

BDC SERIES

Battery Chargers 12V & 24V: 50 - 150 Watts



Features

- High efficiency switched mode design
- Auto ranging or universal input: 90 - 264VAC
- 12V and 24V output options
- Output power levels of 50, 75, 100 and 150 watts
- LED for power output OK
- Battery protection - self-resetting circuit breaker
- Separate load and battery terminals
- Overload and OVP protection
- Convection cooled
- Fully isolated output

General Specifications

Input Voltage:	90 - 264VAC Auto selected
Output Voltage:	12V set for 13.8V float 24V set for 27.6V float
Output Power:	50 - 150 watts
Voltage Adjustment:	±10%
Output Protection:	Rectifier overload OVP protection Battery protection - circuit breaker
EMC:	EN55022 Level A
Isolation:	Input - Output 3000VAC
Operating Temp:	10°C to 50°C at 100% load
Indicator:	DC Output - LED
Cooling:	Convection cooled
Connector:	Input: 3 pin plug and cord. Output: Screw terminals
Dimensions/Weight:	260 x 125 x 75mm 1-1.5Kg

Description

The **BDC** series Battery Chargers are designed to power DC loads with battery back-up, and are available in 12V and 24V systems from 50 to 150 watts.

The reliability of this product is in the simplicity of the design with field proven rectifier modules, that are used within the product. It has also been used as a general acidic power supply in a wide range of industrial applications for over 18 years.

Separate output terminals for Battery and Load allow for simple and efficient installation.

- **For more detailed information on the BDC series, visit our website.**

Options

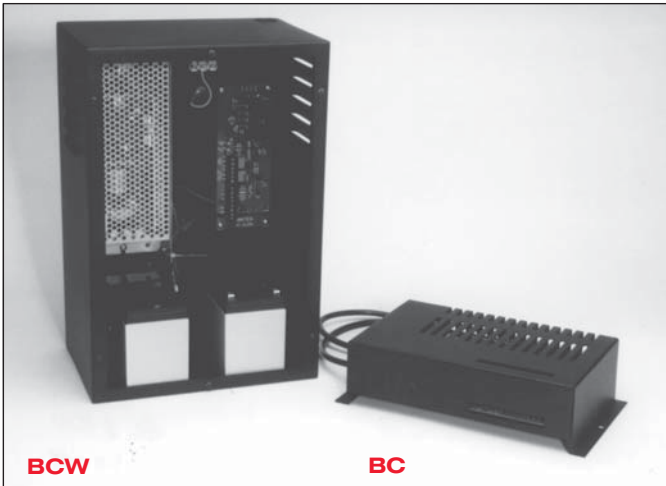
Alarms:	Alternative BC series product is available with optional Power Fail and Battery Low alarms.
Rack Mount:	Optional 1U x 19in Rack mount unit.

Model	Output V A	Battery Float Voltage	Power W
BDC50 - 12	12V 3.5A	13.8V	50W
BDC75 - 12	12V 5.0A	13.8V	75W
BDC100 - 12	12V 7.0A	13.8V	100W
BDC150 - 12	12V 10.5A	13.8V	150W

Model	Output V A	Battery Float Voltage	Power W
BDC75 - 24	24V 2.7A	27.6V	75W
BDC100 - 24	24V 3.6A	27.6V	100W
BDC150 - 24	24V 5.2A	27.6V	150W

BC & BCW SERIES

Battery Chargers 12V & 24V: 50 - 150 Watts



Features

- High efficiency switched mode design
- 12V and 24V output options
- Output power levels of 50, 75, 100 and 150 watts
- Power Fail and Battery Low alarms
- DC OK and Battery OK LEDs
- Output isolation diode
- Battery Fuse protection
- Rectifier overload and OVP protection
- Wall mount enclosure - BCW
- Low volt disconnect option

General Specifications

Input Voltage:	90 - 264 VAC
Output Power:	50 - 150 watts
Output Voltage:	12V models set for 13.8V float 24V models set for 27.6V float
Voltage Adjustment:	±10%
Output Protection:	Rectifier overload OVP Protection Battery fuse
EMC:	EN55022 Level A
Isolation:	Input - Output 3000VAC
Operating Temp:	10°C to 50°C at 100% load
Indicator:	Power Fail - LED Battery Fail - LED
Cooling:	Convection cooled
Alarms:	• Power Fail/AC Fail - voltage free contacts • Battery Fail - voltage free contacts
Connector:	Screw terminals
Dimensions/Weight:	BC: 259 x 148 x 70mm. 1-1.5Kg BCW: 248 x 168 x 361mm. 3 - 5Kg

Description

The BC & BCW series Battery Chargers are designed to power DC loads with battery back-up and are available in 12V and 24V systems from 50 - 150 watts.

The reliability of this product is the simplicity of the design. The rectifier module used within the product is also used as a general AC/DC power supply in a wide range of industrial OEM applications.

The added Alarm card provides the basic features required in battery back-up systems, providing continuous DC power in the event of power failure.

