

Electrical Specification for:	Wide Range DC to 48VDC 600W Front End StrongBox Power Supply
TelkooR Part numbers:	900-3100-0000

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	3100-DOC1-10	REV	A2
VCOM	SCALE	RELEASE DATE	16/10/06	SHEET	1	OF	7

REVISION HISTORY				
Rev Level	Rev Date	Change Made	Reason for Change	Effective
A	16/10/06	Release for production		16/10/06
A1	23/10/06	Updating J1 pin correlation table	Customer request	23/10/06
A2	26/10/06	Input range, reverse polarity and inrush current spec update	Customer request	26/10/06

Approvals		
	Name	Date
Written by:	S. Sadot	15/10/06
Engineering:	S. Sadot	15/10/06
Engineering Manager:	M. Heller	15/10/06
Sales & Marketing:	M. Allon	15/10/06
Management:	Y. Ben Ami	16/10/06

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Input:

Input Voltage: 36 -72 VDC.
 Power supply turn on voltage: 34 - 36 VDC
 Power supply turn off voltage: 33 – 35.5 VDC
 Inrush Current: 20A max. limited by power MosFet
 Efficiency 88% typical at 48Vdc, full rated load
 Reverse Polarity Internally protected by power MosFet
 Input Protection: Non –user serviceable, Internal Line Fuse
 Operation Frequency 90 to 110 KHz

Output Voltages & Currents:

<u>Output Voltage</u>	<u>Min. Load</u>	<u>Max. Load</u>	<u>Peak Load</u>	<u>V Aux. (*)</u>
48V	0	12.5A	13.5A	+5V/1A

(*) V Aux isolated from input and referenced to -VOUT.

Output Power: 600W
 Line Regulation: ±0.2% for Vin (Min) to Vin (Max).
 Load Regulation: ±0.5% for load changes from zero to full load.
 Ripple & Noise 150 mVp-p Max at 20 MHz bandwidth.
 Output Voltage Adjustment Range ±5%
 Initial Set Point Accuracy: ± 1%
 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: 1 sec. Maximum.
 Hold-up Time: 10mSec minimum at 48Vdc and full load
 Turn-On Rise Time; 30mSec Typical
 Over-current Protection: 105 to 130% of I Max, constant current limit, automatic recovery,
 Over-voltage Protection: Shut down at 120 ÷ 130% of nominal output (Latched Shut –Down), input must recycled to re-start.
 Temperature Protection: Shutdown due to excessive internal temperature 90 ±5°C Automatic recovery.
 Remote Sense Total voltage compensation for cable losses 1V with respect to the main output.
 Current Share Accuracy of shared current with up to 6 parallel units. Single wire.
 Hot Swap Internal O-Ring diode

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Signals & Commands

(See attached appendix table)

Inhibit: Active low, main outputs shut down to zero. Only auxiliary output exists at this point.
 Power OK: Open collector active low when the output drops below 10% of its nominal value.

Visual Indicators(Front Panel Led)

Input OK Green Led illuminates
 Alarm RED Led illuminates when output voltage not present.

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-condensating.
 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.
 ROHS compliant: Yes

Safety Regulatory & EMC Specifications:

MEETS FCC CLASS B ,CISPR 22 CLASS B,EN55022 CLASS B
 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 500mSec Criteria C.

Dielectric Withstand:
 Input to Case: Input to case: 1500VDC.
 Input to Output: Input to output: 3000VDC
 Output to Case: Output to case: 1500VDC
 Safety Agency Compliance: UL 60950-1
 CSA C22.2 -234, LEVEL 3.
 CE – MARK
 MTBF: 300,000 hours minimum per BELCOR 332,issue 6 specification @30 degrees c.(Max. junction Temperature 110°C ,Capacitors 105°C)

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Mechanical Dimensions

Size	1U, H X 129 W X 332 D mm
Weight	1.6Kg
Input DC Connector	Dinkle terminal block DT7CB14W03
DC Output Connector	ERNI P/N 413638 (H15)
Command & Control Connector	FCI P/N HM1F51FAR0006H6

Connector Designations

J1
POWER CONNECTOR
ERNI P/N 413638 (H15)

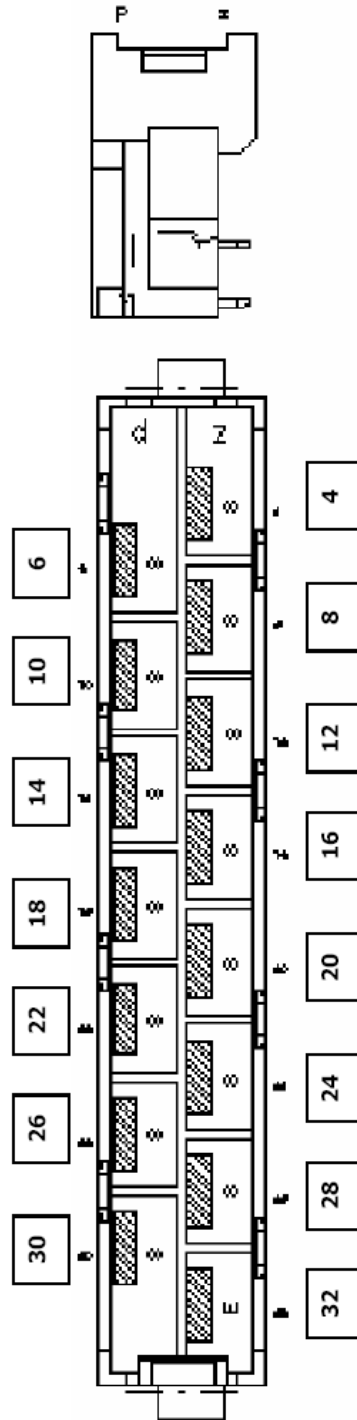
PIN #	FUNCTION
4	CHASSIS GND
6	CHASSIS GND
8	CHASSIS GND
10	+V0 (COM)
12	+V0 (COM)
14	+V0 (COM)
16	+V0 (COM)
18	+V0 (COM)
20	+V0 (COM)
22	-VOUT
24	-VOUT
26	-VOUT
28	-VOUT
30	-VOUT
32	-VOUT

