

## PowerPro™ EL Ranges

Single & Three Phase Options  
Static Inverter / CBS

» 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



## Who We Are

Founded in 1996, The British Power Conversion Company, based in Romsey, Hampshire, is an independently owned international corporation offering an established and effective range of power protection products and services to a broad spectrum of industries and sectors.

Over the past 20 years our business has evolved and we no longer just operate under the traditional fields of UPS Systems and Batteries. Our continued growth in manufacturing of Modular UPS, Static Emergency Lighting Systems, Long Runtime Inverters and Static Transfer Switches for critical applications has developed into a major part of our group. We are also actively developing PV (Solar) and associated products for Wind

and Turbine Generators to address the major growth in the 'Renewable Energy' market.

The BPC Group has seen BPC Energy evolve as the predominant company for the manufacturing and distribution of power protection products, alongside a dedicated distributor network in Europe, Middle East and Africa.



ISO 9001-2008 For design, assembly, commissioning, testing and servicing

## Solutions to meet all Emergency Lighting Applications

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

A highly versatile range, not only providing capacity up to 300kVA but also a comprehensive bespoke range of AC/DC Central Battery Units with normally 24V, 48V 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.



BPC PowerPro EL300DSP Emergency Lighting Inverter range available from 500VA to 300kVA with BSI Kitemark is now approved with UAE Civil Defence.

BSI Kitemark provides assurance that samples are regularly subjected to rigorous, independent testing to ensure that they comply with stringent standards for quality, safety, product performance and reliability. The Kitemark is therefore BPC's commitment towards maintaining the highest possible standards.



## Typical Applications

- » **Escape Route Lighting**
- » **Open Area Lighting**
- » **Sporting Grounds and Stadiums**
- » **Railway Stations**
- » **Ministry of Defence**
- » **Industrial Applications**
- » **Distribution Centres**
- » **Theatres**
- » **Cinemas**
- » **Public Buildings**
- » **Civil Buildings**



## 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

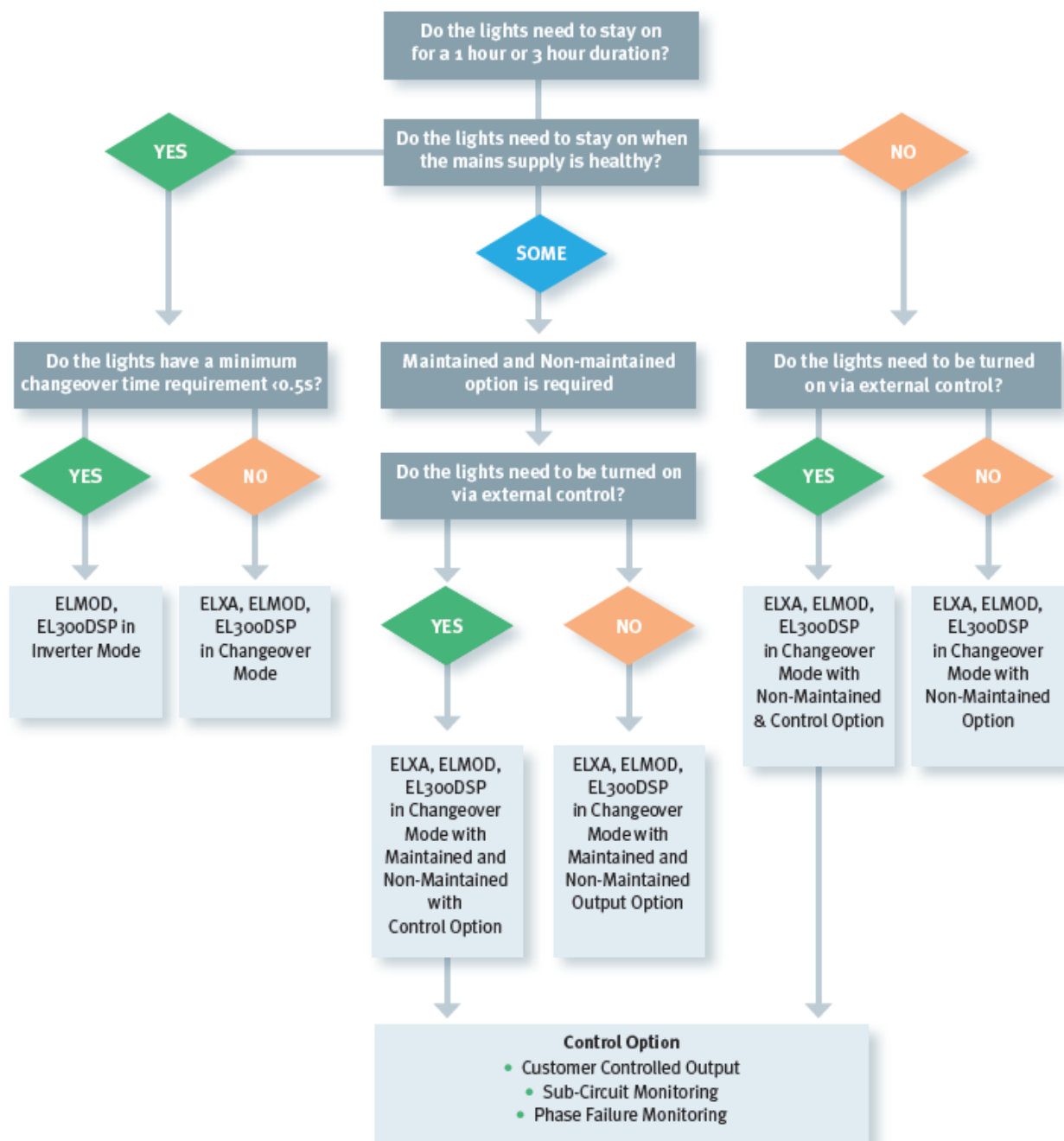
- True sinewave & PWM microprocessor controlled technology
- System and battery test function
- DC short circuit protection
- Recharges batteries up to 80% within 12 hours
- Fast changeover to Battery Mode
- Built-in distribution panel (6x standard)
- LCD panel providing accurate, detailed information 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