Available in two mechanical packages:

- Panel mount low profile unit, and
- Wall mounting option, allowing installation of the battery within the cabinet.

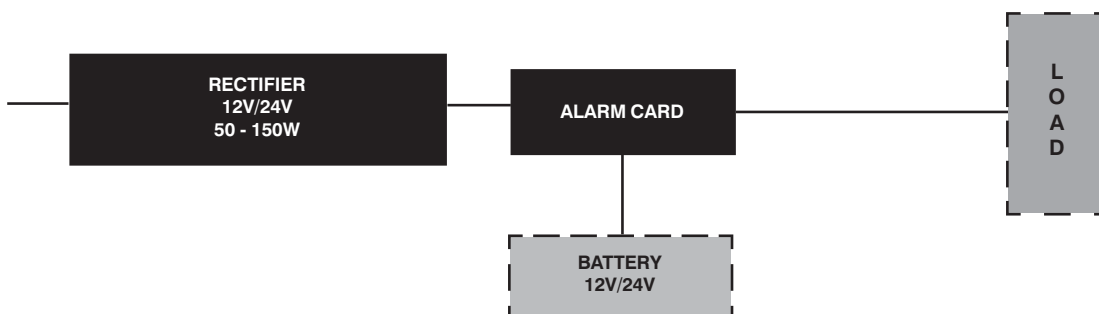
AC Power and Battery Fail alarms are provided via voltage free change over relay contacts for external monitoring, as well as two LEDs for visual indication.

- **For more detailed information on BC and BCW Series visit our website**

Options

Batteries:	The BCW wall mount cabinet is designed to hold 2 x 7AH or 2 x 12AH batteries.
Mechanical:	Alternative mechanical styles.
Rack Mount:	1U x 19in Rack mount style.

Block Diagram



BC & BCW SERIES

Battery Chargers 12V & 24V: 50 - 150 Watts

Model	Output		System Float Voltage	Power W
	V	A		
BC50 - 12 BCW50 - 12	12V 12V	3.5A 3.5A	13.8V 13.8V	50W 50W
BC75 - 12 BCW75 - 12	12V 12V	5A 5A	13.8V 13.8V	75W 75W
BC100 - 12 BCW100 - 12	12V 12V	7.0A 7.0A	13.8V 13.8V	100W 100W
BC150 - 12 BCW150 - 12	12V 12V	10.5A 10.5A	13.8V 13.8V	150W 150W
BC75 - 24 BCW75 - 24	24V 24V	2.7A 2.7A	27.6V 27.6V	75W 75W
BC100 - 24 BCW100 - 24	24V 24V	3.6A 3.6A	27.6V 27.6V	100W 100W
BC150 - 24 BCW150 - 24	24V 24V	5.4A 5.4A	27.6V 27.6V	150W 150W

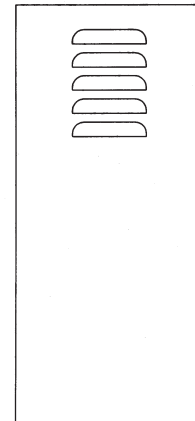
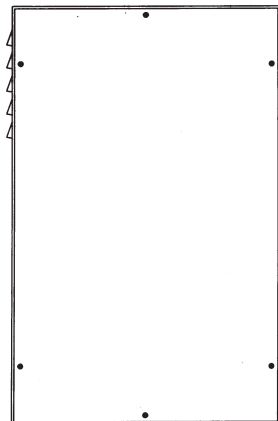
Notes:

- BC models: Rectifier / charger and alarm card assembly.
- BCW models: Rectifier / charger and alarm card in wall mounting assembly, with battery compartment.

BCW Wall Mounting

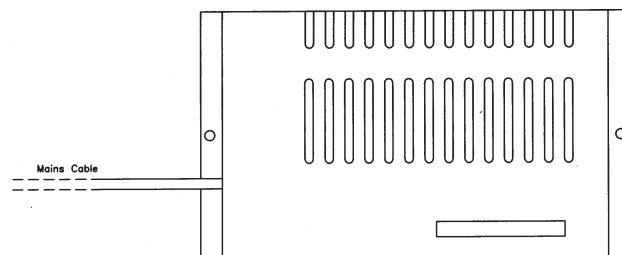
Overall dimensions:
361 x 248 x 166mm
Mounting hole diameter:
6mm
Mounting hole pitch:
332 x 205mm

Cable entry is via 25mm holes located in the right hand rear corners of top and bottom

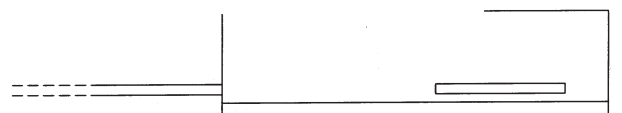


BC Panel Mount Unit

Overall dimensions: 259 x 70 x 148mm
Mounting hole diameter: 6mm
Mounting hole pitch: 247 mm



