

PowerPro™ EL Ranges

Single & Three Phase Options

EL100XA / EL100 / EL200 / EL300DSP / CBU

» EN50171

» Lighting

» Reliable



The PowerPro EL Ranges are Static Inverter Systems designed specifically for emergency lighting applications according to European BS EN50171 specification.

A highly versatile range, not only providing capacity up to 160kVA but also a comprehensive bespoke range of AC/DC Central Battery Units with nominally 24V, 48V, 50V and 110V options, allowing BPC to provide an all-inclusive selection of reliable and cost effective products to meet the most challenging of lighting applications.

» Escape route lighting

» Open area lighting

» High risk task area lighting



PowerPro EL Range & Features

EL100XA SERIES – 1/1

A compact series of single phase input & output Static Inverters ranging from 500VA to 3kVA.

EL100 SERIES – 1/1

High performance single phase input & output Static Inverters ranging from 4kVA to 12kVA.



EL100XA Features

- True sinewave & PWM microprocessor controlled technology
- System and battery test function
- DC short circuit protection
- Recharge batteries up to 80% within 12 hours
- Fast changeover to Battery Mode
- Built-in distribution panel (6x standard)
- LCD panel providing accurate detailed information about load, batteries, system diagnostics & audible alarm
- RS232 and dry contacts for communication and remote monitoring
- Internal battery compartment
- Reduced mean time to repair (MTTR) due to modular design



EL200 SERIES – 3/1

High performance three phase input & single phase output Static Inverters ranging from 10kVA to 20kVA.

EL300DSP SERIES – 3/3

High performance three phase input & output Static Inverters ranging from 10kVA to 160kVA.

