

# PowerPro™ EL300DSP 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 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.



### 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

### EL300DSP Series - 3/3

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



### EL300DSP Features

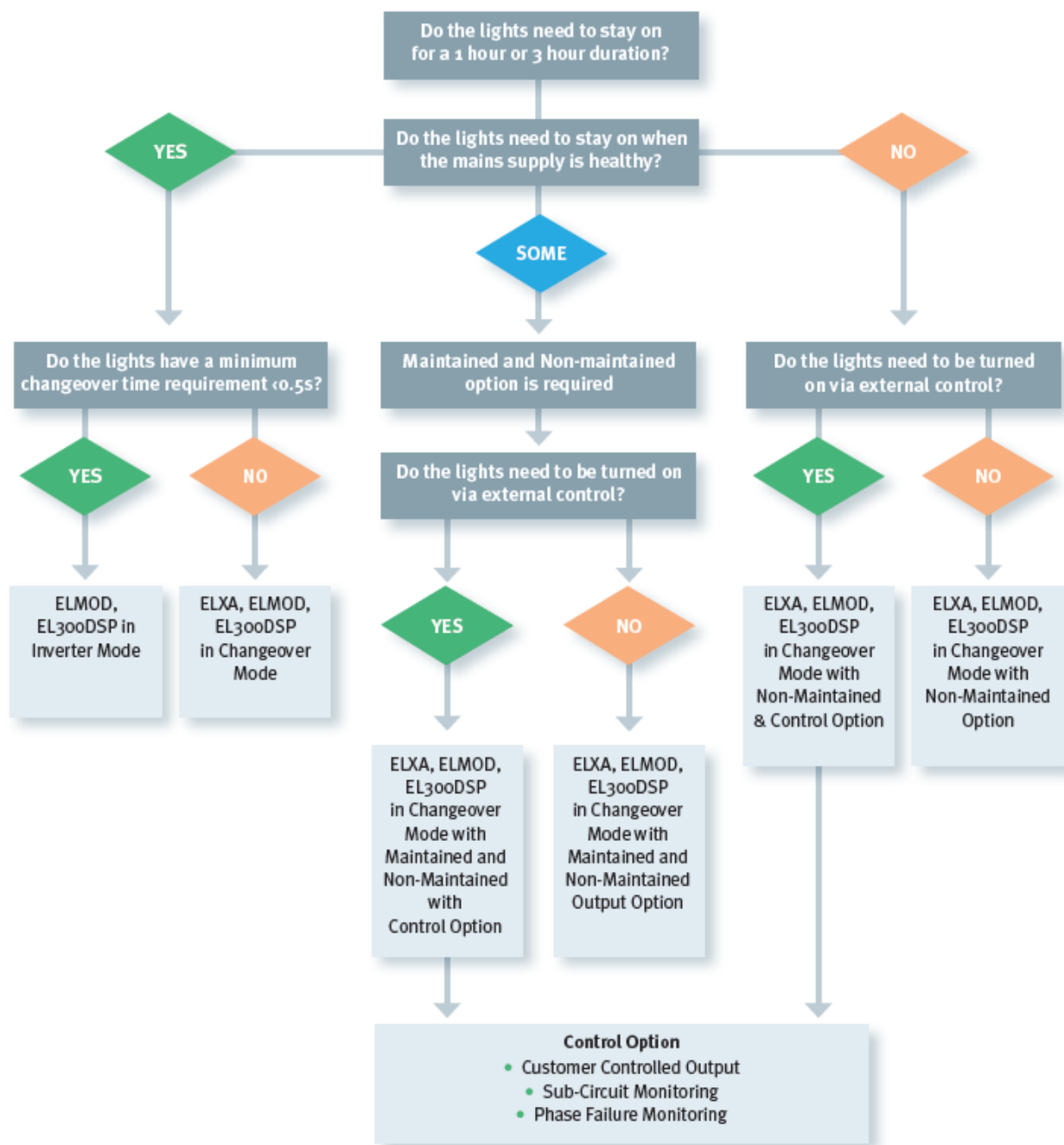
- True sine wave & PWM microprocessor controlled technology
- Recharge batteries up to 80% within 12 hours
- FAR Controls including 48 Vdc supply for Fire Alarm Panel
- Selectable Non-Maintained / Maintained Mode with external Control (if external contactor fitted)
- External phase failure connection (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.



