

Electrical Specification for:	<p style="text-align: center;">Wide Range AC to 48VDC 800W Front End Power Supply</p>
Telkoor Part numbers:	<p style="text-align: center;">900-2180-0000</p>

CUSTOMER	SIZE	CAGE CODE	S5417	DWG. NO.	2180-DOC1-10	REV	A
GENERAL	SCALE		RELEASE DATE	1/03/08	SHEET	1	OF 1

REVISION HISTORY					
Rev Level	Rev Date	Change Made	Reason for Change	Approved By	Effective
A	22/02/2008	Initial Specification Release		S. Sadot	22/02/2008

Approvals		
	Name	Date
Written by:	S. Sadot	13/3/2008
Engineering:	M. Heller	13/3/2008
Sales & Marketing:	B. Steinfeld	13/3/2008

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Input:

Input Voltage: 90-254Vac, auto range, single phase
 Frequency: 47-63Hz
 Inrush Current: 40A maximum, 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
 84% typical at 115Vac, full load rated power
 Input Protection: Internal Line Fuse: IEC type, 3AG, 12.5 A 250Vac FAST ACTION
 Brown – Out: 75 to 300Vac for 1sec

Output Voltages & Currents:

<i>Model</i>	<i>Output Voltage</i>	<i>Min. Load</i>	<i>Max. Load</i>	<i>Peak Load</i>	<i>V Aux. (*)</i>
900-2182-0000	48V	0	16.6A	18A	+5V/30mA

(*) +5V@30mA exists when main output in shut down mode, output to +VOut terminal. Common connected.

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
 Turn-On Rise Time; 50mSec Max.
 Over-current Protection: 105 to 125% of I_{max}, 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 hysteric 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)

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GENERAL	SCALE	RELEASE DATE	1/03/08	SHEET	3	OF	3

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 5VSB ground to start unit.
 AC OK: Open Collector Active Low

 I²C bus Option - 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 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:

MEETS FCC CLASS B, CISPR 22 CLASS B, EN55022 CLASS B
 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

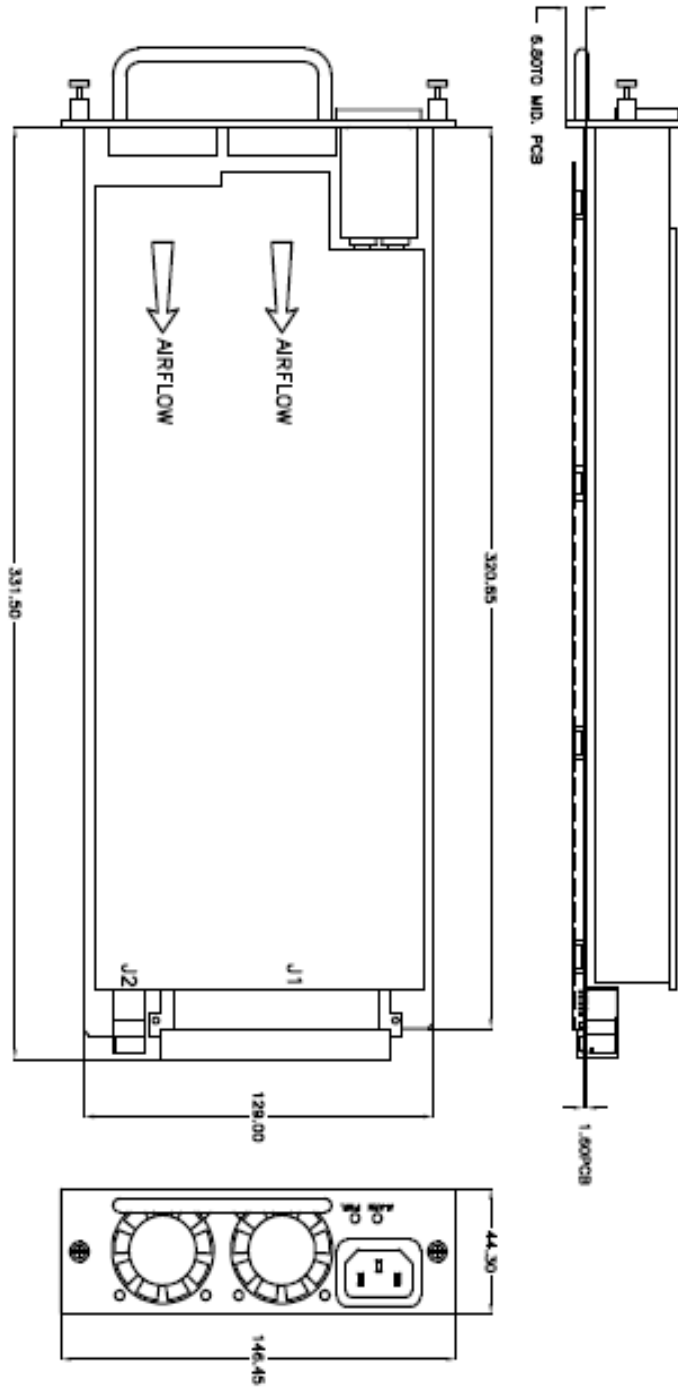
 Dielectric Withstand:
 Input to Case: Input to case: 1500VAC.
 Input to Output: Input to output: 3000VAC
 Output to Case: Output to case: 2100VDC.
 Safety Agency Compliance: UL 60950
 CSA C22.2 -234, LEVEL 3.
 CE – MARK

 Leakage Current: 2mA @50/60 Hz, 264Vac input.
 MTBF: 200,000 hours minimum per BELCOR 332,issue 6 specification @30 degrees c. (Max. junction Temperature 110°C, Capacitors 105°C)

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GENERAL	SCALE	RELEASE DATE	1/03/08	SHEET	4	OF	4

Outline Drawing and 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 25Pin D Type Z series for back plane connection



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GENERAL	SCALE	RELEASE DATE	1/03/08	SHEET	5	OF	5

PS-2180 PIN ASSIGNMENT

J1 – Signals & Command AMP P/N 5223008-1

PIN	FUNCTION
A1	Address A1
B1	5VSTB GND
C1	SCL
D1	N.C.
E1	5VSTB 30mA
A2	Address A0
B2	Address A2
C2	5VSTB GND
D2	SDA
E2	AC OK – Open collector active low ref. to 5VSTB GND
A3	N.C.
B3	N.C.
C3	N.C.
D3	N.C.
E3	N.C.
A4	N.C.
B4	-48V (REV-0)
C4	-48V (REV-1)
D4	-48V (REV-2)
E4	-48V
A5	Temp. Warning - Open collector active low Indicate temp. warning , ref. to +48V return
B5	N.C.
C5	Inhibit- Power supply ON/OFF switch, ref. to +48V return.
D5	Out Good- Open collector active High ref. to +48V return.
E5	PS ON/OFF – Connect to +48V return to start the unit.
A6	N.C.
B6	N sense
C6	P sense
D6	Current Share – Single wire N+1
E6	N.C.

J2 – Power Connector ERNI P/N 413638

PIN	FUNCTION
4	CHASSIS GND
6	CHASSIS GND
8	CHASSIS GND
10	V48+
12	V48+
14	V48+
16	V48+
18	V48+
20	V48+
22	V RTN48
24	V RTN48
26	V RTN48
28	V RTN48
30	V RTN48
32	V RTN48

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GENERAL	SCALE		RELEASE DATE	1/03/08	SHEET 6	OF	6