

Modular UPS System

Empower Cabinet (EC)



EMPOWER series

6~1560kVA

1:1 EC1106 / EC1110

3:1 EC3106 / EC3110

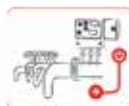
3:3 EC3310 / EC3315 / EC3320 / EC 3325 /
EC3330 / EC3340

Advantages

- Small foot print.
- High MTBF, Low MTTR
- 5 steps adjustable battery voltage
- Common battery for parallel units
- Load sharing between modules
- Hot swappable.

Features

- Module with built in charger
- High frequency and double conversion on-line technology
- Advanced PFC technology
- EPO function
- Wide input voltage range
- Fully digitized microprocessor control
- Parallel redundancy
- Advanced battery management
- Lightning and surge protection, short circuit and overload protection
- Multilingual LCD and LED display
- EMI/RFI noise filter
- Smart communication with monitoring software



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UPS Cabinet Control Panel



Module Control Panel

Empower Module (EM)

single module(3U)



6kVA /10kVA 1:1 phase
6kVA /10kVA 3:1 phase



10kVA /15kVA / 20kVA / 25kVA
/ 30kVA 3:3 phase



40kVA 3:3 phase



Battery Cabinets(Optional)



3 U Battery Box Optional

Technical Specifications:

MODEL		EC1130-06	EC1150-10	EC3130-60	EC3150-10	EC31100-10	EC3360-20	EC33100-20	EC33200-20	
Capacity (VA/watts)	EC cabinet	6~30k / 4.8~24k	6~50k / 4.8~40k	6~30k / 4.8~24k	6~50k / 4.8~40k	6~100k / 4.8~80k	10~60k / 9~54k	10~100k / 9~90k	10~200k / 9~180k	
	EM module	6k / 4.8k, 10k / 8k					10k / 9k, 15k / 13.5k, 20k / 18k			
INPUT										
Nominal voltage	220/230Vac		380/400Vac (3Ph+N+PE)or 220/230Vac			380/400/415Vac, (3Ph+N+PE)				
Operating voltage range	120~276Vac		208~478Vac or 120~276Vac			208~478Vac				
Operating frequency range	40~70Hz									
Power factor	≥0.99									
Bypass voltage range	Max.voltage: 220V +25%(optional +10%,+15%,+20%) 230V 20% (optional +10%,+15%) 240V 15%(optional +10%) Min. voltage: -45% (optional -20%,-30%) Frequency protection range: ±10%									
Harmonic distortion (THDi)	5%(100% non-linear load)					2%(100% nonlinear load)				
Generator input	Support									
OUTPUT										
Output voltage	220/230Vac					380/400/415Vac, (3Ph+N+PE)				
Voltage regulation	±1%									
Power factor	0.85					0.9/1 (Customized)				
Output frequency	1.Line Mode: ±1%, ±2%, ±4%, ±5%, ±10% of the rated frequency (optional) 2.Battery Mode: (50/60±0.1%)Hz									
Crest factor	3:1									
Harmonic distortion (THDv)	≤2% with linear load ≤5% with non linear load									
Efficiency	93.5%					95.5%				
BATTERY										
Battery voltage	±96\±108\±120Vdc; battery quantity(optional)					±192\±204\±216\±228\±240Vdc; battery quantity(optional)				
Charge Current	UPS cabinet	30A (Max.)	60A (Max.)	30A (Max.)	60A (Max.)	18A (Max.)	30A (Max.)	60A (Max.)		
	EM module	6A (Max.) (charge current can be set according to battery capacity installed)								
Backup time	Depends on the capacity of external batteries									
SYSTEM FEATURES										
Transfer time	Utility to Battery : 0ms; Utility to bypass: 0ms									
Overload	Line Mode	Load≤110%: last 60min,≤125%: last 10min,≤150%: last 1min,≥150% turn to bypass mode immediately								
	Bat. Mode	Load≤110%: last 30S,≤125%: last 1S,≤150%: last 200ms,≥150% shut down UPS immediately					Load≤110%: last 10min,≤125%: last 1min, ≤150%: last 1S,≥150% shut down UPS immediately			
	Bypass Mode	Breaker (6kVA:40A / 10kVA:60A)					Breaker (10kVA: 20A / 15kVA: 32A / 20kVA:40A)			
Short circuit	Hold whole system									
Nose suppression	Complies with EN62040-2									
Communication interface	1. UPS cabinet : RS232, RS485, Dry Contact, Intelligent slot x 2(SNMP card,Relay card optional) 2. HPM series UPS module: RS232									
ENVIRONMENTAL										
Operating temperature	0~40°C									
Storage temperature	-25~55°C									
Humidity range	0~95% (non condensing)									
Altitude	<1500m									
Noise level	<55dB					<65dB				
PHYSICAL										
Dimension D×W×H (mm)	UPS cabinet	840×600×1400	840×600×2000	840×600×1400	840×600×2000	840×600×1400	1100×600×2000			
	HPM module	443×580×131 (3U)								
Net weight (Kg)	UPS cabinet	138	150	138	150	213	149	152	290	
	HPM module	6kVA/23; 10kVA/25					10kVA/26; 15kVA/30; 20kVA/31			
STANDARDS										
Safety	IEC/EN62040-1,IEC/EN60950-1									
EMC	IEC61000-4-5,IEC61000-4-6,IEC61000-4-8 , IEC/EN62040-2,IEC61000-4-2,IEC61000-4-3,IEC61000-4-4, IEC 50121-1, 50121-2, 50121-3, 50121-4 IEC 6240-1, 6240-2, 60240-3 EN 50121-1, 50121-2, 50121-3, 50121-4, 50121-5 : 2017 EN 50121-1, 50121-2, 50121-3, 50121-4 : 2016 ,EN 55022: 2010+AC: 2011, EN 61000-6-3:2007+A1:2011+AC:2012, EN 55024: 2010, EN 61000-6-1:2007									

