

Small DC Power Systems

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+24 VDC @ 20 TO 120 AMP MODULAR POWER SYSTEMS



Model No. 126N-D1
Spec. No. 438126NP-D1

- 20 TO 120 AMP CAPACITIES
- 24V @ 20A & 48V @ 10A, 50°C RECTIFIER MODULES
- "HOT" INSERTABLE RECTIFIER MODULES
- LOW VOLTAGE DISCONNECT*
- VOLTAGE & CURRENT METERING*
- CIRCUIT BREAKER OR GMT FUSE DISTRIBUTION
- FULLY ALARMED*
- FULL 2 YEAR WARRANTY

*OPTIONAL

DESCRIPTION: The Modular 126ND1 (24V) Power Systems are designed to rectify 115/230 VAC and provide monitoring and distribution of power. The plants are convection cooled and are ideal for low acoustical noise applications and for installations where a minimum disturbance of the environment is desired. The 19" shelf has mounting positions for five (5) modules and the 23" shelf has mounting positions for six (6) modules. 24V systems grow in increments of 20 Amp Rectifier modules to a maximum capacity of 120 Amps (100 Amps redundant). Systems are designed around the maximum number of rectifier modules required. The remaining space can accommodate metering, LVD, or distribution modules. Blank covers are provided for unused spaces. Low Voltage Disconnect (LVD) is an important option when batteries are in non-controlled environments.

TECHNICAL SPECIFICATIONS

INPUT

| Voltage: | Nominal | Minimum | Maximum |
|------------|---------|---------|---------|
| (Standard) | 115 VAC | 98 VAC | 132 VAC |
| (Optional) | 230 VAC | 195 VAC | 264 VAC |

Current: 7.25Amps @ 115 VAC Per Rectifier
3.70 Amps @ 230 VAC Per Rectifier

Recommended AC Protection: 115VAC - 20 Amp
230VAC - 15 Amp

Note: The standard configuration is for (1) AC breaker to power (2) Rectifier Positions

OUTPUT

| Voltage: | Nominal | Minimum | Maximum |
|------------|-----------|-----------|-----------|
| (Standard) | 27.24 VDC | 25.00 VDC | 30.00 VDC |

Regulation: ± 0.5% (AC Input)
± 1.0% (DC Load from 10% to 100%)

Overvoltage: 28.00 to 56.00 VDC
Defective Rectifier Shuts Down

Noise: < 32 dBnC (Voice Band)
< 300 mv p-p (Wideband)

Current: 20 Amp @ 24 VDC (50°C Module)

Paralleling & Hot Insertion:

Each Rectifier Module has an output orring diode in the -48 VDC lead for the purpose of paralleling and hot insertion in a working system.

RECTIFIER FEATURES

Indicators: PWR Green LED
HVA Red LED
LVA Amber LED

Adjustments: Output Voltage
AC Input: #6 Hardware screw terminal connections to plant back plane.

ENVIRONMENTAL TEMPERATURE

| | MINIMUM | MAXIMUM |
|----------------------------|--|--------------|
| Storage Ambient: | -40°F (-40°C) | 185°F (85°C) |
| Operating Ambient : | | |
| Sea Level to 4800 ft. | 32°F (0°C) | 122°F (50°C) |
| 4800 ft. to 7000 ft. | 32°F (0°C) | 113°F (45°C) |
| 7000 ft. to 10,000 ft. | 32°F (0°C) | 104°F (40°C) |
| Humidity: | 95% Non-condensing (Maximum) Zone 4 Earthquake Design FCC Docket 20780, Subpart J, Class A | |
| BTU: | 280 BTU/Hr Per Rectifier | |

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PLANT FEATURES

Low Voltage Disconnect:

Drop-Out: 21.00 VDC
 Pick-Up: 25.00 VDC

Low Voltage Alarm:

Setpoint: 23.5 VDC
 Alarm: Minor

Alarm Module Indicators

| Alarm | Color |
|---------|-------|
| RFA LED | Red |
| FA LED | Red |
| AC LED | Red |

Digital Meter Module with BTC & Midpoint Indicators

| Alarm | Color |
|----------|-------|
| PMJ | Red |
| PMN | Amber |
| HI-Temp | Red |
| Midpoint | Red |

