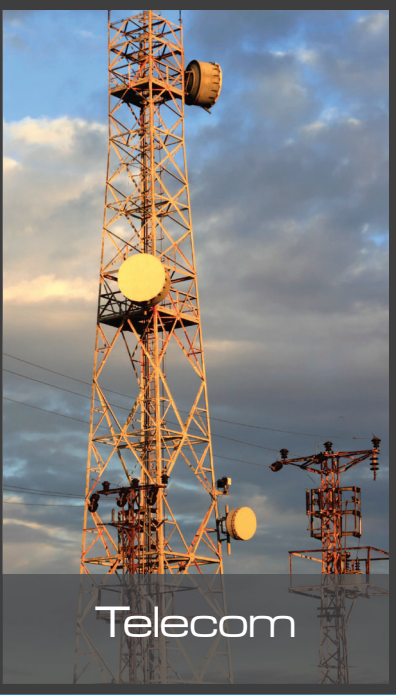
NEWMAR®

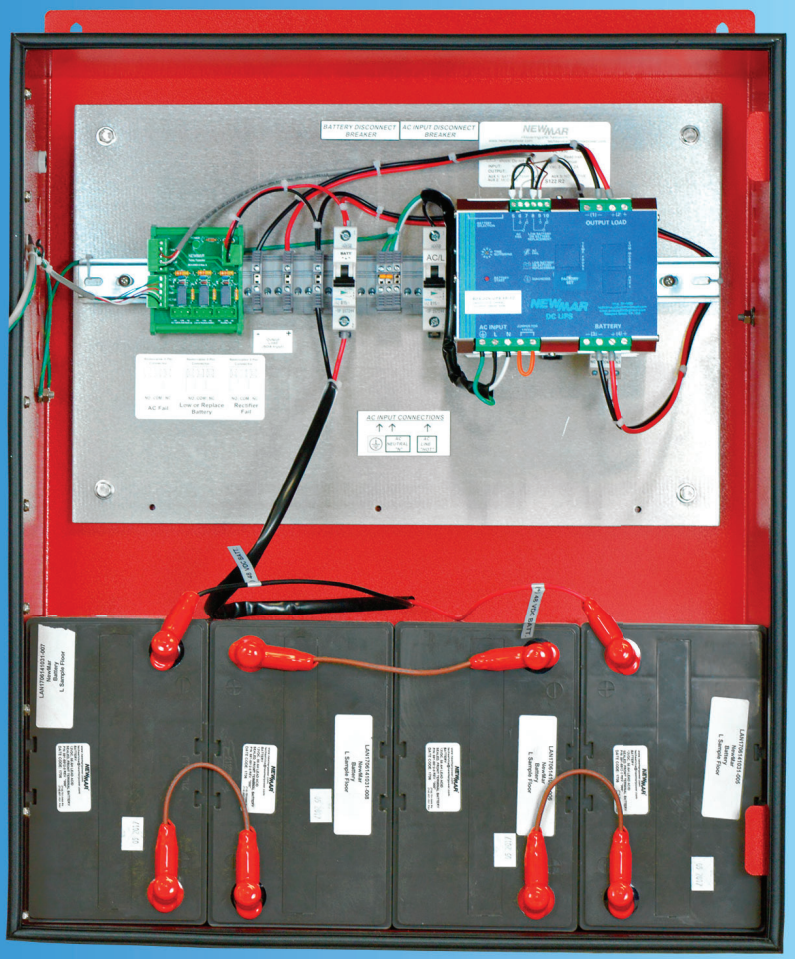
Powering the Network℠

A MISSION CRITICAL ELECTRONICS BRAND



Network DC Power Solutions:

- Power Enclosures
- Power Systems
- DIN-Rail DC UPS
- Converters
- Inverters
- DC Distribution
- Monitoring
- Low Voltage Disconnects
- Power Management
- Batteries
- Accessories



2019

Unity Power System: 12 & 24 Volt

The Unity Rectifier System comprises a low profile 1.75" (1RU) shelf which accommodates up to three 150 watt, -48 or +24 volt hot swap rectifiers, plus an optional GMT fuse distribution panel which contains five individually fuse protected circuits. The system is scalable/adaptable for N, N+1 or N+2 configurations. Front panel test points and voltage adjustment pot are provided for fine-tuning output to the requirements of sensitive loads and to optimize load sharing. Form C status contacts enable remote alarms for the rectifiers and fuse distribution circuits. Front panel OK/FAIL LED's allow monitoring status of each rectifier individually. The optional power distribution module employs industry standard GMT fuses, configured with alarm contacts and a front panel "BLOWN FUSE" LED indicator.

Features

- 150 watt rectifier units - 48 or 24 volt, slide and lock into the Unity Shelf
- Shelf accommodates up to three rectifiers - 450 watts total - plus an optional five-position GMT fuse panel
- Scalable/adaptable hot swap configuration: N, N+1, N+2
- Front panel status indicators, output voltage test points and adjustment potentiometers
- Individual or summary rectifier alarm contacts; Form C
- Summary fuse panel alarm contacts; Form C
- Forced air cooling of rectifiers for extended component life
- 115/230 VAC shelf/rectifier input - easily adapts to available site power
- GMT fuse panel: Five positions, easy rear panel wiring to loads, fuse access at front
- Shelf adapts for 19" or 23" rack; center or flush mount (four-point cabinet mount optional)

Shelf	Input	Capacity	Size	Weight
URS	115/230 VAC Nom.	3 Unity Rectifiers (-48 or +24 V), 1 GMT fuse panel	19/23" Rackmount, 1 RU	6.7 Lbs.

Rectifier	Input Amps @ Full Load 115/230V	Output Voltage	Output Amps Cont.	Watts	Size	Weight
UR48-3	2.2/1.1	-54.4 VDC, adjustable 42-56 VDC	3	150	1 RU	1.9 Lbs.
UR24-6	2.2/1.1	+27.2 VDC, adjustable 21-28 VDC	6	150	1 RU	1.9 Lbs.

GMT Panel	Nominal Input/Output	Total Fuse Fuse Capacity	Total Current Capacity	Size	Weight
UFP-5	-48 or +24 VDC	5	20A	1 RU	1 Lbs.

Optional System Component

Unity Low Voltage Disconnect & Monitor

Digital battery monitor and alarm panel with Low Voltage Disconnect integrates with the Unity rack mount shelf into a highly functional power system. Built-in features include: LVD, digital monitor of voltage and amperage, battery disconnect breaker and alarm contacts. The digital display monitors bus voltage, battery voltage, system output current and low voltage connect/disconnect set points.

Model	Voltage Range	Max. Continuous Current	Low Voltage Battery Disconnect	Size	Weight
ULM-100	8 - 65 VDC	100 Amps DC	100 Amp, Solid State (FET)	19/23", 1 RU	6.25 Lbs.

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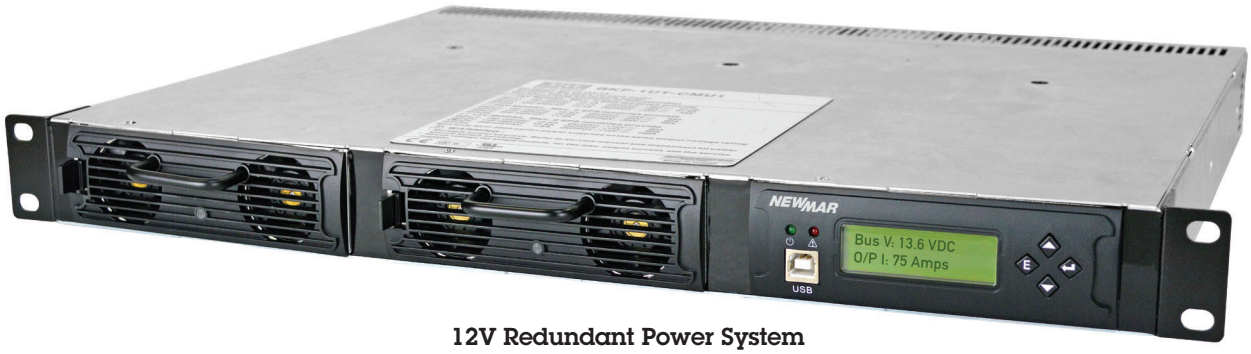
Scout Power System: 12 Volt



12V Redundant Power System

The Scout is a compact, high power density 12 volt rackmount power system that brings telecom power technology to 12 volt base station radio applications to power transmitters and maintain back-up batteries. Its dual 100 amp hot swap rectifiers configured in N+1 redundancy provides fault tolerant reliability. Remote monitoring capability provides system administrators with operating status.

