



# MODULAR DATA CENTRE SOLUTIONS

Advanced *Power Conversion* Solutions



THE BRITISH POWER CONVERSION COMPANY™

# Data Centre Environmental Sustainability

**Data Centres across the globe are growing in size and numbers with increasing demand on performance and efficiency so selecting the right UPS system for your data centre can be a complex task.**

There is a continuing focus of reducing energy consumption and emissions in order to reduce overall energy costs and meet environmental legislation.

The Carbon Trust provides a managed Energy Technology List (ETL) service on behalf of the Department of Energy and Climate Change (DECC) which allow business' to demonstrate that they provide energy efficient equipment.

Businesses that purchase BPC products from the ETL can claim an Enhanced Capital Allowance (ECA) – benefiting from 100% first year accelerated capital allowances on the expenditure.



*"We are delighted to receive the Carbon Trust Standard which is a terrific achievement and I am very proud of the way BPC have taken up the challenge to deliver products and services to our customers that are more environmentally sustainable."*



**Malcolm Henley**  
Managing Director



## PowerTower Green Topology

BPC realises the increased reliance on data centre equipment with uninterrupted availability is such that uptime is now essential for the business operation. The PowerTower Green modular UPS system offers reduced running costs, increased availability and provides high efficiency solutions that delivers energy saving value.

Along with the possible hardware, data loss and financial implications of unexpected downtime, new technologies are driving changes to the way uninterruptible power supplies are designed to offer the best in availability, flexibility, reliability and total cost of ownership.

The BPC PowerTower Green modular UPS series covers both chassis based and rack independent designs, incorporating hot swappable power modules and battery trays, to deliver the best combination of reliability, functionality and scalability at a competitive price. Designed specifically for data centres, computer systems and critical applications, this innovative and reliable power system commits to meet the market requirements.

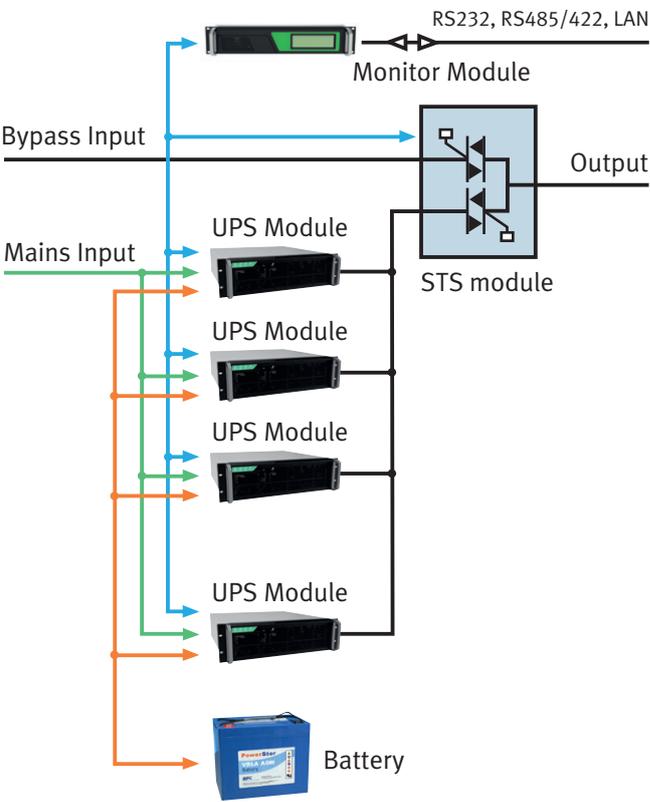


- **Save on Energy costs**
- **Save on Maintenance costs**
- **Fast to Repair (MTTR)**
- **Improved Reliability**

PowerTower Modular Range

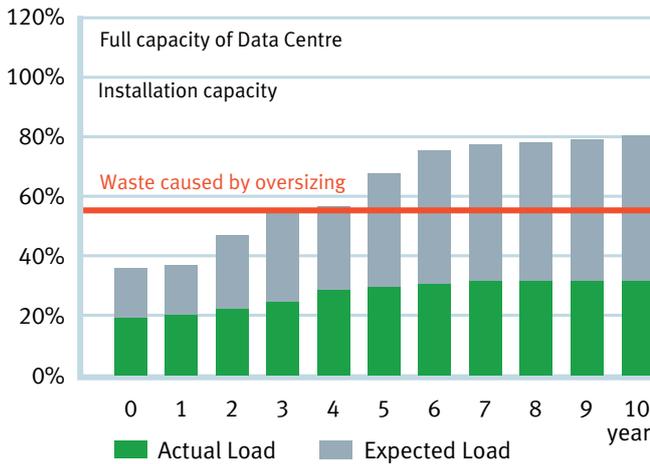


### POWERTOWER GREEN MODULAR CONCEPT



### OPTIMISE CAPITAL INVESTMENT

The BPC PowerTower can be scaled in vertical modular steps up to 1200kVA of power in a single frame, providing a cost effective method of building any data centre without oversizing that can result in energy waste. Flexibility and cost effective 'right-sizing' of any UPS system must be priority when increasing or decreasing power to meet future requirements.



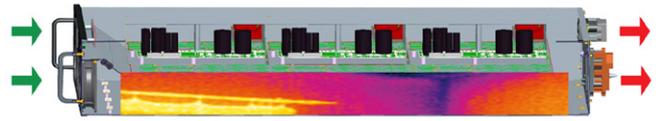
Oversizing Results in Energy Waste

### EXCELLENT POWER PERFORMANCE

The PowerTower UPS has a near unity input power factor at full load, reducing the size of the input cables/fuses. Low total input harmonic distortion (THDi <3%) reduces load pollution, increases power quality and optimises generator sizing. Overall this excellent power performance directly translates into significant reduction in installation costs and extends the life of valuable equipment.

