

PowerPro™ ELMOD Range

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, 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



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.



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

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

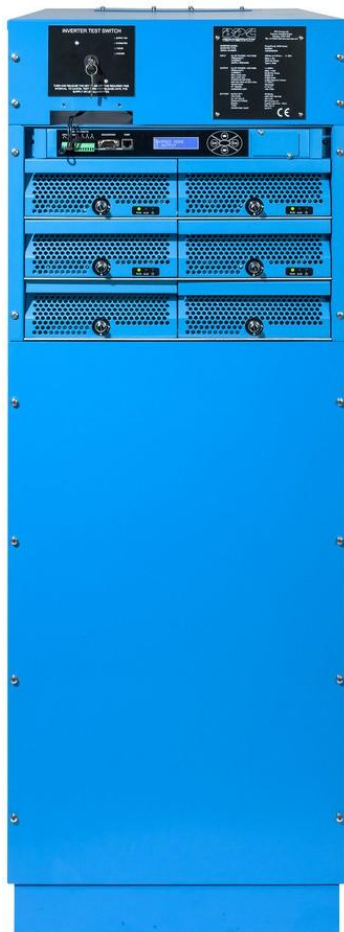
BSI Kitemark provides assurance that samples are regularly subjected to rigorous, independent testing to ensure that they comply with stringent standards for quality, safety, product performance and reliability. The Kitemark is therefore BPC's commitment towards maintaining the highest possible standards.



PowerPro EL Range & Features

ELMOD Series - 1/1, 3/3

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



ELMOD Features

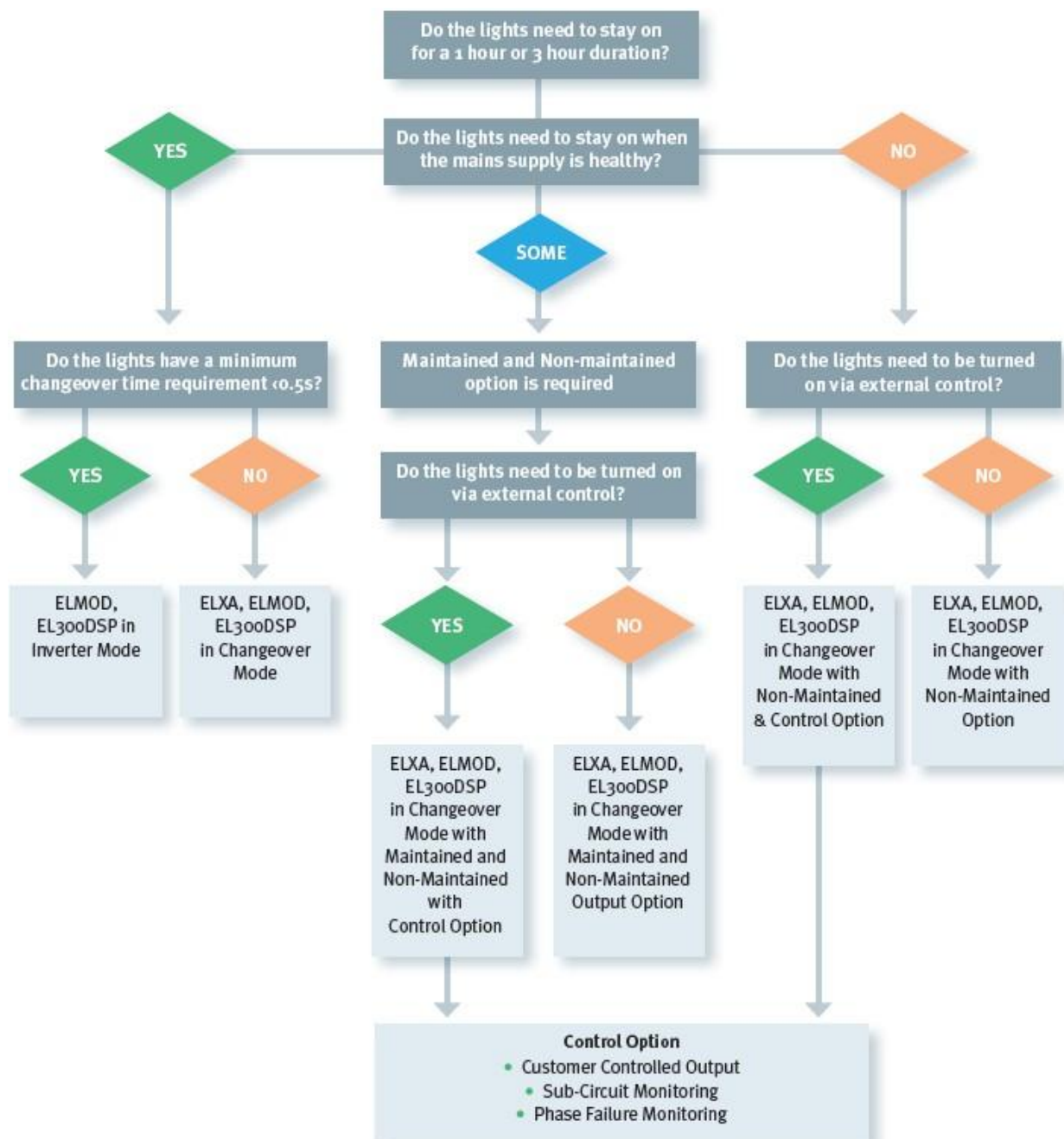
- 24kVA Power Cabinet, built up of 4kVA Power Modules
- 1/1 & 3/3 Configuration via display
- Hot-Swap Power Module
- True sinewave output
- Output configurable to 3 modes of operation (Changeover/ Inverter/Non-Maintained)
- No break Load Transfer for use with Discharge Lamps
- Deep Discharge Protection
- 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



