

PowerPro™ EL Ranges

Single & Three Phase Options
Static Inverter / CBS

» EN50171

» Lighting

» Reliable



Product may differ from image

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 28 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 Inverters) and energy storage associated products

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.



Certificate No: 14135/A/001/UK/En

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 is now approved with UAE Civil Defence.

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.



The PowerPro EL has a comprehensive display panel providing accurate, detailed information about load, batteries, system diagnostics and audible alarm.

The panel consists of an LCD display, function keys and test button which allows the complete monitoring of the static inverter status. The test button mode provides a momentary test of the emergency lighting system.

EL100XA Features

- True sinewave & PWM microprocessor controlled technology
- Wide input range 184V - 285V
- High overload capacity (120% continuous)
- System and battery test function
- DC short circuit protection
- Deep Discharge Protection
- Over temperature protection
- Overload and Short Circuit Protection
- Recharges batteries up to 80% within 12 hours
- Fast changeover to Battery Mode
- Generator compatible & Cold-start capable
- RS232 communication port and dry contacts for communication and remote monitoring
- Internal battery compartment
- High battery recharging current
- Intelligent double stages of charging control
- Reduced MTTR (mean time to repair) due to modular design
- Automatic restart of load after inverter shutdown
- Smart AVR function (Two buck / boost modes)