## 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.



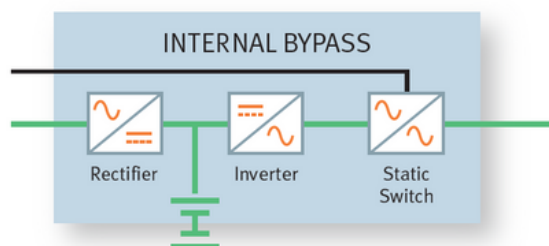
## PowerPro EL

### 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.

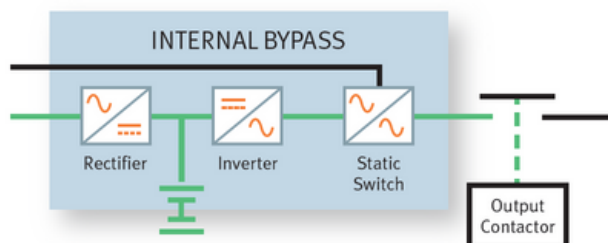
#### MAINTAINED OUTPUT

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



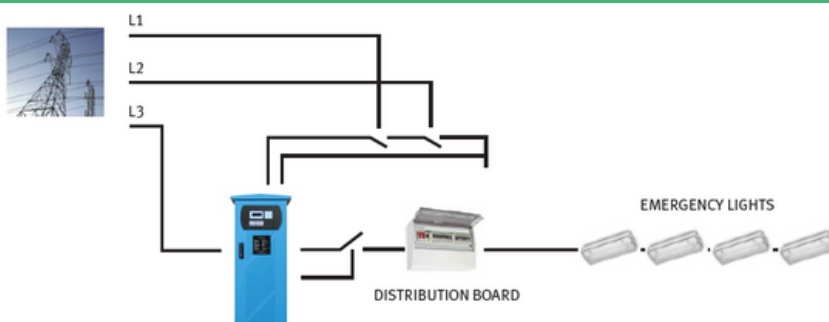
#### NON-MAINTAINED OUTPUT

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.



