

Electrical Specification for:	48V 4500W AC-DC FRONT – END 19" POWER RACK
TelkooR Model:	900-1200-0000



CUSTOMER: GENERAL	SIZE	CAGE CODE	S5417	DWG. NO.	1200-DOC1-10	REV	A	
	SCALE		RELEASE DATE	22/06/7	SHEET	1	OF	1

REVISION HISTORY					
Rev Level	Rev Date	Change Made	Reason for Change	Effective	Approved By
A	22/060/7	Release for production	Release for production	22/060/7	S. Sadot

Approvals		
	Name	Date
Written by:	S. Sadot	1/6/07
Engineering:	S. Sadot	1/6/07
Sales & Marketing:	B Weiss	22/060/7
Management:	Y. Ben-Ami	22/060/7

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	SCALE	RELEASE DATE	22/060/7	SHEET	2	OF	2

Special Features

- 1U High
- Up to three units model PS-1548 in power share
- Up to 4500W 48V N+1 configuration
- Power Supplies hot plug capability, internal O-ring MOSFETs
- Parallel able rack for power share
- I2C Serial Data Bus - Option
- PMBus Communication Protocol - Option
- LED's Logic status indicators
- RoHS - compliances

Input:

- Input Voltage: 90 - 264Vac, auto range.
- Frequency: 47-63Hz
- Inrush Current: 50 A peak for each AC plug.
- Power Factor: 0.98 typical at 230Vac, full load
0.99 typical at 115Vac, full load
- Efficiency >89% at 230Vac, full load rated power
>83% at 115Vac, full load rated power
- Input Protection Internal Fuses 16A

Output Voltages & Currents:

Input Range	V1 Output Voltage	I Min. Load	I Max. Load	Peak Load	V Aux. (*Note 1)
90Vac – 140Vac	48V	0	75A	84A	+5V/90mA +3.3V/90mA
180Vac – 26Vac	48V	0	96A	105A	+5V/90mA +3.3V/90mA

- Output Power: 4.5KW Max. For 48V (24 & 12V units upon request)
- Line & Load Regulation: ± 1% Maximum.
- Ripple & Noise V1: 1% p-p Max @ 20 MHz bandwidth.
- Output Voltage Adjustment Range ± 5%
- Initial Set Point Tolerance: ± 150mV
- Overshoot & Undershoot: Less than 1% at turn ON-OFF
- Transient Load Response: ± 5% Max. (2% typical) deviation for load change of 50% to 100%, at slew rate of 1A/usec, recovery time less then 1mSec
- Turn On Delay: 2 sec. Maximum.
- Hold-up Time: 9mSec minimum
- Turn-On Rise Time: 60mSec Max.
- Over-current Protection: 105 to 120% of I Max. constant current limit, automatic recovery, when cause of overload or short is removed
- Over-voltage Protection: Shut down at 110 ÷ 130% of nominal output, AC input must recycled to restart.
- Temperature Protection: Shutdown due to excessive ambient temperature at over heating or malfunction of cooling fans. The sense point is at 90°C for the internal heat signal, unit recovers automatically typical hysteresis 30°C.

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	SCALE		RELEASE DATE	22/06/7	SHEET	3	OF 3

Signals & Commands

Important note: All signals and commands refer to +5V Aux RTN.

(See attached pin assignment table)

Inhibit:	Active low, main outputs shut down to zero. Only auxiliary output exists at this point.
Enable:	Contact closure to external ground to start unit. On shortest unit. On shortest pin (last make, first break)
PS ALARM:	Open collector active low when the output drops 10% below nominal.
AC OK:	Open Collector Active low when AC in range.
Fan Fail:	TTL Compatible signal, normally High, goes low when fan fail.
I ² C (IPMI interface) - OPTION	Internal I ² C/IPMI interface Card

Visual Indicators

AC In Range	Green LED illuminates for AC O.K
Output In Range	Green LED illuminates for V1 output in range.
Hot swap indication	Blue LED illuminates in accordance with ATCA standard for hot swap indications (see Hot swap indication Table)

Environmental Specifications:

Temperature:	Operating: -5°C to +50°C (de-rating linearly to 70 °C with 50% de-rating). Storage: -40°C to +85°C.
Temperature Coefficient:	0 to 70°C ± 0.02%/°C
Cooling:	Forced air by internal 2 fans
Humidity:	5% to 95% RH non-condensation.
Altitude:	Operating 10,000 ft. Non- operating 40,000 ft.
Vibration:	Three orthogonal axes at 1 octave/min, 5 min dwell at four major resonances at 0.75G peak, 5Hz to 500Hz.