Features

- Redundant hot swap rectifiers provide high system reliability
- Powers transmitters and maintains back-up batteries
- 100 amp output per module - 200 amp system capacity
- Controller module provides Web based remote monitoring and alarms, and LCD digital display of DC volts and amps
- Compact 1U rackmount shelf
- Optional: LVD, power distribution shelf, & expansion shelf
- Four programmable Form C alarm relay contacts
- Abnormal condition event log: over voltage protection, overload protection, output short circuit protection, over-temperature protection, internal over-temperature alarm, low AC power shutdown, and fan malfunction protection

Specifications

Input
Voltage: 90 - 264 VAC, 50 - 60 hz. via IEC C19/20 socket (x2)
Current (per module): 13 amps @ 115 VAC,
7 amps @ 230 VAC

Output
Voltage: 13.6 VDC, adjustable 10.5 - 14.0 VDC
Power (per module): 1200 watts, 100 amps @ 230 VAC input, 1140 watts, 95 amps @ 115 VAC input

Protection: Short circuit, overvoltage, current limit, over-temperature

Monitors
- LCD Digital Display: DC volt and current
- Remote via Ethernet (web page)
- DC ok via TTL
- AC fail
- Over-temp
- Fan fail

Operating Temperature: -40 to + 70˚ C

Mechanical: 19" rackmount, flush, 1RU, 13.75" depth

Safety Compliance: UL 60950

	# of Rectifiers Installed	
Input	**1**	**2**
230 VAC	100 Amps, 1,200 Watts	200 Amps, 2,400 Watts
115 VAC	95 Amps, 1,140 Watts	190 Amps, 2,280 Watts

Optional System Component: Low Voltage Disconnect, Circuit Breaker Distribution Shelf with DC System Bus/Tie Points Creates Complete Power System

PFM-500
Power Function Manager, 500 amps

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Sentinel Power System: 48 Volt

Incredible Functionality, Scalability and Web Monitoring in a 1 RU, 600 Watt to 1.8 Kw, 48V DC Power System

- 19", 1U rackmount shelf with integrated power distribution and SNMP digital controller
- 90-250 VAC input, power factor corrected
- 3 power bays accept 600 watt modular rectifiers, -48V
- 33 amp, 1800 watt total max. output capacity
- Output temperature compensated for precise battery charging
- 4 DC circuit breaker distribution capacity, with tripped breaker alarm
- Master disconnect breaker for two battery strings, with tripped breaker alarm
- Controller with digital display of system parameters with TCP/IP Web interface and SNMP monitoring/logging
- Alarm contacts monitor major system functions
- General Purpose Digital Inputs for user configured external alarms
- Low voltage disconnect built-in
- Easily configures to meet site power requirements

Complete system design and assembly to your application parameters: rectifier configuration, distribution circuit breaker installation and programming of alarms and monitors. Installation in a relay rack with batteries and wiring also available.

Rectifier	Input Amps @ Full Load 115/230V	Output Voltage	Output Amps Cont.	Watts	Weight (Lbs.)
RM-648	5.8/2.9	-54.4 VDC, adjustable 54 - 58 VDC	11A	600	1.9

Shelf	Input Voltage Range	Configuration	Size	Weight (Lbs.)
SRS-48	90-300V, 45-65 Hz.	3 Sentinel Rectifiers (-48 V bays), Controller, 4 DC Circuit Breaker Distribution, 2 x 30A Battery Breakers	19/23"*, 1 RU	19.84

** 23" adapters required, model SRS-1U*

Smart Power Features

Newmar power systems embed the latest technology in smart software to provide the ultimate in intelligent system functionality.

Elements include:

- **Smart Set-Up:** An extensive menu of system parameters for customization per site
- **Smart On-Site Data Viewing:** All system data accessible on-site by laptop via USB
- **Smart Viewing by Web:** Voltages, load, and battery performance data (Ethernet, RJ45)
- **Smart Automatic System Adjustments:** Temperature Compensated charging, low voltage disconnect, battery equalization, fast charging
- **Smart Alarm Notifications:** Voltage, temperature as well as several user defined

General Specifications

AC Input
Nominal: 115 or 230VAC (power cord with NEMA-5-20 plug attached

DC Distribution
Load: 4 breaker position capacity, available amperages (specify) 6A, 10A, 20A, 30 amp, with tripped breaker alarm
Battery: 2 x 30A battery circuit breakers, with tripped breaker alarm
Low Voltage Battery Disconnect: 80A battery LVD installed, with disconnect alarm

Wiring Option: Battery Cable, 8 AWG, 7' Length (P/N: 433-8007-0)

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Centurion II Power System: 24 & 48 Volt

Incredible Functionality, Scalability and Web Monitoring in a 2 RU, 1.0 to 6.0 Kw, -24/48V DC Power System

- 19", 2U rackmount shelf with integrated power distribution
- 90 - 250 VAC input, Power Factor Corrected
- 3 power bays accept 1000 or 2000 watt modular rectifiers
- 111 amp, 6000 watt total max. output capacity, (74 Amp, 4000 Watt, N+1) @ -48 VDC
- Output temperature compensated for precise battery charging
- 16 DC circuit breaker distribution capacity, with tripped breaker alarm
- Master disconnect breakers for two battery strings, with tripped breaker alarm
- Controller with digital display of system parameters with TCP/IP Web interface and SNMP monitoring/logging
- Alarm contacts monitor major system functions and dry contacts for user programmable alarms
- General Purpose Digital Inputs for user configured external alarms
- Low voltage disconnect built in
- Easily configures to meet site power requirements

Complete system design and assembly to your application parameters: rectifier configuration, circuit breaker installation, and programing of alarms and monitors. Installation in a relay rack with batteries and wiring also available.

Rectifier	Input Amps @ Full Load 115/230V	Output Voltage	Output Amps Cont.	Watts	Weight
C2R-1000	@ <175 VAC = 6.2A	-54.4 VDC, adjustable 48 - 58 VDC	18A*	1,000	3.5 Lbs.
C2R-2000	@ <175 VAC = 12.5A	+27.2 VDC, adjustable 24 - 29 VDC	37A*	1,000	3.5 Lbs.
C2RX-2048	@ <175 VAC = 12.5A	-54.4 VDC, adjustable 48 - 58 VDC	37A*	2,000	3.5 Lbs.

** @ 120 VAC: Derate 2 kW rectifiers 41%; 1kW rectifiers 33%*

Shelf	Input Voltage Range	Configuration	Size	Weight (Lbs.)
C2RS-24	90-300V (derate @ 115 input), 45-65 Hz.	3 Centurion II Rectifiers (+24 V), Controller, 16 DC Circuit Breaker Distribution, 2 x 100A Battery Breakers	19/23", 2 RU	19.84
C2RS-48		3 Centurion II Rectifiers (-48 V), Controller, 16 DC Circuit Breaker Distribution, 2 x 100A Battery Breakers		

Gerneral Specifications

Input: **Nominal:** 230V
Voltage Range: 90 - 300V (derate @ 115 input)
Frequency Range: 45 - 65 Hz
Power Factor: >0.99
Efficiency: >94% (from 30-95% output power)
Current Draw @ 230 VAC: 1,000W Rectifier: 4.6 Amps
2,000W Rectifier: 9.2 Amps

Ambient Temperature: Nominal: 25+/-5˚ C, 5-95% RH (non-condensing)
Range: -10˚ C to +70˚ C (derate above +50˚ C)
Altitude: <8,202 ft., De-rate maximum ambient temperature by 4˚ C per 3,280 ft. above sea level

Wiring Option: Battery Cable, 2 AWG, 7' Length (P/N: 435-2007-0)

The Centurion II Power System features Smart Power, see page 3 for more information.

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Commander Power System: 48 Volt

Incredible Functionality, Scalability and Web Monitoring in a 5 RU, 1.0 to 14.0 Kw, -48V DC Power System

- 19", 5U rackmount shelf with integrated power distribution
- 90-250 VAC input, Power Factor Corrected
- 7 power bays accept 1000 or 2000 watt, -48V modular rectifiers
- 259 amp, 14,000 watt total max. output capacity, (222 Amp, 2,000 Watt, N+1) @ - 54 VDC
- Output temperature compensated for precise battery charging
- 18 DC circuit breaker distribution capacity, with tripped breaker alarm, 63 amp max. circuit breaker rating
- Master battery disconnect breakers for four battery strings, with tripped breaker alarm
- Controller with digital display of system parameters with TCP/IP interface and SNMP monitoring/logging
- Alarm contacts monitor major system functions and dry contacts for user programmable alarms
- General Purpose Digital Inputs for user configured external alarms
- Low voltage disconnect built-in
- Easily configures to meet site power requirements

Complete system design and assembly your application parameters: rectifier configuration, distribution circuit breaker installation, and configuration of alarms and monitors. Installation in a relay rack with batteries and wiring also available.

Rectifier	Input Amps @ Full Load 115/230V	Output Voltage	Output Amps Cont.	Watts	Weight
C2R-1000	18/12	-54.4 VDC, adjustable 48 - 58 VDC	18A*	1,000	3.5 Lbs.
C2RX-2048	37/21	-54.4 VDC, adjustable 48 - 58 VDC	37A*	2,000	3.5 Lbs.

** @ 120 VAC: Derate 2 kW rectifiers by 41%; 1kW rectifiers by 33%*

Shelf	Input Voltage Range	Configuration	Size	Weight (Lbs.)
CMDRS-48	90-300V (derate @ 115 input), 45-65 Hz.	7 Commander Rectifiers (-48 V), Controller, 18 DC Circuit Breaker Distribution, 4 x 100A Battery Breakers	19/23", 5 RU	35.15

Gerneral Specifications

DC Distribution
Load: 18 breaker positon capacity, available amperages (specify) 6A, 10A, 16A, 20A, 25A, 32A, 40A, 50 and 63A tripped breaker alarm
Battery: 4 x 100A battery circuit breakers.

Breaker Fail Detection: Electronic fail detection on both load and battery breakers
Low Voltage Battery Disconnect: 300A battery LVD installed standard, with disconnect alarm

The Commander Power System features Smart Power, see page 3 for more information.

