

## ESSERIES

06 ~ 30KVA



ON LINE  
OUTPUT: 231 V

► CONTROL PANEL

**ISOLATION  
TRANSFORMER**  
advantage of  
NOISE REJECTION



## Features

### High reliability design

- Double Conversion on-line design, which make the output a pure sine wave source with tracking frequency, phase-lock- and voltage regulation, low distortion and without power fluctuation interference, providing the load with more comprehensive protection.

### Strong protection for load

- Built-in isolation transformer, strong anti-interference ability, provides more comprehensive protection.

### Wide input range

- Wide input voltage range up to " 165~275VAC, 1 Phase "304~456VAC, 3 Phase frequently switching to battery mode, which adapt to the areas with harsh environment.
- Wide input frequency range, ensure all types of fuel generators connected work stable.

### Optimization of high-performance battery

- Adapt intelligent battery management(ABM) technology, thus extending battery life and reducing battery maintenance times.
- Advanced floating switching and charging technology maximize the activation of the battery, thus saves the charging time and extends the battery life.

### Battery cold start function

- The UPS can be start directly by battery group when no utility access in, which meets the emergent needs of user.
- Strong cold start ability, which can do the cold start operation when full load.

### User-friendly network management

- Communication with computer can be realized by RS232 with corresponding monitoring software. The various parameters can be shown on the communication interface.
- External SNMP adapter. The UPS with remote network management capability can provide real-time data for communication and management through a variety of network management systems.

### Comprehensive and reliable protection

- Self-diagnosis function before start-up, avoid the risks that the failure may lead to.
- The multi-protection such as overload, short-circuit, over-temperature, battery under voltage, battery over-charge ensure the system stability and reliability.



### ► REAR PANEL

- RS232 port
- Input breaker
- FAN
- Connection Box
- Entrance Hole
- Active wheel

MODEL	ES06	ES10	ES10	ES20	ES25	ES30
Capacity (KVA / KW)	6 / 4.8	10 / 8	10 / 8	20 / 16	25 / 20	30 / 24
<b>INPUT</b>						
Operating voltage range	220Vac(±20%), (1Ph+N+PE)		380Vac(±20%), (3Ph+N+PE)			
Operating frequency range	50/60Hz (±5%)					
Power factor	>0.97 (with filter)					
<b>OUTPUT</b>						
Output voltage	220Vac(±0.5%) / 230Vac(±0.5%)					
Output frequency	50/60Hz(±0.5%)					
Crest factor	3:1 (max)					
Efficiency	> 92% online					
Harmonic distortion (THD)	<1.5% (Linear Load)					
Power Factor	0.8 (0.9 Optional)					
<b>BATTERY</b>						
Battery Voltage	192 VDC					240 VDC
Battery Types	SMF VRLA / TUBULAR					
<b>SYSTEM FEATURES</b>						
Transfer Time	0 ms (Line mode ↔ Battery mode)					
Overload	>125% : 1min, >150%: 200ms					
LED display	Battery low, Mains status, Inverter, Bypass, UPS failure, Overload					
LCD display	I/O voltage, frequency, Battery voltage, Load percentage, Internal temperature					
Communication interface	RS232, SNMP (optional), Dry contact (optional)					
<b>ENVIRONMENTAL</b>						
Operating temperature	0 ~ 40°C					
Storage temperature	-25°C ~ 55°C					
Humidity range	0 ~ 95% (non-condensing)					
Altitude	<1500m					
Noise level	<55dB					
<b>PHYSICAL</b>						
Dimension W x D x H (mm)	230x580 x720	305 x 585 x 864		409 x 798 x 1044		555 x 741 x 1200
Net weight (kg)	55	92	132	236	255	315
<b>STANDARDS</b>						
Safety	IEC/EN62040-1;IEC/EN60950-1					
EMC	IEC/EN62040-2;IEC61000-4-2;IEC61000-4-3;IEC61000-4-4; IEC61000-4-5;IEC61000-4-6;IEC61000-4-8					

Specifications are subject to change without prior notice.

**EXULTED INDIA PVT. LTD.**

**Address: Unit No 694, Vegas Mall,  
Dwarka Sector -14, New Delhi -110075  
website: [www.exultpower.com](http://www.exultpower.com)**



## ON-LINE UPS

# EIP SERIES

10-120kVA

3:3 phase



## Features

### ■ Online double conversion

· Online Double Conversion design helps to output a pure sine wave, which is immune from the UPS input, so that the load can run steadily.

· UPS transfers among different working mode without output interruption, thereby powering the load uninterruptedly.

### ■ Full DSP control

· Full DSP Control avoids the risks caused by analog devices failure and makes the control system more stable and reliable.

### ■ High power factor

· The output power factor up to 0.9 better matches the load.

· The input power factor 0.98 with filter helps to improve the efficiency, reduce the harmonic pollution to the Grid and lower the UPS running cost.

### ■ Wide input adaptability

· The range of AC input voltage is (380Vac/400Vac/415Vac) (-25%/+20%), minimizing transfer to battery mode, thereby greatly prolonging the battery life.

· Wide input frequency ranging from 45Hz to 65Hz, ensures stability of UPS while generator connected.

