## **EA660**

20KVA ~ 400KVA PF 1.0



With extendable capacity up to 400KVA/400KW in each closet and full DSP control technology, EA660 series is the third generation of three phase high frequency modular UPS. All internal modules (power module, charger module and monitor module) are modularly designed and hot swappable. In addition, they are constructed with small modules, assuring both system compactness and reliability. Its full isolation design between fragile components and air flue makes the best of combination of reliability, functionality and flexibility. Moreover, this system adopts advanced "N+X" wireless parallel and redundancy technology, avoiding single point failure, and further strengthening the reliability.

## Features

- High frequency online double-conversion with DSP control
- Hot swappable operation for all modules
- Inbuilt integrated PDU system, easy installation and economic initial investment
- Wide input voltage range, 50Hz / 60Hz auto sensing frequency
- Support two modes of frequency conversion: 50Hz input / 60Hz output and 60Hz input / 50Hz output
- Input power factor > 0.99, input THDi  $\leq$  3%, output THDV  $\leq$  3%
- Output power factor 1.0
- Advanced "N+X" wireless parallel and redundancy technology easily set up different numbers of redundancy UPS module via LCD
- Inbuilt battery module available, 40 x 12V / 9AH for each module
- Share battery pack in parallel operation, saving user's battery cost
- System capacity up to 400KVA / 400KW constructed by each module 20KVA / 20KW, single charger module be equipped with 30 A charging current, 4 modules be configured maximally
- Flexible charger parameter and battery configuration setting, selectable battery number: 32 pcs / 34 pcs / 36pcs / 38 pcs / 40 pcs
- $\bullet \ \, \text{Advanced intelligent battery management technique, prolong the working life of battery effectively }$
- Support battery cold start and mains auto restart
- Completely isolation design between fragile components and air flue, improving the system reliability greatly
- Fragile components been replaced as module easily at low maintenance cost
- Front door operation, available for top and bottom terminal connection
- Perfect protection for hardware and software (C class lighting protection, circuit breaker, fuse, software and hardware protection), robust self detection, abundant event log for future check
- 5.7 inches LCD touch screen, friendly human & machine interface
- Standard emergency power off (EPO)
- Standard RS232 / USB / RS485 / dry contacts communication port
- Optional SNMP communication port
- Optional battery temperature compensation