Power Modules: 12, 24 & 48 Volt

These versatile Rectifier Modules function as either power supplies or battery chargers for 12, 24 or 48 volt systems; positive, negative or floating ground. They may be employed singly or in combination, enabling the installer to scale the system anywhere from 500 to 10,000 watts per rack. Units may be paralleled for N+1 redundancy and alarm contacts allow local or remote monitoring. An optional DC quick connect wiring kit allows easy replacement of modules without system shutdown.

Power Modules may be used separately as a power source, or they may be integrated with the Power Function Manager, model PFM-500.

Features

- 12, 24 or 48 volts output; pos., neg. or floating ground
- Built-in oring diode for parallel or N + 1 configuration
- Power supply or battery charger operation (DC UPS system)
- Optional battery charging circuit: three-step charging, gel/lead-acid switch, and temperature compensation
- Form C alarm contacts

Power Modules integrated with Power Function Manager in complete system, see page 12 for more information

Model	Input Amps @ Full Load 115/230V	Output				Dimensions (H x W x D) Inches	Weight	
		VDC V Out	VDC V2	Amps Cont.+	Watts		Lbs.	Kg.
PM-12-40	8.5/4.3	13.6	14.3	40	560	3.5 x 17 x 20.5 19" mounting brackets provided	12.2	5.5
PM-12-80	13/7	13.6	—	80	1,000		15.2	6.9
PM-24-20	8.5/4.3	27.2	27.9	20	560		12.2	5.5
PM-24-40	13/7	27.2	—	40	1,000		15.2	6.9
PM-48-10	8.5/4.3	54.4	55.1	10	560		12.2	5.5
PM-48-20	13/7	54.4	—	20	1,000		14.0	6.4
PM-48-50	*/22	54.4	—	50	2,200		34	15

VDC (V out) Measured at output terminal with oring diode
** 230 VAC input only*
VDC (V2) Measured at direct output terminal
+ For parallel configuration/load sharing derate output 10%

Specifications

Input:
- 85 - 135/170-270 VAC (selectable), 47 - 63 Hz., 560 watt models
- 90 - 265 VAC, 1000 watt models
- 207 - 253 VAC, 2200 watt model

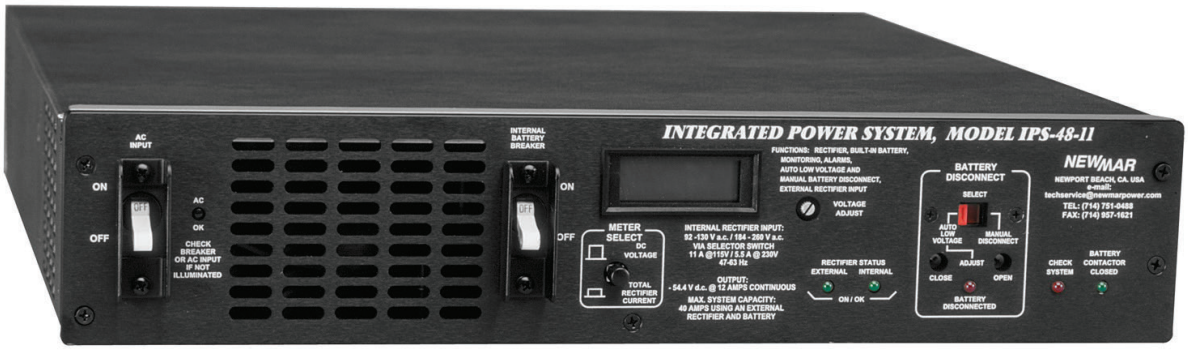
Power Factor:
560W & 2,200W models: 0.7
1,000W models: 0.98

Regulation: ± 1% at direct output (V2); ± 2% through "oring" diode (V out)

Ripple: 1% (Typical)
Efficiency: 80-85% @ full load
Front panel Output Voltage Adjustment Pot Range: ±10%
Altitude Range: Full output to 5,000 feet. Derate output current 4% per 1,000 feet to 10,000 feet max.

Temperature Rating
560 watt models: -40° C to +60° C; Derate linearly from 100% load @ 50° C to 75% @ 60° C
1,000 watt models: -20° C to + 70° C; Derate linearly from 100% load @ 50° C to 50% @ 70° C
2,200 watt model: 0 - 50° C

Integrated Power Systems: 12, 24 & 48 Volt



The Integrated Power System (IPS) is a unique multifunction power supply which incorporates built-in battery back-up and numerous power accessories within a single 2RU (3.5") chassis, thus eliminating time-consuming system integration, component sourcing and installation, while saving precious rack space--ideal for any low-to-medium power application requiring AC fault tolerant operation.

A precision regulated power supply/charger, back-up battery, low voltage battery disconnect, output metering, LED status and Form C alarm contacts are all pre-wired and calibrated within the unit for plug-and-play operation. Plug-in terminals are provided for easy wiring of an additional parallel rectifier input, or external batteries for increased back-up capacity.

The batteries are always in-line with the load, thus there is no interruption from relays or transfer switches in the event of AC loss. Batteries are recharged when AC is restored. A manual battery disconnect switch allows internal or external battery service or replacement while the system is running. Models available for -48, +24 and +12 volt applications.

Features

- Precision regulated power supply simultaneously maintains batteries at peak charge and supplies system load
- Built-in batteries instantly power load during AC failure - no switch-over delay. 3 - 5 year average life. Terminals provided for additional external batteries for increased back-up capacity
- Terminals provided for easy addition of parallel rectifier. (48V and 24V models only)
- Automatic low voltage and manual battery disconnect
- Numerous front panel monitors - L.E.D. status indicators and digital ammeter/voltmeter
- Form C summary failure alarm contacts; loss of internal rectifier output, loss of external rectifier output, LVBD contactor open. AC input failure alarm contacts optional
- Numerous protection features--AC input breaker, internal battery breaker, auto thermal shutdown/recovery, current-limiting, short-circuit and over-voltage protection.
- 19" or 23" rack mount, flush or 6" forward mounting

Models	Input Amps @ Full Load 115 / 230	Output				Internal Battery Capacity	Ground Reference
		VDC	Adjustment Range	Amps Continuous	Supplemental Input Ports		
IPS 48-11	11 / 5.5	54.4	40 - 60 VDC	11	40 Amps	5 A-H	Positive
IPS 24-22	11 / 5.5	27.2	20 - 30 VDC	22	40 Amps	10 A-H	Negative
IPS 12-40	11 / 5.5	13.6	10 - 15 VDC	40	N/A	20 A-H	Negative

Specifications

AC Input
Input Range (switch selectable): 115V = 92-130 VAC; 230V = 184-260 VAC
Frequency: 47-63 Hz

DC Output
Max. Load w/ External Rectifier and Battery Inputs: 40 A
Regulation: Line: ± 1 %, Load: ± 2 %
Ripple: ± 1 %

Environmental
Temperature Rating: -10° to + 60° C; Derate linearly from 100% load @ 50° C to 75% @ 60° C

Internal Batteries
Type: 12 Volt, 5 A-H Sealed Lead-Acid, Maintenance-Free
Approvals: UL Recognized, DOT and IATA, approved for shipment by air

Internal Battery Constant Current Performance (Amps) to 1.75 VPC					
MODEL	5 MIN.	15 MIN.	30 MIN.	1 HR.	2 HRS.
IPS 48-11	15.0	8.0	5.0	3.0	2.0
IPS 24-22	30.0	16.0	10.0	6.0	4.0
IPS 12-40	40.0	32.0	20.0	12.0	8.0

Powering the Network

Site Power System: 12, 24 & 48 Volt

The Site Power System (SPS) series provides a complete DC power solution that integrates quickly with batteries, loads, and monitors. Available in 12, 24 and -48 volt, 300 watt configurations, the compact assembly contains: power supply with temperature compensated, automatic boost/float battery charge cycle, low voltage disconnect, and programmable alarm contacts. High operating temperature rating with convection cooling make the unit ideal for remote site shelters, railroad wayside bungalows, and pole mount enclosure applications, as well as private network base stations and microwave sites.

