Electrical Specification for:	**Wide Range AC to 48VDC 1400W Front End Strongbox Power Supply**
Telkoor Part numbers:	**900-2182-0000**

REVISION HISTORY					
Rev Level	**Rev Date**	**Change Made**	**Reason for Change**	**Effective**	**Approved By**
A	22/02/08	Specification Release		22/02/08	S.Sadot
A2	07/07/09	Update output power to 1400W	Spec. updated	19/07/09	S.Sadot

Approvals		
	Name	**Date**
Written by:	S. Sadot	13/12/08
Engineering:	S. Sadot	13/12/08
Sales & Marketing:	B . Steinfeld	13/12/08
Management:	M. Heller	13/12/08

Input:

Input Voltage:	90-254Vac, auto range, single phase
Frequency:	47-63Hz
Inrush Current:	40Amaximum, cold start at 25°C, 250Vac
Power Factor:	0.98 typical at 230Vac, full load 0.98 typical at 115Vac, full load
Efficiency	88% typical at 230Vac, full load rated power 1400W 84% typical at 115Vac, full load rated power 1200W
Input Protection:	Internal Line Fuse: IEC type, 3AG, 16 A 250Vac FAST ACTION
Brown – Out:	75 to 300Vac for 50Msec

Output Voltages & Currents:

Input Range	V1 Output Voltage	I Min. Load	I Max. Load	Peak Load	V Aux. (*Note 1)
90Vac – 140Vac	48V	0	25A	27A	+5V/30mA
180Vac – 264Vac	48V	0	29A	31A	+5V/30mA

(*) +5V/30mA exists when main output in shut down mode.

Output Power:

Line & Load Regulation:	±0.5% for load changes from zero to full load.
Ripple & Noise	200 mVp-p Max at 20 MHz bandwidth.
Output Voltage Adjustment Range	±5%
Initial Set Point Tolerance:	48V ± 150mV
Overshoot & Undershoot:	Less than 1% at turn ON-OFF
Transient Load Response:	±5% Max. (2% typical) deviation for load change of 25% to 75% , at slew rate of 1A/usec, recovery time less then 500Msec
Turn On Delay:	2 sec. Maximum.
Hold-up Time:	10 mSec minimum at 110Vac and full load
Turn-On Rise Time;	50mSec Max.
Over-current Protection:	105 to 125% of Imax, constant current limit, automatic recovery, when cause of overload or short is removed
Over-voltage Protection:	Shut down at 120 ÷ 125% of nominal output, AC input must recycled to restart.
Temperature Protection:	Shutdown due to excessive ambient temperature due to over heating or malfunction of cooling fans. The sense point is at 105°C for the internal heat signal, unit recovers automatically typical hysterisis 20°C.
Remote Sense	N/A
Current Share	± 10% Max. N+1 Redundancy, up to 6 parallel units. Single wire.
Hot Swap	Internal O-Ring diode (FET)

Signals & Commands

Inhibit:	Active low, main outputs shut down. Only auxiliary output exists.
Power OK:	Open collector active low when the output drops below 10%.
Temp. Warning:	Open Collector active low when the temperature 10% below shut down .
PS ON:	Contact closure to 5V SB ground to start unit.
AC OK:	Open Collector Active Low
I²C bus	I²C Passive data : s/n , model no. ,revision ,and/or user defined data

Visual Indicators

AC In Range	Led illuminates for AC O.K
Output In Range	Led illuminates for DC output in range.

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 fans
Humidity:	Maximum 5% to 95% RH non-condensation.
Altitude:	Operating 6,000 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:

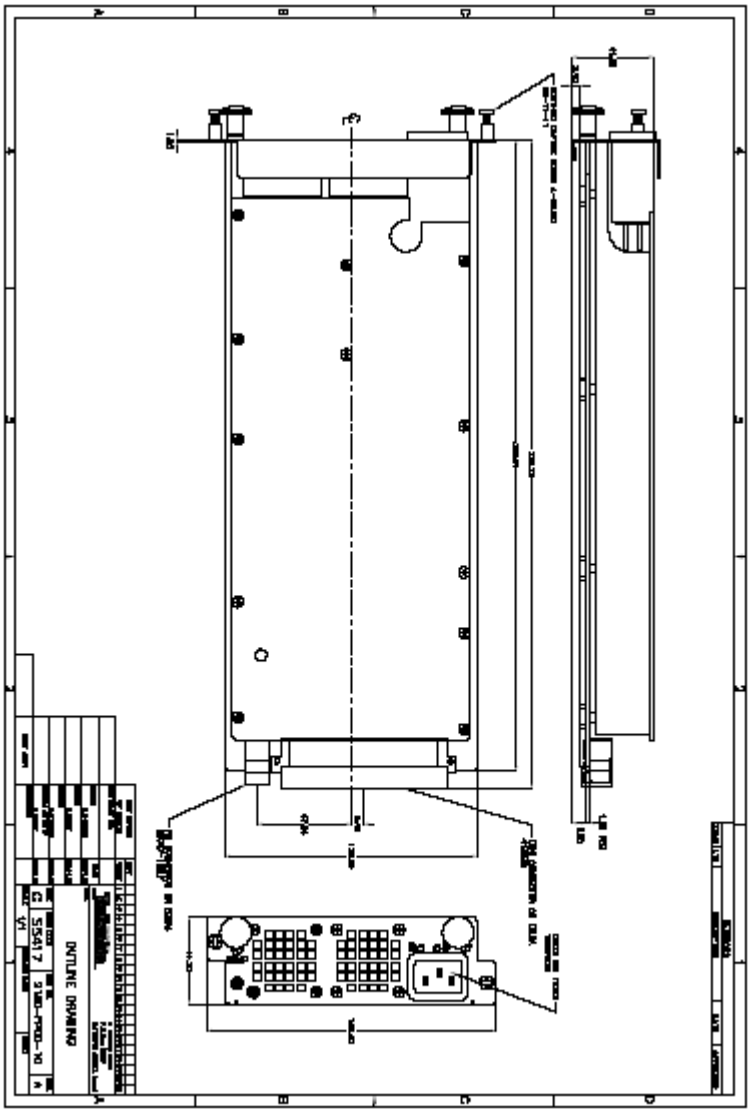
MEETS FCC CLASS A ,CISPR 22 CLASS A,EN55022 CLASS A

EN61000-3-2	HARMONICS
EN61000-3-3	VOLTAGE FLUCTUATION
EN6000-4-2	ESD +8KV AIR +4KV CONTACT DISCHARGE, 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.
EN61000-4-11	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:	Input to case: 1500VAC.
Input to Output:	Input to output: 3000VAC
Output to Case:	Output to case: 2100VDC.
Safety Agency Compliance:	UL 60950-1, EN 60950-1, CE Mark
Leakage Current:	2mA @50/60 Hz, 264Vac input.
MTBF:	300,000 hours minimum per BELCOR 332,issue 6 specification @30 degrees c.(Max. junction Temperature 110°C ,Capacitors 105°C)

Mechanical Dimensions

Size	1U, H X 129 W X 332 D mm
Weight	1.6Kg
Input DC Connector	Via IEC-320 AC inlet on front panel.
DC Output Connector	Din – 15pin male on the back side for back plane connection
Command & Control Connector	AMP P/N 5223008-1

Outline Drawing



Power Supplies Ltd.
Telkoor

2182 Power Supply Module Interface Connector - J1

Pin #	Function	Notes
A1	N.C	GROUNDED ON THE CUSTOMER BACKPLANE
B1	GND 5V	
C1	SC0	SCL-0 (I2C)
D1	N.C.	
E1	5V 30mA	100mA IF MIN LOAD 1A IN 48V OUT
A2	N.C	GROUNDED ON THE CUSTOMER BACKPLANE
B2	N.C	GROUNDED ON THE CUSTOMER BACKPLANE
C2	GND 5V	
D2	SD0	SDL-0 (I2C)
E2	AC OK	O.C. ACTIV LOW
A3	SC1	SCL-1 (I2C)
B3	SD1	SDL-1 (I2C)
C3	INT1	INT of I2C no. 1
D3	INT0	INT of I2C no. 2
E3	N.C.	
A4	N.C.	
B4	-V48 (NOW REV0)	REV0
C4	-V48 (NOW REV0)	REV1
D4	-V48 (NOW REV0)	REV2
E4	-V48	
A5	DEG_S	O.C. ACTIV LOW (INTERNAL 110*C IN PS)
B5	N.C.	
C5	INHIBIT	
D5	OUT GOOD	O.C. ACTIV LOW OUT VOLTAGE IS ABOVE 43V
E5	PS OFF	MUST CONNECT TO E4, IF OPEN THE PS NOT WORK
A6	N.C	
B6	Nsense	Negative sense
C6	Psense	Positive sense
D6	CURRENT_S	CURRNENT SHARING SIGNAL
E6		