

EnplusEVO33 is the latest transformer-less 3 Phase Unity Power factor UPS from **ASTRID** ranging from **10 – 180kVA**. It is specially designed for smaller footprint and high reliability by adopting unique power unit redundancy technology for mission critical application in all Industries

FEATURES

- High power density design
- Online double conversion with DSP control
- Input current harmonic:<3%
- Wide input voltage range:208~478Vac
- Wide input frequency range 40~70Hz
- Maximum charging current up to 20A (Settable)
- Dual input source (optional for standard unit)
- Versatile LCD human-computer interface
- Generator compatible
- ECO mode operation for energy saving
- Intelligent fan speed regulation
- Self-testing when UPS startup
- 50/60Hz frequency converter mode
- Output can support 100% unbalanced load
- N+X Parallel Redundancy, Support up to 4 units in parallel
- Optimization battery group for 12V Battery quantity of: 16/18/20pcs (10~30kVA UPS) and 30~50pcs (40~200KVA UPS)
- Colourful 2.4 inch TFT LCD (10~40KVA UPS) and 7 inch LCD display (50~200KVA UPS)
- Multiple protection function: Short-circuit, Overload, Overheat, Battery overcharge, Over Discharge, Output low voltage and Fan fault alarm
- Multiple communication interface: USB, RS232, RS485 with Optional Parallel port, Dual Intelligent Slots for Relay Dry contact and SNMP card and Battery Temperature sensor



TECHNICAL SPECIFICATION

MODEL	EnplusEVO33 -10K (H)	EnplusEVO33 -15K (H)	EnplusEVO33 -20K (H)	EnplusEVO33 -30K (H)	EnplusEVO33 -40K (H)
POWER RATING (KVA)	10	15	20	30	40
Nominal Active Power (kW)	9	13.5	18	27	36
Dimensions (WxDxH)	Standard: 250x900x868 / H Model: 250x580x655				
Weight (kg)	129 / 35(H)	186 / 39(H)	187 / 40(H)	236 / 43(H)	239 / 46(H)
MAINS INPUT					
Phase	3PH + N + PE (Dual Input optionally available upon request)				
Nominal Voltage	380 / 400 / 415 Vac				
Voltage Range	305~478Vac (Full load); 208~304Vac (50% load)				
Frequency Range	40 - 70 Hz (50/60 Hz Auto-Sensing)				
Frequency Protection Range	50 / 60Hz ±10%				
Power factor	≥ 0.99				
Input THDi (at rated voltage)	< 3%				
BYPASS INPUT					
Input voltage	380 / 400 / 415 Vac (3Ph+N+PE)				
Input voltage range	Max.voltage: 220Vac:+25% / 230Vac:+20% / 240Vac:+15% (Others upon request) Min.voltage: 230Vac: -45% (Others upon request)				
Input frequency range	± 10% (Others upon request)				
Generator input	Support				
OUTPUT					
Voltage (V)	380 / 400 / 415 (3PH + N + PE)				
Output THDv	≤ 2% with Linear load, ≤ 5% with Non-linear load				
Output PF	0.9 (Unity Power Factor available upon request)				
Voltage regulation	±1%				
Crest factor	3:1				
Frequency (Hz)	50 / 60				
Transfer time	Mains to Battery : 0ms; Utility to Bypass: 0ms				
Overload capacity (Inverter)	≤ 110% for 60mins, ≤ 125% for 10mins, ≤ 150% for 1min, >150% Switch to bypass				
Parallel Capability	Parallel Up to 4 units				
Nominal output current (A)	14.43	21.65	28.86	43.3	57.73
Efficiency	Up to 93.5%		Up to 94.5%		
Efficiency (ECO Mode)	≥ 99%				
BATTERY					
Battery type	Valve Regulated Lead Acid Battery				
Internal Battery	1x20 12V 9AH	2x20 12V 9AH		3x20 12V 9AH	2x30 12V 9AH
H Model Voltage Seletcion	± 96/ 108 / 120Vdc				± 216/ 228/ 240/ 252/ 264/ 276/ 288/ 300Vdc
H Model Charging Current	10A			15A	
INTERFACE					
Display	2.4 inch LCD + LED				
Alarm	Overload, Mains fault, UPS fault, Low Battery and etc				
Protection	Short circuit, Overload, Over temperature, Battery low, Fan fault alarm				
Standard communication port	RS232 / RS485 and USB				
Optional communication port	SNMP card, Alarm Relay card, LBS and Parellel Port				
ENVIRONMENT					
Operating temperature	0 - 45 °C				
Relative humidity	0 - 95% (non-condensing)				
Altitude (above sea level) (m)	< 1500m				
Noise at 1m distanance (dB)	55 dB	58 dB	61 dB	64 dB	
STANDARDS					
Marking and certifications	CE				
Safety	IEC 62040-1, IEC60950-1				
EMC	IEC 62040-2, IEC61000-4-2,IEC61000-4-3,IEC61000-4-4, IEC61000-4-5,IEC61000-4-6,IEC61000-4-8				
Test and Performance	IEC 62040-3				