Features

- Well regulated noise free output - no interference with sensitive electronic loads
- Separate Battery Charger output with remote temperature compensation sensor (provided)
- Automatic Boost Voltage output after AC power failure quickly recovers battery
- Low Voltage Disconnect protects batteries from over discharge
- Output current indicator LEDs
- Wide temperature operating range (-40˚ to +70˚ C), convection cooled, meets AREMA standards
- Alarm contacts interface with remote monitoring systems

Models	Voltage Range	Voltage Adjustment Range	Output Amps	Dimensions (Inches)			Weight (Lbs.)
				H	W	D	
SPS 12-20	13.6V	11 - 15V	20	1.75	17	11.5	8
SPS 24-10	27.2V	22 - 30V	10	1.75	17	11.5	8
SPS 48-6	54V	44 - 60V	6	1.75	17	11.5	8

Specifications

AC Input
Nominal: 110/220V, 50/60Hz
Voltage Range: 100-275V AC (full power output),
85-100V AC (reduced power output)
Frequency Range: 45-66Hz
Power Factor/Efficiency: >0.99 (full load)/87%
Input Fuses: Fuses in phase & neutral
Maximum Input Current: 300W Models: 4A ,

Isolation
Input to Output: 4,200V DC
Input to Chassis: 3,500V DC (VDR to chassis removed.)
Output to Chassis: 2,100V DC

Environmental
Cooling: Convection cooled
Range: -40° to +70°C operating range; -10° to +60° @ 100% load rating. derate to 20% load below -10° C and above +60° C

Protection
Input Voltage: Automatic shutdown, restarts automatically when correct voltage restored.
Current Limit: Adjustable to 50-100% of maximum rated current
Over Temp: Automatic current turndown, backup shutdown protection
Polarity Reversal: Output fuse with crowbar diode
Over Voltage: Adjustable limit

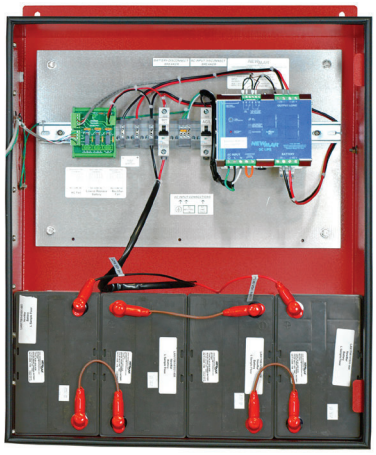
NFPA Compliant Battery Back-Up Power

UL Certified Public Safety/BDA In-Building Coverage

An integral part of an in-building solution for emergency response radio coverage is the backup power system. NFPA codes relating to the autonomous operation and monitoring of the BDA power is quite stringent. These back up power enclosures were engineered to meet every aspect of NFPA 1221 and provide integrators configuration flexibility and rapid delivery directly to site, batteries included.

Features

- Certified to UL 924 *(models w/ UL suffix)*
- NFPA compliant
  - All required monitoring alarms
- Batteries included
  - Choose capacity to match system requirements
- NEMA-4 enclosure
- Prewired with waterproof feed thru' s for easy on-site connections:
- Customization to meet local AHJ 's requirements



Enclosure A
12, 24, & 48V DC, 18 - 100AH

Specifications

Input: 115/230 VAC (factory wired for 120V AC)

Outputs:
DC: 12, 24 and 48V, with 120, 240 and 480 Watt DC UPS
AC: 110V at 96 watts - see reverse for detailed specifications

Protections: Battery breaker, AC input breaker, NEMA enclosure, liquid tight cord grips

NFPA 1221 Compliant Alarms (Form C, Dry Contact)

- AC fail
- Battery discharged to 30% of capacity
- Charger fail

Batteries Included: maintenance free, valve regulated, sealed lead acid, 18, 55, and 100 AH capacity

Enclosure Size including Mounting Flanges (H x W x D):
A: 30" x 23" x 10.5"
B: 25" x 24" x 24"

Conforms to UL Standard 924

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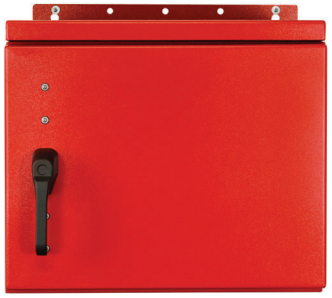

Enclosure B
48V, 100AH

Enclosure A: NEMA-4, UL listed, welded aluminum with IP 65 battery vent and locking door, 4 each 1/2" knock-outs for cable entry on sides and bottom (16 total), IP-68 cable entries. Red powder coat wall mount.

Enclosure B: NEMA-4, welded aluminum with IP 65 vent, pad lockable door handle, 8 each 1/2" knock-outs for cable entry (4 ea. on bottom left and right), IP-68 cable entries. Red powder coat wall mount.

Model	UL Certified	Output Voltage	DC UPS Power Watts	Batt. A/H Capacity*	System w/ Batt. Wt. (Lbs.)	Shipping Wt. (Lbs.)	Enclosure Size
PE-12V-120W-18AH-UL	Yes	12V DC	18	18	49	89	A
PE-12V-120W-55AH-UL	Yes	12V DC	55	55	75	115	A
PE-12V-120W-100AH-UL	Yes	12V DC	60	100	111	151	A
PE-24V-240W-18AH-UL	Yes	24V DC	36	18	63	103	A
PE-24V-240W-55AH-UL	Yes	24V DC	110	55	114	154	A
PE-24V-240W-100AH-UL	Yes	24V DC	120	100	186	226	A
PE-48V-480W-18AH-UL	Yes	48V DC	72	18	90	130	A
PE-48V-480W-55AH-UL	Yes	48V DC	200	55	190	230	A
PE-48V-480W-100AH	No	48V DC	480	100	371	411	B
PE-110V-100W-100AH/24V	No	110V AC	96	100	191	231	A

**See reverse for battery specifications*

UL: Models ETL Listed to UL Standard 924

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DC UPS for Public Safety DAS

- **Combines power supply, battery charger, UPS circuitry and status monitoring in ONE compact DIN rail mount unit**
- **Alarm outputs comply with NFPA public saftey in-building wireless communications back-up power requirements:**
  - **AC Fail, Low Battery, & Charger Fail**
- **Separate outputs for load and battery**
- **"Load Priority" circuit prevents discharged battery from impacting operation of critical loads when AC power is restored**
- **3 step charging for rapid battery recovery, programmable for battery type, with optional temperature compensation sensor**
- **Low voltage disconnect protects battery from total discharge**
- **High operating temperature range to 70˚ C**
- **Communication MODBUS via RS-485 Interface/RJ-45 (Model DIN-UPS 48-10 only)**
- **CE Approved/Designed to UL 1950 (Model DIN-UPS 12-10 only)**

Battery Detection Signal Outputs (form C):

1. AC Fail
2. Low battery voltage indicating battery discharge by 70% (i.e. only 30% capacity remains)
3. Internal charger/power circuit fail

Specifications

Refer to page 11 for DIN-UPS/BDS unit specifications.

BDS-DIN-UPS Model	Output		MODBUS	Case
	Voltage	Power		
12-10	12 VDC	10 Amps	No	A
24-10	24 VDC	10 Amps	No	B
48-10	48 VDC	10 Amps	Yes	C

Case	Dimensions (H x W x D)	Weight
A	4.5" x 2.6" x 5.3"	2 Lbs.
B	4.5" x 3.9" x 5.3"	2 Lbs.
C	4.5" x 5.9" x 5.3"	4 Lbs.

DIN RAIL Mount Batteries

These DIN Rail mount cases provide a quick and convenient method to integrate batteries into a DC UPS system resulting in a professional integration.

The enclosures feature heavy duty clips for 35mm rail, with additional case top and bottom hanging tabs if extra mounting security or non-DIN Rail mounting is desired. Touch safe screw terminals are located at top of the case for easy connection and wire routing. The convenient fold down door gives quick access to fuses and allows easy battery replacement.

Configuration choices include 12, 24, and 48 volts, in capacity of 1.2 to 14 amp hours.

Case B

Case A

Model	Voltage	Amp-Hours	Case	Weight
DIN-BATT 12-1.2	12V DC	1.2	A	3.8 Lbs.
DIN-BATT 24-1.2	24V DC	1.2	A	3.8 Lbs.
DIN-BATT 12-12.0	12V DC	12.0	B	6.8 Lbs.
DIN-BATT 24-7.0	24V DC	7.0	B	11.6 Lbs.
DIN-BATT 48-1.2	48V DC	7.0	2 x A	7.2 Lbs.
DIN-BATT 48-7.0	48V DC	7.0	2 x B	23.2 Lbs.

Case	Dimensions (D x H x W)
A	4.6" x 7" x 2.75"
B	4.9" x 8" x 5.5"

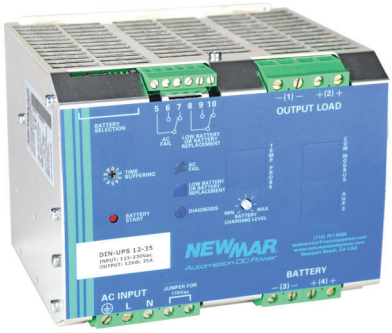
NEWMAR

Powering the Network

DIN-Rail DC UPS

Powers Loads and Charges Back-Up Battery, Ideal for Security, Wisp, Automation and Wireless System Transmitter Applications

- **Combines all system power functions: power supply, battery charger, UPS circuitry and status monitoring in ONE compact DIN rail mount unit**
- **Separate outputs for load and battery**
- **"Load priority" circuit ensures power is dedicated first to the load, with remainder then allocated to battery charging, thus preventing a discharged battery from impacting operation of critical loads.**
- **3 step charging for rapid battery recovery, programmable for battery type, with optional temperature compensation sensor**
- **Battery automatically supports load anytime AC fails**
- **Low voltage disconnectprevents total battery discharge**
- **Operates from street light voltage - 277V AC**
- **Automatic periodic battery health diagnosis**
- **High operating temperature range to 70˚ C**
- **Alarm contacts: AC fail, battery at risk**
- **Communication MODBUS via RS-45 Interface (DIN-UPS-48-10/24-20/12-35)**
- **CE Approved/Designed to UL (DIN-UPS 12-6 and 12-10 only)**



DIN-UPS 12-35/24-20/48-10 (Case Size C)

DIN-UPS 12-6/12-10 (Case Size A, UL Recognized)

DIN-UPS 24-10/48-5 (Case Size B)

Specifications

Front Panel LED Indicators:
- Power Source: AC or on back up
- Battery and System Diagnostics (via blink code)