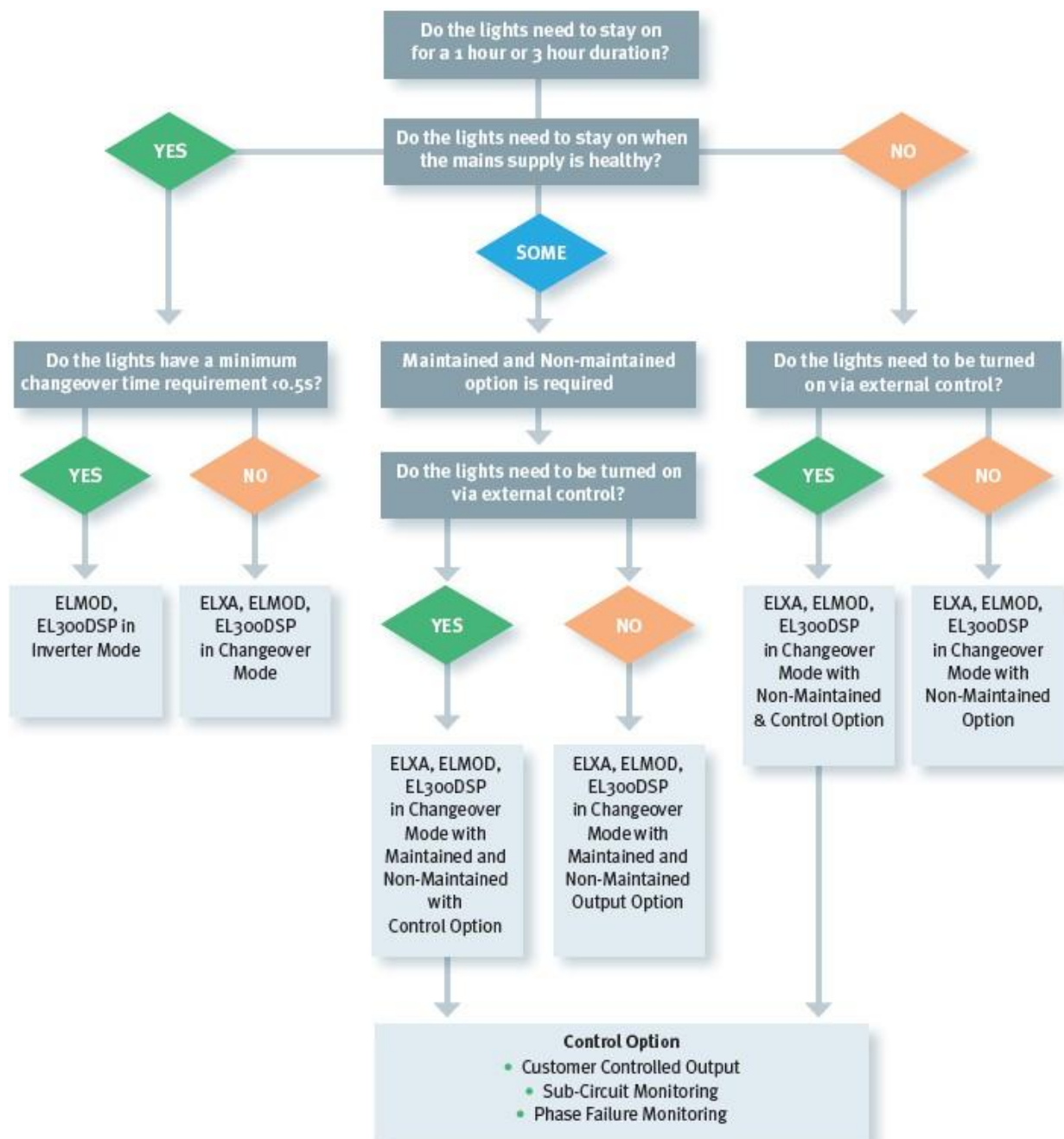


Product may differ from image

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.



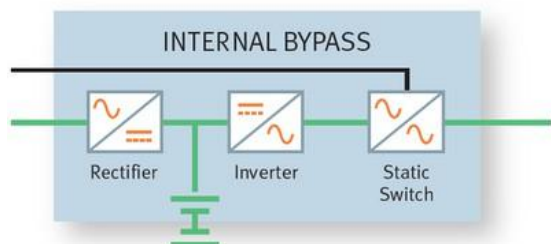
PowerPro EL

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.

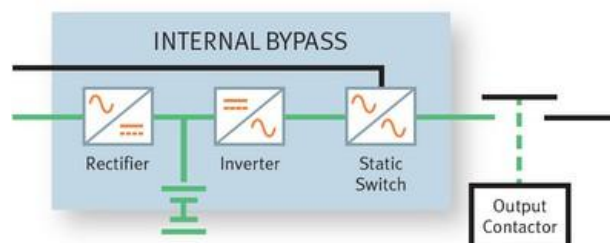
MAINTAINED OUTPUT

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



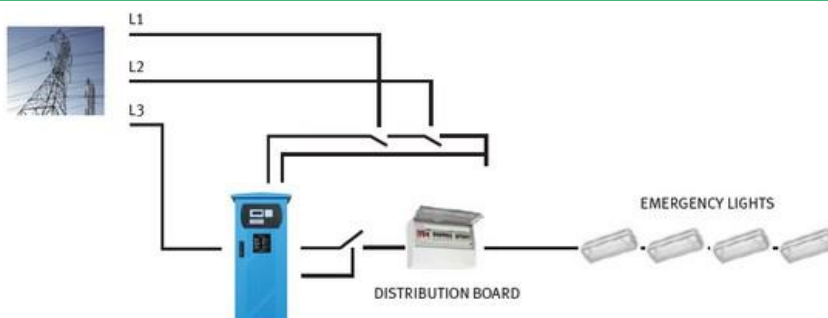
NON-MAINTAINED OUTPUT

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.



