

Product Specification

19" 6U Power Rackmount System

Key Product Features

- Ideal for OEM application
- Low EMI, high efficiency
- Modular structure, high reliability, high maintainability
- Meets EN 55011 standard for conducted and radiated Class A devices
- Meets Mil-STD-461 standard for military applications
- Supports a wide range of popular worldwide 3Ø AC inputs (200Vac or 400Vac)
- Output voltage up to 500V, output current up to 1,000 amps
- "Advanced parallel" configuration of up to four identical units
- Modifiable voltage and output power upon customer request
- Minimum active power factor of 0.98 on all AC inputs
- I²C bus interface option
- Three year warranty

PS-12xx Rack and PS-19xx Rectifier

12V–500V 18KW 3-Phase AC-DC Front-End



Description

The PS-12xx high power/high voltage system is a 19" power chassis that uses internal fans for cooling. It includes up to nine PS-19xx 2,000 watt rectifiers in hot pluggable and power share N+1 configurations. The chassis delivers power up to 18KW and provides configurable output voltage in the range of 12V to 500V.

PS-12xx Model Options

Model	Input Voltage	I-out max	V-out max	P-out max	Output Connector
PS-1212	Wide 3Ø AC	850A	12V	10KW	Fujicon E2077E-10
PS-1225	Wide 3Ø AC	480A	25V	12KW	Fujicon E2077E-10
PS-1248	Wide 3Ø AC	250A	48V	12KW	MS3102E-36-4S
PS-1256	Wide 3Ø AC	265A	56V	15KW	MS3102E-36-4S
PS-1270	Wide 3Ø AC	215A	70V	15KW	MS3102E-36-4S
PS-1210	Wide 3Ø AC	150A	100V	15KW	MS3102E-36-4S
PS-1215	Wide 3Ø AC	115A	150V	17KW	MS3454W24-22S
PS-1220	Wide 3Ø AC	90A	200V	18KW	MS3454W24-22S
PS-1225	Wide 3Ø AC	72A	250V	18KW	MS3454W24-22S
PS-1230	Wide 3Ø AC	60A	300V	18KW	MS3454W24-22S
PS-1232	Wide 3Ø AC	56A	320V	18KW	MS3454W24-22S
PS-1238	Wide 3Ø AC	47A	380V	18KW	MS3454W24-22S
PS-1242	Wide 3Ø AC	43A	420V	18KW	MS3454W24-22S
PS-1250	Wide 3Ø AC	36A	500V	18KW	MS3454W24-22S

Product Specifications

Input

Input Voltage	380Vac \pm 10.0% 47-63 Hz line to line 3 \emptyset star connection or 440Vac \pm 10% 47-63 Hz line to 3 \emptyset delta connection per MIL-STD-1399 (navy) section 300A
Input Current	40A for 12KW & 200Vac & 29A for 18KW & 400Vac
Power Factor	0.98 typical at full load
Soft Start	Initial Inrush current limit not to exceed full rated input current
No load Input Power	100W

Output

Output Power	18KW/12KW
Output Voltage	Configurable from 12Vdc to 500Vdc
Polarity	Floating
Efficiency	Typical 88% at full load
Line Regulation	\pm 0.1% maximum at full load between \pm 10% line change
Load Regulation	\pm 0.5% maximum at 10%-90% load
Ripple Noise	\leq 1% p-p Max at 20 MHz bandwidth with 1uF ceramic and 10uF electrolytic on measure point
Initial set point tolerance	\pm 1V
Overshoot & Undershoot	Less than 1% at turn on-off
Turn On Rise Time	Soft start 100mSec typical
Hold-Up Time	5mSec typical
Switch-On Time	500mSec typical
Temperature Coefficient	0.02% / $^{\circ}$ C
Switching Frequency	60KHz

Protection

Over-current/short circuit-protection	105% to 120% of maximum constant current (I) limit
Over-Voltage Protection	Latch shut down at 110-125%
Over-Temperature Protection	Latch shutdown due to excessive ambient temperature
Short Circuit	Trip and restart

Front Panel Indicators and Commands

DC OK	Green LED illuminates for DC O
FAILURE	Red LED illuminates for FAILURE
RESET	Power Supply Reboot – Momentary Switch
Voltage Meter (VOLTS)	Measure Output Voltage (V)
Current Meter (AMPS)	Measure Output Current (I)
Output Current Sense	10mV/1A \pm 10%

Environment

Temperature	-20°C to 70°C, De-rate of 2.5% from 55°C
Storage	-40°C to 85°C
Humidity	Operating 10–90%RH, storage 10–95%RH
Altitude	Operating 10,000 ft, Non-operating 40,000 ft
Vibration and Shock	Meet ETS 300 019
Cooling	Internal fans, Variable speed control

