

LIQUID COOLED HIGH POWER SERIES 6V TO 400V
AC TO DC SINGLE OUTPUT

Pioneer introduces the line of High Efficiency, High Power and Liquid Cooled Product Series that provides full output power of 10.2kW to 30kW with 3P AC input ranging from 365V to 528V with 480VAC Nominal. Designed to support both standalone and parallel configurations, these models are configured in standard I/O interfaces with quick liquid disconnects with no spill. The Premium Quality front ends are rugged, reliable, designed for high performance and come in the traditional 2U x 19" rack mount configuration.

With optimum power density, excluding the I/O interface, water connection, input fuses and holdup time, these units are featured with liquid cooling and built-in protection from electrical over-loads and over temperature.

A single unit provides continuous full power over ambient operating temperatures of 0°C to +50°C, 3P AC input line and inlet liquid temperature of +20°C to +40°C.

The higher power units ranging from 10.2kW to 30kW are also available in 480VAC 3P Unity PFC of 0.99.

Product Matrix:

Model	PM37220	PM37222	PM37223	PM37224
Max Power	10.2kW	20kW	25kW	30kW
Vout	lout	lout	lout	lout
6V	1700A	---	---	---
30V	---	625A	830A	---
42V	---	475A	600A	---
48V	---	415A	520A	625A
75V	---	335A	415A	500A
100V	---	200A	250A	300A
200V	---	100A	125A	150A
300V	---	70A	85A	100A
360V	---	55A	70A	83A
400V	---	50A	62.5A	75A
Dimensions	4.1" x 17.4" x 26.3"	3.5" x 17.4" x 24.4"	3.5" x 17.4" x 24.4"	3.5" x 17.4" x 24.4"
VAC Input 3P	365 to 528VAC	365 to 528VAC	365 to 528VAC	365 to 528VAC

Features:

- ◆ Power Factor Correction
- ◆ Ambient 0°C to +50°C at Full Load
- ◆ De-rated @ 70°C
- ◆ Standard 2U x 19" Rack Mount
- ◆ Outputs Fully Floating
- ◆ Over Current Protection
- ◆ Over Voltage Protection
- ◆ Remote Sense
- ◆ Over Temperature Protection
- ◆ Max Inlet Liquid Tempeture +40°C
- ◆ Input Fuses With Safety Cover

Options

- ◆ (-128L) DC OK with LED indicator
- ◆ (-1CL) AC Fail with LED indicator
- ◆ (-2T) Unit enable/disable
- ◆ (-5LO) ±10% Output Margining
- ◆ (-6B) Single wire current sharing
- ◆ (-20C) Isolation FETs
- ◆ (-25) Constant current limit
- ◆ (-311) Isolated current monitor
- ◆ (-62B) 12V Aux Power Supply
- ◆ (-314) Max Inlet LiquidTemperature +60°C for higher power units only
- ◆ (-60/61) Voltage and Current Programming
- ◆ (-P) Pluggability
- ◆ (-E) Extended Hold up Time

10.2kW to 30kW Liquid Cooled Power Supply, 9/10/15

Pioneer Magnetics' reserves the right to change the specifications at any time without prior notice. It is Pioneer Magnetics' policy to improve products as new techniques and components become available. 1745 Berkeley Street, Santa Monica CA 90404. Tel: (310) 829-6751 Fax: (310) 453-3929. E-mail: pmi@pioneermagnetics.com. Web Address: <http://www.pioneermagnetics.com>



The Leader of High Power Switching Power Supplies

SPECIFICATIONS

Inputs

RANGE: 365 to 528VAC, 3P
Nominal 480VAC
FREQUENCY: 47 to 63 Hz.
POWER FACTOR: >0.94 @ Full Load.
0.99 @ Full Load for higher power units
EFFICIENCY: Typical 92% at 480VAC

Output

POWER: See Product Matrix
VOLTAGE & CURRENT: See Product Matrix
POLARITY: Output is isolated. It may be referenced plus/minus as required.
STATIC REGULATION:
Line: $\pm 0.25\%$ over full line range.
Load: $\pm 0.25\%$ from zero to full load.
VOLTAGE STABILITY: $\pm 0.1\%$ for 24-hr period after 30-minute warm up.
P-P RIPPLE: 1% Voutpp, 5% to 100% load
MINIMUM LOAD: Not Required.