Specifications are subject to change without prior notice.

Technical Specifications:

MODEL		EC33250-25	EC33390-30	EC33150-30	EC33200-40	EC3320-40	EC33400-40	EC33520-40	EC33800-40	EC331560-40	
Capacity (VA/watts)	EC cabinet	250k / 225k	90k / 81k	150k / 135k	200k / 180k	320k / 2.88k	400k / 360k	520k / 468k	800k / 720	1560k / 1404k	
	EM module	25k / 22.5k	25k / 22.5k, 30k / 27k			40k / 36k					
INPUT											
Nominal voltage	380/400/415Vac, (3Ph+N+PE)										
Operating voltage range	208~478Vac										
Operating frequency range	40~70Hz										
Power factor	≥0.99										
Bypass voltage range	Max.voltage: 220V +25%(optional +10%,+15%,+20%) 230V+20% (optional +10%,+15%) 240V 15%(optional +10%) Min. voltage: -45% (optional -20%,-30%) Frequency protection range: ±10%										
Harmonic distortion (THDi)	3% (100% nonlinear load)										
Generator input	Support										
OUTPUT											
Output voltage	380/400/415Vac, (3Ph+N+PE)										
Voltage regulation	±1%										
Power factor	0.9										
Output frequency	1.Line Mode: ±1%, ±2%, ±4%, ±5%, ±10% of the rated frequency (optional) 2.Battery Mode: (50/60±0.1%)Hz										
Crest factor	3:1										
Harmonic distortion (THDv)	≤2% with linear load ≤5% with non linear load										
Efficiency	95.0%										
BATTERY											
Battery voltage	±192\±204\±216\±228\±240Vdc; battery quantity(optional)										
Charge Current	UPS cabinet	60A (Max.)	30A(Max.)	50A(Max.)	100A(Max.)		130A (Max.)	200A (Max.)	260A (Max.)	390A (Max.)	
	EM module	6A (Max.)	25kVA:6A (Max.) / 30kVA:10A (Max.)			10A (Max.)					
Backup time	Depends on the capacity of external batteries										
SYSTEM FEATURES											
Transfer time	Utility to Battery : 0ms; Utility to bypass: 0ms										
Overload	Line Mode	Load≤110%: last 60min,≤125%: last 10min,≤150%: last 1min,≥150% turn to bypass mode immediately									
	Bat. Mode	Load≤110%: last 10min,≤125%: last 1min,≤150%: last 1s, ≥150% shut down UPS immediately				Load≤110%: last 60min,≤125%: last 10min,≤150%: last 1min, ≥150% shut down UPS immediately					
	Bypass Mode	Breaker (25kVA:40A)	Breaker (25kVA:40A / 30kVA:60A)			40kVA:95A					
Short circuit	Hold whole system										
Nose suppression	Complies with EN62040-2										
Communication interface	1. UPS cabinet : RS232, RS485, Dry Contact, Intelligent slot x 2(SNMP card,Relay card optional) 2. HPM series UPS module: RS232 °										
ENVIRONMENTAL											
Operating temperature	0~40 C										
Storage temperature	-25~55 C										
Humidity range	0~95% (non condensing)										
Altitude	<1500m										
Noise level	<70dB					<73dB					
PHYSICAL											
Dimension	UPS cabinet	600×1100×2000	600×840×1400		600×1100×2000	1200×860×2000	1800×860×2000	3000×860×2000	4800×1100×2000		
	HPM module	443x580x131 (3U)									
Net weight (Kg)	UPS cabinet	290	158	170	307	750	860	1300	1810	2800	
	HPM module	32	25kVA/32; 30kVA/33.5			34					
STANDARDS											
Safety	IEC/EN62040-1,IEC/EN60950-1										
EMC	IEC61000-4-5,IEC61000-4-6,IEC61000-4-8 , IEC/EN62040-2,IEC61000-4-2,IEC61000-4-3,IEC61000-4-4, IEC 50121-1, 50121-2, 50121-3, 50121-4 IEC 6240-1, 6240-2, 60240-3 EN 50121-1, 50121-2, 50121-3, 50121-4, 50121-5 : 2017 EN 50121-1, 50121-2, 50121-3, 50121-4 : 2016 ,EN 55022: 2010+AC: 2011, EN 61000-6-3:2007+A1:2011+AC:2012, EN 55024: 2010, EN 61000-6-1:2007										

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