Meets FCC Class A, CISPR 22 Class A, EN55022 Class A

EN61000-3-2	Harmonics
EN61000-3-3	Voltage fluctuation
EN6000-4-2	ESD +8KV AIR +4KV contact discharge
EN61000-4-3	Radiated immunity of 80–1000Mhz 3V/m, AM 80%
EN61000-4-4	Transient 1KV for AC power port, 0.5KV for DC I/O
EN61000-4-5	Surge 2KV common mode and 1KV differential mode
EN61000-4-8	3A /m at 50Hz, performance criteria A
EN61000-11	Voltage dips and interruption: 30% reduction for 10mSec Criteria-B, 60% reduction for 100mSec Criteria-C, 95% reduction for 5000mSec Criteria-C

Safety, Regulatory, and EMC Specifications

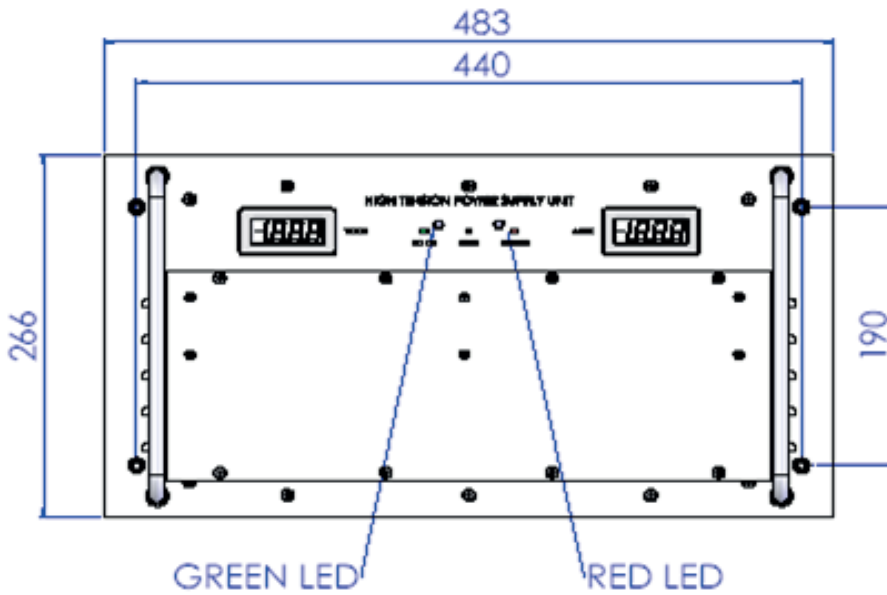
Input to Case	3500Vdc
Input to Output	3500Vdc
Output to Case	500Vdc
Insulation resistance	10MΩ at 500Vdc
Safety	Acc. To EN60950 Class 1
Creepage / Clearance	Acc. To VDE 0110>/-4mm
Air Distance	Acc. To VDE 0110>/-3mm
MTBF	100,000 hours minimum per BELCOR 332, issue 6 specification @30°C

Mechanical

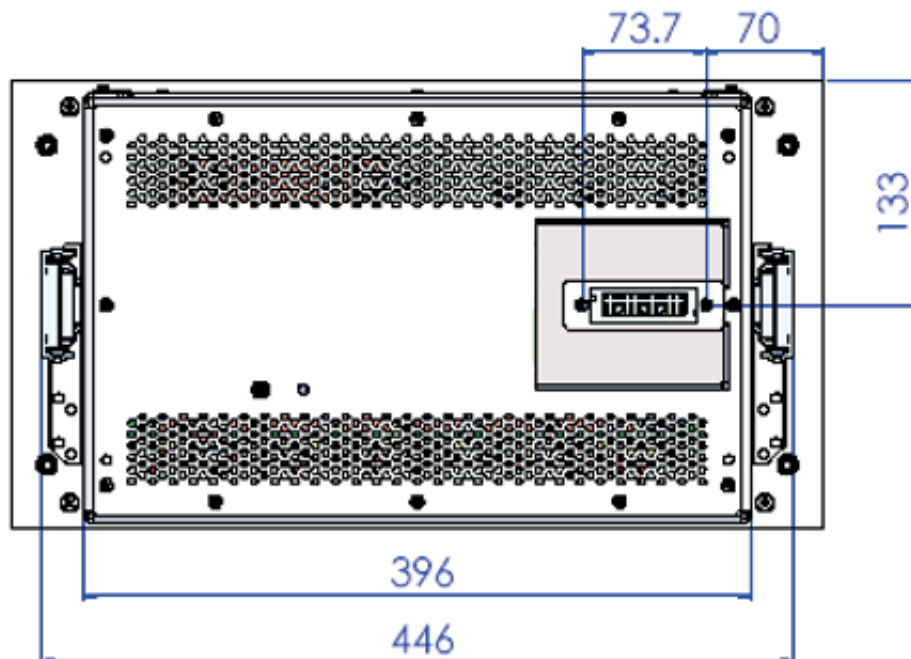
Size (W x H x D)	483mm x 266mm x 446mm
Weight	60Kg
Input /Output Connector	Positronic PLC30M10140/AA + MC112N-14
Mating Connector	Mating Connector

