

# Medium DC Power Plants

BULLETIN: 03.151/a  
MARCH 2001

## -48 VDC @ 600 TO 2000 AMP REAR ACCESS POWER PLANT



**Model No.** 151N-A1  
**Spec. No.** 438151NP-A1

- MODULAR GROWTH DESIGN
  - DIGITAL METERING\*
  - STANDARD OFFICE ALARMS
  - LOW VOLTAGE DISCONNECT\*
  - CIRCUIT BREAKER OR FUSE DISTRIBUTION\*
  - FULL 2 YEAR WARRANTY
- \*OPTIONAL

**DESCRIPTION:** The PEC 151NP-A1 Power Plant provides -48 VDC power in capacities from 200 to 2000 Amps. It offers many configurable options allowing for fuses from 1 to 600 Amps and circuit breakers from 1 to 400 Amps. The AC required by this plant may be single phase 110/230 VAC or three phase 220/480 VAC depending on the selection of Rectifiers. Rectifiers are available in either the Switch Mode or Controlled Ferroresonant type. Switch Mode Rectifiers are available in modules of 50 Amps and ferros of 100, 200, or 400 Amps. The largest ferros of 200 and 400 Amps are 3 phase input while all others are 1 phase input. All of the Switch Mode Rectifiers are shelf-mounted from 1 to 4 per shelf.

### TECHNICAL SPECIFICATIONS

#### ELECTRICAL

The power boards may be mounted in either relay racks or box frames and all offer protective side and rear covers. They offer all standard metering and alarming with the following options.

- Low Voltage Disconnect (LVD) — Load disconnects depending on option in a range of 200 Amps to 1800 Amps;
- Branch metering of large loads;
- Rectifier sense lead fusing — for 200 and 400 Amp rectifier;
- Rectifier restart after Hi Voltage shutdown;
- Automatic equalize timer;
- Redundant LVD control module.

These operate the standard analog alarm system. All power boards are completely “dead front” and offer complete safety for personnel.

The remote monitoring systems offered in the MACS product line will monitor and return the status of the Power Board in an “on-line” mode. All Bus bars for both Battery and Ground are enclosed in the box frames or enclosed with Lexan shields on the relay racks. All inputs and outputs are via 2-hole lugs, either 1/4” bolts on 5/8” centers or 3/8” bolts on 1” centers. The small circuit breakers and fuse holders normally have only a single output stud, 1/4” diameter.

#### INPUT

##### Voltage:

- 230 VAC (Nominal) for the 50 Amp SM and 100 Amp Ferro
- 230 VAC (Nominal) 3 phase for 200, 400 Amp Ferro
- 480 VAC 3 phase for the 200, 400 Amp Ferro

**Current:** Depends on the Rectifier selected

#### RELAY OUTPUTS

Major Alarm	(PMJ)	2 sets Form C
Minor Alarm	(PMN)	2 sets Form C
Low Low Voltage Alarm	(LLVA)	1 set Form C
Rectifier Fail	(RFA)	2 sets Form C
Fuse Fail	(FA)	1 sets Form C
Low Voltage Alarm	(LVA)	1 sets Form C
High Voltage Alarm	(HVA)	1 sets Form C

#### OUTPUT

<b>Voltage:</b>	-54.58 VDC	(factory)
	-48.00 VDC	(minimum)
	-60.00 VDC	(maximum)
<b>Regulation:</b>	±0.5%	(Line)
	±1.00%	(Load) 10% to 100%

### ALARM INDICATORS AND RELAY OUTPUTS

#### VISUAL

Fuse Fail	(FA)
Rectifier Fail	(RFA)
High Voltage Alarms	(HVA)
Low Voltage Alarm	(LVA)
Low Low Voltage Alarm	(LLVA)
Alarm Cutoff	(ACO)
Meter for Volts and Amps	(Plant)

CLICK TO EXIT



**ENVIRONMENTAL TEMPERATURE**

	<b>MINIMUM</b>	<b>MAXIMUM</b>
<b>Storage Ambient:</b>	-40°F (-40°C)	185°F (85°C)
<b>Operating Ambient :</b>		
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)

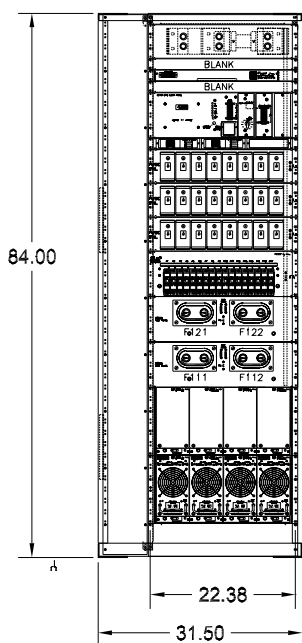
**DOCUMENTATION**

<b>Manual Power Data:</b>	438151N-A1PD
<b>Schematic:</b>	T439151NP-A1
<b>J Specification:</b>	J438151NP-A1

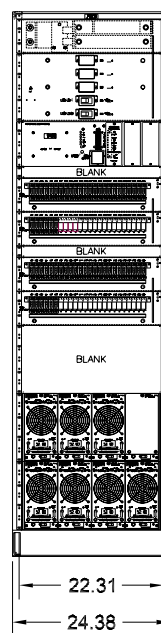
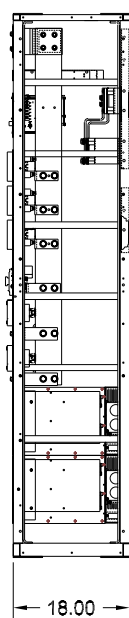
See the J Specification for the complete engineering and ordering information. For pricing and a quote, contact your Regional PECO II Salesman.

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

**OUTLINE DRAWING**



SHOWN IN BOX FRAME



SHOWN IN RELAY RACK

PEC 151NA1

CLICK TO EXIT