### TUNNEL AIR FLOW

The PowerTower Green air flow technology has a dynamic thermal effect of funnelling the core temperature of the key components.



Simply by directing the heat dissipated from power PCB components into the heat sink tunnel area, which is then efficiently removed from each power module, the active power electronics area is kept at an optimum lower temperature resulting in longer component design life and increasing periods between maintenance visits.

### HIGH QUALITY

BPC incorporate dust filters into each module so that the unique design structure and air flow technology can allow the UPS to run in dusty environments, significantly improving its stability and environmental adaptability with IP31 protection on each module.

### TRUE 'HOT SWAP' CAPABILITY

The BPC PowerTower modular UPS operates a true hot swap technology where each power module is automatically synchronised to the load sharing of the system. There is no need to identify individual power modules or sequence them in any particular order. The monitoring module and static transfer switch (STS) module are also designed to be hot swappable, making system maintenance easy. Simply insert the power, monitor and STS modules into the slots and engage. The process of replacement or vertical scalability is easily achieved and hot swapping means no downtime and the service/operating personnel do not require special skills.



Easy hot swappable design modules

# Advanced Power Conversion Solutions

## EASY INSTALLATION & OPERATION

The PowerTower offers a flexible install so assembly time is greatly reduced. Bottom and top entry with generous cable management will simplify the more difficult installation. BPC's PowerTower Green UPS is very easy to maintain and control, providing the highest reliability and best protection for supplying power.

Options are available for Galvanic Isolation Transformer cabinet, front 10" colour screen display, improved battery management, frequency conversion, conformal coating, input & output switchgear.

## LOW MTTR AND 99.9999% AVAILABILITY

The 'hot swap' modularity design of the PowerTower Green provides a high mean time between failure (MTBF), allowing the user to replace and add modules without the risk of downtime, ultimately reducing mean time to repair (MTTR). Whereas a standalone unit takes typically 6 hours to repair, the PowerTower modular UPS can be reduced to less than 30 minutes, giving 'six nines' power availability.

## SMALL FOOTPRINT

The PowerTower Green can deliver one of the highest power density up to 450kW/m<sup>2</sup> and requires minimal space clearance around the unit so floor space required in data centres for UPS can be kept to an absolute minimum.

## HIGH LOAD ADAPTABILITY (BLADE FRIENDLY)

All PowerTower Green Modular UPS systems are provided with an output power factor of 0.9, providing fully rated output – active power without de-rating in the range of 0.7 lagging to 0.8 loading in compliance with modern IT equipment.

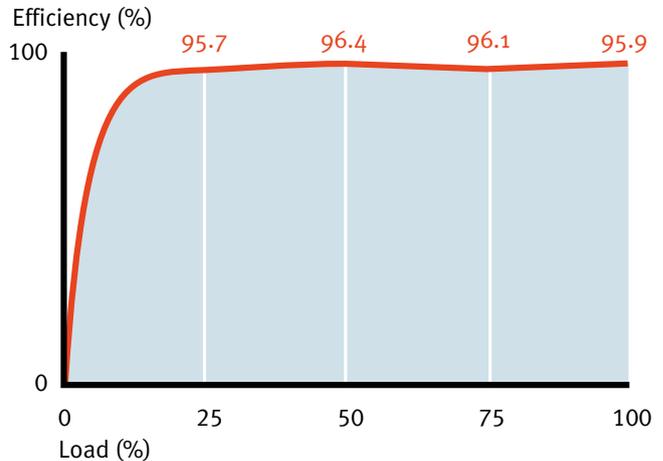
## SINGLE FRAME CONCEPTS

BPC offers more single frame solutions than any other manufacturer, with 12, 24, 36, 50, 100, 150, 200, 250, 300, 350, 500, 800 and 1200kVA chassis, reducing the need to parallel cabinets and improving the reliability of installations.

All systems can be configured to various input and output configurations 1/1, 3/1, 1/3 and 3/3 phases.

## HIGH EFFICIENCY

The PowerTower Green offers true online efficiency over 96% at even 50% load, significantly reducing system running costs and site air-conditioning expenses, thus helping to reduce the organisations carbon footprint.



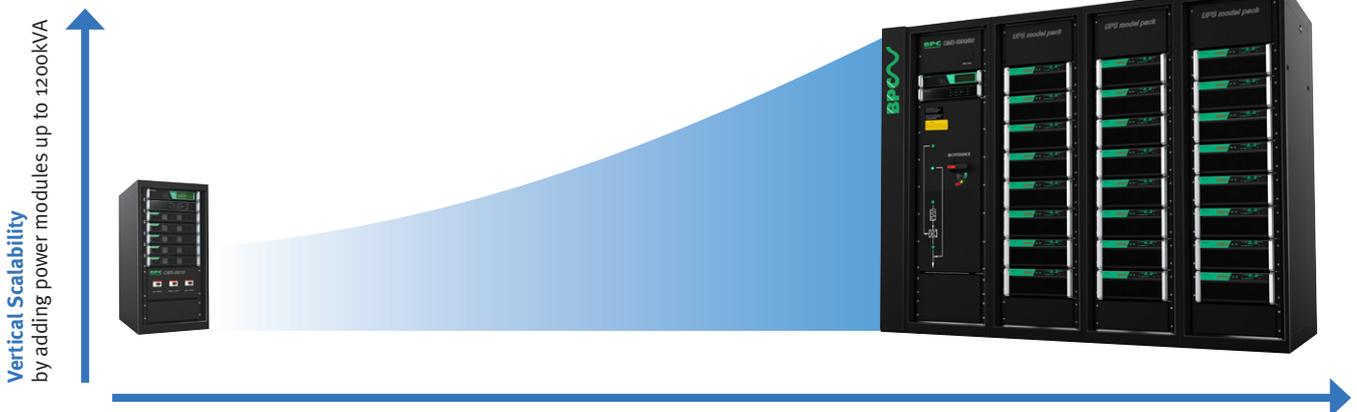
Taking a small to medium data centre 200kVA/180kW load and air conditioned with coefficient performance of 3:1

- Save 127,144kWh per year compared to traditional UPS (90% efficiency)
- Save 210,240kWh per year compared to legacy UPS (86% efficiency)

In DC/AC inverter mode, when the power supply is not present, the battery efficiency is over 98% reducing actual battery capacity requirement and improving design life.