Internal Protection

OVER VOLTAGE PROTECTION: 115% $\pm 5\%$ of nominal. OVP shutdown is latched until the input line is removed for 30 seconds and then reapplied. OVP sensing is done at the output terminals.
OVER CURRENT PROTECTION: Current Limit Point: Set from 105% to 110% of full load.
OVER TEMPERATURE PROTECTION: The unit automatically shuts down in the event of an over temperature condition. After cool down, power must be Re-cycled to restart unit.
INPUT FUSES: Three built in fuses are provided with safety cover

Safety, EMI and EMC

SAFETY: TUV to EN60950-1. CE Mark (LVD)
EMI: Conducted & Radiated: EN55022 Level A
EMC: EN50082-1

Environmental

AUDIBLE NOISE: < 50dBA at 1m max
MAX INLET WATER TEMPERATURE: +40°C
AMBIENT TEMPERATURE: 0°C to +50°C.
HUMIDITY: 20% to 95% non-condensing.
VIBRATION: Operating: From 5 to 27 Hz, 0.02 in double amplitude; from 27 Hz to 500 Hz, 0.75G, 3 Axes, 3 min per octave sweep, dwell 15 min at resonance. *Non-operating:* From 5 to 17 Hz, 0.10 in double amplitude, from 17 to 500Hz, 1.5G peak; 3 axes, 5 min per octave sweep; dwell 15 min at resonance.
SHOCK: Operating: 5G, half sine, 11msec, 3 axes. Non-Operating: 15G, half sine, 11msec, 3 axes.
COOLING: Cold Plate to Liquid cooling. Min Liquid Flow Rate 2.5g/m

MECHANICAL:

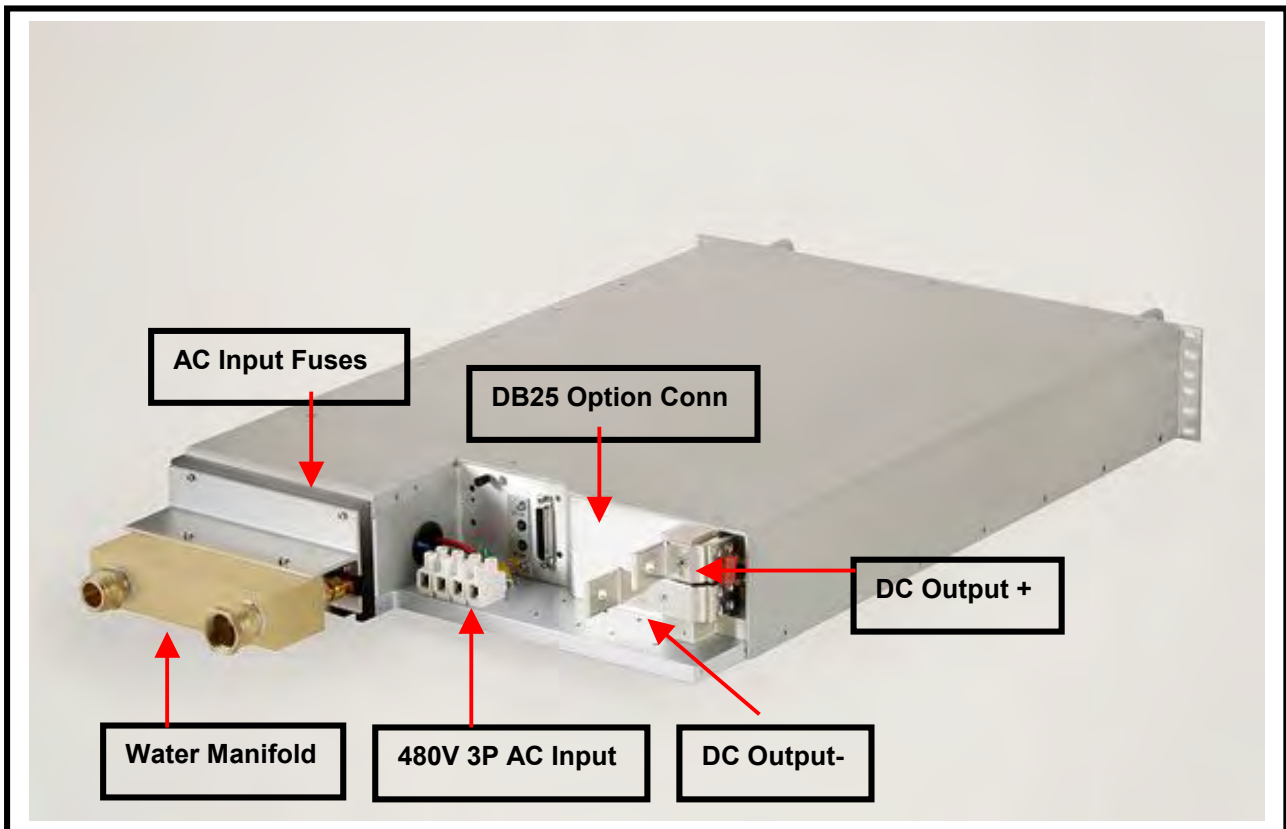
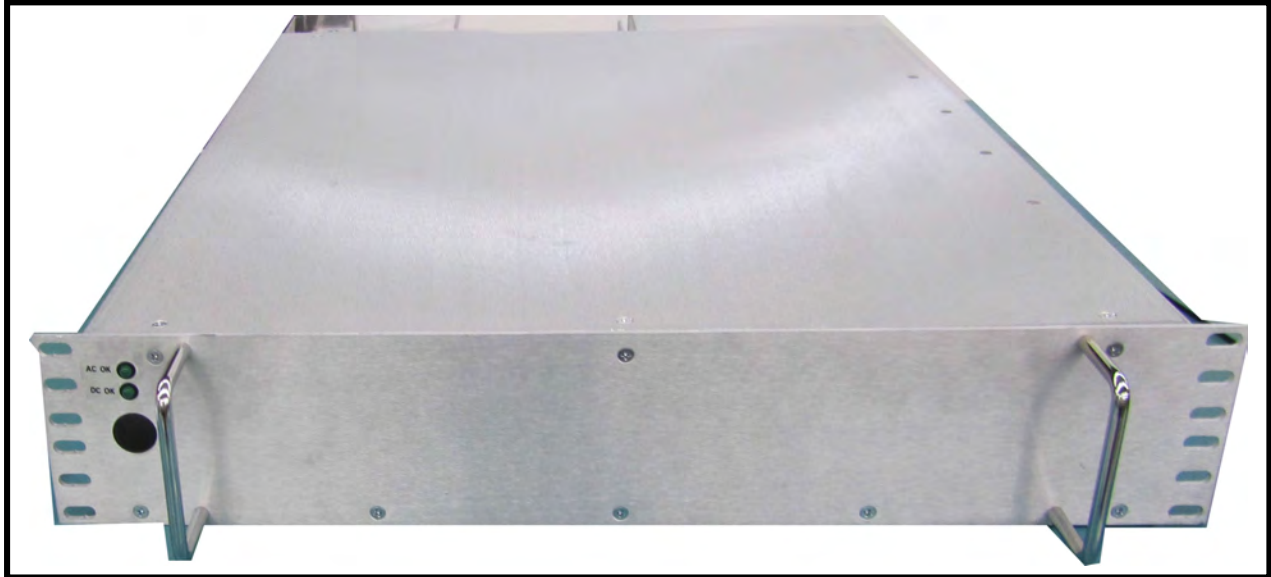
DIMENSIONS: 3.47" x 18.86" x 30.85".
Including the I/O Connectors, fuses, mounting ears, handles and water safety cover.
WATER INLET & OUTLET: Two inlets and two outlets are provided at the connector end of the power supply.
WEIGHT: Approx 75 lbs.
MOUNTING: Front mounting ears.
I/O CONNECTORS: DC Bus Bars and four Position AC Terminal block external to the safety box. The AC Terminal block is designed to accept 6 awg or 8 awg wires.