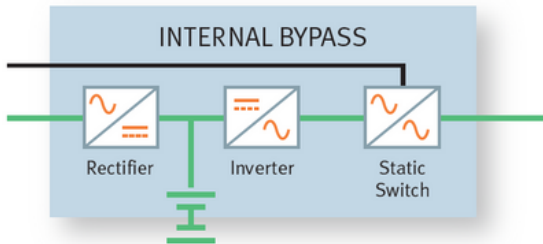
## PowerPro EL

### 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.

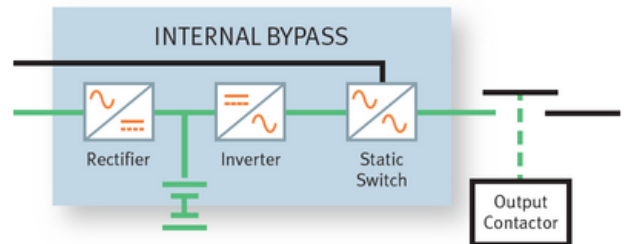
#### MAINTAINED OUTPUT

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



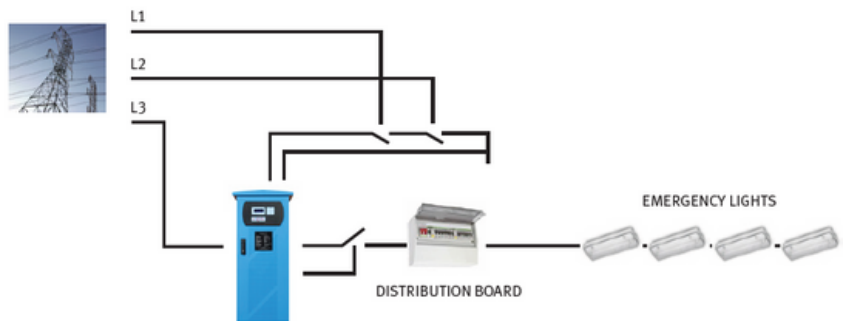
#### NON-MAINTAINED OUTPUT

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.



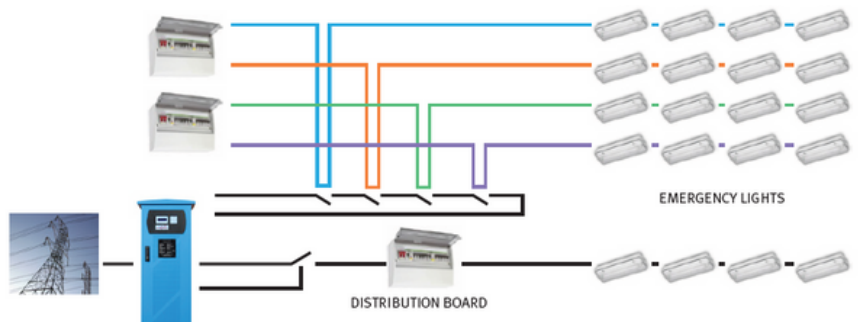
#### PHASE FAILURE MONITORING

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



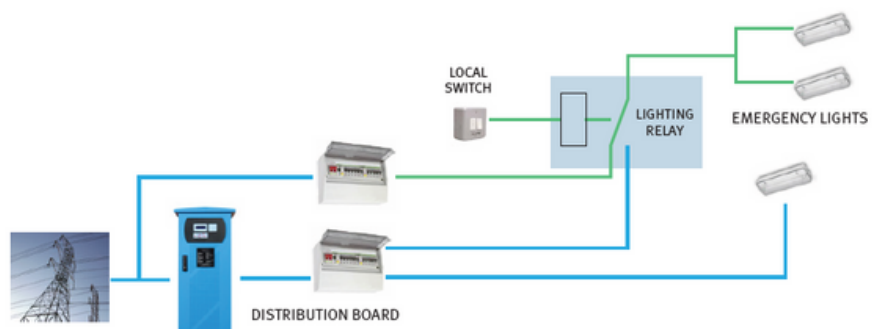
#### SUB-CIRCUIT MONITORING

- 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 EL300DSP Three Phase Input & Output Static Inverter