J2
SIGNAL INTERFACE
FCI P/N HM1F51FAR0006H6

PIN #	FUNCTION
A1	N.C
B1	5V GND
C1	N.C
D1	N.C
E1	+5V AUX.
A2	N.C
B2	N.C
C2	EXIST
D2	N.C
E2	INPUT OK
A3	N.C
B3	N.C
C3	N.C
D3	N.C
E3	N.C
A4	N.C
B4	N.C
C4	N.C
D4	N.C
E4	N.C
A5	N.C
B5	N.C
C5	INHIBIT
D5	POWER OK
E5	POWER SUPPLY OFF
A6	N.C
B6	-V SENSE
C6	COMMON SENSE
D6	CURRENT SHARE
E6	N.C

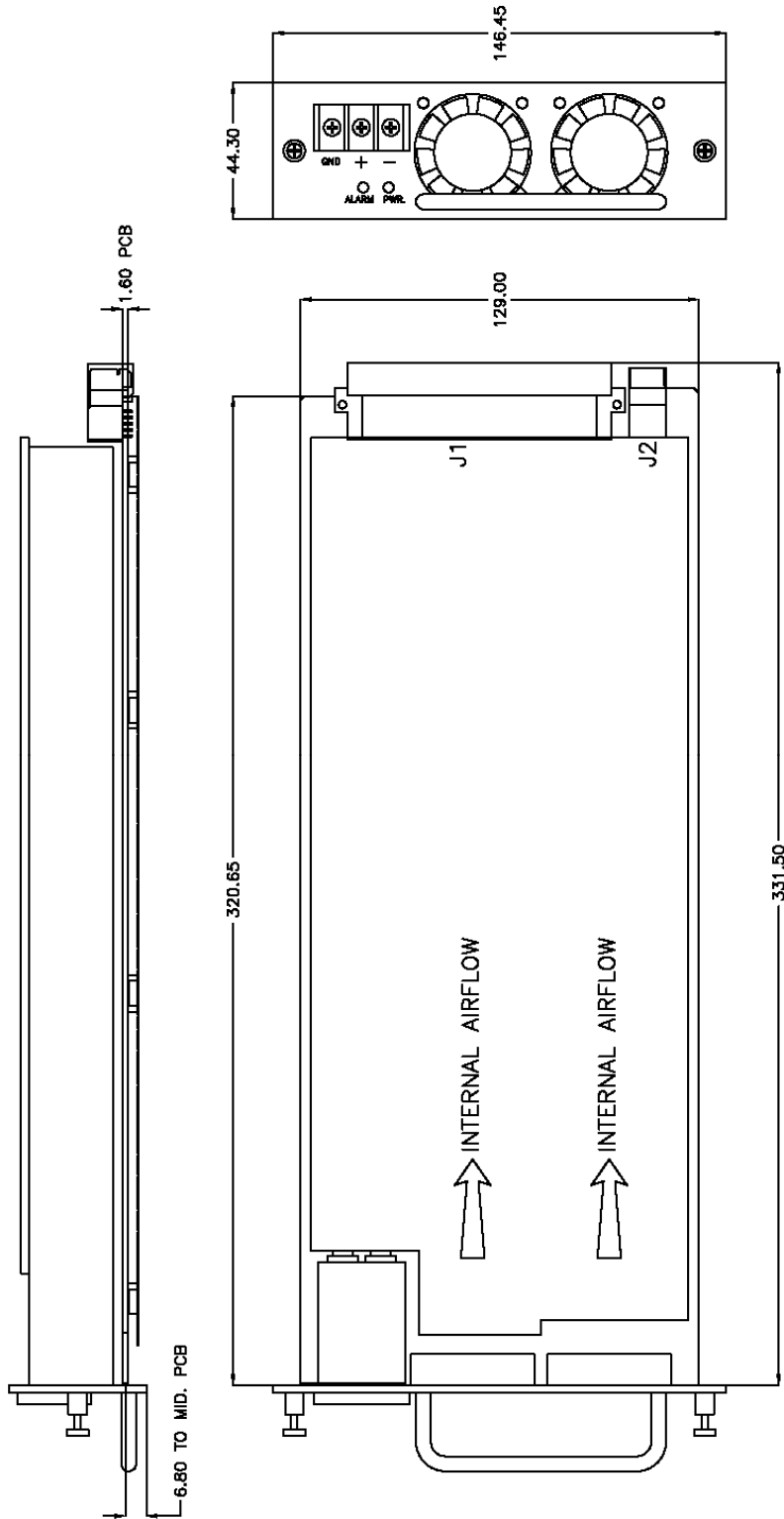
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Connector J1 - Pin correlation with electrical circuit



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Outline Drawing



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