Settings/Selectors:
- Battery Type: Lead Acid, Gel-Cell
- Charge Current Limit: 20 - 100% of charge rating
- Back-Up Run Time on Batteries:
  - Programmed time limit: 1 - 60 min. (48-10, 24-20, and 12-35 models only)
    Or
  - Until LVD disconnect (all models)
- Power Restore Button: re-connects battery without AC present

DIN UPS: 115/230/277 (305) VAC Input

DIN-UPS Model	Output Voltage	Output Power	MODBUS	Case
12-6*	12 VDC	6 Amps	NA	A
12-10*	12 VDC	10 Amps	NA	A
12-35	12 VDC	35 Amps	Yes	C
24-10	24 VDC	10 Amps	NA	B
24-20	24 VDC	20 Amps	Yes	C
48-5	48 VDC	5 Amps	NA	B
48-10	48 VDC	10 Amps	Yes	C

**UL Recognized Component*

Signal Outputs (form C):
- AC Fail - operating on back-up power
- Battery abnormal condition (summary contact): Discharged, damaged, disconnected
- MODBUS Communication (DIN-UPS 48-10/24-20/12-35) only)

Temperature: -25 to +70˚ C. Continuous to 50˚, de-rate 2.5% per˚ C >50˚ C (50% output @ +70˚ C)
Cooling: Free air, convection
Reliability (MTBF): >300,000 Hours

Protection:
- Low Voltage disconnect at 1.5 volts per cell
- Internal fuse
- Current limiting
- Short circuit and reverse polarity protection
- Thermal overload shut down and recovery

Terminal Blocks: Screw type
Mounting: DIN Rail Bracket (35mm)
Optional:
- Battery temp. sensor, 10' or 3' cable length
- BDA/DAS version w/ NFPA compliant alarm signals

Case	Dimensions (H x W x D)	Weight
A	4.5" x 2.6" x 5.3"	2 Lbs.
B	4.5" x 3.9" x 5.3"	2 Lbs.
C	4.5" x 5.9" x 5.3"	4 Lbs.

NEWMAR

Powering the Network

Low Voltage Disconnects/Power Management

The **ULM-100** is a 1RU assembly that contains numerous DC control and monitoring features that integrate power and distribution components into a highly functional system. Built in features include: low voltage disconnect, digital monitor of voltage and amperage, battery disconnect breaker, and alarm contacts. The digital display monitors bus voltage, battery voltage, system output current, and low voltage connect/disconnect set points. Alarm contacts actuate on low voltage and battery disconnect conditions. Rear panel bus bars provide ample terminal landings for easy integration with rack mount rectifiers, distribution panels and batteries.

Digital Battery Monitor and Alarm with Low Voltage Disconnect Integrates Rack Mount Rectifiers into a Fully Functional Power System.

Features

- Solid state (FET) low battery voltage disconnect with adjustable set points and manual over ride switch for system maintenance/testing, with adjustable low battery alarm contact alerting to impending system shutdown
- Digital monitor displays system bus voltage, battery voltage, total rectifier amperage, and connect/disconnect voltage set points, and system ambient temperature
- 100 amp battery disconnect breaker for system protection and easy testing and maintenance
- Form C alarm contacts
- All these functions in a compact 1RU unit, minimizing system rack space
- For use with 12, 24, and -48V systems

Model	Voltage Range	Max. Continuous Current	Low Voltage Battery Disconnect	Size	Weight
ULM-100	8 - 65 VDC	100 Amps DC	100 Amp, Solid State (FET)	19/23", 1 RU	6.25 Lbs.

The **Power Function Manager (PFM-500)** is a system integrating component which converts ordinary power supplies (or Power Modules) into a fully integrated and multifunctional power system. The unit provides for control, monitoring, paralleling and protection of 12, 24 or 48 VDC, positive negative or floating ground power sources. A built-in Low Voltage Disconnect protects batteries in the event of extended AC power loss.

Features

- Low voltage battery disconnect protects batteries in the event of extended AC power loss
- Simplifies wiring with parallel tie point for power modules
- 12, 24 or 48 VDC input/output
- Digital meter displays: system bus voltage, battery voltage, total rectifier amperage, connect/disconnect voltage set points, and system ambient temperature
- Up to five isolated distribution circuit breaker capacity with alarm contacts; easy front panel plug-in installation
- Alarm LED (summary) indicates impending LVD disconnection, Power Module output fail or load circuit breaker trip
- Summary alarm contacts (form C) allow remote monitoring of system status
- Manual battery disconnect switch allows service/replacement of batteries without system shutdown

Model	Voltage Range	Max. Continuous Current	Low Voltage Battery Disconnect	Size	Weight
PFM-500	8 - 65 VDC	500 Amps DC	500 Amp, Contactor	19/23", 2 RU	20 Lbs.

NEWMAR

Powering the Network

Rackmount Inverter - 1RU Series

1RU, 48V Input, 1000 Watts Output

- Pure sine wave AC output powers telecom equipment without performance degradation
- Continuous duty rated - full output wattage maintained even during extended power outages
- 1000 Watts - easily cascade for N+1 redundancy, providing maximum reliability required by data centers
- Utility bypass, with fast load transfer switch, <8mS
- Load & temperature controlled cooling fan
- Form C alarm contacts for monitoring abnormal conditions
- Fan aging, failure, disconnect and blockage alarm
- User-friendly Status and Diagnostic LCD/LED displays
- Remote Power Management optional via RS-232 port, summary alarm contacts for system fault
- UL listed

Model	DC Input	AC Output
48-1U-1000RM	36 - 60 VDC, 25A	115 VAC, 60 Hz., 1,000 Watts

1RU, 48V Input, 2000 Watts Output

- Pure sine wave AC output powers telecom equipment without performance degradation
- 2000 watts surge, 1700 watts/2 KVA continuous
- Easily cascaded for N+1 redundancy, providing maximum reliability required by data centers
- Low EMI and RFI interference characteristics
- High efficiency: 90% (Full linear load at 120 VAC Output)
- Two NEMA 5-20R AC receptacles provided
- Utility bypass, with fast load transfer switch, <6mS
- Numerous circuit and load protections: over- temp, overload, reverse polarity, high/low battery voltage, AC input breaker
- Load & temperature controlled cooling fan
- Form C alarm contacts for monitoring abnormal conditions
- All diagnostic Operation Controlled by a microprocessor
- User-friendly Status and Diagnostic LED displays
- Remote Power Management optional via remote control relay RS-232 port
- Inverter/UPS mode selector switch
- 19", Rackmount, 1RU

Model	DC Input		AC Output			
	Voltage	Amps	Volts	Surge Watts	Cont. Watts	Cont. VA
48-1U-2000RM	42 – 62	50	100 - 120V AC	2,000	1,700	2 KVA

NEWMAR® Powering the Network

Rackmount Inverter - 2RU Series

- Pure sine wave AC output powers telecom equipment without performance degradation
- Continuous duty rated – full output wattage maintained even during extended power outages
- 3,000 Watts – easily cascaded for N+1 redundancy, providing maximum reliability required by data centers

2RU, 48V Input, 3000 Watts Output

- Low EMI and RFI interference characteristics
- High efficiency: 89% (Full linear load at 120 VAC Output)
- Four NEMA 5-15R AC receptacles provided
- Utility bypass, with fast load transfer switch, <6mS
- Numerous circuit and load protections: over- temp, overload, reverse polarity, high/low battery voltage, AC input breaker
- Load & temperature controlled cooling fan
- Form C alarm contacts for monitoring abnormal conditions
- All diagnostic Operation Controlled by a microprocessor
- User-friendly Status and Diagnostic LED displays
- Remote Power Management optional via remote control relay RS-232 port
- Inverter/UPS mode selector switch

Model	DC Input		AC Output		Dimensions (H x W x D)	Weight (Lbs.)
	Voltage	Amps	Volts	Watts		
48-3000RM	42 – 62	75	100 - 120V AC	3,000	3.46" x 17.52" x 16.7"	31.5

- Pure sine wave AC output powers telecom equipment without performance degradation
- Continuous duty rated - full output wattage maintained even during extended power outages
- Utility bypass, with fast load transfer switch, <4mS
- Form C alarm contacts and optional SNMP card for remote monitoring
- User-friendly Status and Diagnostic LCD/LED displays
- Remote Power Management optional via remote control relay RS-232 port

2RU, 24, 48 & 125V Input, 1000 & 2000 Watts Output

Model	DC Input		AC Output				Weight (Lbs.)
	Voltage	Amps	Voltage	KVA	Cont. Watts	Surge Watts	
24-1000RM	20 - 30	50	115 VAC, 60 Hz.	1 KVA	800	1,000	15.4
48-1000RM	40 - 60	25	115 VAC, 60 Hz.	1 KVA	800	1,000	15.4
48-1000IRM†	40 - 60	25	230 VAC, 50 Hz.*	1 KVA	800	1,000	15.4
48-2000RM	40 - 60	50	115 VAC, 60 Hz.	2 KVA	1,600	2,000	17.6
48-2000IRM†	40 - 60	50	230 VAC, 50 Hz.*	2 KVA	1,600	2,000	17.6
125-1000RM†	100 - 150	10	115 VAC, 60 Hz.	1 KVA	800	1,000	15.4
125-2000RM†	100 - 150	20	115 VAC, 60 Hz.	2 KVA	1,600	2,000	17.6

** Adjustable for 60 Hz.; † Special Order - Contact Factory*

NEWMAR

Powering the Network

DC-DC Converters

Communication sites require isolated DC Converters to provide excellent voltage regulation, low noise, and high efficiency voltage conversion. Reliability is vital under continuous duty operation and high ambient temperatures. All these aspects were incorporated in the design of our rackmount DC Converters.

