

# PowerPro™ EL Ranges

Single & Three Phase Options

EL100XA / ELMOD / EL100 / EL300DSP / CBU

» EN50171

» Lighting

» Reliable



The PowerPro EL ranges are Static Inverter Systems designed specifically for emergency lighting applications according to European BS EN50171, EN50272-2, BS 5266 and ICEL 1009.

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.



### EL100XA Features

- True sinewave & PWM microprocessor controlled technology
- System and battery test function
- DC short circuit protection
- Recharges 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 and audible alarm
- RS232 and dry contacts for communication and remote monitoring
- Internal battery compartment
- Reduced MTTR (mean time to repair) due to modular design
- Deep Discharge Protection

### ELMOD Series – 1/1, 3/1

High performance single and three phase input and single phase output modular Static Inverter ranging from 4kVA to 24kVA.



### ELMOD Features

- 24kVA Power Cabinet, built up of 4kVA Power Modules
- 1/1 & 3/1 Configuration via display
- Hot-Swap Power Module
- True sinewave output
- Output configurable to 3 modes of operation (Changeover/ Inverter/Non-Maintained)
- No break Load Transfer for use with Discharge Lamps
- Deep Discharge Protection
- Reverse Battery Polarity Protection
- Front access for all maintenance and repair
- Each module automatically equally shares the input and output current, all inverter modules share the batteries
- Battery Short Circuit Protection
- Battery discharge management, auto-transfer between floating and equal charging, temperature compensation
- Multiple communication options RS232, RS485, drycontacts, TCP/IP Adapter for local and remote communication