## TOTAL COST OF OWNERSHIP (TCO)

The PowerTower Green UPS offers today's data centre management the opportunity for sustainability and future growth. With flexibility and scalability combined with lower cost of service contracts, short and long term, we can increase savings on overall operations.



**Horizontal Scalability**  
possible with up to 4 frames in parallel, achieving total power capacity of 4.8mVA

# PowerTower™ Green CMS

## Three Phase Online Double Conversion UPS

### 10kVA – 1200kVA



» Modular Design » Scalable » Pay as you grow



- PTGCMS 50/10**
- 10-50kVA Power Capacity
  - 10kVA UPS module
  - 5 module slots



- PTGCMS 100/10**
- 10-100kVA Power Capacity
  - 10kVA UPS module
  - 10 module slots



- PTGCMS 150/25**
- 25-150kVA Power Capacity
  - 25kVA UPS module
  - 6 module slots



- PTGCMS 200/25**
- 25-200kVA Power Capacity
  - 25kVA UPS module
  - 8 module slots



- PTGCMS 250/25**
- 25-250kVA Power Capacity
  - 25kVA UPS module
  - 10 module slots

## PowerTower Green CMS Features

The PowerTower Green CMS Modular Series from BPC Energy covers 10kVA – 1200kVA capacity and delivers the best combination of reliability, functionality and scalability at a competitive price. Designed specifically for data centres, computer systems and critical applications, this innovative and reliable power system commits to meet market requirements.

The CMS UPS architecture can scale power as demand grows or as higher levels of availability are required up to 1200kVA in a single frame, with the possibility of connecting frames in parallel to obtain an overall total of 4.8mVA maximum capacity.

### FLEXIBILITY MODULAR AND SCALABLE DESIGN

Each power module is designed to be hot swappable which makes power expansion and system maintenance easy. Each module is controlled independently, thus avoiding single point of failure. If any module fails or disconnects, the system will continue to operate and supply power without any interruption, ensuring the highest level of reliability and protection.

With the ever increasing demands of power the PowerTower Green CMS UPS allows you to increase your power capacity in small steps reducing initial costs and over sizing. This flexibility can extend both vertically and horizontally from 10 to 900kVA using 10, 25 and 50kVA modules, so as your business grows, the PowerTower Green UPS grows with you.

- AC – AC efficiency  $\geq 95\%$
- Input power factor 0.99
- N+X module level redundancy UPS
- Multi-level decentralised control technology
- Battery discharge management
- Space saving high density design
- Monitoring function

### LOW MTTR

The PowerTower offers a flexible install so installation time is greatly reduced. It is very easy to maintain and control, providing the highest reliability and best protection for supplying power. The large touch screen LCD panel allows the user to easily access performance information for the power modules and the system.

### REDUCED INSTALLATION COSTS

The BPC Modular UPS grows with your business without oversizing to match critical load requirements. Along with low THDi and near unity input power factor reducing the size of required input cables and the size of input infrastructure, the PowerTower UPS offers lower initial investment and Total Cost of Ownership than the typical standalone UPS.



#### PTGCMS 300/25

- 25-300kVA Power Capacity
- 25kVA UPS module
- 12 module slots



#### PTGCMS 350/50

- 50-350kVA Power Capacity
- 50kVA UPS module
- 7 module slots



#### PTGCMS 500/50

- 50-500kVA Power Capacity
- 50kVA UPS module
- 10 module slots



#### PTGCMS 800/50

- 50-800kVA Power Capacity
- 50kVA UPS module
- 16 module slots

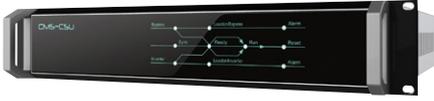


#### PTGCMS 1200/50

- 50-1200kVA Power Capacity
- 50kVA UPS module
- 24 module slots

## PowerTower Green CMS Features

### STS MODULE



- Transfer time < 1ms
- Overload ability (100% - 1min)
- Self-diagnostics, interlock and protection functions
- Fully hot swappable, can be replaced easily without forced shutdowns

### MONITOR MODULE



- Dual core 16-bit processor
- Easy to read 240 x 64 LCD touch controller
- Display of general, system, battery and module information, system output, event record and index set up
- RS232 and RS485 communication
- Output dry contacts
- TCP/IP, SNMP (optional)

### POWER MODULES

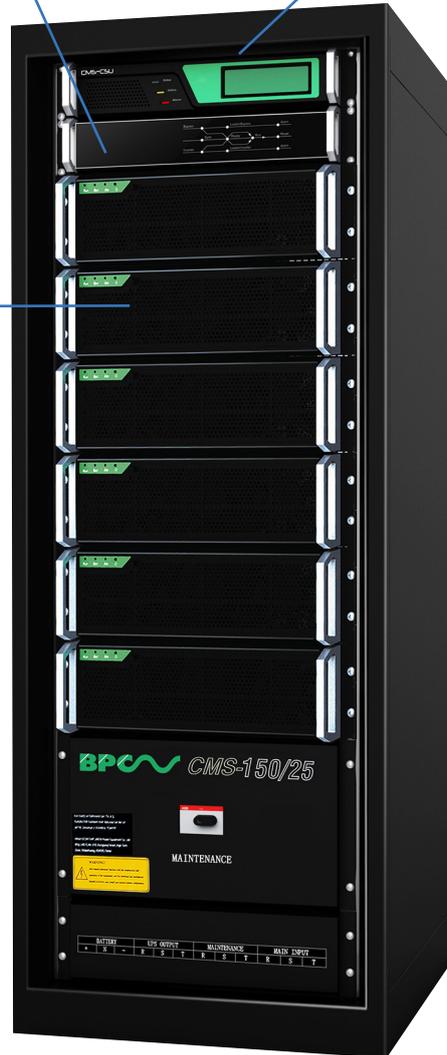
PTG10M – 10kVA Power Module



PTG25M – 25kVA Power Module



PTG50M – 50kVA Power Module



### CABINET OPTIONS

Additional space for cable management



Input and output switch breakers can be included

- Online double conversion technology ensures reliable power supply
- High efficiency reduces power and cooling costs
- Each UPS module is a fully functional UPS including a converter, inverter, charger and controller
- Intelligent communication ports
- Dust proof design (IP31), online cleanable filter