Overall dimensions: 259x70x148mm



BX SERIES

Battery Chargers: 140 - 1000 Watts



Features

- Universal input: 90 - 264VAC with PFC
- AC input via IEC socket
- Low profile 52mm
- 1U x 19in rack mounted assembly - option
- 12 -120VDC output options
- Built-in redundancy diodes for **N+1** applications
- High efficiency 88%
- Power Fail and Battery Low alarms
- DC OK LED front panel
- EN60950 safety approval (internal modules)
- Suitable for use as a combined power supply and **Battery Charger** in high-end DC Back-Up systems

General Specifications

Input Voltage:	90 - 264VAC
Output Power:	140 - 1000 watts
Output Voltage:	12 - 121VDC
Voltage Range:	Each internal module adjustable $\pm 15\%$
Power Factor:	0.98
Efficiency:	83 - 88%
Isolation:	Input - Output 3000VAC
EMC:	EN55022 Level B
Safety:	EN60950 (Internal Modules)
Operating Temp:	-10°C to +55°C, derate linearly to 70°C
Protection:	Overvoltage protection. Overload protection.
Parallel Operation:	For N+1 Redundancy of two units
Cooling:	Internal fan
Alarms:	<ul style="list-style-type: none"> • Power Fail/DC Fail (voltage free contacts) • Battery Low (voltage free contacts)
Connectors:	Input: IEC320 socket DC/DC Output & Alarms: Screw Terminals
Dimensions/Weight:	4 Slot Case: 344 x 110 x 52mm 1.9-2.5Kg 6 Slot Case : 344 x 153 x 52mm 2.5-3.2Kg

Description

The BX series Battery Chargers are designed to power DC loads with battery back-up as a combined Battery Charger/Power Supply unit. The modular design of the BX product allows total flexibility of output voltage settings from 12 to 121VDC and power from 140 to 1000 watts. Available in two mechanical packages for panel mounting within customer assemblies or as a 1U x 19in rack mounting case. AC input is via IEC320 socket, and all DC and alarm connections are available or quality screw terminals. Two alarms provide DC Fail and Battery Low via voltage free relay contacts for external monitoring.

- **For more detailed information on BX series, visit our website.**

Options

Rack Mount:	For rack mounting unit change BX to RX (RX400-48)
Meters:	Digital meters are available on the rack mount unit, add M to model (RX400-48M)

BX SERIES

Battery Chargers: 140 - 1000 Watts

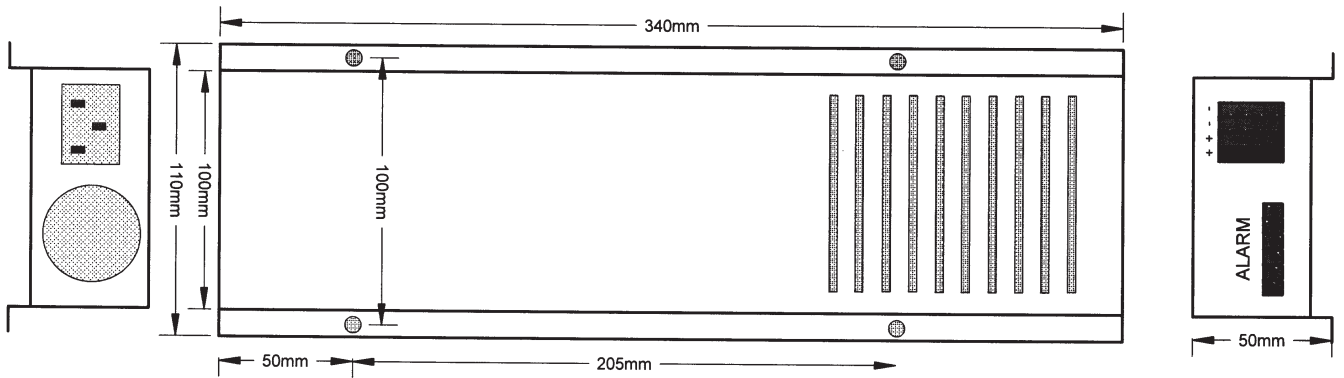
Model	Output			Power W	Case
	Nom V	Float V	A		
BX200 - 12	12V	13.8V	10A	140W	4 Slot
BX400 - 12	12V	13.8V	18A	240W	4 Slot
BX200 - 24	24V	27.0V	5A	130W	4 Slot
BX400 - 24	24V	27.0V	9A	240W	4 Slot
BX600 - 24	24V	27.0V	20A	540W	4 Slot
BX600 - 36	36V	41.0V	10A	400W	4 Slot
BX1000 - 36	36V	41.0V	17A	690W	6 Slot

Model	Output			Power W	Case
	Nom V	Float V	A		
BX400 - 48	48V	54V	5A	270W	4 Slot
BX600 - 48	48V	54V	9A	480W	4 Slot
BX1000 - 48	48V	54V	15A	810W	6 Slot
BX700 - 96	96V	108V	5A	540W	6 Slot
BX1000 - 96	96V	108V	9A	970W	6 Slot
BX1000 - 110	108V	121V	6A	720W	6 Slot
BX1200 - 110	108V	121V	8A	970W	6 Slot