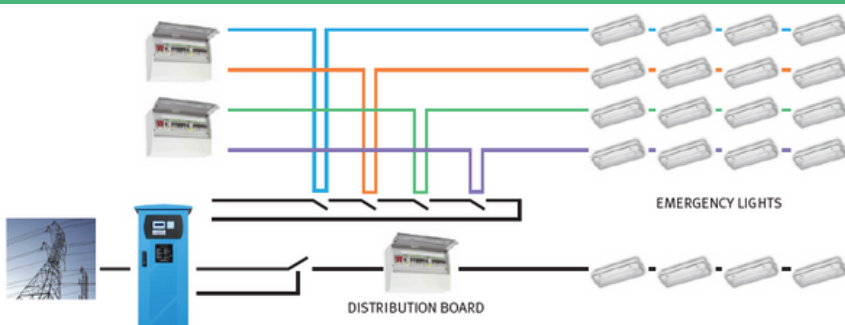
#### PHASE FAILURE MONITORING

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



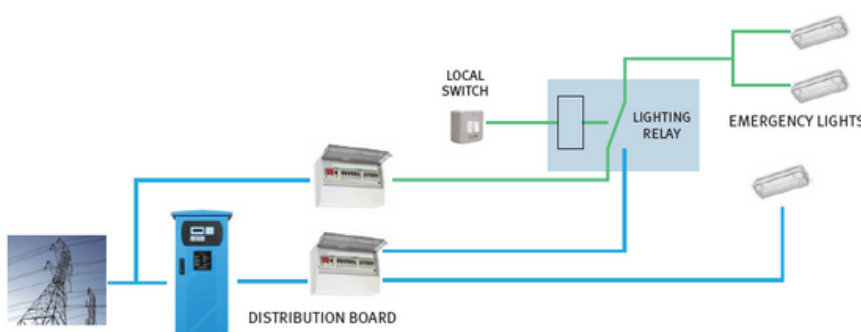
#### SUB-CIRCUIT MONITORING

- 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 EL100XA Single Phase Input & Output Static Inverter

### Technical Specifications



MODEL	EL1005XA	EL1012XA	EL1030XA
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	150% 1min / 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 hrs	Included		
Deep Discharge protection	Included		
DC Earth Leakage	Included		
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 / DALI / NODE Interface	Optional		
Mains Fail Test Button	Key switch included		
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	IP20		
Dimensions (mm) WxDxH (Ex 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 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, 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



# Central Battery Units

## Bespoke DC Systems - AC/DC

All BPC Central Battery Units (CBU) are bespoke designs with a range of standard features and benefits providing a robust solution to meet specific customer requirements, supplied in wall mounted and free standing cabinets with options for high ingress protection.

### BATTERY

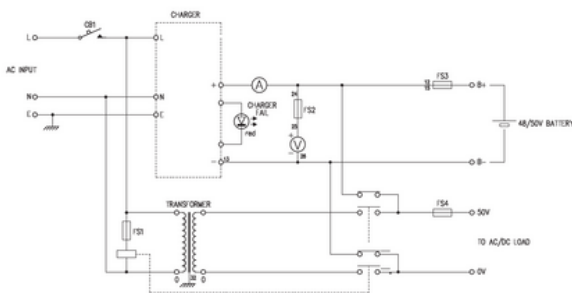
Any battery autonomy can be catered for, this will often be designed as a self-contained battery, housed in the base of the CBU. However, depending on runtime requirements, an external battery cabinet or open steel manufactured racks will be provided. Valve Regulated Sealed Lead Acid Maintenance Free 12 year design life or Nickel Cadmium 25 year design life options are available, meeting stringent emergency lighting demands.

### OPERATION

All BPC Central Battery Units typically have three variations in design: a Non-Maintained System, Maintained System and Hold Off System. These designs can then be adapted to suit individual customer requirements.

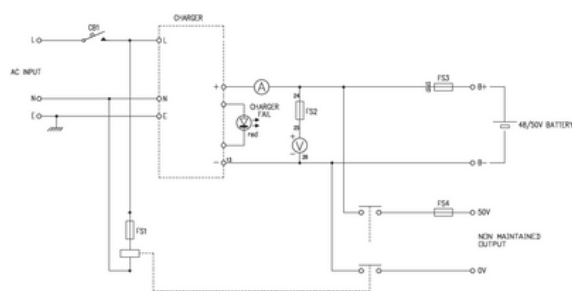
### MAINTAINED

A Maintained CBU will provide an AC supply to the lights when the AC incoming power is healthy and in the event of a mains power failure at the CBU input the luminaires will be supplied with a DC Supply.