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.



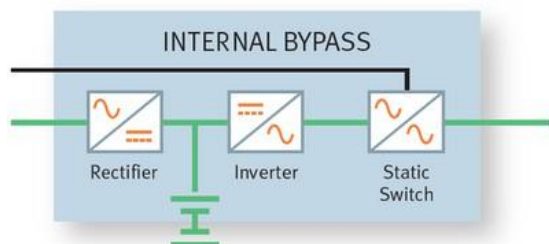
PowerPro EL

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.

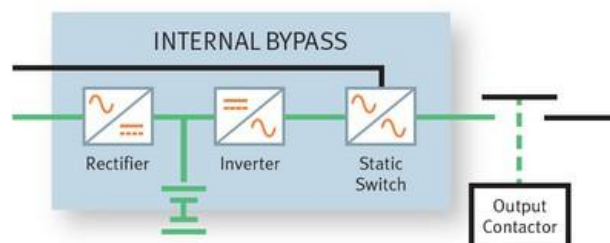
MAINTAINED OUTPUT

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



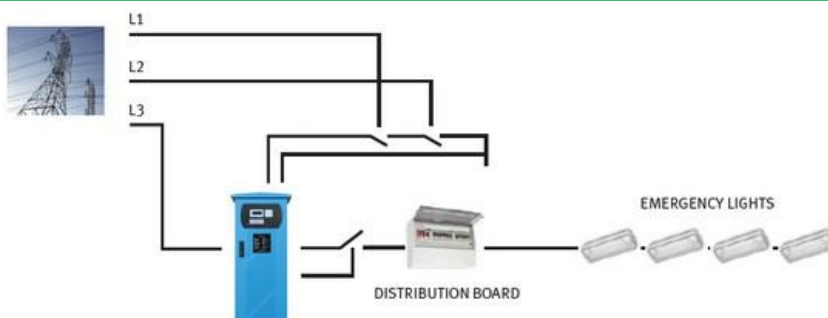
NON-MAINTAINED OUTPUT

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.