Outline Drawing

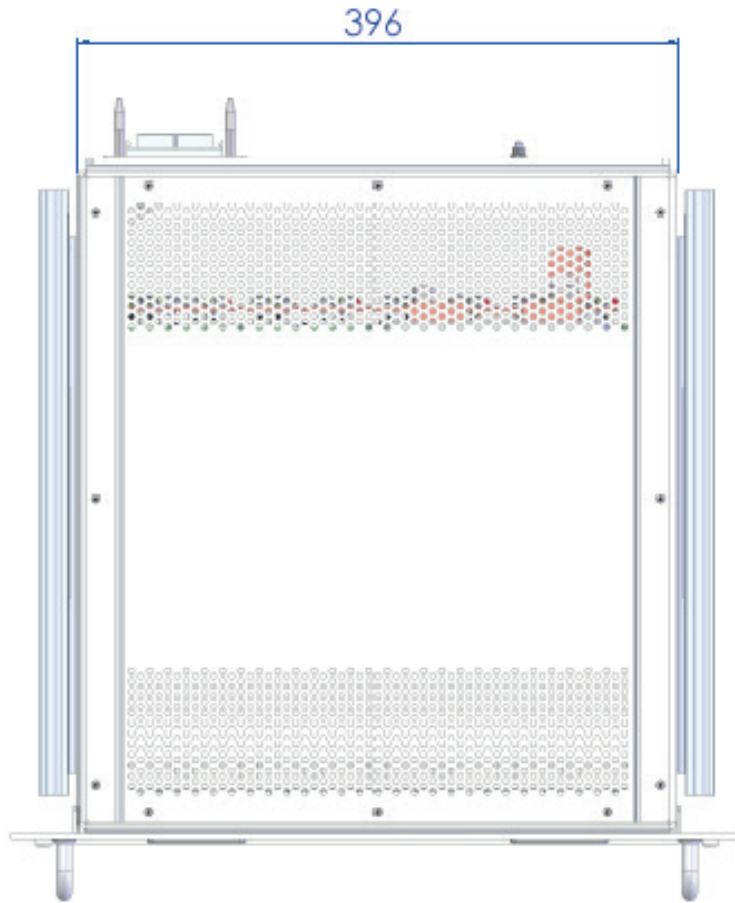
Front View



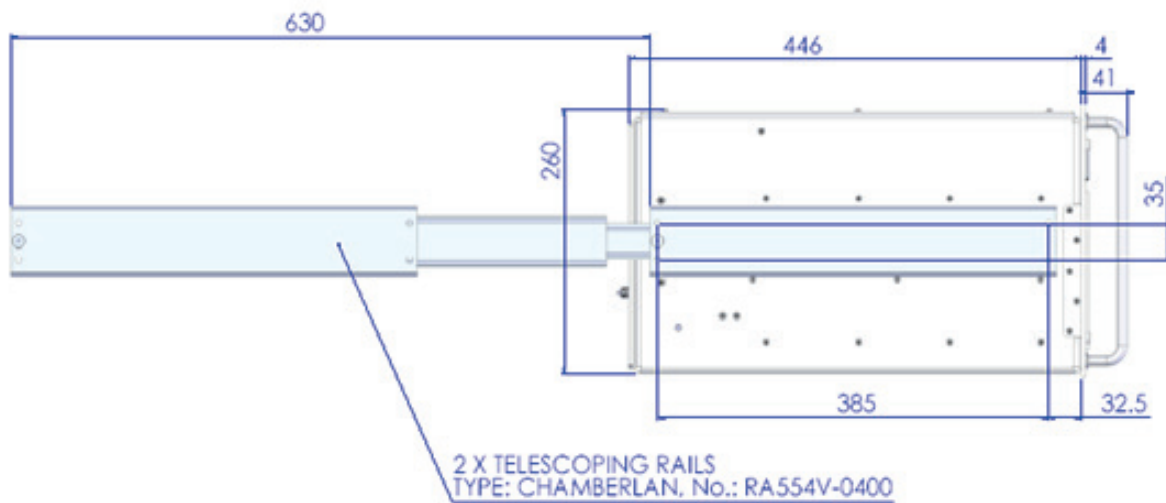
Rear View



Top View



Side View



Rear View Product Images

Option I



Option II



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