when expanding new UPS module. The engineered design simplifies UPS service and maintenance.

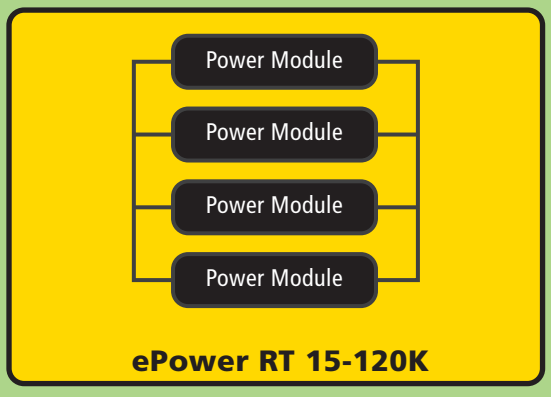
The **ePower RT 15-120K** Power UPS modules uses the latest DSP microchip. It reduces hardware component and increase UPS reliability, precision and also makes it convenient for upgrading and maintenances by software.

The UPS is operating with load sharing technology. Should any of the UPS modules fail, the load will be taken over by the rest of the modules without interruption. The real time operation and power availability increase as compare to other Standby UPS.

The **ePower RT 15-120K** UPS is designed to connect to external battery banks without limitation of battery run time. The 19" Racks in black color design can blend easily into most Data Centre, Computer Room or Power Room.

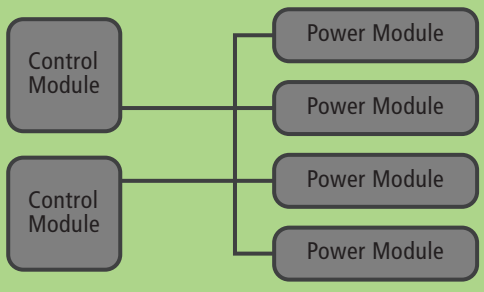
N+X Parallel Redundancy UPS

ePower RT 15-120K UPS with its N+X parallel redundancy technologies highly enhance the reliability of UPS system.



ePower RT 15-120K

In ePower RT 15-120K, controller is built-in into individual modules, hence increasing system redundancy. LCD module is designed only for display and communication interface, it does not affect the UPS performance even if it fails.



Other Modular UPS

In other Modular UPS system, the module operations are dependent on 1 or 2 controllers, which is less reliable. Critical load operation is dependent on the controller's reliability.

ePower RT 15-120K Technical Specifications

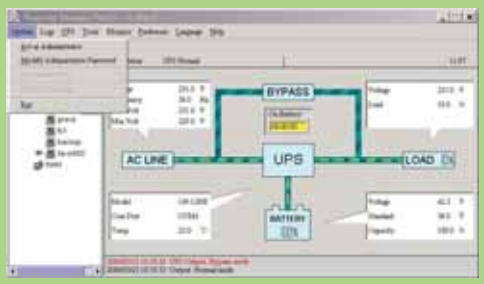
MODEL	ePower RT15-120K
Capacity	15kVA to 120kVA
INPUT	
Voltage	380V/ 400V/ 415V, 3 phase 4 Wire + E
Voltage range	204Vac to 520Vac
Frequency range	40Hz to 70Hz
Power Factor	≥ 0.99
THDi	< 5%
BYPASS	
Voltage	380V/ 400V/ 415V, 3 phase 4 Wire + E
Voltage range	323Vac to 437Vac
Transfer time from On-line to Off-Line or vice versa	0 sec
OUTPUT	
Voltage	380V/ 400V/ 415V, 3 phase 4 Wire + E
Voltage Stability	≤1.5%
Frequency	50Hz / 60Hz
MODULE	
Capacity	15kVA / 12kW
Output capacity	15kVA x number of modules
PHYSICAL DATA	
Audible noise (measure @ 1m in front of UPS)	≤ 60dBA to 62dBA
Operating temperature	0°C - 40°C
Humidity	20% - 90% non condensing
Storage temperature	-15°C - +55°C
Weight (Module / Chassis)	35kg / 250kg
Module dimension	440(L) x 700(D) x 131(H)
Chassis dimension (90kVA)	600(L) x 1000(D) x 1600(H)
Chassis dimension (120kVA)	600(L) x 1000(D) x 2000(H)
STANDARD	
Safety	EN50091-1-1/ EN62040-1-1
EMC	IEC 61000-4-2(L3); IEC 61000-4-3(L3); IEC 61000-4-4(L3); IEC 61000-4-5(L4); EN 50091-2(>25A) Class A