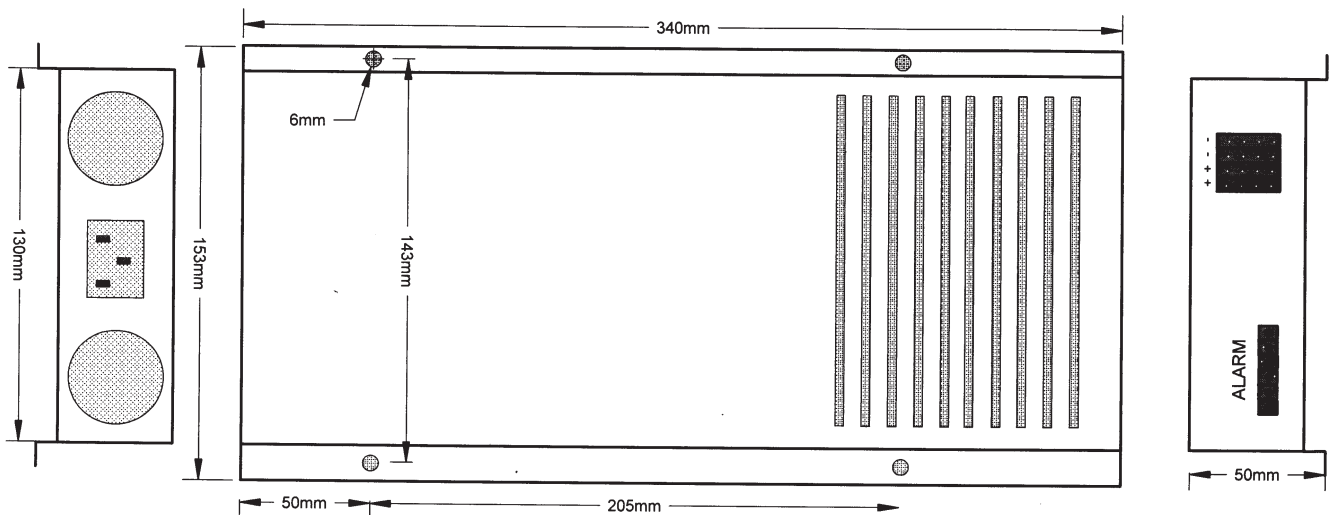
- For rack mount replace B with "R": **RX600-24**
- For rack mount with meters add "M" to model: **RX600-24M**

- For rack mount replace B with "R": **RX600-24**
- For rack mount with meters add "M" to model: **RX600-24M**

4 SLOT CASE



6 SLOT CASE



FPK SERIES

Battery Charger/Power Supply: 500 - 1000 Watts



Features

- Universal input: 90 - 264VAC
- IEC input socket or Screw Terminal option
- Low profile: 46mm height
- 24V, 32V and 48V output options
- Hot swap capability
- Parallel operation with power share
- Built-in redundancy diodes for **N+1** applications
- High efficiency 88%
- AC, DC and Over Temperature Alarms
- LED front panel: AC OK, DC OK, DC Fail
- EN60950 safety approved modules
- Suitable for use as a combined power supply and **Battery Charger** in high-end DC Back-Up systems

General Specifications

Input Voltage:	90 - 264VAC, 120 - 370VDC
Power Factor:	0.95
Output Voltage:	24V (22 - 29), 32V (28 - 38), 48V (43 - 58)
Output Power:	500 - 1000 watts
Voltage Adjustment:	By rear panel trim pot
Output Protection:	<ul style="list-style-type: none"> • Current limiting with auto recovery • OVP protection
EMI:	EN55011 and EN55022 - B
Immunity:	EN61000 - 4
Operating Temp:	-10°C to +50°C at 100% load
Safety:	UL1950, EN60950, UL508, UL50178 (Modules only)
Isolation:	Input - output 3000VAC
Cooling:	Built in fan
Connector:	Screw terminals
Dimensions/Weight: (L x W x H)	365 x 168 x 46mm 3.5Kg

Description

The **FPK** series is suitable for use as a DC power supply or as a combined battery charger/power supply in stand-by applications with battery back-up.

The FPK is best suited for applications where quality and performance is uppermost in a project with Power Factor Correction, Parallel Operation and **N+1 Redundancy** if required.

One of the main features of the FPK series, is the ability to have a module removed from its chassis, by simply pushing on a small lever on the right side of the front panel and unplugging it without having to disconnect any of the wiring. This allows for simple module replacement. Power Fail and DC Fail Alarms are available via voltage free contacts for external signalling, as well as LED indicators.