### EL100 Series – 1/1

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



### EL300DSP Series – 3/3

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

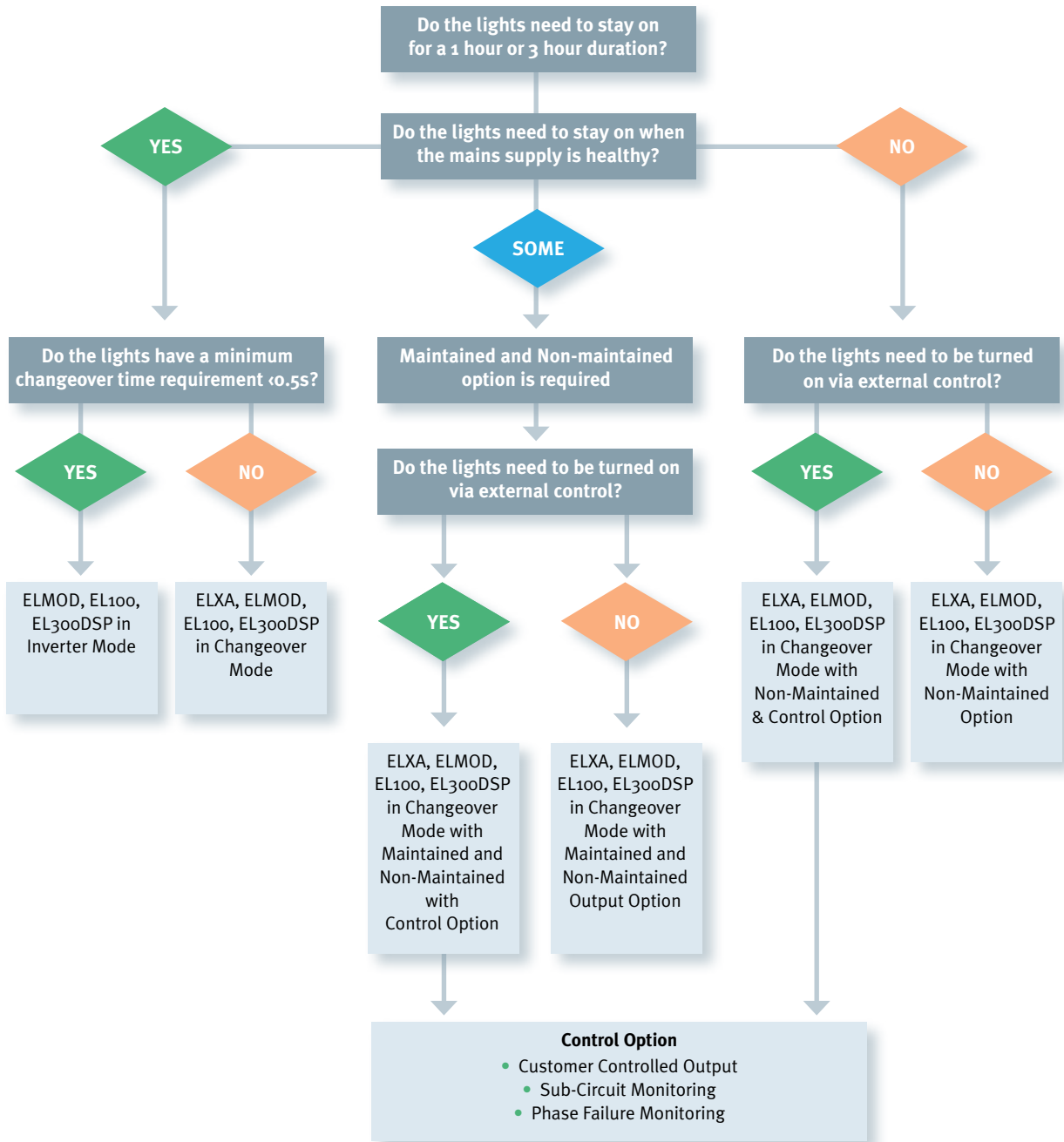


### EL100 / EL300DSP Features

- True sinewave & PWM microprocessor controlled technology
- DC short circuit protection
- Recharges batteries up to 80% within 12 hours
- FAR Controls including 48Vdc supply for Fire Alarm Panel
- Selectable Non-Maintained/Maintained Mode with external Control (if external contactor fitted)
- External Phase Fail 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
- Deep Discharge Protection

## 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.

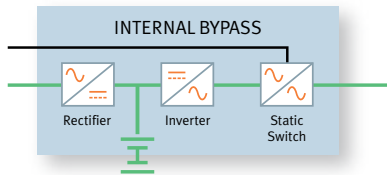


## PowerPro EL System Operation Descriptions

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

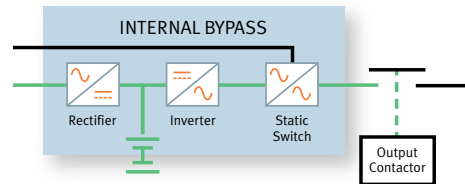
### MAINTAINED OUTPUT

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



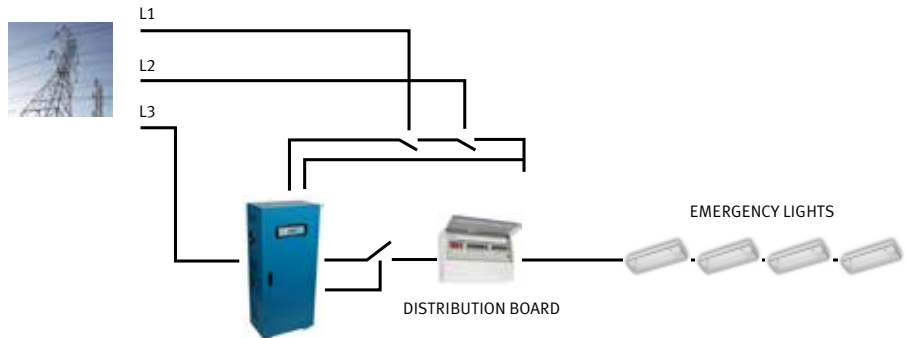
### NON-MAINTAINED OUTPUT

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.