## Technical Specifications

MODEL	EL310DSP	EL320DSP	EL330DSP	EL340DSP	EL360DSP	EL380DSP	EL3100DSP	EL3120DSP	EL3160DSP	
Power Rating VA / Watts	10/9	20/18	30/27	40/36	60/54	80/72	100/90	120/108	160/144	
<b>INPUT</b>										
Nominal Voltage	380/400/415 Vac (3Ph + N + PE)									
Voltage Range	±15%									
Power Factor	0.99 @ full load									
Harmonic Distortion	<5% @ 100% load									
Frequency Range	50 Hz ±5%									
<b>OUTPUT</b>										
Nominal Voltage	230 / 400 Vac (3Ph + N + PE)									
AC Voltage Regulation	±2%									
Frequency Range	±1%									
Power Factor	0.9									
Crest Factor	3:1									
Harmonic Distortion (Linear Load)	<3%									
Transfer Time	0.5secs									
Waveform	Sinewave									
Load Circuits	1									
Overload	120% continuous, 120 - 150% for 10mins, 150 - 180% for 1min									
Mode Operation	Changeover or Inverter selectable									
Maintained / Non-Maintained	Maintained (standard) / Non-Maintained (optional)									
<b>BATTERY</b>										
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	Optional									
<b>LIGHTING CONTROL INTERFACE</b>										
External Mains Fail Test Connection	Included									
Non-Maintained Mode Connection**	Included									
FAR Connection **	Included									
External Phase Fail Connection **	Included									
24 Vdc Supply for External Contactor	Included									
KNX Interface	Optional									
Volt Free Contacts	9									
<b>GENERAL</b>										
Operating Temperature	0°C - 40°C / <1000m above sea level									
Operating Humidity	10 - 90% non-condensing									
Acoustic Noise	<62 dB @ 1metre			<64 dB @ 1metre			<68 dB @ 1metre			
Protection Degree	IP41									
Dimensions (mm) WxDxH (Ex Batteries)	400 x 815 x 1040			515 x 855 x 1440					880 x 775 x 1900	
Net Weight (kgs) (Ex Batteries)	91	100	173	197	209	220	232	265	482	

\*\*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

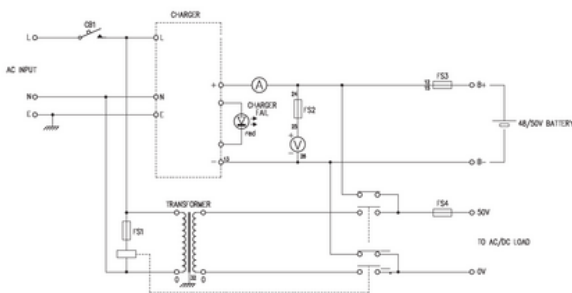
Any battery autonomy can be catered for, this will often be designed as a self-contained battery, housed in the base of the CBU. However, depending on runtime requirements, an external battery cabinet or open steel manufactured racks will be provided. Valve Regulated Sealed Lead Acid Maintenance Free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