Safety Regulatory & EMC Specifications (Designed to meet):

MEETS FCC CLASS B, CISPR 22 CLASS B, EN55022 CLASS B with an external TBD line filter	
EN61000-3-2	HARMONICS
EN61000-3-3	VOLTAGE FLUCTUATION
EN6000-4-2	ESD +8KV AIR +4KV CONTACT DISCHARGE, performance criteria B
EN61000-4-3	RADIATED IMMUNITY: 80-1000Mhz 3V/m, AM 80% (1KHz), criteria A
EN61000-4-4	FAST TRANSIENT: 1KV for AC power port, 0.5KV for DC power I/O and signals Port, performance criteria B
EN61000-4-5	SURGE: 2KV common mode and 1KV differential mode
EN61000-4-6	3VRMS, 80% A.M. BY 1kHz
EN61000-4-8	3A /m at 50Hz, performance criteria A.
EN61000-11	VOLTAGE Dips and interruption: 30% reduction for 10mSec –Criteria B, 60% For 100mSec. Criteria C, 95% reduction for 5000mSec Criteria C.
Dielectric Withstand:	
Input to Case:	1500VAC.
Input to Output:	3000VAC
Output to Case:	1500VDC
Safety Agency Compliance:	
	UL 60950, EN 60950, IEC 60950
	CSA C22.2 -234, LEVEL 3.
	CE – MARK 2200VDC
Leakage Current:	2mA @50/60 Hz, 264Vac input.
MTBF: (Per single cassette)	300,000 hours minimum per BELCOR 332, issue 6 specification @30 degrees C

