

**Electrical
Specification for:**

eF200-433

Wide range AC/DC Quad Output 200W Power Supply

**Telkoor Part
Number:**

900-0633-0000

CUSTOMER: GENERAL	SIZE	CAGE CODE	S5417	DWG. NO.	0633-DOC1-10	REV	A1
	SCALE		RELEASE DATE	7.5.06	SHEET	1	OF 5

REVISION HISTORY				
Rev Level	Rev Date	Change Made	Reason for Change	Effective
A	7/5/06	Product Release		7/5/06
A1	15/5/08	Leakage current changed to 2mA	Wrong value	15/5/08

Approvals		
	Name	Date
Written by:	Sam Sadot	7/5/06
Engineering:	Sam Sadot	7/5/06
Sales & Marketing:	Mor Allon	7/5/06
Management:	Yossi Ben Ami	7/5/06

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Input:

Input Voltage:	85-265Vac
Frequency:	47-63Hz
Inrush Current:	60A max. Cold start at 25 ° C, 220VAC
Power Factor:	0.96 typical at 230Vac, full load 0.98 typical at 115Vac, full load
Efficiency	80% typical at 230Vac, full load 77% typical at 115Vac, full load
Input Protection:	Internal Line Fuse: IEC type 4A 250Vac Normal BLO
Brown – Out:	75 to 300Vac

Output Voltages & Currents:

<i>Output</i>	<i>Output Voltage</i>	<i>I Min</i>	<i>I Max</i>	<i>Max. Peak</i>
V1	5.15V	0	15A	17A
V2	3.4V	0	15A	17A
V3	+12V	0	3.5A	5A
V4	-12V	0	1.0A	2A

Notes:

- Maximum output power at any combination within this table is 200 watts
- V4 return is floating

Output Power:	200W
Line & Load Regulation:	No load to full load over entire line range
V1 V2 V3	± 1%
V4	± 2%
Ripple & Noise:	
V1 & V2	50mV p-p tested on 10 µF, in parallel with 0.1 µF Ceramic Capacitors, Bandwidth 20 MHz
V3 & V4	120mV p-p tested on 10 µF, in parallel with 0.1 µF Ceramic Capacitors, Bandwidth 20 MHz
Output Voltage Adjustment Range	± 5% Trim On V1 & V2 Only.
Initial Set Point Tolerance:	
V1 & V2	± 0.05V
V3 & V4	± 0.2V at half load
Overshoot & Undershoot:	Less than 1% at turn ON-OFF
Transient Load Response:	±5% Max. Deviation for load change of 25% to 75%, at slew rate of 1A/µsec, recovery time less then 500mSec
Turn On Delay:	2 sec. Maximum.
Hold-up Time:	16mSec minimum at 110Vac and full load
Rise Time:	30mSec max.
Over-current Protection:	V1 110 to 130% of IMax, current limit, automatic recovery. V2 & V3 & V4 110 to 160% of Imax. Current limit, automatic recovery
Over-voltage Protection:	Outputs shut down at 110% to 130% of nominal, AC input must be Recycled to restore operation (on V1, V2 & V3).
Temperature Protection:	Internal thermostat protects the power supply against excessive temperature. Automatic recovery.

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Signals & Commands (one of the two signals is available upon request)

DC Fail (Standard) For V1, V2 & V3 - Open collector, active low when any of the outputs drop 10% below rated output.
Inhibit (Optional) Replace DC Fail signal Active Low

Environmental Specifications:

Temperature: Operating: -10 °C to +50 °C (de-rating linearly to 70 °C at -2.5% per 1°C).
Storage: -40 °C to +85 °C.
Temperature Coefficient: $\pm 0.01\% / ^\circ\text{C}$
Cooling: 100W free convection cooling (base plate cooling). 200W continuous forced air cooling, 15CFM min.
Humidity: Maximum 5% to 95% RH non-condensing.
Altitude: Operating 10,000 ft. Non- operating 40,000 ft.
Vibration: Three orthogonal axes at 1 octave/min, 5 min dwell at four major resonance at 0.75G peak, 5Hz to 500Hz.