- **For more detailed information on the FPK series, visit our website.**

Options

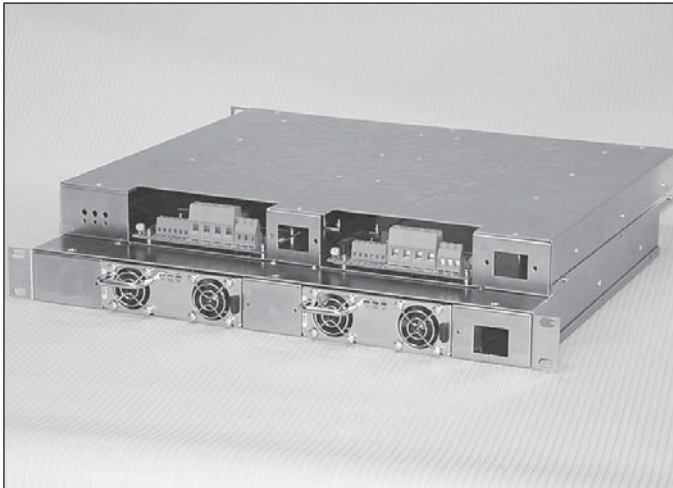
Input Option:	Standard AC input is on screw terminals for hard wiring. Optional input via IEC socket on front panel. Add "E" to model
Remote ON/OFF:	Consult office

Model Power Supply	Output		Power W
	V	A	
FPK500-24-PU	24V	21A	500W
FPK500-32-PU	32V	16A	500W
FPK500-48-PU	48V	11A	500W
FPK800-24-PU	24V	34A	800W
FPK800-32-PU	32V	25A	800W
FPK800-48-PU	48V	17A	800W
FPK1000-24-PU	24V	40A	1000W
FPK1000-32-PU	32V	30A	1000W
FPK1000-48-PU	48V	20A	1000W

Model Battery Charger	Output		Power W
	V	A	
FPK500-24-BC	27V	21A	500W
FPK500-32-BC	36V	16A	500W
FPK500-48-BC	54V	11A	500W
FPK800-24-BC	27V	34A	800W
FPK800-32-BC	36V	25A	800W
FPK800-48-BC	54V	17A	800W
FPK1000-24-BC	27V	40A	1000W
FPK1000-32-BC	36V	30A	1000W
FPK1000-48-BC	54V	20A	1000W

FPK-RACK SERIES

Battery Charger/Power Supply: 500 - 1000 Watts



Features

- Universal input: 90 - 264VAC with PFC
- Low profile 1U x 19in rack mounting
- 24V, 32V and 48V output options
- 110VDC output option - consult office
- Hot-swap capability
- Parallel operation with power share
- Built-in redundancy diodes for **N+1** applications
- High efficiency 88%
- AC fail alarm, DC/Over Temperature Alarm
- LED front panel: AC OK, DC OK, DC Fail
- EN60950 safety approved modules
- Suitable for use as a combined power supply and **Battery Charger** in high-end DC back-up systems

General Specifications

Input Voltage:	90 - 264VAC, 120 - 370VDC
Power Factor:	0.95
Output Voltage:	24V (22 - 29), 32V (28 - 38), 48V (43 - 58)
Output Power:	500 - 1000 watts
Voltage Adjustment:	By rear panel trim pot on Rack assembly
Output Protection:	Current limiting with auto recovery OVP protection Thermal protection
EMI:	EN55011 & EN55022-B
Immunity:	EN61000-4
Operating Temp:	-10°C to +50°C at 100% load
Parallel Operation:	Modules can operate in parallel or N+1 Redundancy
Safety	UL1950, EN60950, UL508, UL50178 (modules only)
Isolation:	Input - Output 3000VAC
Cooling:	Built-in fan
Connector:	Screw terminals
Dimensions & Weight:	1U x 19in x 365mm 5Kg

19 in Rack Model	Suitable for Number of Modules	Power W
FPK-Rack-1	One FPS - Module	500 - 1000W
FPK-Rack-2	Two FPS - Modules	500 - 2000W

Model Selection:

1. The output voltage/setting is done on the FPK-Rack (rear trim-pot) for each module that is installed in the rack.
2. Each rack is able to take one or two power supply/rectifier modules from the table.

Description

The **FPK-Rack** is a 1U x 19in rack assembly that is designed to hold one or two 500W, 800W or 1000W rectifier modules.

Suitable for use as a DC power supply or as a combined battery charger/power supply in stand-by applications with battery back-up.

The FPK-Rack is best suited for applications where quality and performance is uppermost in a project with Power Factor Correction, and **N+1 Redundancy** for powering critical loads.

One of the main features of the FPK series, is the ability to have a module removed from its chassis, by simply pushing on a small lever on the right side of the front panel and, unplugging it without having to disconnect any of the wiring. This allows for a very simple replacement of the module. Power Fail and DC Fail Alarms are available via voltage free contacts for external signalling, as well as LED indicators for the same alarms.

