

PowerWAVE EL

Designed to deliver complete emergency lighting protection



PowerWAVE EL

Efficient power for emergency lighting and safety equipment

The PowerWAVE EL series addresses the need for a range of high performance static inverters, manufactured using state of the art technology to give your operation the peace of mind it needs.

For more information call 01256 386700 or visit www.upspower.co.uk

PowerWAVE EL

Designed to the latest European EN 50171 Specification for Emergency Lighting

True double conversion and PWM technology

Inverter stage output galvanic isolation transformer included

Capable of 120% continuous overload to meet European Emergency Lighting regulations

Parallel mode operation (optional) (hot standby, redundant, symmetric parallel)

Large charger for faster recharge of batteries

Maintenance bypass (for complete isolation of the inverter during maintenance)

Unique inverter design to suit high inrush lighting loads

Bypass to load (change-over mode) user selectable

LCD panel providing accurate detailed information about load, batteries and inverter with advanced diagnostics

RS232 and dry contacts for communication and remote monitoring

Common applications

Emergency lighting systems

Central power supply systems

Fire alarm and safety systems

System and battery test function

Hospital and medical systems

Cinemas and entertainment venues

Retail



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PowerWAVE EL 100XA Series

High Performance Static Inverter (500VA to 3000VA)

Wall-mounted & standalone options

Allows for an internal self-contained battery system capable of supplying standard emergency lighting of 3 hour autonomies

Fully encapsulated product for lower rated requirements

High reliability with low maintenance

Low operating cost

Wide range of standard ratings available

Battery options to suit all applications

Intelligent battery monitoring to maximise service life

Simple & easy to install with front access



Single Phase Input & Output – Technical specification

Model	EL1005XA	EL1012XA	EL1030XA
Power Rating VA / W	500 / 400	1250 / 1000	3000 / 2400
Power Factor	0.8		
Input			
Voltage / Tolerance	230VAC Single phase/184V ~ 285V		
Frequency	50Hz +5%		
Max. RFI	EN50091-2 CLASSA		
Output			
Voltage	230VAC Single phase		
Voltage Stability	Changeover mode +10% / Battery mode +3%		
Voltage Recovery Time	After step load 0-100%. Max. 20ms.		
Frequency	50Hz		
Frequency Tolerance	+1% in battery mode		
Efficiency at 100% Load	>97%		
Crest Factor	3:1		
Short Circuit Protection	Electronic short circuit		
Overload Capacity	120% continuous, 150% alarm load		
Batteries			
Type	Sealed lead acid –maintenance free		
Number of 12V Blocks (Internal)	4	4	4 or 8
Float Charging Voltage	54VDC	54VDC	54VDC
End of Discharge Voltage	42VDC	42VDC	42VDC
Battery Ambient Temperature	20°C	20°C	20°C
Battery Protection	Double Pole DC Circuit Breaker		
Battery Test	Automatic Battery Test / Smart Battery Management		
General			
Serial Communication	Drycontacts plus RS232		
Software	Optional monitoring & shutdown / optional SNMP module		
Protection Degree	IP21		
Ambient Operating Temperature / Altitude	0°C to 40°C / <1000m above sea level		
Standard	Emergency Lighting EN50171		
Ventilation	Forced air cooling		
Acoustic Noise at 1m Distance	<56 dbA		
Dimensions (mm) W x D x H	750 x 250 x 850	750 x 250 x 1250	750 x 400 x 1250

PowerWAVE EL 100 Series

Single Phase Input & Output Online Static Inverter (4kVA to 12kVA)

Solution for higher power, single phase loads

Galvanic isolation transformer at the inverter stage

High reliability with low maintenance

Low operating cost

Wide range of standard ratings available

Battery options to suit all applications

Intelligent battery monitoring to maximise service life

Simple & easy to install with front access



Technical specification

Model	EL104	EL105	EL106	EL108	EL110	EL112
Power Rating kVA/kW	4 / 2.8	5 / 3.5	6 / 4.2	8 / 5.6	10/7	12.5 / 8.75
Power Factor	0.7					
Input						
Voltage / Tolerance	230 VAC single phase, +/- 15%					
By-pass Voltage	230 VAC single phase					
Input Frequency	50Hz +/- 5%					
Max RFI	EN50091-2 Class A					
Output						
Voltage	230 VAC single phase					
Voltage Stability	Static (balanced load) +/-1%, Static (unbalanced load) +/-2%, Dynamic (step load 0-100%) +/-5%					
Voltage Recovery Time	After step load 0-100% max. 20ms					
Frequency	50Hz					
Frequency Tolerance	Line synchronised +/- 1% / free running +/- 0.2%					
Efficiency at 100% Load	>87-91%					
Crest Factor	3:1					
Short Circuit Protection	Electronic short circuit					
Overload Capacity	120% continuous, 150% load 10min. 180% 1min, 200% for 1 sec					
Total Harmonic Distortion (THD)	Linear Load <3% / non linear load (75% NP and CF 3:1) <5%					
Batteries						
Type	Sealed Lead Acid – Maintenance Free					
Number of 12V Blocks	16	18			20	
Float Charging Voltage	216Vdc	243Vdc			270Vdc	
End of Discharge Voltage	160Vdc	180Vdc			200Vdc	
Battery Ambient Temperature	20°C					
Battery Protection	Circuit breaker					
Battery Test	Automatic battery test once a week					
General						
Serial Communication	Dry contacts plus RS232					
Software	T-Mon standard / SNMP module optional					
Protection Degree	IP41					
Ambient Operating Temperature / Altitude	0°C to 40°C / <1000m (above sea level)					
Standard	Emergency Lighting EN 50171					
Ventilation	Forced air cooling					
Acoustic Noise at 1m distance	<56 dbA					
Weight (kgs)	85	95	110	125	150	155
Dimensions (mm) w x d x h	500 x 300 x 1220					