## PowerTower Green CMS Technical Specification

MODEL	PTGCMS 50/10	PTGCMS 100/10	PTGCMS 150/25	PTGCMS 200/25	PTGCMS 250/25	PTGCMS 300/25	PTGCMS 350/50	PTGCMS 500/50	PTGCMS 800/50	PTGCMS 1200/50	
Power Rating kVA Max.	50	100	150	200	250	300	350	500	800	1200	
Compatible Power Module	PTG10M		PTG25M			PTG50M					
<b>INPUT</b>											
Nominal Voltage	380 V / 220 V, 400 V / 230 V, 415 V / 240 V (1Ph + N + E, 3Ph + N + E)										
Voltage Range	±20%										
Frequency Range	50 Hz or 60 Hz										
Power Factor	≥0.99										
<b>OUTPUT</b>											
Nominal Voltage	380 Vac / 220 Vac, 400 Vac / 230 Vac, 415 Vac / 240 Vac (1Ph + N + E, 3Ph + N + E)										
AC Voltage Regulation (Battery Mode)	±1%										
Power Factor	0.9										
Crest Factor	3:1										
Harmonic Distortion (Linear Load)	TDH ≤1%										
Transfer Time	Zero										
Waveform	Sinewave										
<b>EFFICIENCY</b>											
AC Mode	≥96%										
Battery Mode	≥98%										
<b>BATTERY</b>											
Battery Type	VRLA Sealed Lead Acid Maintenance Free Batteries										
Charging Ability	10 hours (2 hours back up)										
Charging Voltage Stability	±1%										
<b>GENERAL</b>											
Display	Touch LCD/LED Screen										
Communication	RS232, RS485, 8 Dry Contacts, TCP/IP Adaptor, SNMP (Optional)										
Operating Temperature	-5 ~ 40°C										
Operating Humidity	0 - 95% (non-condensed)										
Acoustic Noise	55 dB @ 1 metre										
Protection Degree	IP30										
Cabinet (single)	Dimensions (mm) WxDxH	600 x 800 x 1200	600 x 800 x 1600	600 x 800 x 2000	800 x 800 x 2000	1400 x 800 x 2000	800 x 1000 x 2000	1400 x 1000 x 2000	2200 x 1000 x 2000	2400 x 1000 x 2000	
	Net Weight (kgs)	150	200	240	300	470	400	500	700	1000	
<b>MODEL</b>											
		<b>PTG10M</b>			<b>PTG25M</b>			<b>PTG50M</b>			
Capacity kVA/kW	10kVA/9kW			25kVA/22.5kW			50kVA/45kW				
Input / Output Mode	1/1, 3/1, 1/3, 3/3, (Ph + N + E)										
Input Power Factor	±0.99										
THDI	≥3%										
Overload Ability	125% for 10 min, 150% for 1 min.										
Max. Charging Power	2.5kW			6kW			12kW				
Max. Heat Dissipation	475W			1187W			2375W				
Dimensions (mm) WxDxH	482 x 465 x 89			482 x 465 x 133			482 x 700 x 176				
Weight (kgs)	16			20			40				

# PowerTower™ Green RITo6 Series

## Rack Independent Online Double Conversion UPS

### 6kVA – 36kVA

The PowerTower Green RITo6 series is a rack independent modular UPS of low and medium power developed by BPC. With a flexible structure, it can be embedded into any standard 19 inch cabinet and can be configured to operate in any power requirement.

Ranging from 6-36kVA using 6kVA modules in a functional rack-independent solution, the PowerTower Green RITo6 series is ideal for the space conscious enterprise networking manager.

#### PTG RIT 12/6

12kVA – 2 module rack 19" (w) x 600mm (d) x 3U (h)



#### PTG RIT 24/6

24kVA – 4 module rack 19" (w) x 600mm (d) x 5U (h)



#### PTG RIT 36/6

36kVA – 6 module rack 19" (w) x 600mm (d) x 7U (h)



- N+X module-level redundancy UPS System
- 1/1, 3/1, 1/3 and 3/3 configuration via display
- Multi-level decentralized control technology and Master-slave synchronization in sequence control eliminating system failure bottleneck
- Each module equally shares the input and output current automatically, and all UPS modules share the batteries
- Battery discharge management, auto-transfer between floating and equal charging, temperature compensation
- C/S-Oriented Architecture Software available to monitor multiple UPS up to 600 sets
- B/S-Oriented Architecture available to check via internet browser
- Multiple User options RS232, RS485, dry contacts, TCP/IP Adapter for local and remote communication
- Optional input/output transformer
- Optional Battery IPDS (Intelligent Power Distribution System)