- **For more detailed information on the FPK-Rack series, visit our website.**

Options

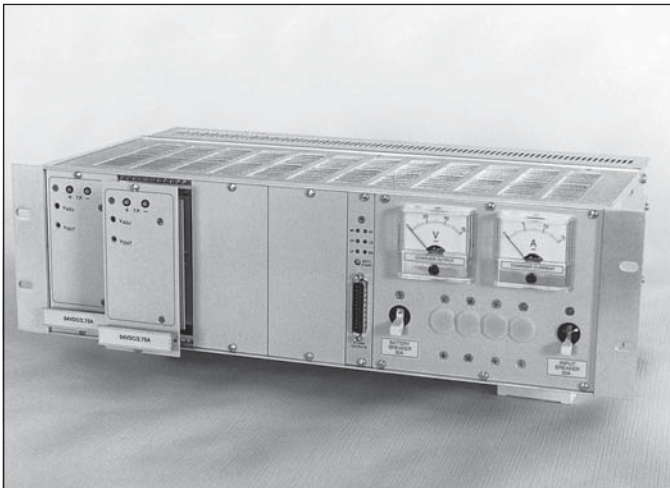
Input Option: Standard AC input is on screw terminals for hard wiring. Optional input via IEC socket on front panel, add "E" to model.

Remote ON/OFF: Consult office.

Model	Output		Voltage Range	Power W
	V	A		
FPS500 - 24	24V	21A	22 - 29V	500W
FPS500 - 32	32V	16A	28 - 38V	500W
FPS500 - 48	48V	11A	43 - 58V	500W
FPS800 - 24	24V	34A	22 - 29V	800W
FPS800 - 32	32V	25A	28 - 38V	800W
FPS800 - 48	48V	17A	43 - 58V	890W
FPS1000 - 24	24V	40A	22 - 29V	1000W
FPS1000 - 32	32V	30A	28 - 38V	1000W
FPS1000 - 48	48V	20A	43 - 58V	1000W

BR3U SERIES

Battery Charging Systems: 150 - 600 Watts



Features

- Input 115/230VAC
- Output 12 - 130VDC options
- 3U x 19in rack mount assembly, fully wired
- N+1 redundancy of rectifier modules
- System can take up to four rectifier modules in parallel
- Hot swap capability under load conditions
- Front panel test points and voltage adjustment
- Alarms and LED indicators
- Voltage and Amp meters
- Input AC breaker and battery breaker
- DC distribution option

General Specifications

Input Voltage:	115/230VAC Link Selectable
Output Voltage:	12V nominal: 13.5 VDC 24V nominal: 27.0 VDC 48V nominal: 54.0 VDC 110V nominal: 121.0 VDC
Voltage Adjustment:	5% front panel adjustment
Output Power:	Up to 500 watts per rack
Output Protection:	Rectangular current limiting with auto recovery. Overvoltage protection
EMI:	EN55022 Class B
Immunity:	EN61000-4
Isolation:	Input - Output 4300VAC
Operating Temp:	0°C to +50°C at full load
Cooling:	Convection cooled
LED Indicators:	With buzzer warning: <ul style="list-style-type: none"> • AC Fail • Rectifier/module fail • High Volts • Low volts • Battery breaker open
Alarms:	Voltage free relay contacts: <ul style="list-style-type: none"> • AC Fail • Rectifier/module fail • High volt alarm • Low volt alarm • Battery breaker open
Dimensions/Weight:	3U x 19in 260mm Rack Assembly

Description

The BR3U series rectifier systems are designed to power DC loads with battery back-up and are available in any voltage from 12V to 130VDC. The system is manufactured for parallel operation of rectifier modules with **N+1 Redundancy** and **Hot Swap** capability and fully assembled and wired as a 3U x 19in Rack mounting system. Each rectifier is rated at 150 watts, with the 3U rack able to hold 1 - 4 modules in parallel. An alarm card provides a number of LED's and voltage free relay contacts for external monitoring of system parameters.

- **For more detailed information on the BR3U series, visit our website.**

Options

BR4U:	Larger rectifier systems at 500 watts per rectifier module and up to 2000 watts per rack assembly
DC Distribution:	Optional DC distribution/circuit breakers
Custom Design:	The system illustrated here is only a small part of our design flexibility. We can totally customise rectifier systems to customer specifications.

Rectifier Model	Output		Power W
	V	A	
REW150 - 13 - Q8290	13.5V	11.0A	150W
REW150 - 27 - Q8290	27.0V	5.5A	150W
REW150 - 54 - Q8290	54.0V	2.7A	150W
REW150 - 120 - Q8290	120.0V	1.25A	150W