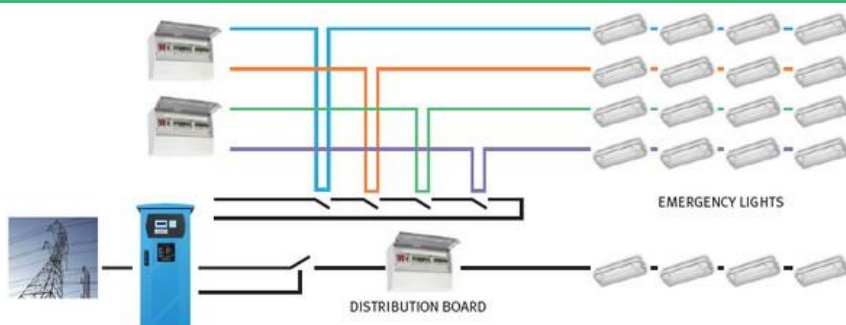
PHASE FAILURE MONITORING

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



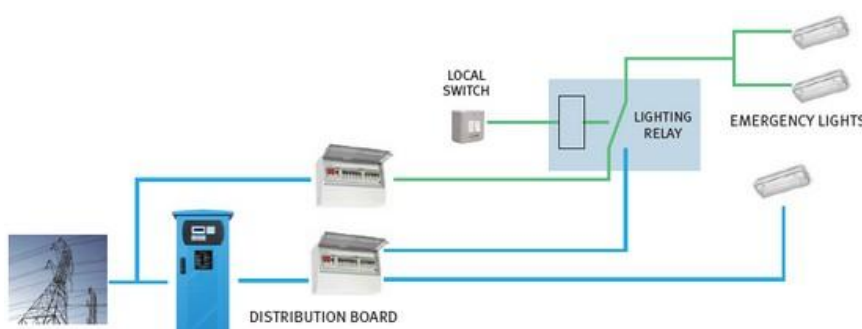
SUB-CIRCUIT MONITORING

- 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	EL 1005XA			EL 1012XA			EL 1030XA		
Power Rating VA / Watts	500 / 400			1250 / 1000			3000 / 2400		
INPUT									
Nominal Voltage	220/230/240 Vac (1Ph + N+PE)								
Voltage Range	140 V – 310 Vac								
Frequency Range	47 – 55Hz								
INPUT CABLE SPECIFICATION									
Maximum Input Current (A)	10			13.5			25		
Recommended Cable Size) (mm²)	6								
Internal Input MCB Fitted	10A (Type C)			16A (Type C)			25A (Type C)		
OUTPUT									
Nominal Voltage	230 Vac								
AC Voltage Regulation (Battery Mode)	±2%								
Frequency Range (Battery Mode)	±3% (free running)b/ ±10% line synchronised								
Power Factor	> 0.99								
Crest Factor	3:1								
Harmonic Distortion (Linear Load)	<5%								
Transfer Time	0.5secs								
Inrush Current Limiter	1 x Fitted – reduces inrush to 16A								
Waveform	Sinewave								
Overload	120% Load : Continuous / 125-150% Load : 1 min / Bypass - 150-200% Load : Continuous								
Mode Operation	Changeover								
OUTPUT MODEL CONFIGURATION VARIANTS									
1OPv6*	Cabinet is provided with 1 x larger output for systems with external distribution. 6 x outputs for internal distribution.								
1OPv12**	Cabinet is provided with 1 x larger output for systems with external distribution. 12 x outputs for internal distribution.								
1/Cv4C	Cabinet is provided with 1 x large, controlled output for systems with external distribution. 4 x controlled outputs for internal distribution								
OUTPUT CABLE SPECIFICATION									
Maximum Output Current	2			5			10.5		
Internal Output MCB Fitted	1OPv6	1OPv12	1Cv4C	1OPv6	1OPv12	1Cv4C	1OPv6	1OPv12	1Cv4C
	6 x B2A 1 x C2A	12 x B2A 1 x C2A	4 x B2A 1 x C2A	6 x B4A 1 x C4A	12 x B4A 1 x C4A	4 x B4A 1 x C4A	6 x B6A 1 x C16A	12 x B6A 1 x C16A	4 x B6A 1 x C16A
INRUSH CURRENT									
Maximum Inrush Current	25A 60ms			25A 60ms			45A 250ms		

*If 1 x larger output can not be used at same time as internal distribution - due to emergency lighting regulations

**If 1 x larger output cannot be used at same time as internal distribution - due to emergency lighting regulations

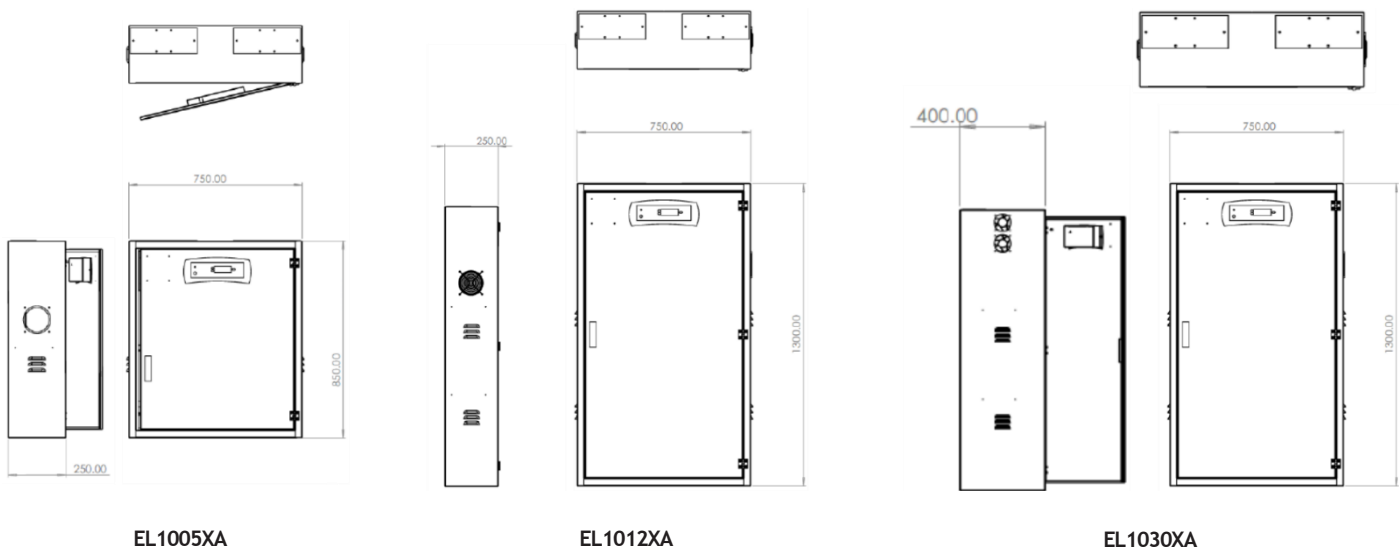
PowerPro EL100XA Single Phase Input & Output Static Inverter