These units accept a wide input range at 24 or 48 VDC nominal, positive or negative ground, and produce pure 12 or 24 volt power. The solid state circuitry is conservatively designed and semi-conductors are selected and tested to withstand 200% of normal operating power.

Output voltage is maintained within 1% for all line and load conditions and the output is well filtered, allowing use with sensitive transceivers and telecom equipment.

Features

- 48, 24 volt inputs; 12, 24 volt outputs; positive, negative or floating ground
- Input/Output chassis isolation – 250 VDC
- 400 watt output
- Rated for continuous duty at full load
- Excellent regulation under all line/load conditions
- Low ripple provides noise free output
- High efficiency – 87% typical
- Easily adapts to both 19" and 23" racks, center mount (6" from front)
- Output volt and ammeter
- Output voltage adjustment on front panel
- Low profile – occupies two RU (one RU space above and below recommended for cooling)

	Input		Output			Dimensions			Weight	
Model	Voltage (VDC)	Max. Amps	Voltage (VDC)	Output Adjustment	Amperage (Continuous)	H	W	D	Lbs.	Kg.
48-12-30RM	40 - 60	12	13.6	12.6 - 14.5	30	3.5″	19″	8.9″	10	4.6
48-24-15RM	40 - 60	12	27.2	25.2 - 29.0	15	3.5″	19″	8.9″	10	4.6
24-12-30RM*	20 - 30	26	27.2	12.6 - 14.5	30	3.5″	19″	8.9″	10	4.6
24-48-8RM	20 - 30	26	54.4	50.4 - 58.0	8	3.5″	19″	8.9″	10	4.6

** Special order - contact factory for availability*

Specifications

Performance
Regulation: 1% line/load
Ripple: +/– 1/2% peak-peak max.
Idle Current: 48V: <100 mA, 24V: 300 mA
Efficiency: 85% typical @ 50% load.
Operating Temperature: -20 to 50° C; Derate linearly from 100% @ 50° C to 50% @ 70° C
Isolation: 250 volts input-output-chassis

Mechanical
- Powder coated aluminum front panel, vinyl coated aluminum case
- Mounting brackets provided for 19" or 23" rackmount, center or front
- Easy access terminal blocks on back of unit, with protective cover
- Front panel switch guard provided
- Output voltage adjustment potentiometer recessed in front panel

Protection
- Input and Output circuit breaker
- Current limited/short circuit proof
- High/low input voltage shutdown
- Fail-safe components guard against output over-voltage condition
- Automatic high temperature power reduction starting at 65° C heat sink temp
- Automatic thermal shut down and recovery @ 80° C heat sink temp. (automatic reset @ 55° C heat sink temp.)
- Reverse polarity protection

Options
- Operation as battery charger and/or parallel redundant operation
- Output Failure Alarm Contacts; Form C

NEWMAR® Powering the Network

Modular DC-DC Converter System

Convert 48 to 24 or 24 to 48 volts with this compact, high power density (1RU) DC converter system. Wide range input maintains well regulated (isolated) output even when source voltage goes low. Multiple power bays accept 1500 watt converter modules allowing system scalability, load sharing and N+1 redundancy for high reliability. Built-in remote monitoring by Form C alarm contacts alerts operators to major and minor fault conditions.

Features

- High power density 1RU shelf, saves valuable rack space
- Scalable to 7500 watts output by insertion of multiple 1500 watt DC converter modules, up to 5 per shelf
- N+1 redundancy back-up, converters always on-line in event of failure, providing seamless back up power
- Wide input range accepts variation of input voltage while producing steady output essential for proper equipment operation
- Wide temperature range -40 to 75˚ C assures performance in remote sites and outdoor cabinets
- High efficiency: 95% conserves energy and minimizes heat generation, reducing ambient cooling requirements
- Remote monitoring provides major and minor failure conditions notifications
- Diagnostic LEDs on each converter provides on-site trouble shooting diagnostics

1500 Watt Converter Module
48V to 24V
or
24V to 48V

Specifications

Shelf	Input Voltage	Output Voltage	Amperage	Size	Weight
DRS-248-7500	21.5 - 58.0V DC	24 or 48V DC	290 @ 24V; 145 @ 48V	19", 1 RU	10.6 Lbs.

DC Converter Module	Input Voltage	Output Voltage	Output Amps Cont.	Watts
24-48-DHS	21.5 - 29.0V	54.4 VDC	27A	1500
48-24-DHS	43.0 - 58.0V	27.0 VDC	55A	1500

General Specifications

Ground Reference: Positive/Negative/Floating

Efficiency: 95%

Connections: Dual stud for two hole lugs

Alarm Module: 2 Form C relays, single pole, double throw, 0.5 amps at 60V DC

Operating Temperature: -40˚ to 75˚ C

Protection: Internal fuse

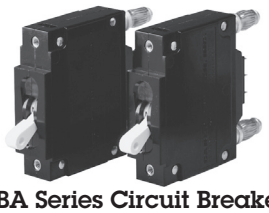
Safety: UL 60950, Nebs GR-1089

Shelf Dimensions: 19" W x 1.72" H x 15" D

Circuit Breaker Distribution Panels

Circuit Breaker Distribution Panels c UL us LISTED

- High density, 2RU Rackmount Panels designed to accommodate virutally any 48, 24 or 12 VDC power distribution requirement
- Accommodates up to 10 or 20 circuits depending on model
- Distributes up to 900 amps (450 amps per bus)
- Unique plug-in circuit breaker design requires only front panel access for quick and easy installation
- Tripped breaker alarm contacts provide remote alarm/indications
- Circuit Breaker ratings: 5, 10, 15, 20, 25, 30, 40, 50, 75 or 100 amp
- UL Listed, CE Marked

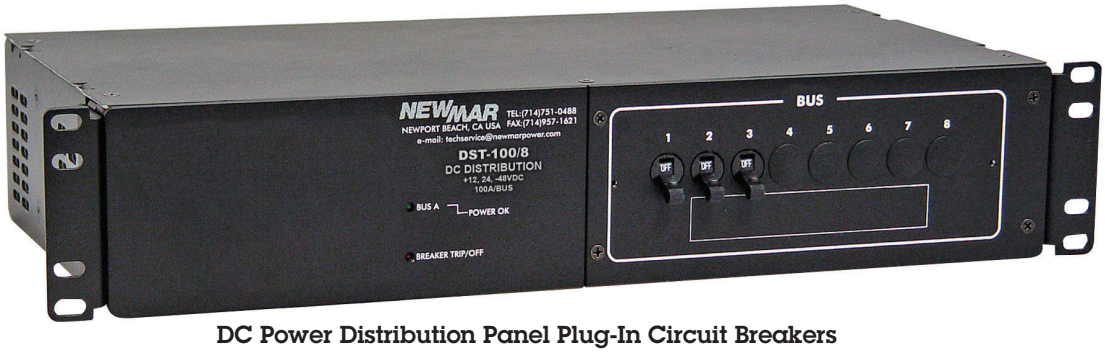


PBA Series Circuit Breaker

Models	Nominal Input/Output	Bus	Total Circuit Capacity	Total Current Capacity	Dimensions (Inches) H	W	D (w/ Cover)	Weight* (Lbs.)
DST-10	12, 24 or 48 VDC	Single	10	450 amps	3.5	19	14.4	9
DST-20A	12, 24 or 48 VDC	Dual	20	900 amps	3.5	19	14.4	12

** Weight with no circuit breakers installed*

This 8 position circuit distribution panel provides system integrators a flexible solution for DC power distribution on 12, 24 or 48 volt application. Plug in circuit breakers allow easy front access configuration to load distribution. Front panel indicators provide system status: Power available, and if breaker is tripped/off position. In addition, remote monitoring is provided via form C contact indicating tripped breaker condition. The panel's compact 2 RU height saves valuable rack space and the barrier terminal blocks on rear panel provide convenient wire terminals landing points, and simplifies cable management.



DC Power Distribution Panel Plug-In Circuit Breakers

8 Plug-In Circuit Breaker Capacity
DST-FB Series Available
Ratings 5, 10, 15, 20, 35 or 30A

Features

- 12, 24, or -48 VDC, Positive or Negative Ground operation
- Integrates easily with any power system
- 100 amps Bus - 8 plug-in circuit breaker capacity (breakers sold separately)
- Indicator LEDs: Power available, tripped/off circuit breaker
- Form C alarm contacts: tripped breaker, input fail

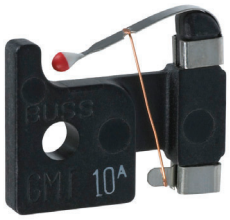
Models	Nominal Input/Output	Total Circuit Capacity	Total Current Capacity	Dimensions (Inches) H	W	D	Weight* (Lbs.)
DST-100/8	12, 24 or 48 VDC	8	100 Amps	3.5	19	11	5

** Weight with no circuit breakers installed*

NEWMAR® *Powering the Network*

Fuse Distribution Panels

These fuse panels are ideal for DC distribution to low power loads in 24 and 48 volt positive and negative ground network applications and provide enhanced system reliability via dual input buses which allow configuration with redundant power sources. Each input bus accommodates 10 or 20 GMT output fuses (depending on model) in ratings up to 15 amps. Form C alarm contacts provide remote monitoring of input power and blown fuse conditions. Front panel LEDs indicates normal operation, fuse failure mode, as well as a user configured external alarm signal. Their low profile 1.75" (1RU) occupies minimal space and can be configured for 19 or 23 inch rack mounting.