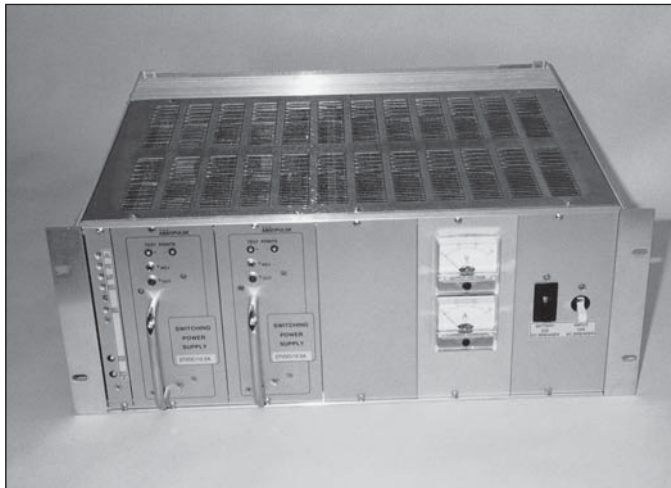
System Assembly	
BR3U - 13 - Q8290	12V Rack System
BR3U - 27 - Q8290	24V Rack System
BR3U - 54 - Q8290	48V Rack System
BR3U - 120 - Q8290	120V Rack System

Notes:

1. Standard output voltage options are illustrated, however any voltage is possible from 12 - 130VDC.
2. Output voltage is customer specified and factory set.
3. Final part number will be factory allocated.

BR4U SERIES

Battery Charging Systems: 300 - 1500 Watts



Features

- Input 115/230VAC
- Output 12 - 130VDC options
- 4U x 19in rack mount assembly, fully wired
- N+1 redundancy of rectifier modules
- Hot swap capability under load conditions
- Front panel test points and voltage adjustment
- Alarms and LED indicators
- Voltage and Amp meters
- Input AC breaker and battery breaker
- DC distribution option

General Specifications

Input Voltage:	115/230VAC Link Selectable
Output Voltage:	12V nominal: 13.5 VDC 24V nominal: 27.0 VDC 48V nominal: 54.0 VDC 110V nominal: 121.0 VDC
Voltage Adjustment:	5% front panel adjustment
Output Power:	Up to 1500 watts per rack
Output protection:	Rectangular current limiting with auto recovery. Overvoltage protection
EMI:	EN55022 Class B
Immunity:	EN61000-4
Isolation:	Input - Output 4300VAC
Operating Temp:	0°C to +50°C at full load
Cooling:	Convection cooled
LED Indicators:	With buzzer warning: <ul style="list-style-type: none"> • AC Fail • Rectifier/module fail • Low battery • Battery disconnect • Battery breaker open
Alarms:	Voltage free relay contacts: <ul style="list-style-type: none"> • AC Fail • Rectifier/module fail • Low battery • Battery disconnect • Battery breaker open
Dimensions/Weight:	4U x 19in 385mm Rack Assembly

Notes:

1. Standard output voltage options are illustrated, however any voltage is possible from 12 - 130VDC.
2. Output voltage is customer specified and factory set.
3. Final part number will be factory allocated.

Description

The BR4U series rectifier systems are designed to power DC loads with battery back-up and are available in any voltage from 12V to 130VDC. The system is manufactured for parallel operation of rectifier modules with **N+1 Redundancy** and **Hot Swap** capability and fully assembled and wired as a 4U x 19in Rack mounting system. Each rectifier is rated at 300/500 watts, with the 4U rack able to hold 1 - 3 modules in parallel. An alarm card provides a number of LED's and voltage free relay contacts for external monitoring of system parameters.