### ■ Multi-protection

· Self-diagnosis function will take place before start-up for safety.

· Multi-protection: AC input under/over voltage, overload, short-circuit, over-current, over bus voltage, over-temperature, fan failure, auxiliary power failure, battery under voltage, battery over-charge and so on.

### ■ Optimized battery management

· Intelligent battery management system and advanced battery auto float/boost charge technology, reduces the frequency of battery maintenance, greatly improves the battery efficiency and extends battery life.

· Battery discharge time prediction: the system will display the backup time of battery calculated by discharge current and voltage.

· Battery self-test: battery is automatically tested at regular intervals

· Flexible battery configuration ranging from 360~408Vdc / 480Vdc.

### ■ N+X parallel redundancy

· N+X parallel redundant design, up to 6 units available, makes the configuration more flexible.

Any unit in parallel system fails, the faulty one will automatically cut off the output, and the load will be powered by the remained units.

· It is easy to configure the parallel system just by connecting the parallel cables and doing proper settings.

· Non-fixed Master-Slave relationship: Among several UPS in parallel, the unit startup first is Master UPS, the others are Slave. The master and slave may be exchanged.

### ■ Strong overload capability

· 110% / 125% / 150% overload for 60min / 10min / 1min.

### ■ EPO function

· A concave red EPO button with transparent cover is embodied in the LCD control panel for emergency power off.

### ■ Power walk in

· Specially designed power walk in function, in which rectifier of each unit in parallel system will be turned on in sequence at intervals to avoid the sudden load on the generator, thereby reducing the cost of the generator required.

### ■ Generator mode

· Set the maximum output power of the generator when a smaller one than needed is employed to extend the battery duration time. In this case, the load is supplied by both the generator and battery.

### ■ Cold Start

· Battery start-up without AC input, for commissioning and emergency application.

### ■ LBS synchronization

· Synchronize the output of the two independent UPS systems (single unit or parallel) even when the two systems are operating on different modes (bypass/inverter) or on battery.

### ■ User-friendly network management

· English LCD and LED mimic diagram: real time operation parameters and status

· RS232 & RS485 communication ports: for local monitor with corresponding software, and MODBUS protocol is optional.

· SNMP adapter (optional): for remote monitor through network

· Dry contacts for additional monitoring:

- UPS on Inverter
- Mains input failure
- remote EPO
- Battery low voltage alarm
- UPS fault
- UPS alarm
- UPS on battery
- UPS on bypass

Note: d)--h) optional



## Technical Specifications :

MODEL	EIP -10	EIP-20	EIP -30	EIP - 40	EIP - 60	EIP- 80	EIP-100	EIP -120
Capacity (VA/Watts)	10kVA/9kW	20kVA/18kW	30kVA/27kW	40kVA/36kW	60kVA/54kW	80kVA/72 kW	100kVA/90kW	120kVA/108kW
<b>INPUT</b>								
Operating voltage range	380/400/415Vac (-25% / +20% ), (3Ph+N+PE)							
Operating frequency range	50/60Hz ( ± 5Hz)							
Power factor	≥0.94,with filter							
<b>OUTPUT</b>								
Output voltage	380/400/415Vac ( ±0.5%)							
Output frequency	50/60Hz ( ± 0.05%)							
Harmonic distortion (THD)	<1.5% ( linear load)							
Crest factor	3:1 (Max.)							
Efficiency	≥91%				≥92%			
<b>BYPASS</b>								
Rated voltage	380/400/415Vac							
Rated frequency	50/60Hz							
Voltage protection range	Upper limit: +20% (+10%,+15%,+20% adjustable) Lower limit: -40% (-10%, -20%, -30%, -40% adjustable)							
Frequency protection range	± 10% ( ± 2.5%, ± 5%, ± 10%, ± 20% adjustable)							
<b>BATTERY</b>								
Battery voltage	384Vdc(default 32, 30-32, settable)					384Vdc(default 32, 30-34, settable)		
<b>SYSTEM FEATURES</b>								
Transfer time	0ms (Line mode ↔ Battery mode)							
Overload	110%/60min ,125%/10min ,150%/1min							
LED display	Input, Inverter, Bypass, Battery, Output, Status							
LCD display	I/O voltage, power factor, battery voltage, current, battery status, load percentage, UPS status, history record							
Communication interface	Dry contact, RS232, RS485, SNMP card (Optional)							
Optional	Harmonic filter, SNMP adapter, LBS cables, battery temperature sensor, Bypass current-sharing inductor							
<b>ENVIRONMENTAL</b>								
Operating temperature	0 ~ 40°C							
Storage temperature	-25°C ~ 55°C							
Humidity range	0 ~ 95% (non-condensing)							
Altitude	<1500m							
Noise level	<58dB				<62dB			
<b>PHYSICAL</b>								
Dimension W × D × H (mm)	430*830*1100				720*690*1400		880*760*1600	
Net weight (kg)	210	225	240	255	390	430	650	690
<b>STANDARDS</b>								
Safety	IEC/EN62040-1;IEC/EN60950-1							
EMC	IEC/EN62040-2;IEC61000-4-2;IEC61000-4-3;IEC61000-4-4; IEC61000-4-5;IEC61000-4-6;IEC61000-4-8							

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