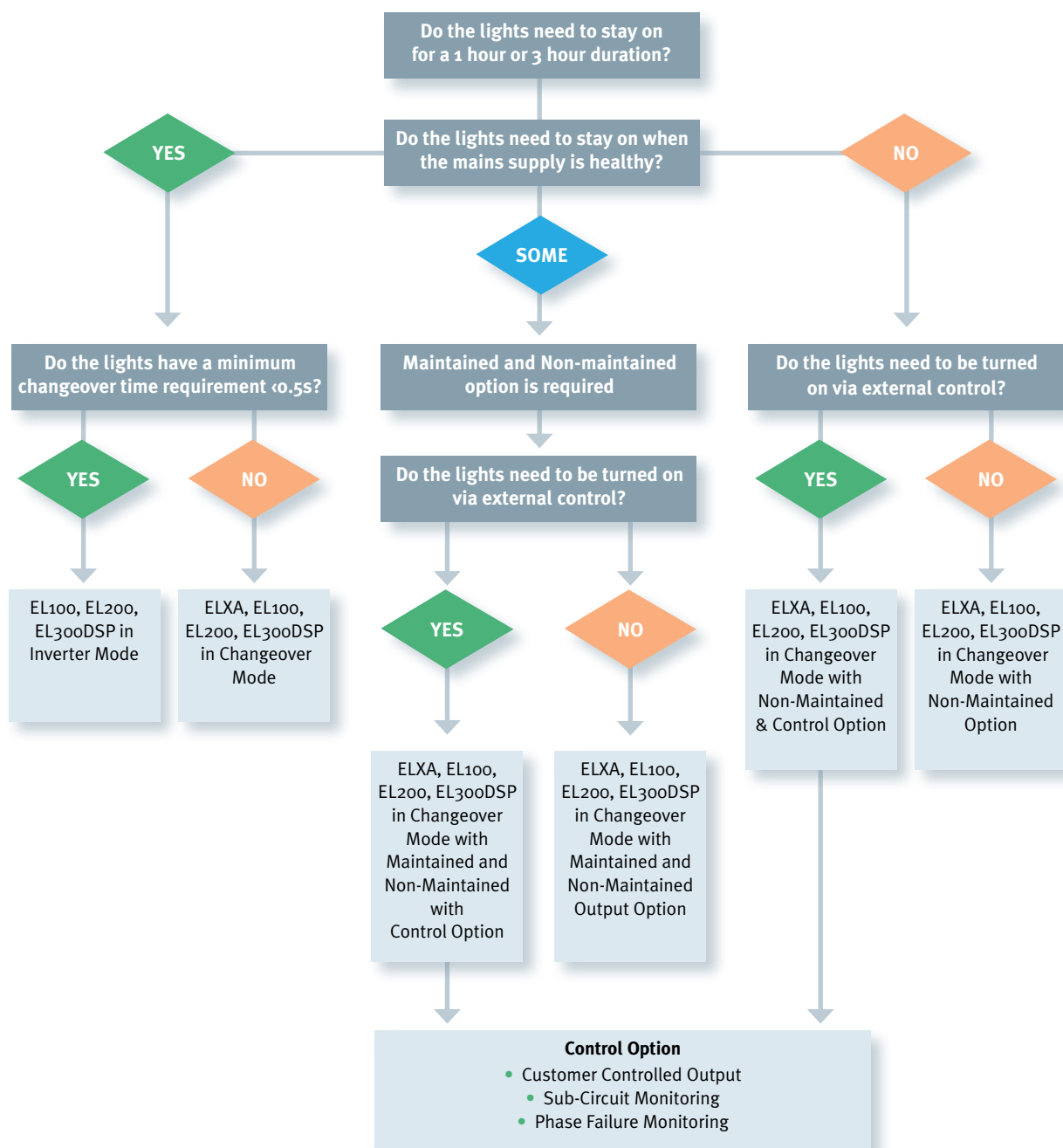


EL100 / EL200 / EL300DSP Features

- True sinewave & PWM microprocessor controlled technology
- Recharge batteries up to 80% within 12 hours
- FAR Controls including 48 Vdc supply for Fire Alarm Panel
- Selectable Non-Maintained / Maintained Mode with external Control (if external contactor fitted)
- External phase failure connection (if external contactor fitted)
- External Test Facility included
- Unique inverter design to suit high inrush lighting loads
- User selectable Inverter or Changeover Mode
- LCD panel providing accurate detailed information about load, batteries and inverter with advanced diagnostics
- RS232 and dry contacts for communication and remote monitoring

PowerPro EL Considerations

Choosing the right Static Inverter to support your Emergency Lighting System will depend on a number of key factors; it is key to ensure the right system is provided for the right type of installation and this can depend on a variety of considerations. Below is a quick guide to understanding your requirements.

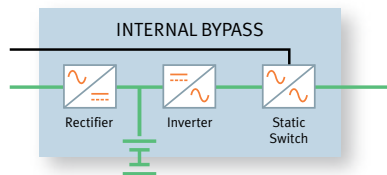


PowerPro EL System Operation Descriptions

With multiple ways to control lights within an application, the below descriptions and drawings show the various ways the lighting load may be controlled.

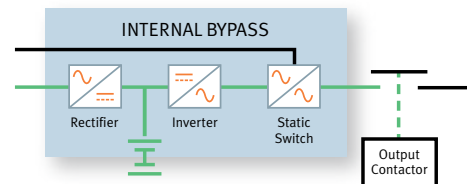
MAINTAINED OUTPUT

Static Inverter provides continuous power to the emergency luminaires during normal operation and during power failure.



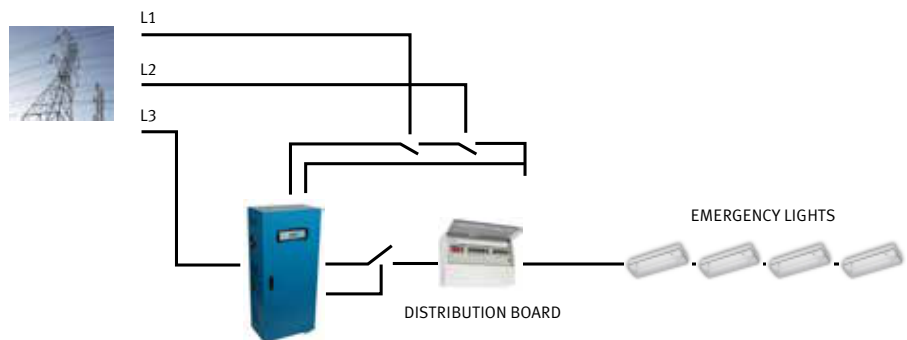
NON-MAINTAINED OUTPUT

Static Inverter output and emergency luminaires are off during normal operation. During power failure the Static Inverter output is activated and the luminaires turn on.



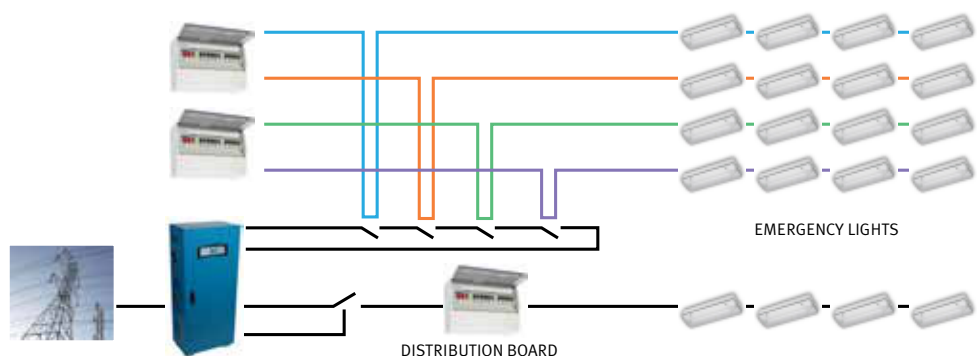
PHASE FAILURE MONITORING

- During normal operation emergency lights non-maintained
- Emergency lights operate during mains failure
- Emergency lights operate if any other incoming phase fails