Safety Regulatory & EMC Specifications:

MEETS FCC CLASS B, EN55022 CLASS B – With an external 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.
EN61000-4-11 VOLTAGE Dips and interruption: 30% reduction for 10mSec –Criteria B, 60% For 100mSec. Criteria C, 95% reduction for 500mSec Criteria C.

Dielectric Withstand:

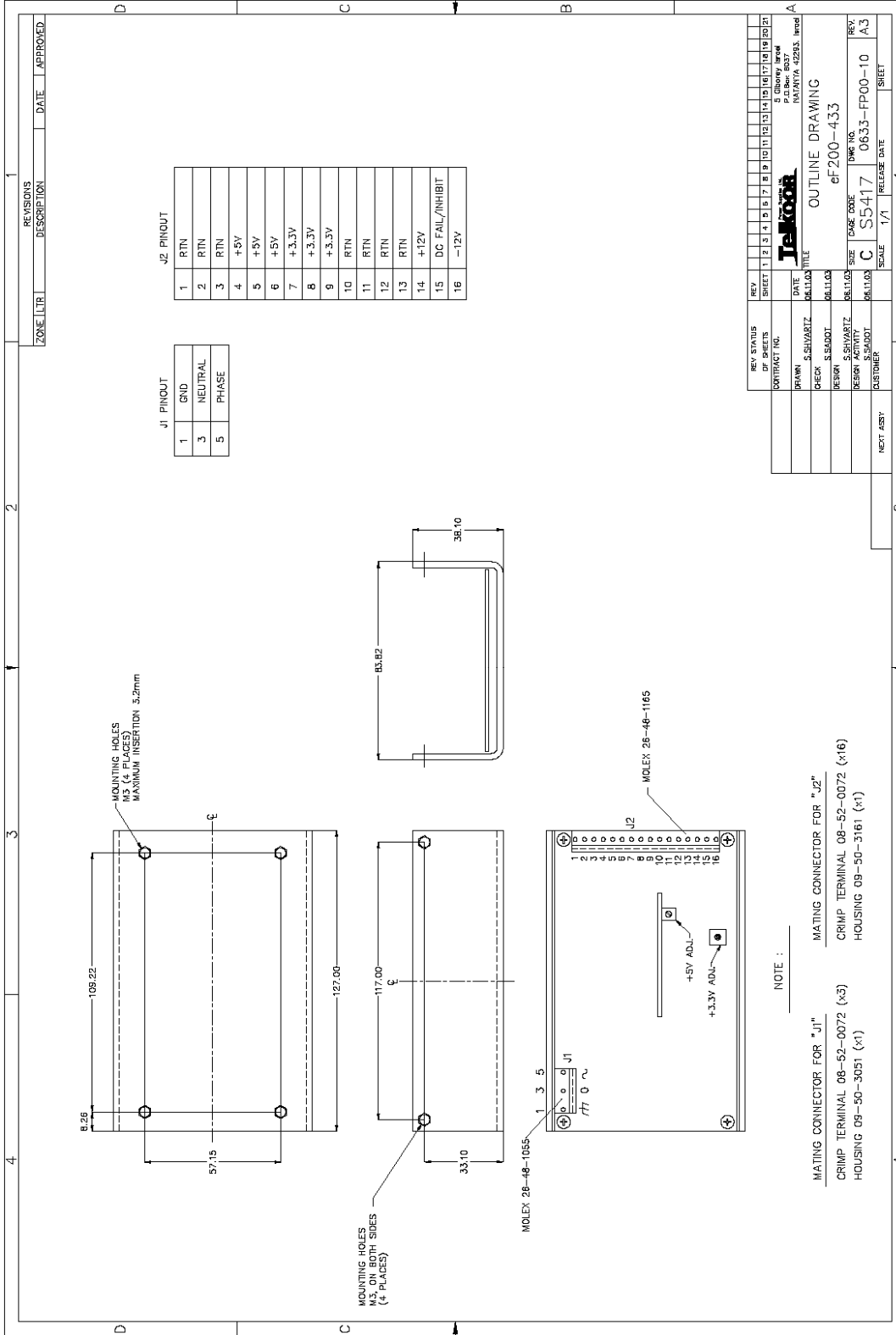
Input to Case: Input to case: 1500VAC.
Input to Output: Input to output: 3000VAC
Output to Case: Output to case: 100VDC.
Safety Agency Compliance : UL 60950-1
CSA C22.2 -234, LEVEL 3.
EN-60950-1
CE - MARK
Leakage Current: 2mA @50/60 Hz, 230VAC input.
MTBF: 400,000 hours minimum per BELCOR 332,issue 6 specification @30 degrees C (Max. junction temperature for silicon 110°C , Capacitors 105°C)