#### RIT Monitoring Module

Display, Monitoring, Communication and Alarm Management



#### PTG6M Power Module

Rectifier, Inverter, Battery Charger, Control



## PowerTower Green RITo6 Technical Specification

MODEL	PTGRIT 12/6	PTGRIT 24/6	PTGRIT 36/6
Maximum Power kVA	12kVA	24kVA	36kVA
Compatible Power Module	PTG6M		
<b>INPUT</b>			
Nominal Voltage	(1PH + N + E) 380V/220V ±25%		(1PH + N + E) or (3PH + N + E) 380V/220V ±25%, 400V/230V ±25%, 415V/240V ±25%
Frequency Range	50Hz ±10%, 60Hz ±10%		
Power Factor	≥0.99		
<b>OUTPUT</b>			
Nominal Voltage	(1PH + N + E) 220, 230, 240Vac		(1PH + N + E) or (3PH + N + E) 380/220Vac 400/230Vac 415/240Vac
AC Voltage Regulation	±1%		
Power Factor	0.9		
Crest Factor	3:1		
Harmonic Distortion (Linear Load)	≤1%		
Transfer Time	Zero		
<b>EFFICIENCY</b>			
AC Mode	≥95%		
Battery Mode	≥98%		
<b>BATTERY</b>			
Rated DC Input Voltage	±240Vdc		
Charging Ability	Within 10 hours (2 hours backup)		
<b>GENERAL</b>			
Display	LCD/LED Screen		
Communication	RS232, RS485, 2 dry contact, TCP/IP adaptor		
Ambient Temperature	-25°C ~ 60°C		
Operating Temperature	-5°C ~ 40°C		
Operating Humidity	≤95% (non-condensed)		
Dimensions (mm) WxDxH	480 x 600 x 133 (3U)	480 x 600 x 222 (5U)	480 x 600 x 311 (7U)
Net Weight (kgs)	12	16	20
<b>MODEL</b>	<b>PTG6M</b>		
Capacity kVA/kW	6kVA/5.4kW		
Input/Output Mode	1/1, 3/1, 1/3, 3/3 (Ph + N + E)		
Input PF	≥0.99		
THDI	≥3%		
Overload Ability	125% for 10 min, 150% for 1 min		
Max. Charging Power	1.5kW		
Max. Heat Dissipation	338W		
Dimensions (mm) WxDxH	219 x 487 x 83		
Net Weight (kgs)	7.5		

# PowerTower™ Green RIT25 Series

## Rack Independent Online Double Conversion UPS

### 25kVA – 200kVA

The PowerTower Green RIT25 Series is a rack independent UPS system specially designed for independent rack solutions. The modular UPS design includes a base unit, sub module frame and power modules that can be installed into any suitable 19" rack cabinet.

Starting at 25kVA up to 200kVA, this solution is easy to integrate into a small or medium size computer room. The PowerTower Green RIT25 allows full power integration of a full UPS into any hot-cold aisle data centre design. With just a few modules, you are able to build or extend the UPS to meet the power needs of your business.



With a base unit power of 100kVA or 200kVA, extending your power could not be simpler. Easily multiplying the BPC high performance 25kVA modules to your need, not getting limited to single phase or three phase designs.

#### BASE UNITS

- Input/Output cable entries
- Maintenance By-Pass switch
- System monitoring (placed at eye level)
- Input/output 1/1, 3/1, 1/3 and 3/3
- 380/220VAC, 400/230VAC, 415/240VAC, 50/60Hz
- SNMP interfacing
- Fits into any 19" frame



#### PTG RIT/200 base unit

- STS static switch 200kVA
- Maximum size supported 200kVA/180kW
- Height Base Unit is 16U

#### PTG RIT/100 base unit

- STS static switch 100kVA
- Maximum size supported 100kVA/90kW
- Height Base Unit is 9U



#### SUB MODULE FRAME

##### PTG RIT/100F sub module frame

- Fits up to 4 x 25kVA/22,5kW UPS modules
- Maximum size 100kVA per CM-100F
- Maximum 1 x RIT/100F with RIT/100 base unit
- Maximum 2 x RIT/100F with RIT/200 base unit
- Fits into any 19" frame
- Sub module frame height 12U total



##### PTG RIT/50F sub module frame

- Fits up to 2 x 25kVA/22,5kW UPS modules
- Maximum size 50kVA per CM/A50F
- Maximum 1 x RIT/50F with RIT/100 base unit
- Fits into any 19" frame
- Sub module frame height 6U total



#### UPS POWER MODULE

##### PTG25M UPS module

- 25kVA/22,5kW UPS modules
- Maximum 8 x 25kVA UPS modules per Rack-RIT/200 base unit
- Single or three phase input/output
- 380/220VAC, 400/230VAC, 415/240VAC, 50/60Hz



## PowerTower Green RIT25 Technical Specification

MODEL	PTGRIT 100/25	PTGRIT 200/25	
Maximum Power Rating kVA	100kVA	200kVA	
Compatible Power Module	PTG25M		
<b>INPUT</b>			
Nominal Voltage	380V / 220V, 400V / 230V, 415V / 240V (1Ph + N + E, 3Ph + N + E)		
Voltage Range	±20%		
Frequency Range	50 Hz or 60 Hz		
Power Factor	≥0.99		
<b>OUTPUT</b>			
Nominal Voltage	380 Vac / 220 Vac, 400 Vac / 230 Vac, 415 Vac / 240 Vac (1Ph + N + E, 3Ph + N + E)		
AC Voltage Regulation (Battery Mode)	±1%		
Power Factor	0.9		
Crest Factor	3:1		
Harmonic Distortion (Linear Load)	TDH ≤1%		
Transfer Time	Zero		
Waveform	Sinewave		
<b>EFFICIENCY</b>			
AC Mode	≥96%		
Battery Mode	≥98%		
<b>BATTERY</b>			
Battery Type	VRLAAGM Sealed Lead Acid Maintenance Free Batteries		
Charging Ability	10 hours (2 hours back up)		
Charging Voltage Stability	± 1%		
<b>GENERAL</b>			
Display	Touch LCD/LED Screen		
Communication	RS232, RS485, 8 dry contacts, TCP/IP adaptor, SNMP (optional)		
Operating Temperature	-5 ~ 40°C		
Operating Humidity	0 - 95% (non-condensed)		
Acoustic Noise	≤55 dB @ 1 metre		
Protection Degree	IP30		
Base Unit	Dimensions (mm) WxDxH	482 x 750 x 400	482 x 710 x 711
	Weight (kgs)	29	40
Sub Module Frame	Dimensions (mm) WxDxH	482 x 650 x 400	482 x 650 x 533
<b>MODEL</b>			
<b>PTG25M</b>			
Capacity kVA/kW	25 kVA/22.5kW		
Input/Output Mode	1/1, 3/1, 1/3, 3/3 (Ph + N + E)		
Input PF	≥0.99		
THDI	≥3%		
Overload Ability	125% for 10 min, 150% for 1 min		
Max. Charging Power	6kW		
Max. Heat Dissipation	1187W		
Dimensions (mm) WxDxH	482 x 465 x 133		
Net Weight (kgs)	20		