TECHNICAL SPECIFICATION

MODEL	EnplusEVO33 -50KH	EnplusEVO33 -60KH	EnplusEVO33 -80KH	EnplusEVO33 -100KH	EnplusEVO33 -120KH
POWER RATING (kVA)	50	60	80	100	120
Nominal Active Power (kW)	50	60	80	100	120
Dimensions (WxDxH)	250 x 828 x 868		442 x 850 x 1200		
Weight (kg)	80	83	140	160	170
MAINS INPUT (RECTIFIER)					
Phase	3PH + N + PE				
Nominal Voltage	380 / 400 / 415 Vac				
Voltage Range	305~485Vac (Full-load); 138~485Vac (40% load)				
Frequency	40 - 70Hz (50/60Hz Auto-Sensing)				
Frequency Protection Range	50 / 60Hz ±10%				
Power factor	≥ 0.99				
Input THDi (at rated voltage)	< 3% (100% non-linear load)				
BYPASS INPUT					
Input voltage (V)	380 / 400 / 415				
Input voltage range	Max.voltage: 220Vac:+25% / 230Vac:+20% / 240Vac:+15% (Others upon request) Min.voltage: 230Vac: -45% (Others upon request)				
Input frequency (Hz)	50 / 60				
Generator input	Support				
OUTPUT (INVERTER)					
Voltage	380 / 400 / 415 Vac (3PH + N + PE)				
Output THDv	≤2% with linear load, ≤4% with non-linear load				
Output PF	1				
Voltage regulation	±1%				
Crest factor	3:1				
Frequency (Hz)	50 / 60				
Transfer time	Mains to Battery : 0ms; Utility to Bypass: 0ms				
Overload capacity (Inverter)	110% for 60mins, 125% for 10mins, 150% for 1min, >150% switch to bypass				
Parallel Capability	Parallel Up to 6 units				
Nominal output current (A)	72.17	86.6	115.47	144.34	173.21
Efficiency	Up to 95.5%				
Efficiency (ECO Mode)	> 99%				
BATTERY					
Battery type	Valve Regulated Lead Acid Battery				
Nominal DC Voltage (VDC)	± 216/ 228/ 240/ 252/ 264/ 276/ 288/ 300Vdc (32~50 x 12V Blocks) ± 180Vdc (pf: 0.9)				
No of 12V Battery	30 - 50				
Charging current	20A		40A		
INTERFACE					
Display	7 Inch Touch Screen LCD				
Alarm	Overload, Mains fault, UPS fault, Low Battery and etc				
Protection	Short circuit, Overload, Over temperature, Battery low, Fan fault alarm				
Backfeed	Support (Optional)				
Standard communication port	RS232 / RS485 and USB				
Optional communication port	SNMP card, Alarm Relay card, LBS and Parallel Port				
GENERAL					
Operating temperature	0 - 45 °C				
Relative humidity	0 - 95% (non-condensing)				
Altitude (above sea level) (m)	< 1500m				
Noise at 1m distance (dB)	<55dB	<58dB	<60dB	<62dB	
STANDARDS					
Marking and certifications	CE				
Safety	IEC 62040-1, IEC60950-1				
EMC	IEC/EN62040-2 (IEC 61000-2-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11)				
Test and Performance	IEC 62040-3				

TECHNICAL SPECIFICATION

MODEL	EnplusEVO33-150KH	EnplusEVO33-160KH	EnplusEVO33-180KH
POWER RATING (kVA)	150	160	180
Nominal Active Power (kW)	150	160	180
Dimensions (WxDxH)	442 x 850 x 1200		
Weight (kG)	200	205	215
MAINS INPUT (RECTIFIER)			
Phase	3PH + N + PE		
Nominal Voltage	380 / 400 / 415 Vac		
Voltage Range	305~485Vac (Full-load); 138~485Vac (40% load)		
Frequency (Hz)	40 - 70Hz (50/60Hz Auto-Sensing)		
Frequency Protection Range	50 / 60Hz ±10%		
Power factor	≥ 0.99		
Input THDi (at rated voltage)	< 3% (100% non-linear load)		
BYPASS INPUT			
Input voltage (V)	380 / 400 / 415		
Input voltage range	Max.voltage: 220Vac:±25% / 230Vac:±20% / 240Vac:±15% (Others upon request) Min.voltage: 220Vdc: ±15% (Others upon request)		
Input frequency (Hz)	50 / 60		
Generator input	Support		
OUTPUT (INVERTER)			
Voltage (V)	380 / 400 / 415 (3PH + N + PE)		
Output THDv	≤2% with linear load, ≤4% with non-linear load		
Output PF	1		
Voltage regulation	±1%		
Crest factor	3:1		
Frequency (Hz)	50 / 60		
Transfer time	Mains to Battery : 0ms; Utility to Bypass: 0ms		
Overload capacity (Inverter)	110% for 60mins, 125% for 10mins, 150% for 1min, >150% switch to bypass		
Parallel Capability	Parallel Up to 6 units		
Nominal output current (A)	216.51	230.94	259.81
Efficiency	Up to 95.5%		
Efficiency (ECO Mode)	> 99%		
BATTERY			
Battery type	Valve Regulated Lead Acid Battery		
Nominal DC Voltage (VDC)	± 216/ 228/ 240/ 252/ 264/ 276/ 288/ 300Vdc (32~50 x 12V Blocks) ± 180Vdc (pf: 0.9)		
No of 12V Battery	30 - 50		
Charging current	60A		
INTERFACE			
Display	7 Inch Touch Screen LCD		
Alarm	Overload, Mains fault, UPS fault, Low Battery and etc		
Protection	Short circuit, Overload, Over temperature, Battery low, Fan fault alarm		
Backfeed	Support (Optional)		
Standard communication port	RS232 / RS485 and USB		
Optional communication port	SNMP card, Alarm Relay card, LBS and Parellel Port		
GENERAL			
Operating temperature	0 - 45 °C		
Relative humidity	0 - 95% (non-condensing)		
Altitude (above sea level) (m)	< 1500m		
Noise at 1m distance (dB)	<63dB	<64dB	<66dB
STANDARDS			
Marking and certifications	CE		
Safety	IEC 62040-1, IEC60950-1		
EMC	IEC/EN62040-2 (IEC 61000-2-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11)		
Test and Performance	IEC 62040-3		