

# Power Modules

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 (see opposite page) to greatly expand the system capability with other functions such as digital output monitoring, powering multiple loads via circuit breaker distribution and low voltage battery disconnect.

## Features

- 12, 24 or 48 volts output; pos., neg. or floating ground
- 115 or 230 VAC, 50-60 Hz input 560 & 1000 watt models
- 230 VAC only 2200 watt model
- 560, 1000 or 2200 watts per module (approx.)
- Built-in oring diode for parallel or N + 1 configuration
- Power supply or battery charger operation (DC UPS system)
- Battery charging options: three-step charging, gel/lead-acid switch, equalization and temperature compensation
- Remote shutdown control option via TTL signal (except 2200 watt models)
- Form C alarm contacts
- 19" or 23", 2 RU, flush or 6" forward rackmount

## Protection

- Output fuse for reverse polarity
- Current limit
- Input circuit breaker
- Automatic high temp. output power reduction
- Forced air cooling with filter provided

## Mechanical/General

- Anodized aluminum front panel
- Vinyl laminated base and cover
- 19" or 23" Rackmount, brackets provided
- Wallmount via optional brackets
- IEC AC entry module. 6' power cord with NEMA 5-15 plug, 115 VAC. (560 watt models)
- 6' power cord with NEMA 6-15 plug, 230 VAC (1,000 watt models)
- 6' power cord with NEMA 5-20 plug, 115 VAC also supplied (1,000 watt models)
- Hardwire junction box on 2200 watt units, no power cord provided
- 1/4" -20 Output stud (560 watt models)
- Output bus bar (1,000 & 2200 watt models) with 1/4" - 20 studs
- Output "OK" L.E.D.
- Loss-of-output alarm contacts- Form C, plus loss of AC alarm contacts Form C (2200 watt units only)
- Front panel voltage test points

Model	Input Amps @ Full Load	Output			Weight		
		VDC V OUT	VDC V2	Amps Cont.+	Watts	Lbs	Kg.
PM-12-40	8.5/4.3	13.6	14.3	40	560	12.2	5.5
PM-12-70	16/8	13.6	14.3	70	1000	15.2	6.9
PM-24-20	8.5/4.3	27.2	27.9	20	560	12.2	5.5
PM-24-35	16/8	27.2	27.9	35	1000	15.2	6.9
PM-48-10	8.5/4.3	54.4	55.1	10	560	12.2	5.5
PM-48-18	16/8	54.4	55.1	18	1000	14.0	6.4
PM-48-50	* /22	54.4	—	50	2200	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%

\* 230 VAC input only

## Performance Specifications

- Input: 85-135/170-270 VAC (selectable), 47-63 Hz. 560 & 1000 watt models. 207-253 VAC only 2200 watt models
- Power Factor: 0.7
- Regulation:  $\pm 1\%$  at direct output ( $V^2$ );  $\pm 2\%$  through "oring" diode (V out)
- Ripple: 1% (Typical)
- Efficiency: 80-85% @ full load
- Front panel Output Voltage adjustment pot range:  $\pm 10\%$
- Altitude Range: Full output to 5,000 feet. Derate output current 4% per 1,000 feet to 10,000 feet max.

## Design Standards

- UL 1950 / EN 60950 (Safety)
- EN 50082 (Immunity)
- EN 55014 (Conducted)

## Options

- Three stage charger function with gel/lead-acid selector Model: CFB 560 & 1000 watt units only
- Temperature compensation (for battery charging). All models.
- DC quick connect wiring kit, 560 & 1000 watt Models: QCK-3 (for 2-3 unit PM system), QCK-6 (for 4-6 unit PM system), CCK-4 (2200 watt models)
- "Universal" mounting bracket; Model: UMB-PM (500 & 1KW models only)
- Metering, alarms, LVD and distribution breakers (PFM-400 option)

## Temperature Rating

**560 & 1000 watt models:** -40° C to +60° C; Derate linearly from 100% load @ 50° C to 75% @ 60° C

**2200 watt models:** 0-50° C

## Case Size

Inches		
H	W*	D
3.5	17	20.5
Centimeters		
13.5	43.2	52.1

\*19" and 23" mounting brackets provided



Powering the Network