

**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
<b>Written by:</b>	<b>Sam Sadot</b>	<b>7/5/06</b>
<b>Engineering:</b>	<b>Sam Sadot</b>	<b>7/5/06</b>
<b>Sales &amp; Marketing:</b>	<b>Mor Allon</b>	<b>7/5/06</b>
<b>Management:</b>	<b>Yossi Ben Ami</b>	<b>7/5/06</b>

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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:**

Output	Output Voltage	I Min	I Max	Max. Peak
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: ± 0.01 %/°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:**

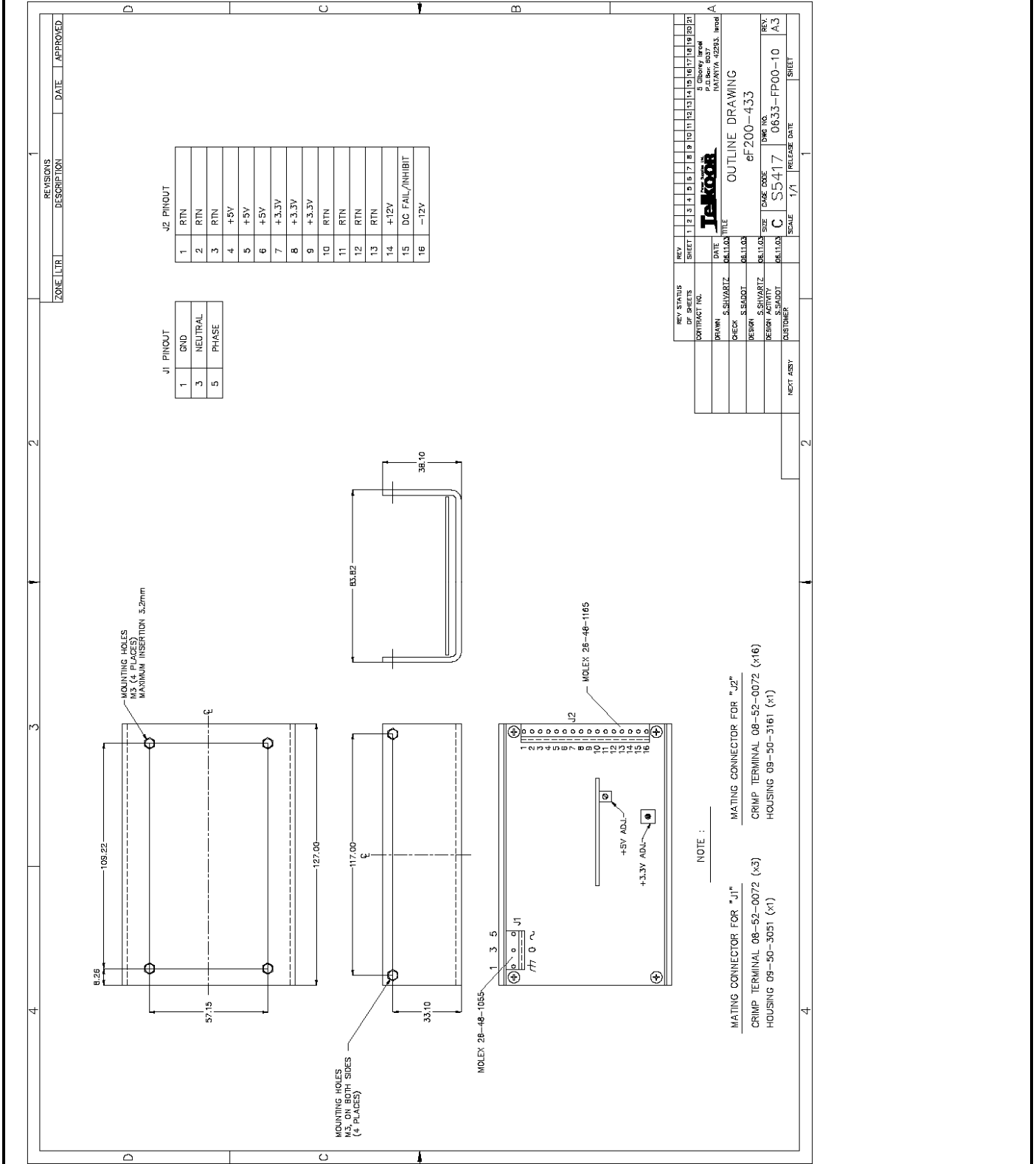
Input to Case: Input to case: 1500VAC.  
 Input to Output: Input to output: 3000VAC  
 Output to Case: Output to case: 100VDC.  
 Safety Agency Compliance : UL 60950-1  
 CSA C22.2 -234, LEVEL 3.  
 EN-60950-1  
 CE - MARK  
 Leakage Current: 2mA @50/60 Hz, 230VAC input.  
 MTBF: 400,000 hours minimum 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**



**J2 PINOUT**

1	RTN
2	RTN
3	RTN
4	+5V
5	+5V
6	+5V
7	+3.3V
8	+3.3V
9	+3.3V
10	RTN
11	RTN
12	RTN
13	RTN
14	+12V
15	DC FAIL/INHIBIT
16	-12V

**J1 PINOUT**

1	GND
3	NEUTRAL
5	PHASE

REV	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
SHEET																						
REV STATUS																						
CONTRACT NO.	0633-PP00-10																					
DRAWN	S.SILVARTZ																					
DATE	08.11.03																					
CHECK	S.SADOT																					
DESIGN	S.SILVARTZ																					
REVISION	S.SADOT																					
SCALE	1/1																					
RELEASE DATE																						
ORDER NO.	0633-PP00-10																					
REV.	A.3																					

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