Technical Specifications



MODEL	EL1005XA		EL1012XA	EL1030XA
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			
BATTERY CABLE SPECIFICATION				
Maximum DC Current	28	28	100	
Internal DC Protection Fitted	32A MCB	32A MCB	100A FUSE	
Charge Battery To 80% Within 12 Hours	Included			
OPTIONS				
Maintenance Bypass Switch	Optional			
SNMP Card G57C141L	Optional			
BACS SNMP Card	Optional			
IP54 Indoor Chassis (Intake Filters & Exhaust Fan)	Optional			
IP54 Outdoor Chassis (Intake Filters & Exhaust Fan)	Optional			
Time Delay Of Output During Changeover	Optional (provides 350ms break during changeover, adjustable via internal timer)			
Adjustable Timer Switch	Optional			
Output Galvanic Isolation Transformer	Built into standard chassis	Built into EL1030XA chassis	Built internal to EL1030XA chassis (batteries must be in separate cabinet).	
Simtronic Connection	Optional			
External Control	Optional (external loop LK7 applied to 1/CV4C design. When loop is NO outputs are dependent on separate control. When loop is NC all outputs are forced to maintained.)			
GENERAL				
Operating Temperature	0°C - 40°C / <1000m above sea level			
Operating Humidity	< 93%			
Acoustic Noise	<56 dB @ 1metre			
Protection Degree	IP20			
Dimensions (mm) WxDxH (Excluding Batteries)	750 x 250 x 850	750 x 250 x 1300		750 x 400 x 1300
Net Weight (kgs)***	35	40		50

***Dependent on battery configuration



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.



Product may differ from image



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

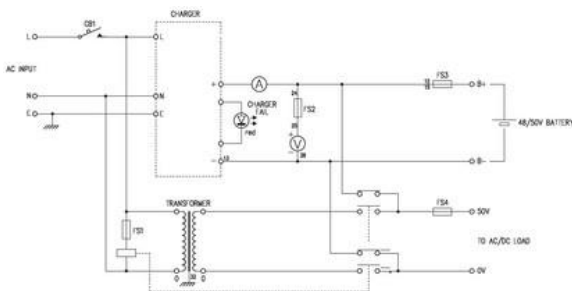
Any battery autonomy can be catered for, this will often be designed as a self-contained battery, housed in the base of the CBU. However, depending on runtime requirements, an external battery cabinet or open steel manufactured racks will be provided. Valve Regulated Sealed Lead Acid Maintenance Free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

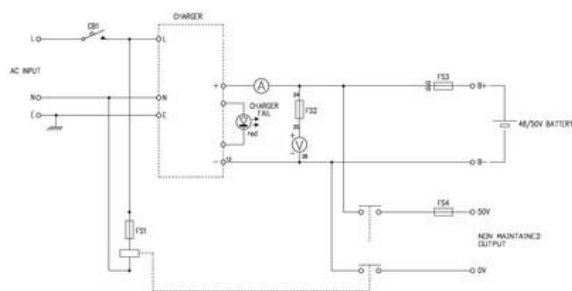
MAINTAINED

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

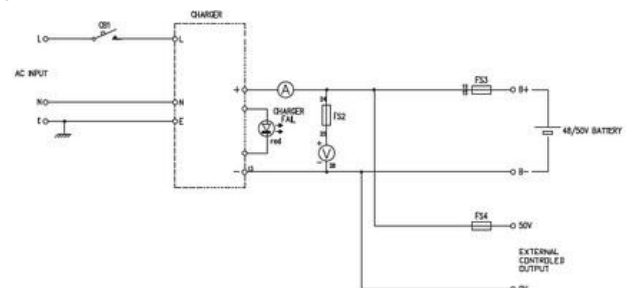
A Non-Maintained CBU will provide a DC supply in the event of a mains power failure at the CBU Input.



- » 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