10.2kW to 30kW Liquid Cooled Power Supply, 9/10/15

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Model Number PM37223-10P

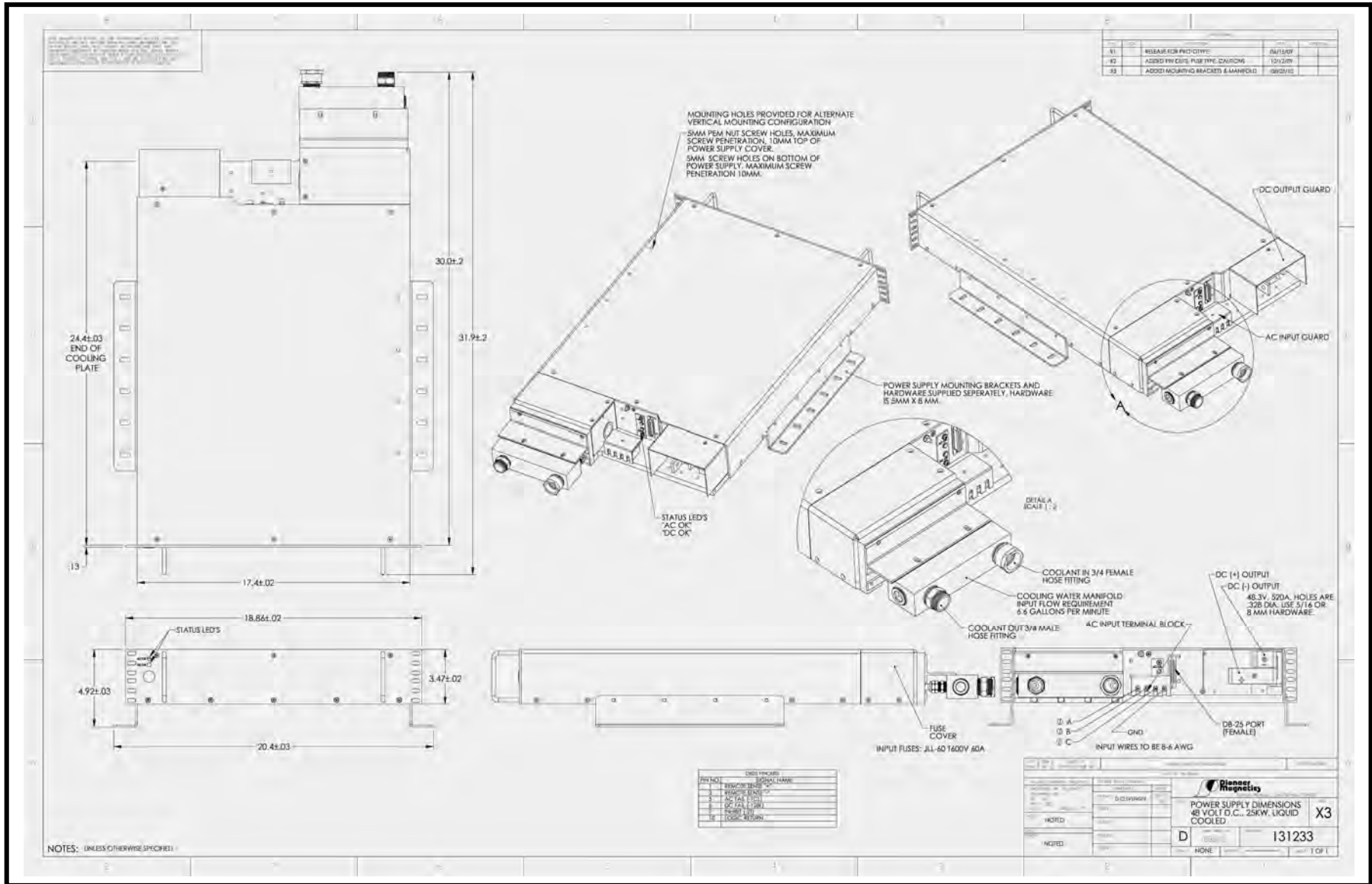
48V @ 530A, Total Output Power: 25kW



PM37223-10P, 25kW, 9/15/15