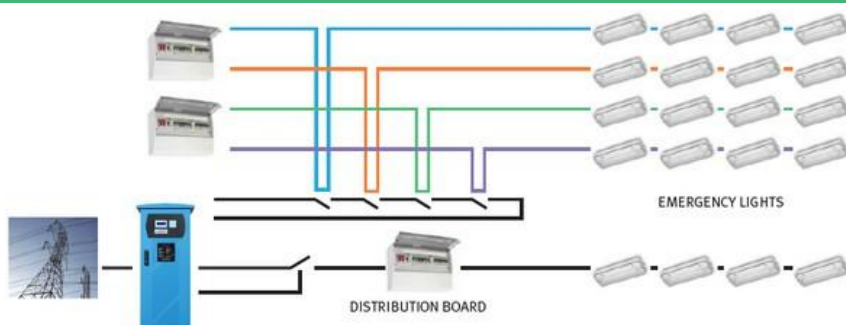
PHASE FAILURE MONITORING

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



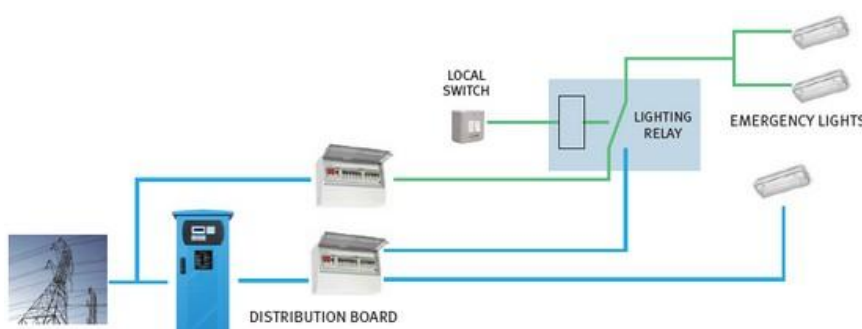
SUB-CIRCUIT MONITORING

- 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 Specifications

MODEL	ELMOD/4	ELMOD/8	ELMOD/12	ELMOD/16	ELMOD/20	ELMOD/24
Power Rating kVA / kW	4 / 3.6	8 / 7.2	12 / 10.8	16 / 14.4	20 / 18	24 / 21.6
INPUT						
Nominal Voltage	220 / 230 / 240 Vac *					
Voltage Range	±25%					
Frequency Range	50 Hz ±10%, 60 Hz ±10%					
OUTPUT						
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)					
BATTERY						
Battery Type	VRLA AGM Maintenance Free Sealed Lead Acid Batteries, Nickel Cadmium or Planté					
Internal / External	1or 3 hour internal	1or 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					
LIGHTING CONTROL INTERFACE						
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					
GENERAL						
Operating Temperature	-5 °C to 40 °C / ◁1000m above sea level					
Operating Humidity	≤93% non-condensing					
Acoustic Noise	◁55 dB @ 1metre					
Protection Degree	IP21					
Dimensions (mm) WxDxH	900 x 750 x 1685	510 x 850 x 1340				
Net Weight (kgs) (Excluding Batteries)	≤ 200	114	121	128	135	142

*Three phase input/output - 3/3 option available

**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

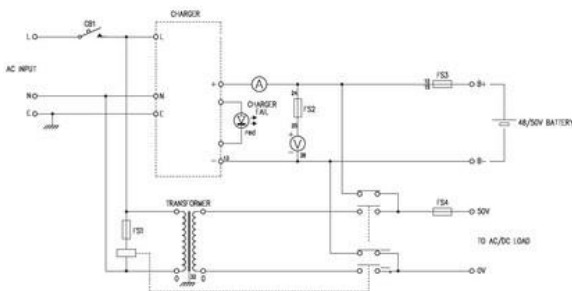
Any battery autonomy can be catered for, this will often be designed as a self-contained battery, housed in the base of the CBU. However, depending on runtime requirements, an external battery cabinet or open steel manufactured racks will be provided. Valve Regulated Sealed Lead Acid Maintenance Free 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.

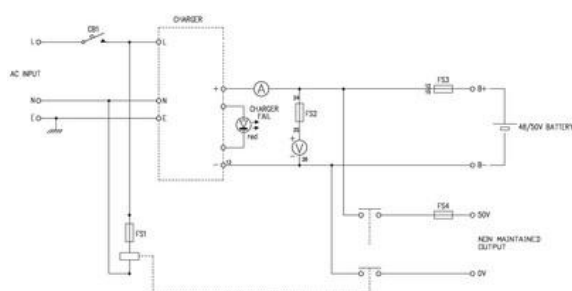
MAINTAINED

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

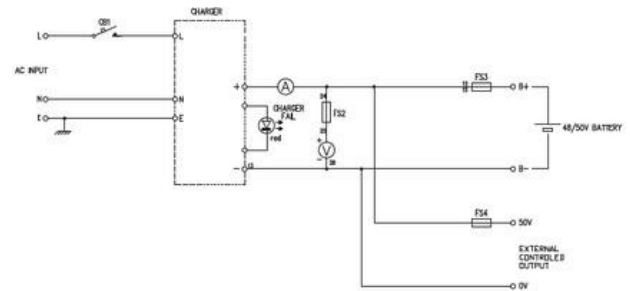
A Non-Maintained CBU will provide a DC supply in the event of a mains power failure at the CBU Input.



- » 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.



Authorised Distributor