# Hot Swappable Modular Battery Solutions

The BPC Rack Independent (BRI) Battery System is a hot swappable battery containment solution that incorporates the SAFEGUARD battery monitoring system.

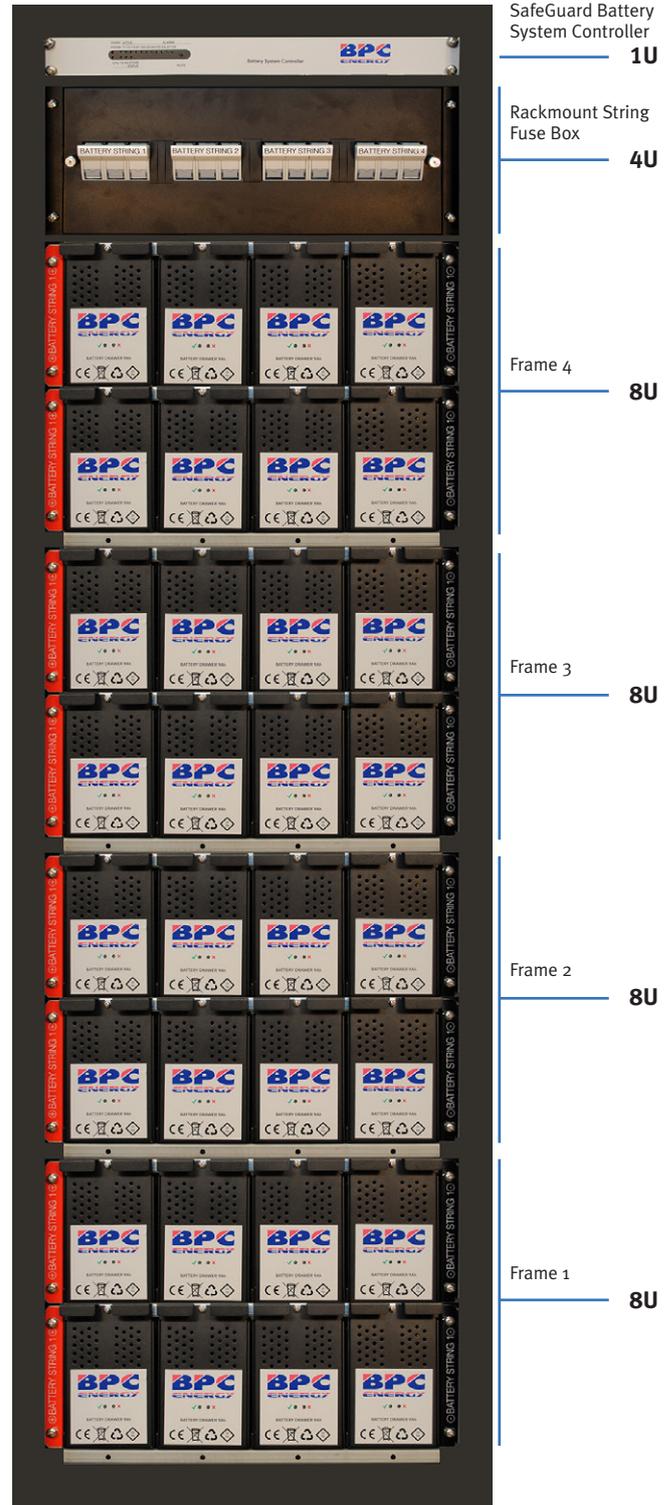
Designed to work with the PowerTower Modular solutions the BRI System provides the complete modular package. The system can be installed into any 19" rack that is 1000mm deep and suitable for the weight of the battery.

Rack Independent UPS solutions can also be integrated with modular battery solutions. Typically suitable for applications for 200kVA for 10 minutes autonomy or combinations of more autonomy but less power capacity.

## BATTERY RACK INDEPENDENT FRAME



MODEL	PTG BRI-40F	PTG BRI-64F
Battery Type	VRLA Sealed Lead Acid Battery	
Included Battery Trays	4 trays x 10 blocks each	8 trays x 8 blocks each
Total number of Battery Blocks	40	64
Battery Voltage	± 240VDC	± 384VDC
Battery Mounting	19" Battery Tray	
Expected Battery Life	5 years	
Battery Volt-Amp-Hour Capacity	4320	6912
Maximum (HxWxD) per Frame	4U x 19" x 820mm	8U x 19" x 820mm
Cabinet Height	42U (max. 8 frames)	42U (max. 4 frames)
Cabinet Dimensions (mm)	2000 (h) x 600 (w) x 1000 (d)	2000 (h) x 600 (w) x 1000 (d)
Net Weight (with batts.)	105kgs	210kgs
Colour	black	
Approvals	CE, EN/IEC 62040-1-1, EN/IEC 62040-2, EN/IEC 62040-3, Eurobat General Purpose, UL 1778	



Battery cabinet with open door showing 4 frames

## SAFEGUARD BATTERY SYSTEM CONTROLLER



The BPC BATTERY SAFEGUARD Monitoring System is key to guarding your battery to ensure that when required the battery is able to provide the necessary support to your UPS. Continuous monitoring of Voltage and Temperature provides immediate alarms to show of any existing issues within the system.