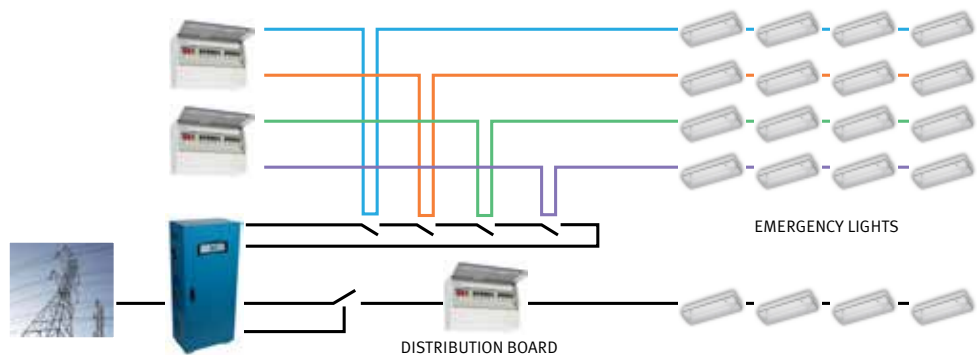
### PHASE FAILURE MONITORING

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



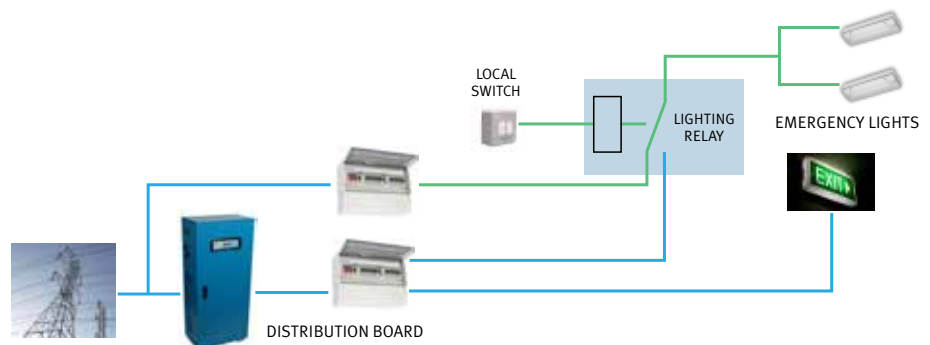
### SUB-CIRCUIT MONITORING

- 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 ELMOD Single & Three Phase Input & Single Phase Output Static Inverter Technical Specification

MODEL	EL MOD/4	EL MOD/8	EL MOD/12	EL MOD/16	EL MOD/20	EL MOD/24
Power Rating kVA / kW	4 / 3.6	8 / 7.2	12 / 10.8	16 / 14.4	20 / 18	24 / 21.6
<b>INPUT</b>						
Nominal Voltage	220 / 230 / 240 Vac (1Ph + N + PE)		220 / 230 / 240 Vac (1Ph + N + PE) or (3Ph + N + PE)	220 V / 230 V / 240 V (1Ph + N + PE)		220 / 230 / 240 Vac (1Ph + N + PE) or (3Ph + N + PE)
Voltage Range	±25%					
Frequency Range	50 Hz ±10%, 60 Hz ±10%					
<b>OUTPUT</b>						
Nominal Voltage	220 / 230 / 240 Vac					
AC Voltage Regulation	±1%					
Frequency Range	±4%, (±0.2% battery supply)					
Power Factor	0.9					
Crest Factor	3:1					
Harmonic Distortion (Linear Load)	<1%					
Transfer Time	<0 ms					
Waveform	Sinewave					
Load Circuits	1					
Overload	120% continuous, 150% for 10mins, 175% for 1min					
Mode Operation	Changeover, Inverter and Non-Maintained selectable					
Maintained / Non-Maintained	Maintained and Non-Maintained (Standard)					
<b>BATTERY</b>						
Battery Type	VRLA AGM Maintained Free Sealed Lead Acid Batteries, Nickel Cadmium or Planté					
Internal / External	1 or 3 hour external					
End of Life to En50171	Included					
Charge Battery to 80% within 12 hours	Included					
Deep Discharge Protection	Included					
DC Earth Leakage	Optional					
<b>LIGHTING CONTROL INTERFACE</b>						
External Mains Fail Test Connection	Included					
Non-Maintained Mode Connection**	Optional					
FAR Connection **	Optional					
External Phase Fail Connection **	Optional					
24 Vdc Supply for External Contactor	Optional					
KNX / DALI / NODE Interface	Optional					
Mains Fail Test Button	Key switch with 10min / 1hr / 3hr time delay included					
Volt Free Contacts	3					
<b>GENERAL</b>						
Operating Temperature	-5°C to 40°C / <1000m above sea level					
Operating Humidity	≤93% non-condensing					
Acoustic Noise	≤55 dB @ 1 metre					
Protection Degree	IP21					
Dimensions (mm) WxDxH	510 x 850 x 1340					
Net Weight (kgs) (Excluding Batteries)	107	114	121	128	135	142

\*\*only applicable if Non-Maintained Contactor 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*



# Advanced Power Conversion Solutions

## The BPC Group

BPC is an international company operating for 20 years globally, with partners and distributors located around the world.

These regions include:

### EUROPE

UK, France, Germany, Gibraltar, Ireland, Netherlands, Malta, Norway, Portugal.

### MIDDLE EAST

Bahrain, Jordan, Kuwait, KSA, Lebanon, Oman, Qatar, UAE, Yemen.

### AFRICA

Burkina Faso, Democratic Republic of the Congo, Egypt, Ethiopia, Kenya, Ghana, Libya, Nigeria, Rwanda, Sierra Leone, Sudan, Tanzania, Uganda, Zambia.

### FAR EAST & ASIA

India, Pakistan, Sri Lanka.

To ensure a high level of pre and post-sales support is offered, BPC work closely with distributors, providing key commercial and technical training whilst providing competitive costing structures tailored to specific region markets, ensuring the most suitable BPC products are offered. We pride ourselves on long standing relationships with our partners which is reflected in the ongoing support provided locally.



The British Power Conversion Company

Authorised Distributor