PowerWAVE EL 200 Series

Three Phase Input & Single Phase Output Static Inverter (10kVA to 30kVA)

Solution for higher power, three-phase loads

Galvanic isolation transformer at the inverter stage

High reliability with low maintenance

Low operating cost

Wide range of standard ratings available

Battery options to suit all applications

Intelligent battery monitoring to maximise service life

Simple & easy to install with front access



Technical specification

Model	EL210	EL215	EL220
Power Rating kVA/kW	10 / 8	15 / 12	20 / 16
Power Factor	0.8		
Input			
Voltage / Tolerance	230/400 VAC 3phase, 4wires, +ground, +/- 15%		
By-pass Voltage	230 VAC single phase		
Input Frequency	50Hz +/- 5%		
Max RFI	EN50091-2 Class A		
Output			
Voltage	230 VAC single phase		
Voltage Stability	Static (balanced load) +/-1%, Static (unbalanced load) +/-2%, Dynamic (stop load 0-100%) +/-5%		
Voltage Recovery Time	After step load 0-100% max. 20ms		
Frequency	50Hz		
Frequency Tolerance	Line synchronised +/- 1% / free running +/- 0.2%		
Efficiency at 100% Load	>87-91%		
Crest Factor	3:1		
Short Circuit Protection	Electronic short circuit		
Overload Capacity	120% continuous, 150% load 10min. 180% 1min, 200% for 1 sec		
Total Harmonic Distortion (THD)	Linear Load <3% / non linear load (75% NP and CF 3:1) <5%		
Batteries			
Type	Sealed Lead Acid – Maintenance Free		
Number of 12V Blocks	30		
Float Charging Voltage	405		
End of Discharge Voltage	300VDC		
Battery Ambient Temperature	20°C		
Battery Protection	Circuit breaker		
Battery Test	Automatic battery test once a week		
General			
Serial Communication	Dry contacts plus RS232		
Software	T-Mon standard / SNMP module optional		
Protection Degree	IP41		
Ambient Operating Temperature / Altitude	0°C to 40°C / <1000m (above sea level)		
Standard	Emergency Lighting EN 50171		
Ventilation	Forced air cooling		
Relative Humidity	90% max (non-condensing)		
Acoustic Noise at 1m distance	<56 dbA		
Weight (kgs)	200	210	240
Dimensions (mm) w x d x h	520 x 715 x 1170		

PowerWAVE EL 300 Series

Three Phase Input & Output Static Inverter (10kVA to 160kVA)

Solution for higher power, three-phase loads

Galvanic isolation transformer at the inverter stage

High reliability with low maintenance

Low operating cost

Wide range of standard ratings available

Battery options to suit all applications

Intelligent battery monitoring to maximise service life

Simple & easy to install with front access



Technical specification

Model	EL310	EL315	EL320	EL325	EL330	EL340	EL360	EL380	EL3100	EL3120	EL3160	
Power Rating kVA/kW	10 / 8	15 / 12	20 / 16	25 / 20	30 / 24	40 / 32	60 / 48	80 / 64	100 / 80	120 / 96	160 / 128	
Power Factor	0.8											
Input												
Voltage / Tolerance	230/400 VAC three phase, 4wires, +ground, +/- 15%											
By-pass Voltage	230/400 VAC three phase											
Input Frequency	50Hz +/- 5%											
Max RFI	EN50091-2 Class A											
Output												
Voltage	230/400 VAC three phase											
Voltage Stability	Static (balanced load) +/-1%, Static (unbalanced load) +/-2%, Dynamic (stop load 0-100%) +/-5%											
Voltage Recovery Time	After step load 0-100% max. 20ms											
Frequency	50Hz											
Frequency Tolerance	Line synchronised +/- 1% / free running +/- 0.2%											
Efficiency at 100% Load	>87-91%											
Crest Factor	3:1											
Short Circuit Protection	Electronic short circuit											
Overload Capacity	120% continuous, 150% load 10min. 180% 1min, 200% for 1 sec											
Total Harmonic Distortion (THD)	Linear Load <3% / non linear load (75% NP and CF 3:1) <5%											
Batteries												
Type	Sealed Lead Acid – Maintenance Free											
Number of 12V Blocks	30											
Float Charging Voltage	405											
End of Discharge Voltage	300VDC											
Battery Ambient Temperature	20°C											
Battery Protection	Circuit breaker											
Battery Test	Automatic battery test once a week											
General												
Serial Communication	Dry contacts plus RS232											
Software	T-Mon standard / SNMP module optional											
Protection Degree	IP41											
Ambient Operating Temperature / Altitude	0°C to 40°C / <1000m (above sea level)											
Standard	Emergency Lighting EN 50171											
Ventilation	Forced air cooling											
Relative Humidity	90% max (non-condensing)											
Acoustic Noise at 1m distance	<56 dbA					<60 dbA			<65 dbA			
Weight (kgs)	260	276	332	494	494	572	630	780	820	970	1160	
Dimensions (mm) w x d x h	520 x 715 x 1170			590 x 860 x 1425			730x840x1425	1120 x 840 x 1675		1215 x 910 x 1755		