## Specifications

MODEL	EA6680	EA66160	EA66200	EA66400
Capacity	80 KVA / 80 KW	160 KVA / 160 KW	200 KVA / 200 KW	400 KVA / 400 KV
Numbers of parallel module	1 ~ 4	1 ~ 8	1 ~ 10	1 ~ 20
Numbers of redundancy module	0 ~ 3	0 ~ 7	0 ~ 9	0 ~ 19
UPS power module	20 KVA / 20 KW			
INPUT		2011111	, 20 1111	
Rated voltage		380 \/ / 400	V / 415 Vac	
nated voltage	380 V / 400 V / 415 Vac 204 ~ 520 Vac (load ≤ 50%);			
Voltage range	$204 \sim 520 \text{ Vac (10ad } \leq 50\%)$ , $242 \sim 520 \text{ Vac (50\% < 10ad } \leq 70\%)$ ;			
	$242 \sim 520 \text{ Vac} (50\% < 1080 \le 70\%),$ $277V \sim 520 \text{ Vac} (70\% < 1080 \le 100\%)$			
5	· · · · · · · · · · · · · · · · · · ·			
Rated frequency	50 / 60 Hz (auto-sense)			
Frequency range	40 ~ 70 Hz			
Power factor	≥ 0.99			
Total harmonic distortion (THDI)	≤ 3%			
Bypass voltage Range	Rated output v	/oltage -40% ~ rated οι	utput voltage +20% (se	ttable via LCD)
OUTPUT				
Voltage	380 V / 400 V / 415 Vac			
Voltage regulation	± 1%			
-	Synchronized with utility in mains mode;			
Frequency	50 / 60 Hz ± 0.1% in battery mode			
Power factor	1.0			
Waveform	Pure sine wave			
Crest factor	3:1			
Total harmonic distortion (THDV)	=			
, ,	≤ 1% (linear load); ≤ 3% (non-linear load)			
Transfer time	0 ms			
Inverter overload capability	110% ~130%: transfer to bypass in 10 mins;			
	130% ~ 150%: transfer to bypass in 1 min;			
	> 150%: transfer to bypass in 0.5 s			
Bypass overload capability	,	≤ 150%: long time running		
· · · · · ·		> 150%: pov	ver off in 10 s	
BATTERIES				
DC voltage	± 240 V (options: ± 192 V / ± 204 V / ± 216 V / ± 228 V)			
Inbuilt battery of standard model	40 × 12 V / 9 Ah for each module			
Charging current	1 ~ 3	30 A / 60 A (settable via	LCD)	1 ~ 60 A / 120 A
				(settable via LCI
SYSTEM				
Efficiency	≥ 94%			
Display panel	5.7 Inches LCD touch screen			
Alarm	Battery mode, low battery, fans fault etc.			
	EN62040-2			
EMI	IEC61000-4-2 (ESD)			
EMI		IEC61000-	-4-2 (ESD)	
			, ,	
		IEC61000	-4-3 (RS)	
		IEC61000 IEC61000-	-4-3 (RS) -4-4 (EFT)	
EMS		IEC61000 IEC61000-	-4-3 (RS)	
EMS  COMMUNICAITONS	0	IEC61000 IEC61000-	-4-3 (RS) -4-4 (EFT) 4-5 (surge)	7/0/40
EMS  COMMUNICAITONS  RS232 / RS485 / USB / dry contacts (standard)		IEC61000 IEC61000- IEC61000- indows <sup>®</sup> 98 / 2000 / 2003	-4-3 (RS) -4-4 (EFT) 4-5 (surge)	
EMS  COMMUNICAITONS  RS232 / RS485 / USB / dry contacts (standard)  SNMP (option)		IEC61000 IEC61000-	-4-3 (RS) -4-4 (EFT) 4-5 (surge)	
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COMMUNICAITONS  RS232 / RS485 / USB / dry contacts (standard) SNMP (option)  OTHERS  Humidity		IEC61000 IEC61000- IEC61000- indows® 98 / 2000 / 2003 nanagement from SNMF 0 ~ 95% RH @ 0 ~ 40°	-4-3 (RS) -4-4 (EFT) 4-5 (surge) 8 / XP / Vista / 2008 / Wi manager and web bro	
COMMUNICAITONS  RS232 / RS485 / USB / dry contacts (standard) SNMP (option)  OTHERS  Humidity Noise level		IEC61000 IEC61000- IEC61000- indows® 98 / 2000 / 2003 nanagement from SNMF 0 ~ 95% RH @ 0 ~ 40° ≤ 6	-4-3 (RS) -4-4 (EFT) 4-5 (surge) 8 / XP / Vista / 2008 / Wi manager and web bro C (non-condensing) 0 dB	
COMMUNICAITONS  RS232 / RS485 / USB / dry contacts (standard) SNMP (option)  OTHERS  Humidity Noise level		IEC61000 IEC61000- IEC61000- indows® 98 / 2000 / 2003 nanagement from SNMF 0 ~ 95% RH @ 0 ~ 40°	-4-3 (RS) -4-4 (EFT) 4-5 (surge) 8 / XP / Vista / 2008 / Wi manager and web bro C (non-condensing) 0 dB	
SNMP (option)  OTHERS  Humidity  Noise level  Module dimensions (mm) W × D × H	Powern	IEC61000 IEC61000- IEC61000- indows® 98 / 2000 / 2003 nanagement from SNMF 0 ~ 95% RH @ 0 ~ 40° ≤ 6	-4-3 (RS) -4-4 (EFT) 4-5 (surge) 8 / XP / Vista / 2008 / Wi manager and web bro C (non-condensing) 0 dB 90 x 131	wser
COMMUNICAITONS  RS232 / RS485 / USB / dry contacts (standard) SNMP (option)  OTHERS  Humidity  Noise level  Module dimensions (mm) W × D × H  Module weight	Powern	IEC61000 IEC61000- IEC61000- indows® 98 / 2000 / 2003 nanagement from SNMP 0 ~ 95% RH @ 0 ~ 40° ≤ 60 482 × 58	-4-3 (RS) -4-4 (EFT) 4-5 (surge) 8 / XP / Vista / 2008 / Wi manager and web bro C (non-condensing) 0 dB 90 x 131 er module, 7 kg / monit	oring module
EMS  COMMUNICAITONS  RS232 / RS485 / USB / dry contacts (standard) SNMP (option)  OTHERS  Humidity  Noise level  Module dimensions (mm) W × D × H  Module weight  UPS dimensions (mm) W × D × H	28 kg / powe 600 × 1000 × 1600	IEC61000 IEC61000− IEC61000− indows® 98 / 2000 / 2003 nanagement from SNMF 0 ~ 95% RH @ 0 ~ 40° ≤ 60 482 × 50° or module, 27 kg / charg	-4-3 (RS) -4-4 (EFT) 4-5 (surge) 8 / XP / Vista / 2008 / Wi manager and web bro C (non-condensing) 0 dB 90 × 131 er module, 7 kg / monit	oring module
EMS  COMMUNICAITONS  RS232 / RS485 / USB / dry contacts (standard) SNMP (option)  OTHERS  Humidity  Noise level  Module dimensions (mm) W × D × H  Module weight  UPS dimensions (mm) W × D × H  UPS packaged dimensions (mm) W × D × H	28 kg / powe 600 × 1000 × 1600 700 × 1070 × 1760	IEC61000 IEC61000− IEC61000− Indows® 98 / 2000 / 2003 Inanagement from SNMF 0 ~ 95% RH @ 0 ~ 40° ≤ 60 482 × 58 Fr module, 27 kg / charg 600 × 100 700 × 100	-4-3 (RS) -4-4 (EFT) 4-5 (surge) 8 / XP / Vista / 2008 / Wi manager and web bro C (non-condensing) 0 dB 90 × 131 er module, 7 kg / monit	oring module
EMS  COMMUNICAITONS  RS232 / RS485 / USB / dry contacts (standard)  SNMP (option)	28 kg / powe 600 × 1000 × 1600	IEC61000 IEC61000− IEC61000− indows® 98 / 2000 / 2003 nanagement from SNMF 0 ~ 95% RH @ 0 ~ 40° ≤ 60 482 × 50° or module, 27 kg / charg	-4-3 (RS) -4-4 (EFT) 4-5 (surge) 8 / XP / Vista / 2008 / Wi manager and web bro C (non-condensing) 0 dB 90 × 131 er module, 7 kg / monit	wser

All specifications subject to change without notice.Custom-made specifications are acceptable.

31