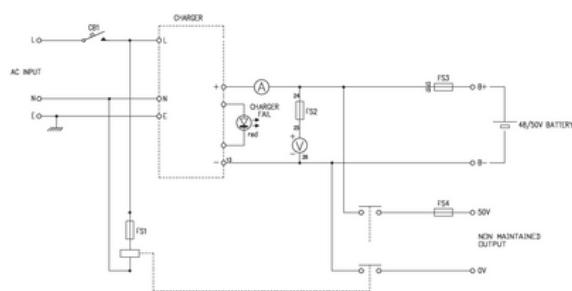
### MAINTAINED

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

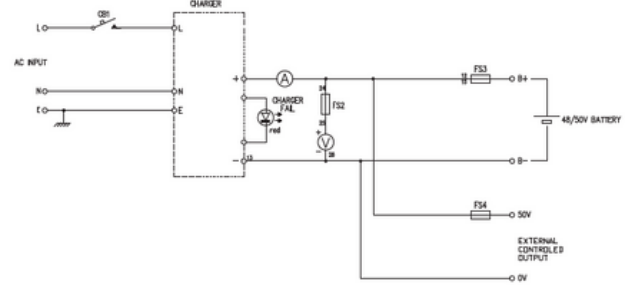
- AC fail alarm LED

- 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.

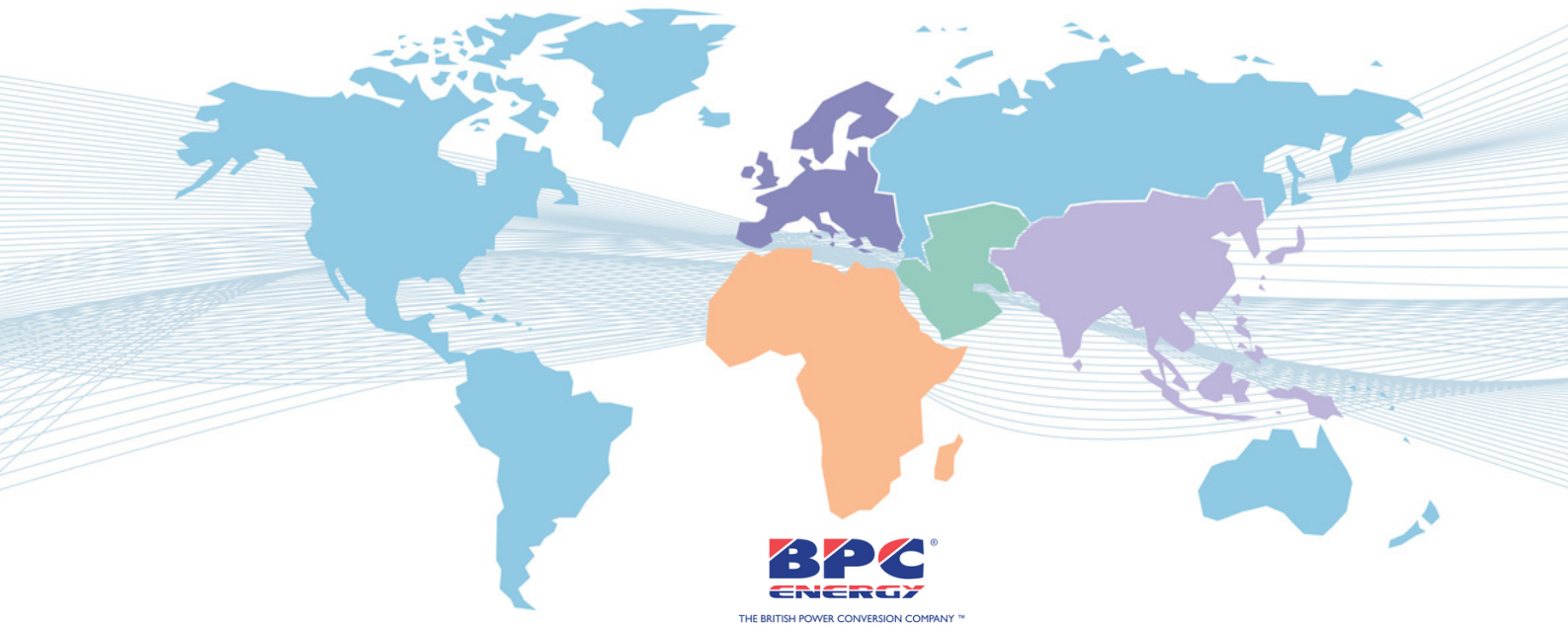
### AFRICA

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