



Lighting-Power-Control



PowerPro™ 3-Phase EL Range RDF-EL300DSP Series 10kVA to 16kVA

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

- » Escape route lighting
- » Open area lighting
- » High risk task area lighting

Features

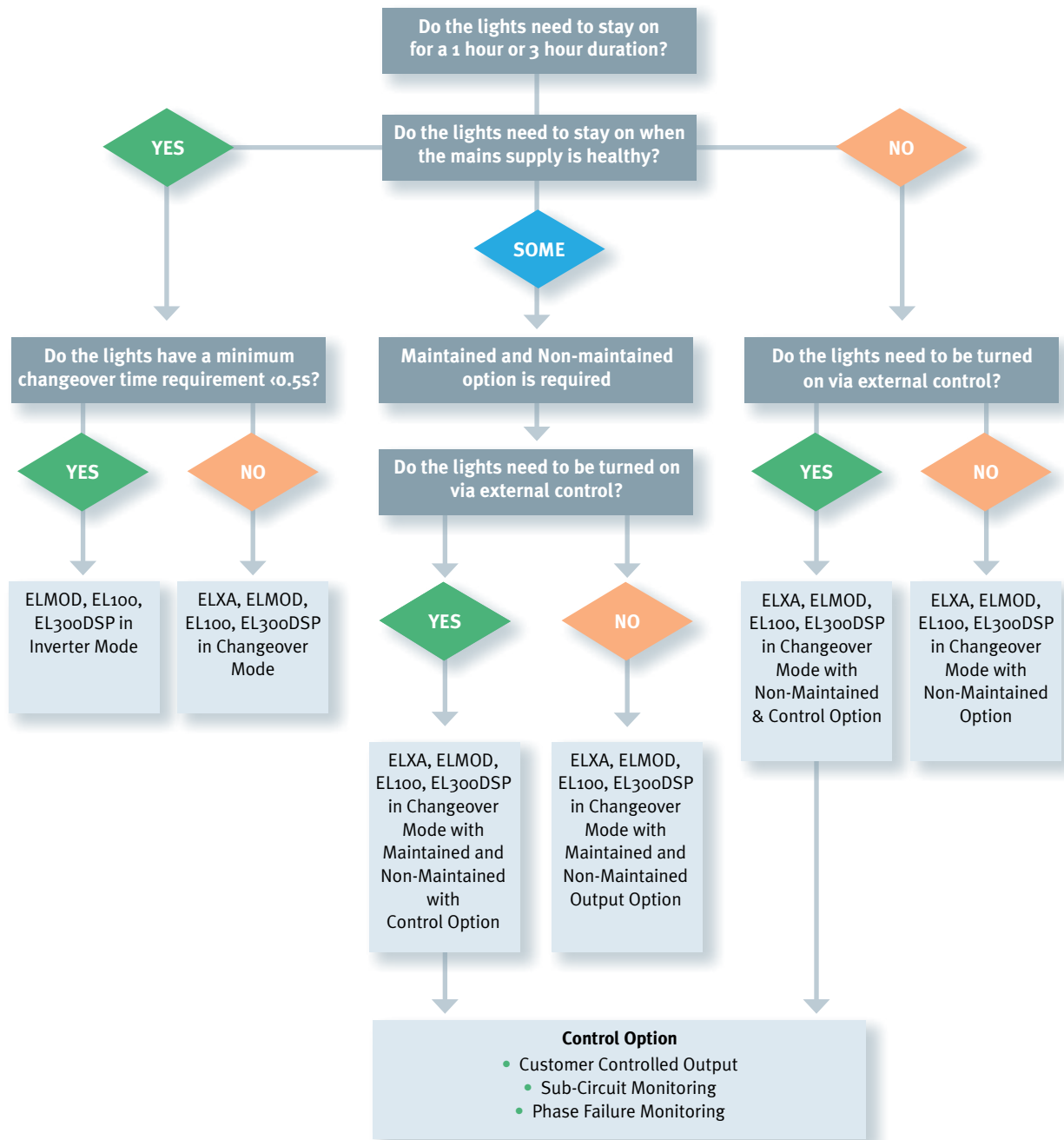
- True sinewave & PWM microprocessor controlled technology
- DC short circuit protection
- Recharges batteries up to 80% within 12 hours
- Optional integral fire suppression aerosol technology
- FAR Controls including 48Vdc supply for Fire Alarm Panel
- Selectable Non-Maintained/Maintained Mode with 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
- 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.