Mechanical Dimensions

Size 127mm x 84mm x 38.1mm
Weight 650 Gr.
Input AC Connector Molex 5 pin P/N 26-48-1055
Output Connector Molex 16 pin P/N: 26-48-1166

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Outline Drawing



REV	STATUS	DATE	BY	CHKD	APPD	REV	STATUS	DATE	BY	CHKD	APPD
1	NEW	08/11/03	S.SIVARTZ			1	NEW	08/11/03	S.SIVARTZ		
2	REVISED	08/11/03	S.SIVARTZ			2	REVISED	08/11/03	S.SIVARTZ		
3	REVISED	08/11/03	S.SIVARTZ			3	REVISED	08/11/03	S.SIVARTZ		
4	REVISED	08/11/03	S.SIVARTZ			4	REVISED	08/11/03	S.SIVARTZ		
5	REVISED	08/11/03	S.SIVARTZ			5	REVISED	08/11/03	S.SIVARTZ		
6	REVISED	08/11/03	S.SIVARTZ			6	REVISED	08/11/03	S.SIVARTZ		
7	REVISED	08/11/03	S.SIVARTZ			7	REVISED	08/11/03	S.SIVARTZ		
8	REVISED	08/11/03	S.SIVARTZ			8	REVISED	08/11/03	S.SIVARTZ		
9	REVISED	08/11/03	S.SIVARTZ			9	REVISED	08/11/03	S.SIVARTZ		
10	REVISED	08/11/03	S.SIVARTZ			10	REVISED	08/11/03	S.SIVARTZ		
11	REVISED	08/11/03	S.SIVARTZ			11	REVISED	08/11/03	S.SIVARTZ		
12	REVISED	08/11/03	S.SIVARTZ			12	REVISED	08/11/03	S.SIVARTZ		
13	REVISED	08/11/03	S.SIVARTZ			13	REVISED	08/11/03	S.SIVARTZ		
14	REVISED	08/11/03	S.SIVARTZ			14	REVISED	08/11/03	S.SIVARTZ		
15	REVISED	08/11/03	S.SIVARTZ			15	REVISED	08/11/03	S.SIVARTZ		
16	REVISED	08/11/03	S.SIVARTZ			16	REVISED	08/11/03	S.SIVARTZ		

CONTRACT NO.	08-52-0072	TITLE	OUTLINE DRAWING
DRAWN	S.SIVARTZ	DATE	08/11/03
CHECK	S.SIVARTZ	DATE	08/11/03
DESIGN	S.SIVARTZ	DATE	08/11/03
REV	1	DATE	08/11/03
REV	2	DATE	08/11/03
REV	3	DATE	08/11/03
REV	4	DATE	08/11/03
REV	5	DATE	08/11/03
REV	6	DATE	08/11/03
REV	7	DATE	08/11/03
REV	8	DATE	08/11/03
REV	9	DATE	08/11/03
REV	10	DATE	08/11/03
REV	11	DATE	08/11/03
REV	12	DATE	08/11/03
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REV	14	DATE	08/11/03
REV	15	DATE	08/11/03
REV	16	DATE	08/11/03

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