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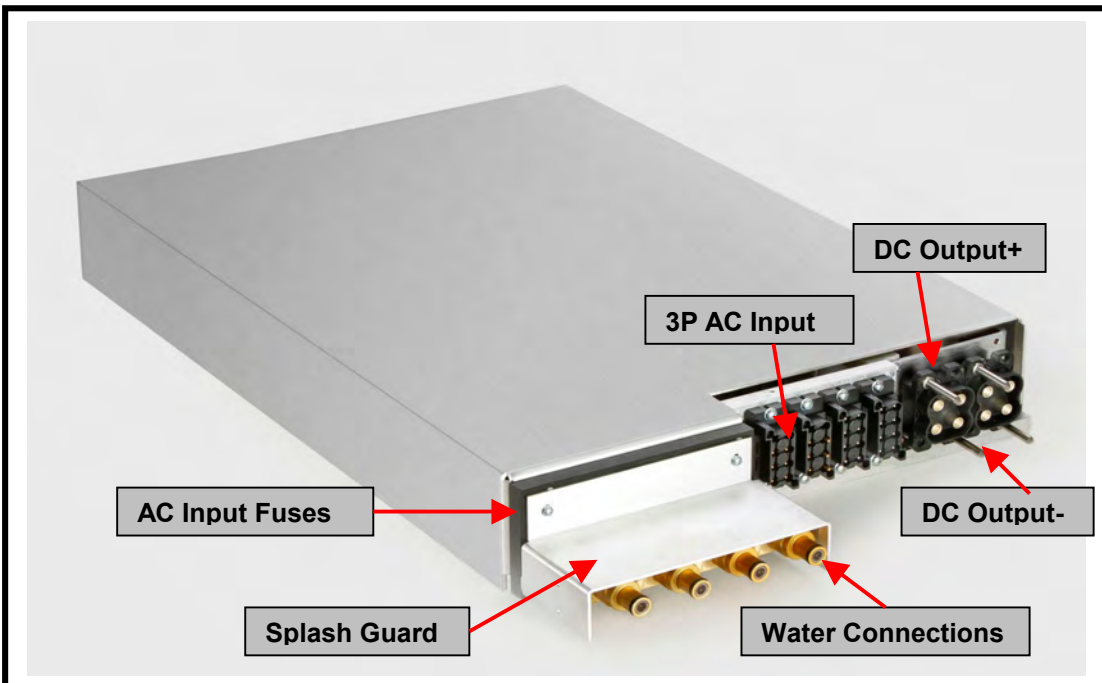
48V @ 25kW, Outline Drawing



PM37223-10P, 25kW, 9/15/15
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Pluggable Model PM37223P-10P