The SAFEGUARD voltage monitoring is based on identifying if there is any imbalance between the 12VDC battery blocks as well as monitoring the battery cabinet temperature in three positions within the cabinet. The system then provides alarms and visual indications that the system is outside its optimum voltage or temperature range.

The SAFEGUARD Monitor records all active alarms that are produced by the central part of the system, the BMS Controller making sure active alarms are safely logged every 15 minutes into the historical log. The historical LOG is large enough for 18 months data and work on the basis "first in first out". During yearly preventative maintenance the historical LOG will be exported and analysed by the maintenance engineer.

- Dimensions: 19" housing, 1U x 300mm depth
- Connects to sensors of maximum 8 strings
- Stores up to 18 months of battery information

## RACKMOUNT STRING FUSE BOX (2 STRING OR 4 STRING)



- Dimensions: 19" (w) x 150mm (d) x 4U (h)
- Cable between UPS and fuse box based on side by side installation

## LARGER BATTERY SOLUTIONS

For applications requiring much longer backup time or the UPS capacity exceeds the normal data centre room requirements. The standby battery system might be physically too large or just very heavy for installation inside the data centre, in this case an alternative arrangement has to be found. BPC Energy designs and manufactures its own PowerStor™ battery range and, in addition to hot swappable long life battery modules, we also have a versatile range of lead acid batteries with suitable AGM and GEL sealed technology for both 12 year and 15 year design life batteries.

The wide choice of capacity ratings can be provided with matching UPS rackmount frames, open steel battery stands, enclosed cabinets, separate battery room design and even outdoor solutions to suit every possible environment.



## LITHIUM BATTERY SOLUTIONS

In certain applications where space is restricted, and a huge density power storage is required in perhaps a hostile environment with high temperature variations, a more advanced battery solution might be a better solution.

Lithium technology is now becoming well proven and understood for powering larger applications. BPC Energy has a 48 volt rackmount Lithium Ion Module which is developed for energy storage and standby applications.

When considering total cost of ownership these advanced battery solutions are becoming very commercially attractive, offering smaller volume and light weight installations with excellent cycling characteristics, plus the ability to operate at high ambient temperatures might be more suitable for harsh environments.

IT managers will also be relieved that Lithium batteries can be recharged much faster than conventional lead acid batteries returning the UPS system back to full protection in a much shorter time.



96kWh Lithium Battery

# Accessories

Extensive range of accessories to accompany the BPC product portfolio

## EXTERNAL MAINTENANCE BYPASS

BPC UPS are equipped with an Internal Static Switch allowing for instantaneous transfer to mains supply when the power demand of the load exceeds the overload level of the inverter or a short circuit is experienced.

However, an optional External Manual Bypass Switch facility may be provided to offer the opportunity to do commissioning, routine maintenance, repair or removal of the equipment without any interruption to the critical load. Both make-before-break (MBB) and break-before make (BBM) bypass switch designs are available.

A comprehensive range of bypass switches which are built to the highest standard using proven components are available in both single and three phase, with variations for dual input supplies or parallel redundant configurations.



## SWITCHABLE & CHANGEVER PANELS

Every switchboard is individually designed to suit our clients requirements including:

- Forms of separation: Form 2 to 4, type 1 to 7
- Ratings: 100A to 6300A
- Type tested assemblies (IEC 61439-1)
- Board access: Front and rear
- Mains, gen-man, auto changeover controls
- Electrical or mechanical interlocking
- Restricted or unrestricted earth fault
- Power factor correction (switchboard or stand alone)
- Surge protection



## BATTERY ACCESSORIES

BPC offer a comprehensive range of battery accessories which include open steel battery stands and cladded enclosed battery racks that can easily be assembled and disassembled, also including complete battery cabinet system options.

Other accessories include insulated battery shrouds, cable kits, DC switchable fuses and DV circuit breakers.

BPC also offer battery testing accessories for voltage and impedance testing along with insulated battery tools to simplify safe battery maintenance.



## Networking Intelligent Power Management

### SIMPLE NETWORKING MANAGEMENT PROTOCOL (SNMP) CARDS AND ADAPTORS

SNMP cards are used for the management of UPS systems via a computer or local network. With a web based programme built into the SNMP, simply connecting the card to a network via its LAN port allows for easy monitoring of the UPS. SNMP cards can be used not only to monitor UPS parameters, but also allow user controlled testing, email alerts and sending of remote console commands to client systems to initiate automatic shutdowns. SNMP cards can be fitted internally on some UPS models or externally fitted via the UPS RS232 port.



### ENVIRONMENTAL MONITORING

BPC can provide enhanced environmental monitoring using the NetFeeler 2 alongside your SNMP card. It can detect variations in temperature, humidity and presence of water as standard, with optional add-ons as listed below:

- **Wireless smoke sensor**
- **Wireless gas sensor**
- **Wireless door / window sensor**
- **Wireless glass-break sensor**
- **Wireless infrared sensor**
- **Wireless PIR sensor**
- **Flashlight**

When an event occurs, the NetFeeler 2 alarm will buzz and can be configured to simultaneously send an email through the SNMP card. When connected to an SNMP Card it can provide environmental status feedback via the internet using a standard browser and can support up to 7 individual ID/sensors.

### PORT MULTIPLEXER

Allows two devices to be connected to a single RS232 serial communication port on a UPS. It can be used when a separate Intelligent Power Management interface and Remote Monitoring Panel are both required.

### MODBUS ADAPTORS

BPC have a wide range of MODBUS/BUS adaptors that support RS485 and TCP/IP connectivity to ensure the device provides continuous, reliable and accurate network monitoring of the UPS system through a Building Management System (BMS).