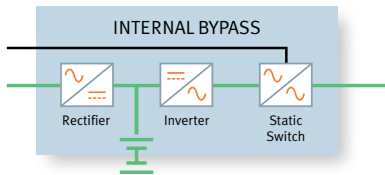


PowerPro EL System Operation Descriptions

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

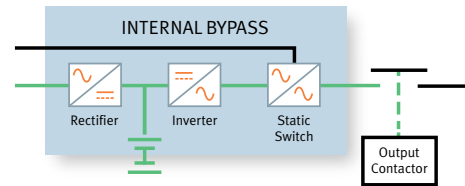
MAINTAINED OUTPUT

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



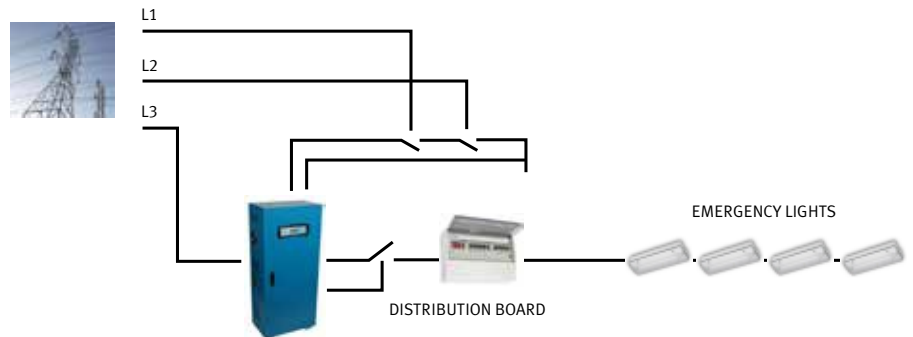
NON-MAINTAINED OUTPUT

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.



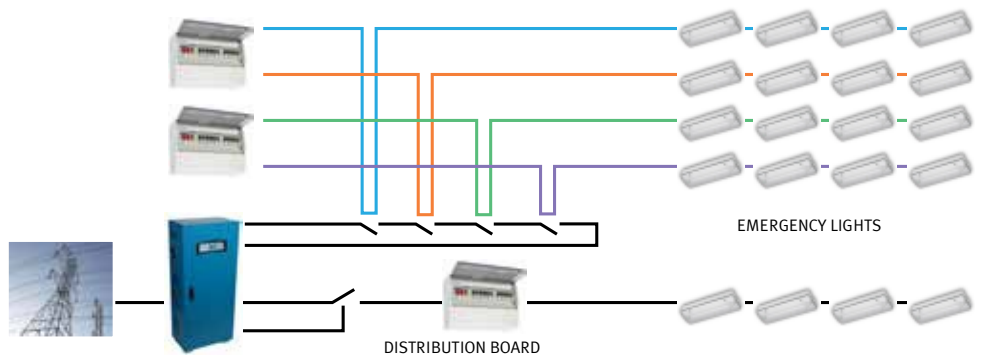
PHASE FAILURE MONITORING

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



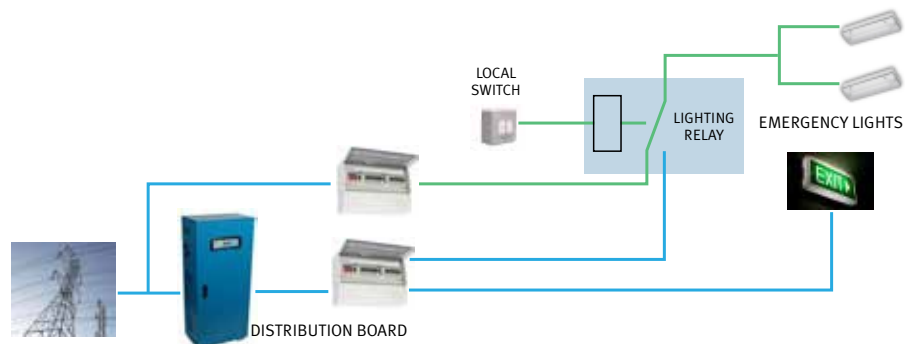
SUB-CIRCUIT MONITORING

- 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





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PowerPro EL300DSP Three Phase Input & Output Static Inverter

Technical Specification



MODEL	EL310DSP	EL320DSP	EL330DSP	EL340DSP	EL360DSP	EL380DSP	EL3100DSP	EL3120DSP	EL3160DSP	
Power Rating kVA / kW	10 / 9	20 / 18	30 / 27	40 / 36	60 / 54	80 / 72	100 / 90	120 / 108	160 / 144	
INPUT										
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%									
OUTPUT										
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)									
BATTERY										
Battery Type	VRLA AGM Sealed Lead Acid Maintenance Free Batteries / Nickel Cadmium Batteries / Planté Batteries									
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									
LIGHTING CONTROL INTERFACE										
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 / DALI / NODE Interface	Optional									
Mains Fail Test Button	Included									
Volt Free Contacts	9									
GENERAL										
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 (Excluding Batteries)	400 x 815 x 1040			515 x 855 x 1440						880 x 775 x 1900
	91	100	173	197	209	220	232	265	482	

**only applicable if Non-Maintained Contactor Option fitted



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RDF Power Pro EL

Three Phase Input & Output Static Inverters
Options and Accessories

- **Remote Alarm Panel** – External panel for monitoring the Static Inverter.
- **Output Distribution** – Internal distribution of the lighting circuits is standard, multiple output options available including single output and inrush current protection from LED lighting loads.
- **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.
- **Integral Fire Suppression** - Temperature sensitive fast acting integral fire suppression aerosol system to suppress or extinguish any fire for internal component protection and to extend system operation for critical loads during building escape due to fire
- **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.