Note: UPS specification and data may subject to change for improvement without prior notice

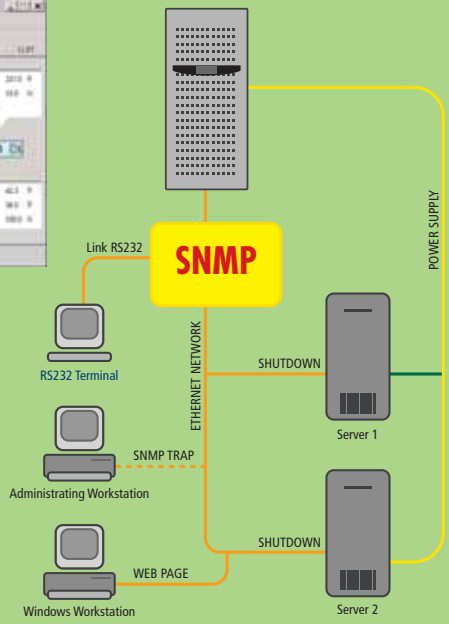
Communication and Power Management Solutions

WinPower CD is packed with UPS, and can also be downloaded from the Internet. It has the function of remote monitor and control UPS through LAN, warning notifications through broadcast and mobile phone, multi-shutdown PCs, and schedule UPS self-test. This unique software provides complete power protection for computer system during power failure. The software supports lots of O/S including Windows family, Linux, Sun Solaris 7/8/9, Compaq True64, FreeBSD, IBM Aix 4.3x, 5.1x, and HP-UX 11.x. More than that, to offer increased benefits for our customers, we have also released USB version MAC version on the Internet.

- Power flow display for monitoring UPS status
- Scheduled system shutdown/restart
- Scheduled UPS test
- Warning notification via E-mail / Pager
- Warning notification via Broadcast
- Password security protection
- Remote Monitor / Control via LAN
- Multi-language versions: English, Germanic, French, Italian,Spanish, Portuguese and Chinese
- Selectable User Interface (Background)
- UPS Parameter setting
- Record logs for analysis
- Multi-OS supported: Windows Family, Linux, Sun Solaris 7/8/9, IBM AiX 4.3x, 5.1x, Compaq True64, FressBSD, HP-UX 11.x and MAC



SNMP Network Card allows management of UPS across LAN using any of the main network communication protocols – TCP/IP and network interface via SNMP.



DIRECT CONNECTION WITH ETHERNET NETWORK

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Service Center

TECHNICAL ASSISTANCE SERVICES

UPService, our technical assistance facility uses highly trained engineers to provide a reliable and competent technical support and after-sales service.

UPService can provide customers with:

• UPService personnel are always available and ready to provide advice and assistance regarding UPS installation, maintenance, fault finding and repair.

• FAST & READY
A fast repair on site is guaranteed through the use of state-of-the-art UPS technology and the professionalism of the UPService personnel and Authorised Assistance Centres.

UPService guarantees that failed parts are replaced with original ones, tested and updated in order to maintain the safety, reliability and operating characteristics of the UPS.

• COMMISSIONING AND START-UP
UPService can provide assistance during commissioning and startup of the UPS equipment on-site with additional training during handover to site personnel.

UPService engineers can also verify site suitability, analyse and advise on potential problems, and disconnect and relocate equipment. UPService recommend that all hardwired installations are commissioned by UPService engineers.

• MAINTENANCE CONTRACTS can be provided by UPService to minimise response times and repair costs. Contracts range from periodic inspections to comprehensive cover including labour and materials.

• The Web Power software package provides remote 24 x 7 UPS supervision. Web Power can interrogate REEM UPS connected to a local telephone line to check on their operating logs and system status.

• UPService organises regular TECHNICAL TRAINING COURSES for UPS operators and installers.

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