CUSTOMER: GENERAL	SIZE	CAGE CODE	S5417	DWG. NO.	1200-DOC1-10	REV	A
	SCALE		RELEASE DATE	22/06/07	SHEET	4	OF 4

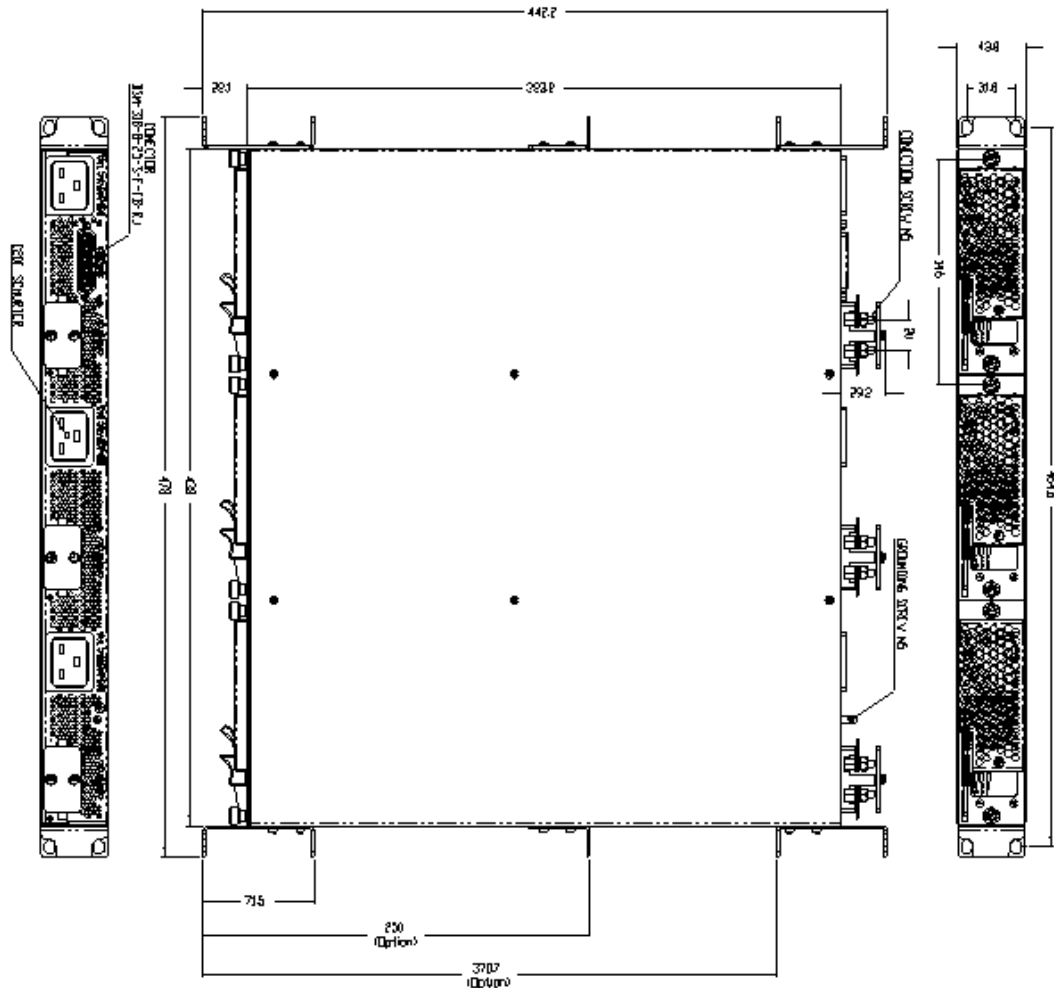
Mechanical Dimensions

Case	Fully enclosed metal box IP20 conform
Size	1U X 19" X 15.11"
Weight	4.44Kg
I/O Connector	Positronic Right Angle PCI47M400A1
DC-Output	3 X 14 AWG
AC – line Cord	3 X IEC60320C19 Schurter 3 x 14 AWG
Signals Connector	D-TYPE 25 PINS

Hot Swap indication Table (BLUE LED on Front Panel)

Status	Definition
Steady Blue	P.S. powering up or ready for ex-traction
Blinking blue	P.S. hot swap process
Off	P.S. operating

Power Box Outline Drawing



CUSTOMER: GENERAL

A

SCALE

RELEASE DATE

22/06/17

SHEET

5

OF

5

PS-1200 general view. Rear/Back panels



CUSTOMER: GENERAL	SIZE	CAGE CODE	S5417	DWG. NO.	1200-DOC1-10	REV	A
	SCALE		RELEASE DATE	22/06/07	SHEET	6	OF 6

Power Box 25 pin D-TYPE Pin Assignment

Pin #	Signal Name	Remarks
1	5V RTN	FLOATING
2	5V	FLOATING
3	48V RTN	
4	5V PTC	
5	48V RTN	
6	EXIST2	
7	EXIST1	
8	EXIST0	
9	N.C	
10	PTC ADJ	
11	PTC INTERNALLY	
12	N.C	
13	SCL- B	I2C bus B
14	SDA_ B	I2C bus B
15	SCL_ A	I2C bus A
16	SDA- A	I2C bus A
17	AC-OK 2	OPEN COLLECOR ACTIVE HIGH
18	AC-OK 1	OPN COLLECTOR ACTIVE HIGH
19	AC-OK 0	OPEN COLLECTOR ACTIVE HIGH
20	PS ALARM 2	OPEN COLLECTOR ACTIVE LOW
21	PS ALARM 1	OPEN COLLECTOR ACTIVE LOW
22	PA ALARM 0	OPEN COLLECTOR ACTIVE LOW
23	INHIBIT 2	CONNECT TO GND to start the unit
24	INHIBIT 1	CONNECT TO GND to start the unit
25	INHIBIT 0	CONNECT TO GND to start the unit

CUSTOMER: GENERAL	SIZE	CAGE CODE	S5417	DWG. NO.	1200-DOC1-10	REV	A
	SCALE		RELEASE DATE	22/06/7	SHEET	7	OF 7