GMT Fuse
Available Ratings
1, 3, 5, 7.5, 10 and 15 Amps

Features

- GMT Fuse
- Polarity insensitive panels work with positive and negative ground systems -/+ 24 or -/+ 48 VDC
- Form "C" alarm contacts
- 1RU (1.75") in height will configure to 19" or 23" rack mounting

Models	Nominal Input/Output	Total Fuse Capacity	Amps per Bus (Dual Bus)	Total Current Capacity	Dimensions (Inches) H	W	D	Weight (Lbs.)
FDP-1010	+/- 24 or 48 VDC	20	100	200 amps	1.75	17	11.5	8
FDP-2020	+/- 24 or 48 VDC	40	100	200 amps	1.75	17	11.5	8

Specifications

Nominal Input/Output: +/- 24 or +/- 48 VDC

Fuse Capacity
FDP-1010: 10 GMT fuses per bus (20 total)
FDP-2020: 20 GMT fuses per bus (40 total)

Total Current Capacity
FDP-1010: 200 amps (dual 100 amp bus)
FDP-2020: 200 amps (dual 100 amp bus)
Fuse Holder & Fuse Rating:15 amps max.

GMT Fuses: Available amperages: 1, 3, 5, 7.5, 10, and 15. Other ratings available upon request. Note: Fuses sold separately

Operating Temperature: -20° to +60° C (-5° to + 140° F)

Alarms
- Form C alarm contacts for each bus
- External ground input alarm (bay or rack alarms)

Compliances: NEBS 3 certified

Mechanical
- Steel case painted flat black
- Mounting ears provided for 19" and 23" rackmount, flush mount or 6" offset
- 1 RU (1.75"), can be zero clearance mounted directly adjacent to other equipment

Front Panel Details
- LED status indicators:
- Normal Operation
- Fuse Alarm
- External alarm
- Easy accessible fuse blocks
- Spare fuse holder

Rear Panel Details
- Input Terminal Block: Two 1/4" studs on 5/8" centers
- Output and Alarm Terminal Blocks:
- FDP-1010: Barrier Terminal Block; #22 to #10 AWG wire for fork or ring #6 screw
- FDP-2020: Elevator clamp style terminal block; #26 to #12 AWG wire.
- Cable Management Bar Clear Lexan cover protects wiring connections

Circuit Breaker Distribution

with Remote Re-Boot Control

Instantly reboot, start or stop –48V network equipment (contact factory for +12V and +24V modification) in remote locations securely from your web browser or via program control. Eliminate overloads, brown-outs, blown breakers and other power problems before they occur, start devices in sequence automatically.

Ease of remote operation is made possible via numerous web browser control options of up to 8 breaker protected circuits. Remotely control power relays, choose from sequential on, all-off, selective circuit, or last state. In addition, an advanced custom control function is built-in, programmed via a BASIC style language that remotely initializes scripts without user intervention upon defined conditions such as: power-up, or when lock up is sensed via the "Auto-Ping" feature. Auto Ping continually monitors critical network devices, such as telecom equipment, servers and routers. If a device fails to respond after a user selectable number of pings, the power controller will automatically reboot it, or run a user's script with no user intervention. "Locked-up" devices are brought back to life instantly. Long distance service calls are averted.

Convenient monitoring via user-defined graphics and hyperlinks allow you to customize web pages. Programmable web links provide a seamless control panel of multiple systems comprising several distribution reboot units.

Features

- Remote control routers, telecom equipment. Switches any -48VDC device, up to 15 amps. An internal web server gives you manual control from anywhere in the world.
- Use scripts to automate control from remote locations via LAN or WAN.
- The "Auto-Ping" feature intelligently reboots a machine, router, server, or other Ethernet device automatically.
- Windows utility provides e-mail notification of logs and events. Also supports UNIX style SYSLOG.
- Front panel system control buttons with LCD display enables manual on-site relay control for ease of set-up.
- Eight relays are individually controlled by scripts or web commands over Ethernet. Ethernet connection with static IP allows connection anywhere on your LAN or WAN.
- Dual 50 Amp A/B input bus power four 15 Amp outputs for each bus, or wire inputs in parallel for an 8 circuit, single bus.
- All inputs and outputs are circuit breaker protected (50A inputs, 15A outputs). Other values available upon special request.
- Universal 19" brackets accommodate center, back, or front rack mounting.

Model	Input Voltage	Circuit Capacity	Dimensions (H x D x W)	Weight (Lbs.)
DST-8-RB	36 - 75V DC either A or B bus	8	1.75" x 11" x 17"	9.3

Electrical

Input: 11.5 - 75V DC, either A or B bus
Frequency: 20% ripple permissible
A/B Input Breakers: 50A thermal, manual reset
Power Dissipation: 10.3W Max (relays on) <3 W idle
Ethernet Interface: 10/100 autosensing, Static IP, TCP port selectable, 8 pin RJ-45 w/ internal FCC filtering
Web Interface: Internal web server
Input Terminal Rating: 100A
Relay Contact Rating: 20A DC
Password Transmission: Secure authentication Encrypted, base 64 Movable HTTP port for security
Output Circuit Breakers: 15A standard or specify 7 or 10A thermal, manual reset
Power Fail Hold-Over: 600ms minimum (all relays on)
Switches & Controls: Reset to factory default switch Link, ACT (Relays On), Pwr LEDs
Power-Up Settings: Last relay settings, all relays off, sequential on or run PLC script
Software Controls (via web or script): Individual outlets on/off, all on

Enviromental

Operating Temperature: -40° to 170° F, -34° to 77° C

NEWMAR

Powering the Network

Site Power Monitor

Web-enable and integrate intelligence to any site's AC and DC power system for 24/7 monitoring, alarm condition notification, and data logging of vital electrical functions. All programmable, accessible, and managed via the Internet: TCP/IP or SNMP. View current conditions and log 30 day history of DC and AC power status at remote sites before dispatching personnel.

The Site Power Monitor is designed specifically for monitoring power supplies, rectifiers, batteries, converters, inverters, UPS, distribution panels, and AC power at communication sites, base stations, outdoor enclosures, and command vehicles via Ethernet or Wireless connection. The palm sized unit can be rack, DIN-rail, or wall mounted and is easily adapted to virtually any make of power system via nine sensor input ports which capture and stream critical data via the internet for analysis and logging of site history. Web page based programs are easily user configured for site parameters with up to 50 desired alarm conditions settings and multiple automatic notification options by e-mail, mobile phone and smart devices.

Sites without internet access can use the monitor solely as a data logger that captures and retains 30 days' data, ready for download to lap top for site history file and analysis of component performance and failure conditions.

Sensor Data
- DC Bus/Battery Voltage
- DC System Amperage/Battery Charge-Discharge Current
- AC Voltage
- Ambient Temperature
- Dry Contacts/Alarms

Firmware
- Programmable Alarms
- Data Logging
- Ethernet Camera

Optional Accessories
- Rackmount Panel (model SPM-RM)

Reporting Via
- Internet – Software Included
- E-Mail
- Mobile Phone

SPM-200 Installed into SPM-RM Rackmount Bracket

Monitor Inputs: 9 Total

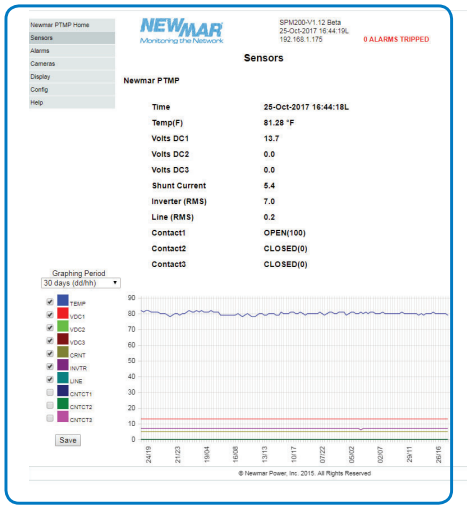
DC: 3 Ports:
- 2 each: +0 - 40 VDC
- 1 each: -36 - 60 VDC
- Accuracy: +/- 3%

AC: 2 Ports:
- 115 (90-135) utility power (L-N or L-L)
- 120/240 inverter output (floating)
- Accuracy: +/-5%

DC Current: 1 Port
- +/- 100mv, 100 amp via differential using provided shunt
- Read battery charge/discharge current, or load current
- Accuracy: +/-5%

Dry Contact Switch Sensors: 3 Ports
- Possible uses: door open, water leak detection, smoke alarm, component fail, breaker trip, high temperature

Ambient Temperature Sensor
- Located outside case of unit
- Range: -20 to +60° C, 4° to +140° F
- Accuracy: +/-0.5° C



Sensors Webpage Screenshot

Model	Input	Dimensions (H x D x W)	Weight (Lbs.)
SPM-200	9 - 60 VDC, neg. ground, 250 mA max.	3.27" x 4.66" x 2.18"	1

