# **EA660**

50 kVA ~ 600 kVA **PF 1.0** 



#### Highlights

High power factor 1.0

High efficiency 96.5%

High adaptability

Power flexibility from 50 - 600 kW

Modular hot-swappable & Scalability

High MTBF and low MTTR

EA660 modular UPS is ideal for reliable, saving, intelligent and easy solutions. It ensures that a scalable, secure, high quality power supply is available for any critical high-density computer and IT environment applications, such as data centers and other critical loads.

EA660 modular UPS is a scalable three-phase / three-phase uninterruptible power supply system with DSP technology and provides true on-line double conversion power protection. The available UPS power and redundancy level can expand vertically from 50 to 600 kVA / 600 kW in one single power cabinet, and four power cabinets can be connected in parallel, increasing the capacity up to 2.4 M kW. It features modular hot-swappable design, all modules support "plug & play", including power modules, bypass module, and control module, simplifies UPS servicing and maintenance.

### Features

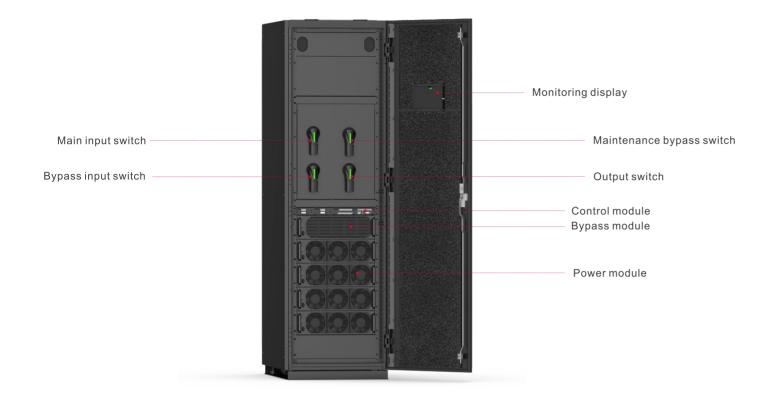
- DSP digital control technology
- Flexible modularity and easy scalability with all hot-swappable module design
- High efficiency at low load rate: 96% at 40% rated load and 95% at 20% rated load
- High power density of 50 kVA / 3U power module
- High grid adaptability, strong load adaptability and strong overload capability
- Small footprint (500 kVA system only 1.02 m footprint)
- Inbuilt integrated PDU system, easy installation and saving investment
- Soft-start technology improves generator matching up to 1:1.1
- Intelligent hibernation design enables UPS to operate efficiently at low load rate
- Advanced parallel expansion technology, support 4 units in parallel
- Share battery pack in parallel operation, saving user's battery cost
- Flexible charger parameter and battery configuration setting, numbers of battery 30 ~ 46 pcs selectable
- Intelligent battery management (Intelligent charge/discharge management and float charging voltage temperature compensation), extending battery lifespan
- Support battery cold start and utility self boot
- Self-aging function, easy debugging and test on site
- Fault-tolerant design for fan system: 30% load can be driven when 2 fans fail and 50% load when 1 fan fails
- Front accessible maintenance, top/bottom cable entry compatible
- Complete hardware and software protection function, robust self-diagnostic function, and abundant event log for check
- 7 inches LCD touch screen, friendly human-machine interface
- Monitoring unit with built-in SNMP, supports RS485 and dry contacts



• Input power factor > 0.99, THDi < 3%, environment friendly and high-efficiency and energy-saving

• Support two modes of frequency conversion: 50 Hz input / 60 Hz output and 60 Hz input / 50 Hz output





**Power Module** 

**Bypass Module** 





#### **Control Module**



1 Parallel port	② LED indicator	(3) DRY_IN	(4) DRY_OUT	(5) BTG port	6 BCB port	
⑦ BCB tripping signal ⑧ EPO port		(9) Switch state port of power distribut cabinet		<ul> <li>Environmental temperature port</li> </ul>		
CAN port	1 RS485 port 1	1 RS485 port 2	1 Ethernet port	USB port	CD screen port	

## Specifications

MODEL	EA66200	EA66300	EA66400	EA66500	EA66600		
Rated capacity	200 kVA/200 kW	300 kVA/300 kW	400 kVA/400 kW	500 kVA/500 kW	600 kVA/600 kV		
Numbers of power modules	4	6	8	10	12		
Rated capacity of power module	50 kVA						
INPUT							
Input wiring	3 Ph + N + PE						
Rated voltage	e 380 / 400 / 415 Vac						
	138 ~ 485 Vac (305 ~ 485 Vac without power downgrading;						
Voltage range	138 ~ 305 Vac with linear downgrading 40%)						
Input frequency	40 ~ 70 Hz						
Power factor	≥ 0.99						
Current distortion	<3%						
BATTERIES			0,0				
Battery voltage	+ 240 Vd	c (+180 + 192 + 20	)4 + 216 + 228 + 2	52 + 264 + 276 sel	ectable)		
Number of battery	± 240 Vdc (±180, ± 192, ± 204, ± 216, ± 228, ± 252, ± 264, ± 276 selectable) 40 pcs 12 V batteries ( 30 / 32 / 34 / 36 / 38 / 42 / 44 / 46 pcs selectable)						
OUTPUT	40 000	12 V Buttonics ( 00	10210410010014	27 447 40 000 00100			
Output wiring			3 Ph + N + PE				
Rated voltage	380 / 400 / 415 Vac ±1%						
Nated Voltage	Synchronized with utility in mains power mode:						
Frequency	$50 \text{ Hz} / 60 \text{ Hz} \pm 0.25\%$ in battery mode						
Power factor		50112700	1	erymoue			
Voltage distortion							
Crest factor	$\leq$ 1% with linear load / $\leq$ 3% with non-linear load						
Clest lactor		10E0/ cload <	3:1	nace in CO min			
	$105\% < \text{load} \le 110\%$ : transfer to bypass in 60 min						
Inverter overload capacity	$110\% < \text{load} \le 125\%$ : transfer to bypass in 10 min						
	$125\% < \text{load} \le 150\%$ : transfer to bypass in 1 min						
Bypass overload capacity	Load > 150%: transfer to bypass in 200 ms           Load ≤135% for long term;         < 1000% load for 100 ms						
SYSTEM		Load \$135% for	long term; < 1000%	load for 100 ms			
			00 5 %				
Efficiency	96.5 %						
Max. number of parallel connections	4 units						
Transfer time	0 ms						
Protections	Short circuit protection, overload protection, over-temperature protection, battery low						
	voltage protection, output over/low voltage protection, fans failure protection etc.						
Communications	RS485, dry contacts, SNMP						
Display		7 in	ches LCD touch scr	een			
OTHERS	-						
Operating temperature	0 ~ 40°C						
Storage temperature	-40°C ~ +70°C						
Humidity	0~95% (non-condensing)						
Altitude	≤ 1000 m. Above 1000 m, derating 1% for each additional 100 m						
Protection level	IP 20						
Noise level at 1 m	< 65 dB	< 65 dB < 68 dB					
Cabinet dimensions (W $\times$ D $\times$ H) (mm)	600 × 850 × 2000 1200 × 850 × 2000 1400 × 850 × 2000						
UPS module dimensions (W $\times$ D $\times$ H) (mm)		440 × 620 × 130					
Cabinet weight (kg)	233	242	415	465	617		
Power module weight (kg)			32				

•All specifications subject to change without notice.