### RS485 CONVERTER

Using a BPC RSC 24 you are able to convert the RS232 interface to RS485. Should be used if the distance between UPS and its receiving interface exceeds 20 metres.

### CUSTOMISED INTERFACES

With a Multi-interface slot, various communication combinations are selectable including additional RS232, Relay Cards, USB, Dry-Contact Relays and customised packages.

### GSM MODEM

When connected to advanced SNMP cards the GSM MODEM can send SMS alerts via a telephone sim card.



## After Sales Support

### INSTALLATION & COMMISSIONING

All BPC installations are carried out by approved engineers who are experts in the installation of UPS and related equipment. If required, BPC can provide a managed turnkey service which provides for delivery to site and all associated installation electrical and building work. All BPC installations are compliant with current regulations and full certification will be issued on completion.

BPC are able to meet with all your exact requirements regardless of the size or complexity of your application. A solution can be tailored to suit both your commercial and technical requirements by utilising either modified commercially off the shelf (COTS) products or custom built as a bespoke product.

BPC have a dedicated team of managers and engineers who can provide a total solution from surveying your site through to complete commissioning of the system.

It is vital that your UPS or Static Inverter is fully commissioned to ensure it is installed and running correctly. Commissioning by a trained engineer will check the performance of the system whilst also checking the environment is suitable to achieve maximum service life.



### MAINTENANCE & SERVICE PLANS

Any power protection equipment is an investment for any sized company and having the reassurance that your equipment is maintained to ensure full life expectancy is key.

BPC can offer a range of maintenance agreements all with 24 hour telephone support. Agreements vary in price depending on the level of support and response time required. Options from next working day to 4 clock hour responses are available nationwide. BPC can be very flexible to suit customer requirements whether it is an additional annual visit or strategic spare part requirements.

With the knowledge and experience to support third party equipment it is now even easier to choose BPC as your service provider, allowing us to support all your equipment at site regardless of quantity, size, make or model, ensuring a high level of support and one single point of contact.

#### Supported Brands include:

- Emerson
- Chloride
- Liebert
- APC/Schneider
- Merlin Gerin
- Riello
- Gamatronic
- Powerwave
- Eaton
- Coopers
- SIEL
- Salicru
- JSB
- Menvier
- Best Power

### HAZARDOUS WASTE DISPOSAL

Due to tight regulations within England and Wales on the transport of batteries that are at the end of their life, BPC Energy are fully equipped to offer complete removal and replacement services. BPC are registered upper tier waste carriers for the safe transportation of batteries with the Environment Agency in England & Wales. Registration No. CB2U66604

# Advanced Power Conversion Solutions

## 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.

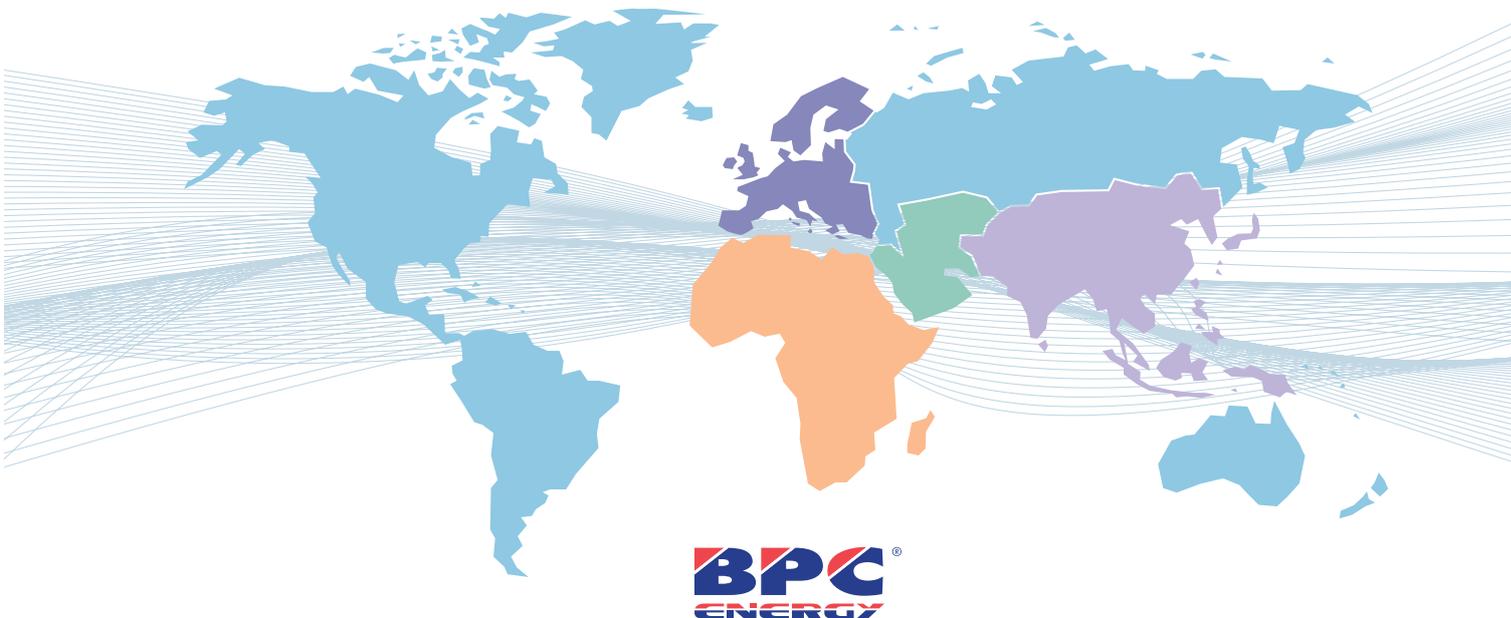
### AFRICA

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.



The British Power Conversion Company

Authorised Distributor



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