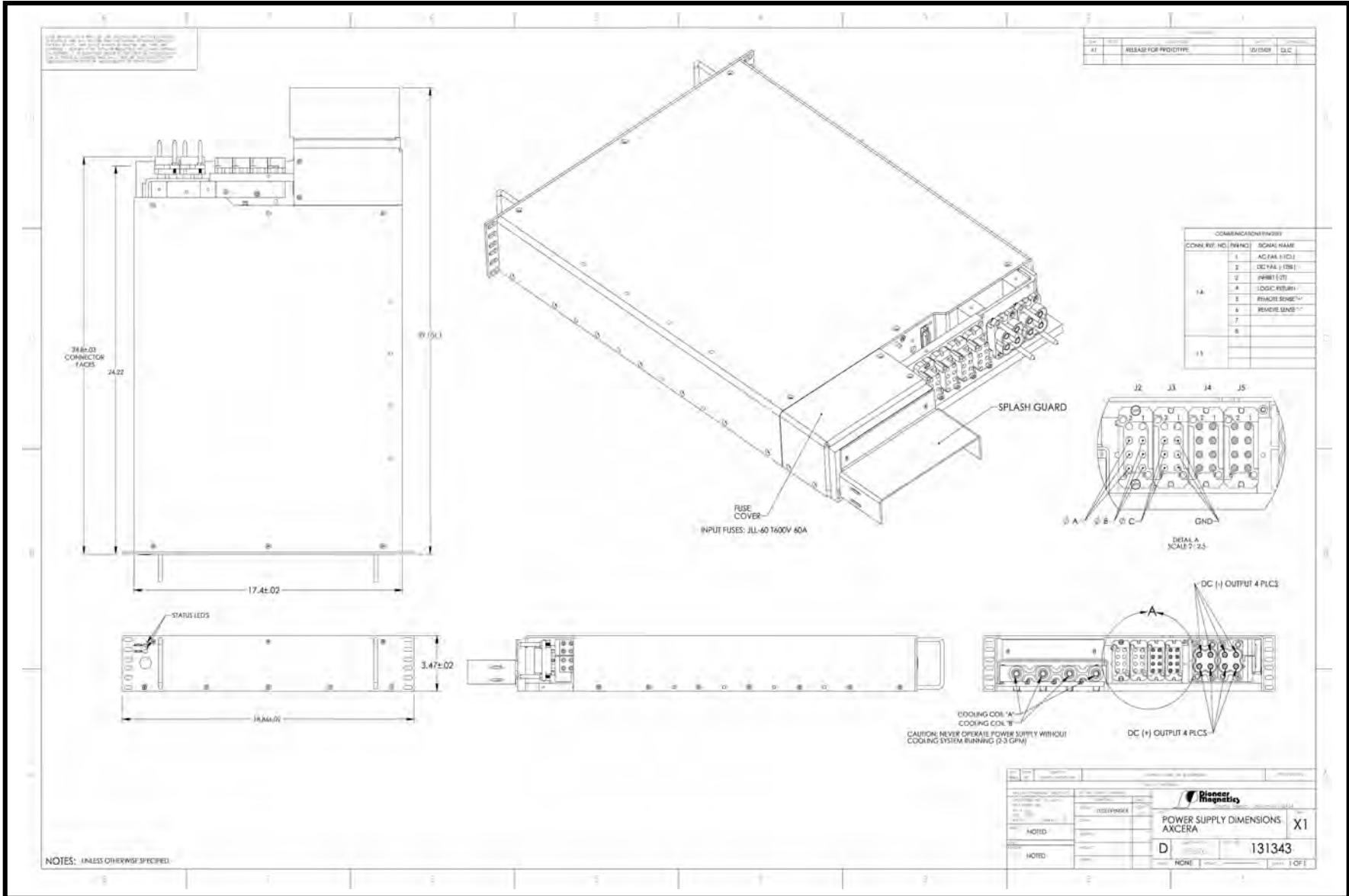
42V @ 595A, Total Output Power: 25kW



PM37223-10P, 25kW, 9/15/15

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42V @ 25kW, Pluggable Outline Drawing



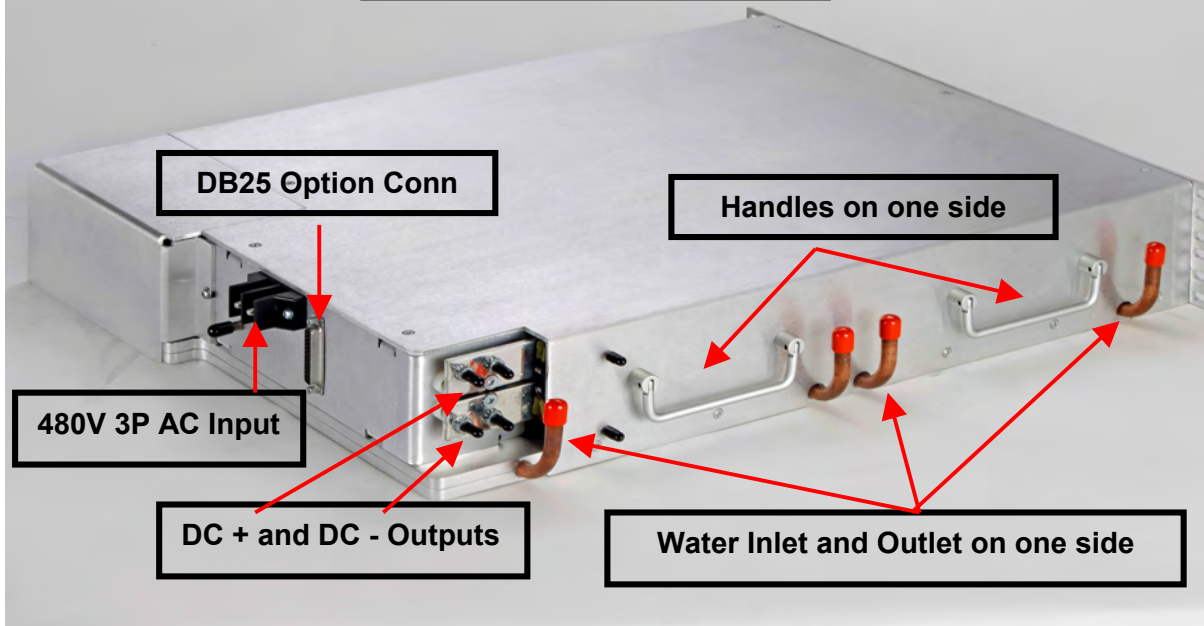
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PM37224-10P
364V @ 82.4A, Total Power = 30kW

Custom Front Panel



Custom I/O Panel



PM37224-10P, 30kW, 9/10/15

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