LVD Module Indicators

| Alarm | Color |
|---------|-------|
| LVD LED | Red |

LOW VOLTAGE DISCONNECT

The LVD provides a means to disconnect the load from the batteries before the batteries are discharged and damaged. The control circuits have separate settings for Disconnect and Connect. Typical settings are 21.00 VDC and 25.00 VDC respectively. A large difference (hysteresis) between the two settings is to prevent contactor chatter due to the battery voltage raising quickly when the load is removed. A built-in test circuit is provided to set and check the LVD setpoints. The rating of the LVD is 100 Amps.

RECTIFIERS

Light weight, high frequency Switchmode Rectifiers may be easily removed and inserted into a mounting shelf without impact on the DC bus. Both normal and hardened environment rectifiers are available, plus a variety of features including Float Adjustment, Equalize Adjustment, High & Low Voltage Alarm Indicators, Voltage and Current Monitoring, and Remote Equalize.

METER MODULE

The meter module provides metering of both voltage and current. The Ammeter is available with ratings of 20, 30, 50, 75, & 100 Amps. An output circuit breaker with the same rating as the Ammeter is also provided.

GMT FUSE DISTRIBUTION

Fifteen (15) GMT type fuses are provided and can accept fuse sizes from 0.18 to 10 Amps. Each of the three groups of five fuses are rated at a maximum of 20 Amps. Terminations are provided for both the fused outputs and the return leads.

MOUNTING SHELF

The 126N-D1 Power Systems are available in 19" and 23" mounting configurations. The 19" shelf can accommodate five (5) modules and the 23" shelf can accommodate six (6) modules. The modules can be any combination of Rectifiers, Alarm, LVD, Metering, and Distribution as listed below.

CIRCUIT BREAKER DISTRIBUTION

Four DC distribution circuit breakers with ratings from 5 to 50 Amps are to be equipped with this distribution module. Each circuit breaker is equipped with a guard to prevent accidental tripping. Terminations are provided for both the distribution outputs and the return leads.

BATTERY DISCONNECT CIRCUIT BREAKER

The Battery Disconnect circuit breaker provides a means to protect the battery cabling and to facilitate battery maintenance by opening the battery string. Ratings from 20 to 100 Amps are available. This module does not occupy one of the standard module spaces, but mounts on the far right side of the shelf.

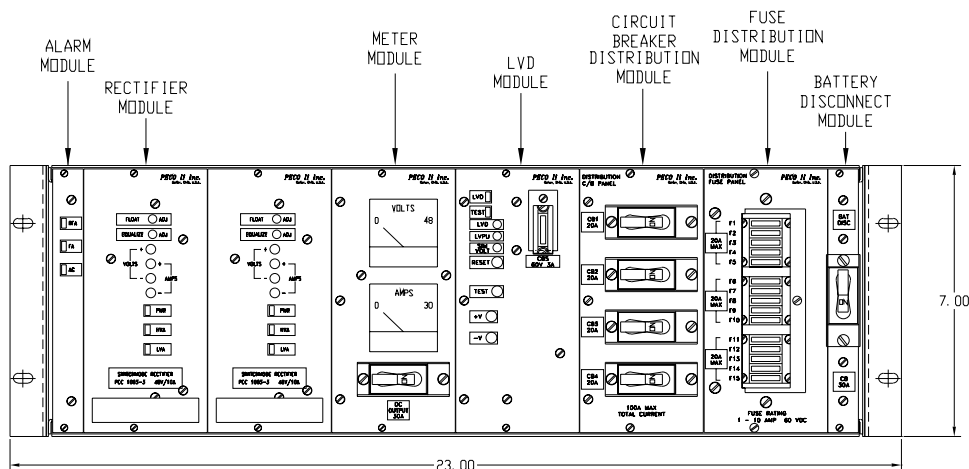
MECHANICAL

Weights:

| | |
|-------------------|---------|
| 19" Cage: | 15Lbs. |
| 23" Cage: | 20 Lbs. |
| Sm. Rect. Module: | 6 Lbs. |

Specifications are subject to change without notice. Please contact our website for the latest version.

OUTLINE DRAWING



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