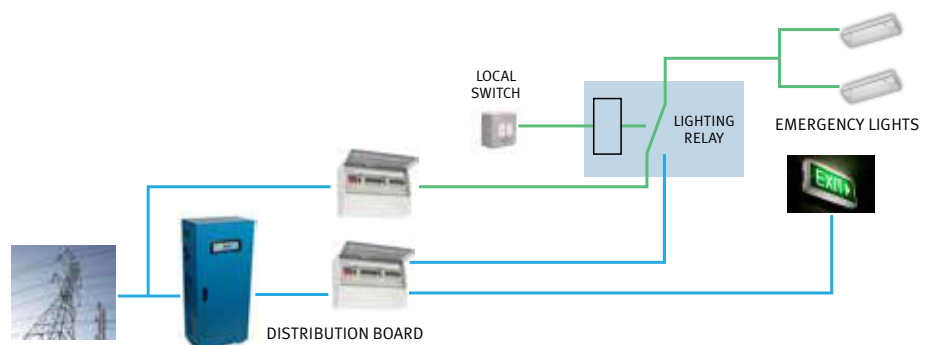
SUB-CIRCUIT MONITORING

- During normal operation emergency lights non-maintained
- Emergency lights operate during mains failure
- Emergency lights operate if any sub-circuit breaker on non-emergency lighting trips



CUSTOMER CONTROLLED OUTPUT

- During normal operation emergency lights switch maintained
- Emergency lights operate during mains failure
- Some lighting circuits left as maintained
- Emergency lights operate if local switch is OFF during mains failure



PowerPro EL100 XA Single Phase Input & Output Static Inverter

Technical Specification



MODEL	EL 1005XA		EL 1012XA	EL 1030XA
Power Rating VA / Watts	500 / 400		1250 / 1000	3000 / 2400
INPUT				
Nominal Voltage	230 Vac (1Ph + N + PE)			
Voltage Range	184 V – 285 V			
Frequency Range	50 Hz ±5%			
OUTPUT				
Nominal Voltage	230 Vac			
AC Voltage Regulation (Battery Mode)	±3%			
Frequency Range (Battery Mode)	±1%			
Power Factor	0.8			
Crest Factor	3:1			
Harmonic Distortion (Linear Load)	≤5%			
Transfer Time	0.5secs			
Waveform	Sinewave			
Load Circuits	6			
Overload	120% Continuous			
Mode Operation	Changeover			
Maintained / Non-Maintained	Maintained (standard) / Non-Maintained (optional)			
BATTERY				
Battery Type	VRLA AGM Sealed Lead Acid Maintenance Free Batteries / Nickel Cadmium Batteries / Planté Batteries			
Internal / External	1 or 3 hour internal			
End of Life to En50171	Included			
Charge Battery to 80% within 12 hours	Included			
Deep Discharge Protection	Included			
DC Earth Leakage	Optional			
LIGHTING CONTROL INTERFACE				
External Mains Fail Test Connection	Optional			
Non-Maintained Mode Connection**	Optional			
FAR Connection **	Optional			
External Phase Fail Connection **	Optional			
24 Vdc Supply for External Contactor	Optional			
KNX Interface	Optional			
Volt Free Contacts	3			
GENERAL				
Operating Temperature	0°C - 40°C / ≤1000m above sea level			
Operating Humidity	5 - 95% non-condensing			
Acoustic Noise	≤56 dB @ 1metre			
Protection Degree	IP21			
Dimensions (mm) WxDxH (Excluding Batteries)	750 x 250 x 850	750 x 250 x 1250		750 x 400 x 1250
Net Weight (kgs)	Dependent on battery configuration			

**only applicable if Non-Maintained Option fitted

PowerPro EL Range Options / Accessories

- **Remote Alarm Panel** – External panel for monitoring the Static Inverter
- **Output Distribution** – Internal distribution of the lighting circuits, standard in EL100XA & EL100, multiple outputs are optional
- **Maintenance Bypass Panel** – to provide flexibility during maintenance, service and/or repairs to the equipment. The bypass can ensure that the system is isolated from the critical load whilst work can be carried out.
- **Phase Failure Monitoring** – Factory fitted relays to ensure that the system monitors all three phases. Failure of any phase activates the emergency lights
- **Sub-Circuit Monitoring** – Factory fitted relays monitor external lighting circuits, if any of the external circuits fail the emergency lights are activated
- **Lighting Control Interface** – Allows communication via a node/module to the testing and monitoring systems
- **Fire Alarm Monitoring** – An alarm condition from the fire alarm panel will activate the emergency lights
- **Night-Watchman Switch** – Enables switching of the emergency lights from a remote location, fail safe in an emergency condition
- **Light Switch Control Relay** – Enables individual circuits to be controlled externally, fail safe in an emergency condition
- **Timer Control** – Solar dials or 24hr timers can be used to activate the non-maintained contactor
- **Earth Fault Alarm** – Monitoring of battery positive and negative for earth leakage
- **Plinth** – For sites that are using SWA cables, a plinth may be required to raise the unit off the floor and allow the cables to be easily installed.



15x Static Inverters and UPS Systems at the National Velodrome Stadium, Olympic Village