### NON-MAINTAINED

A Non-Maintained CBU will provide a DC supply in the event of a mains power failure at the CBU Input.



### » Bespoke designs

» 12 / 24 / 36 / 48 / 50 / 110 / 220 Vdc output options

» Low voltage cut out, 'Mains On' indicator

» Automatic reset after using manual test button

» Extensive range of Slave Luminaires available

» Various back up runtimes to suit specifications

» Ventilated mild steel cabinets

» Options for self-contained battery compartments

» Charge current ammeter fitted as standard

» Maintained and Non-Maintained options available

» Metering can include:

- Battery / Charger fail alarm LED

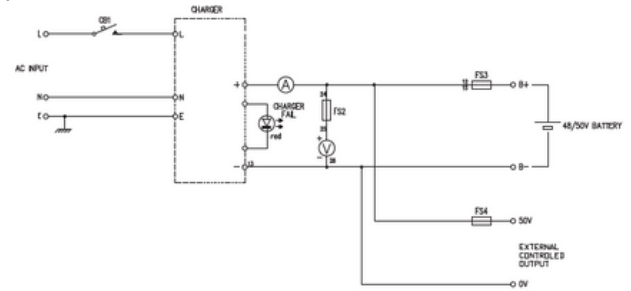
- AC fail alarm LED

- DIN72 analogue battery volt meter

- Volt free form C contact set for alarm annunciation to BMS

### HOLD OFF DESIGN

This circuit is used when the lighting is externally controlled by hold off relays and a constant DC voltage is required to the circuit.





## 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.

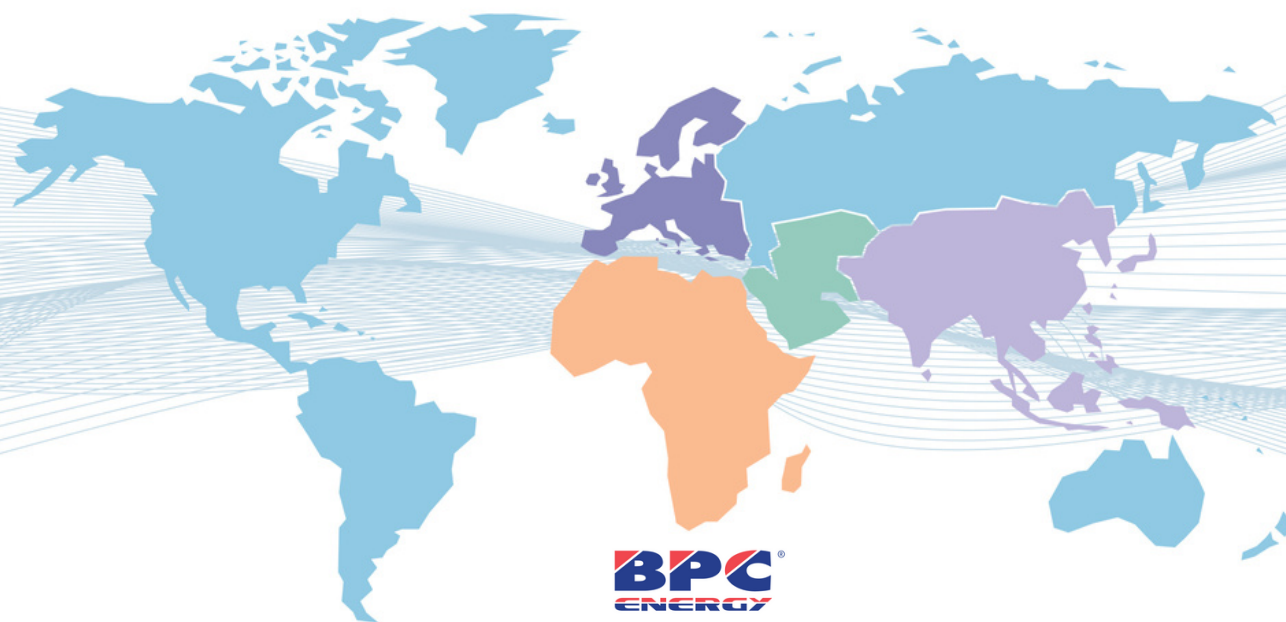
### AFRICA

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.



**BPC**  
ENERGY  
THE BRITISH POWER CONVERSION COMPANY™

Authorised Distributor