- **For more detailed information on the BR4U series, visit our website.**

Options

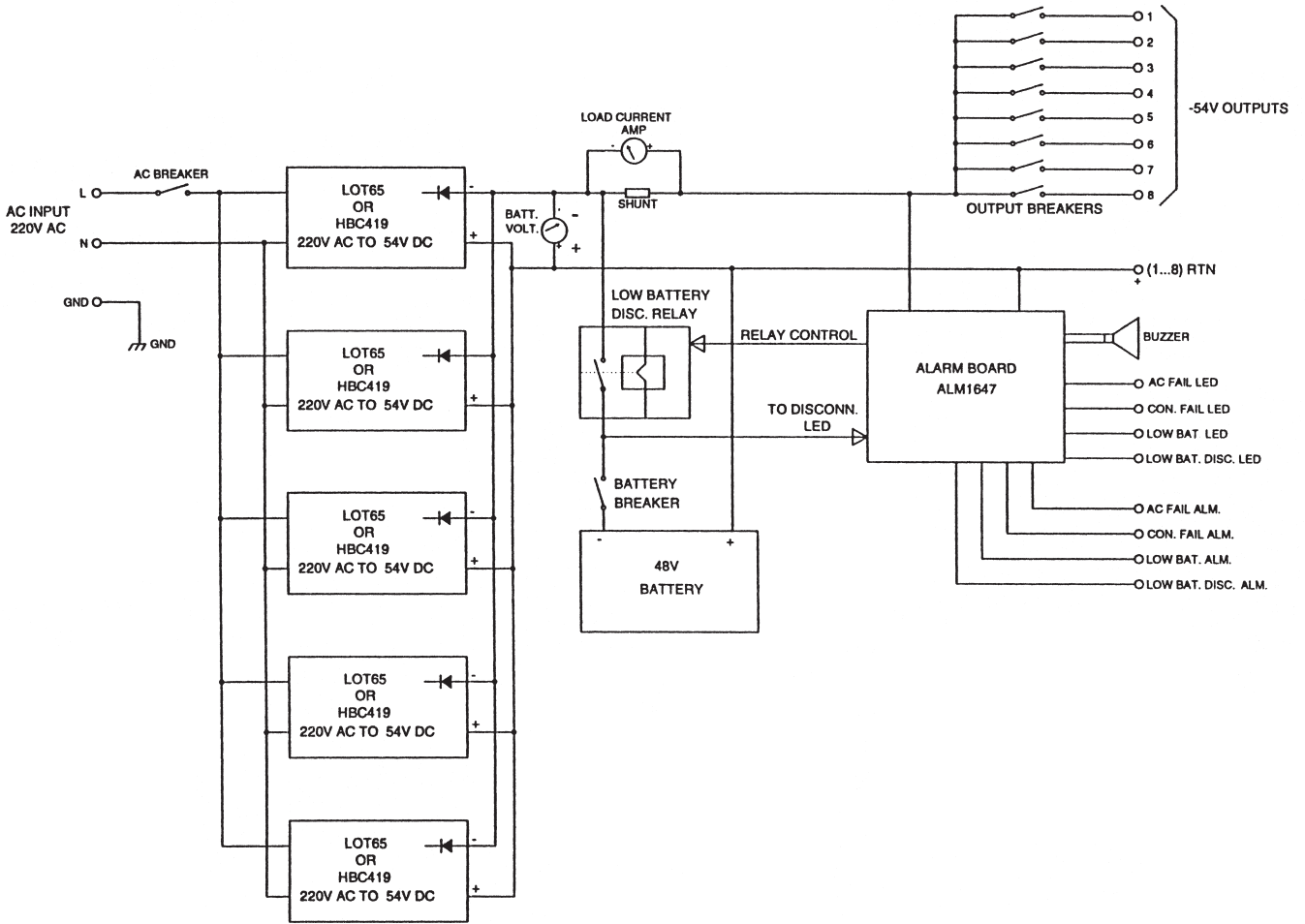
DC Distribution:	Optional DC distribution/circuit breakers
Custom Design:	The system illustrated here is only a small part of our design flexibility. We can totally customise rectifier systems to customer specifications.

Rectifier Model	Output		Power W
	V	A	
LOT65 - 13 - Q8268	13.5V	22A	300W
LOT65 - 27 - Q8268	27.0V	12A	300W
LOT65 - 54 - Q8268	54.0V	5.5A	300W
LOT65 - 120 - Q8268	120.0V	2.5A	300W
HBC419 - 27 - Q8268	27.0V	18.5A	500W
HBC419 - 54 - Q8268	54.0V	9.2A	500W
HVC419 - 120 - Q8268	120.0V	4.0A	500W
System Assembly			
BR4U - 13 - Q8268	12V Rack System		
BR4U - 27 - Q8268	24V Rack System		
BR4U - 54 - Q8268	48V Rack System		
BR4U - 120 - Q8268	120V Rack System		

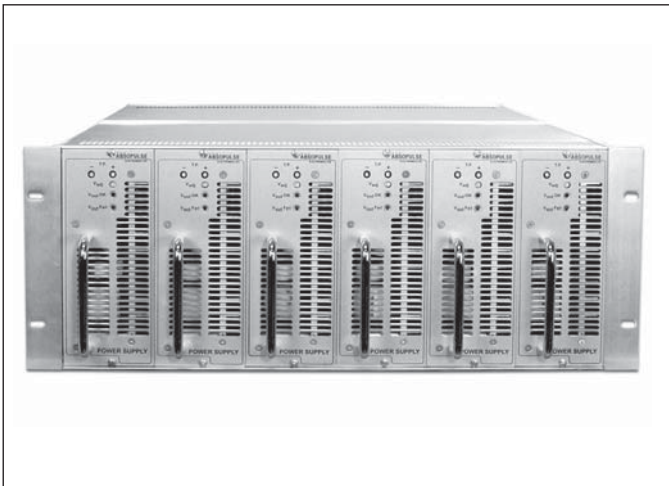
BR4U SERIES

Battery Charging Systems: 300 - 1500 Watts

48V SYSTEM BLOCK DIAGRAM



OPTIONAL PFC6000 MODULAR RECTIFIER SYSTEM



- The system is comprised of six 1000W power factor corrected plug-in modules in a 4U x 19" Rack assembly.
- Each module can supply 1200W @ 230VAC input or 1000W @ 110VAC
- At 230VAC input, the system can provide:
12V @ 580A, 24V @ 290A, 48V @ 145A
- For AC input redundancy, the modules are wired internally in pairs at the input.
This also allows for a three phase 415V & neutral supply.
- Forced air cooling is provided by a uniquely designed fan unit installed at the rear of the system.
- The PFC6000 can be designed to your voltage specification and any modifications are welcomed.