NEWMAR

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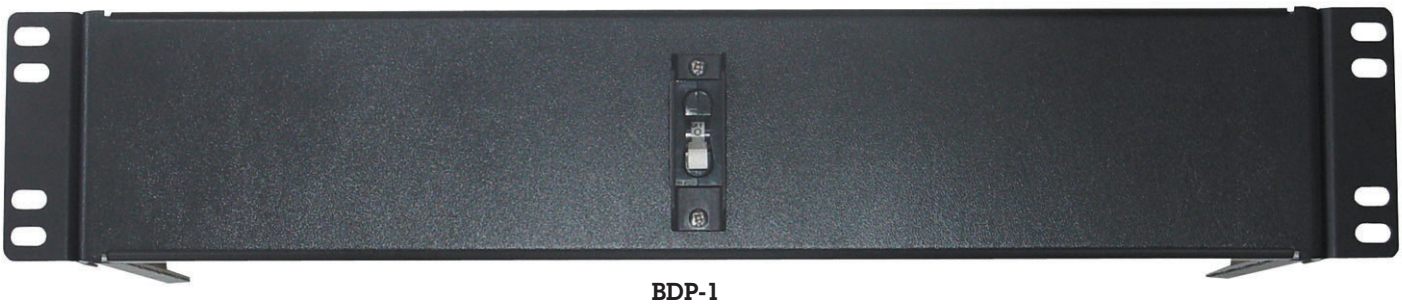
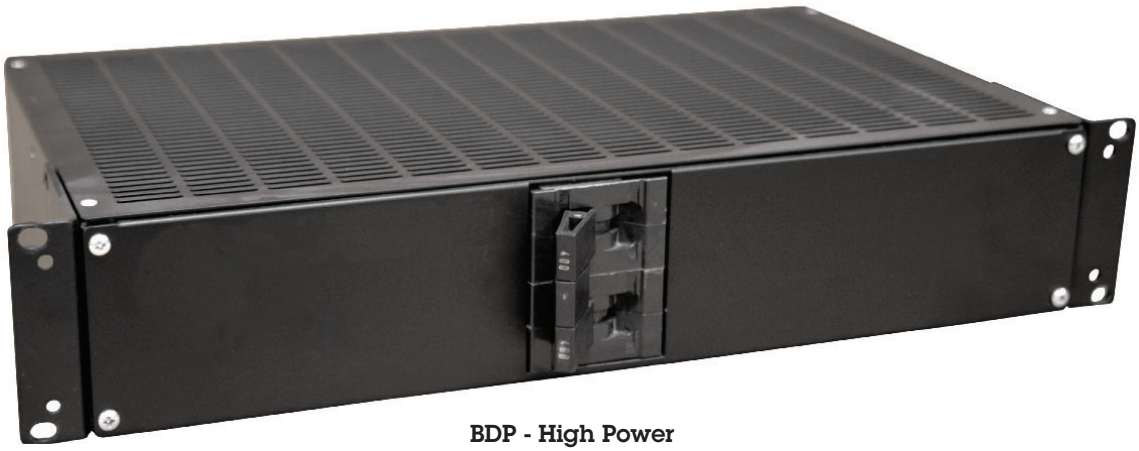
Battery Disconnect Panels



BDP-1

- Provides over-current protection in high current battery wiring applications
- Provides a convenient means of disconnecting batteries from power plant during servicing
- High current single pole breaker is mounted into 2RU rackmount panel
- Auxiliary contacts (form C) provide tripped breaker signal to power plant monitor
- 10,000 amp interrupt current rating (AIC)
- 19" rackmount ears provided (23" ears available, contact factory)
- Voltage Rating: 12, 24 or 48 VDC, positive or negative gound

Model	Battery Breakers	Available Amperage
BDP-1	1	50, 75, 100
BDP-2	2	50, 75, 100

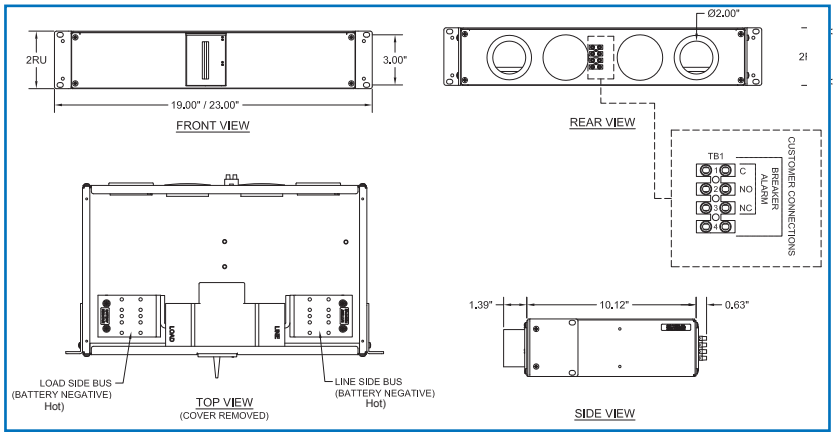


BDP - High Power

- Form C alarm contacts - breaker off or tripped
- Bus bar terminations, 1/4-20 tapped holes and hole center to center spacing for 2 hole lugs
- 25,000 amp interrupt current rating (AIC)
- 2RU chassis, adapts for 19" and 23" racks
- Voltage Rating: 12, 24 or 48 VDC, positive or negative ground systems
- UL and CSA listed
- Special order, contact factory for availability

Model	Battery Breakers	Available Amperage
BDP-125	1	125
BDP-150	1	150
BDP-175	1	175
BDP-200	1	200
BDP-225	1	225
BDP-250	1	250
BDP-275	1	275
BPD-300	1	300
BDP-350	1	350
BDP-400	1	400

Dimensions



NEMA

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Accessories

Battery Trays and Equipment Shelves

Model	Tray Area	Weight Capacity	Colors	Ship Weight
T 19" x 19"	17.25" x 19.04"	350 lbs	Black	12 Lbs.
T 19" x 21"	17.25" x 22.3"	400 lbs	Black or Gray	17 Lbs.

23" tray available in various depths - contact factory for more information

Battery Tray

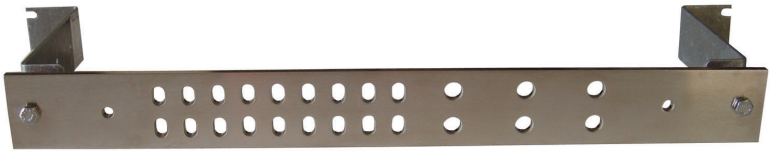
Model	Shelf Area	Weight Capacity	Colors	Ship Weight
S 19" x 16" Adjustable	17.56" x 16"	200 lbs	Black or Gray	10 Lbs.
S 19" x 20" Adjustable	17.56" x 20"	200 lbs	Black or Gray	11 Lbs.
S 19" x 16" Ventilated	17.5" x 14.87"	150 lbs	Black or Gray	10 Lbs.

Adjustable Equipment Shelf

Bus Bars

BBA-800

- 800 amp rated nickel-plated copper bus bar for use as heavy duty DC positive or negative connection point in rack installations
- Multiple attachment holes in two sizes provided for single and dual hole lugs: 18 ea. @ .312" x .500"; 6 ea. @ .437" round; 4 ea. @ .281" round



BBA-800

GB-19

- Copper bus bar for (unplated), 100 amp rating
- 14 ea. 1/4" landing points
- Installer must supply insulating stand-offs
- Tie bar provided for connecting to adjacent racks

GB-19

Model	Rating	Dimensions (H x W x D)	Weight
BBA-800	800 Amps	19.5" x 2" x 0.25"	4 Lbs.
GB-19	100 Amps	19.3" x 0.75" x 0.15"	1 Lbs.

Quick Connects

Designed specifically for use with Newmar's PM Series Power Modules and Power Function Manager in stacked rack configuration.

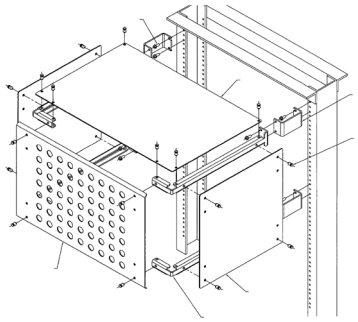
Models	Description	AWG	Weight
QCK-3	for up to 3 Power Modules, 70A rating	6	3 Lbs.
QCK-3A*	for up to 3 Power Modules, 80A rating	4	3 Lbs.
QCK-6	for up to 6 Power Modules, 70A rating	6	4 Lbs.
QCK-6A*	for up to 6 Power Modules, 80A rating	4	4 Lbs.
CCK-4**	for up to 4 Power Modules (2,200 Watt)	4	6 Lbs.

** PM-12-80 - only use QCK-3A or QCK-6A; ** PM-48-50 - only use CCK*

Rack Covers

Clear plastic panels attach to rear of racks to protect service personnel by preventing accidental contact with "live" terminals, etc., from top, sides and rear.

Model	Rack Height (1RU = 1.75")	Rack Width	Weight
RRC-3-19	3 RU	19"	4 Lbs.
RRC-7-19	7 RU	19"	5 Lbs.
RRC-3-23	3 RU	23"	5 Lbs.
RRC-7-23	7 RU	23"	6 Lbs.



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