



eF306 – 433 Specification

INPUT:

Input Voltage: 85-265Vac

Frequency: 47-440Hz

Inrush Current: 50A maximum, cold start at 25°C, 250Vac

Power Factor: 0.98 typ at 230Vac, full load
0.99 typ at 115Vac, full load

Efficiency ; (Synchronous Rectifiers Forward Topology)
85% typ at 230Vac, full load
82% typ at 115Vac, full load

Input Protection

Internal Line Fuse: IEC type 6.3A 250Vac SLO BLO

Brown - Out : 75 to 300Vac

Output Voltages and Currents

output	Output voltage	Min.	Max.	Max. peak
V1	5V	0	40A	45A
V2	3.3V	0	40A	45A
V3	12V	0	4A	5A
V4	-12V	0	1.5A	1.8A
Standby	5V	0	50mA	0.1A

* Maximum output power at any combination within this table is 300 watts.

** V4 - Floating

Line Regulation: $\pm 0.1\%$ for V_{in} (Min) to V_{in} (Max).

Load Regulation: V1 & V2 $\pm 0.5\%$ for load change from zero to full load.
V3 & V4 $\pm 2\%$ for 10% to 100% of I_m on V1 & V2.
 $\pm 5\%$ for 0% to 100% of I_m on V1 & V2.

Ripple @ Noise: V1 - 75 mV_{p-p} Max.
V2 - 50 mV_{p-p} Max.
V3 & V4 - 120mV_{p-p} Max.

Output voltage adjustment range: V1&V2 only $\pm 10\%$

Initial setp point tolerance: 5.1 $\pm 20mV$ 3.35 $\pm 10mV$

Overshoot&Undershoot: Less than 1% at turn ON-OFF

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Transient Load Response: $\pm 5\%$ Max. 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: 20msec minimum at 110Vac and full load

Turn-On Rise Time: 20Msec Max.

Output voltage adjustment range: V1&V2 only

Turn -On Sequencing: All Outputs Same time with priority to the 5V.

Overcurrent Protection: V1 & V2 120 to 130% of I_m , constant current limit, automatic recovery.
V3 & V4 120 to 180% of I_m constant current limit, automatic recovery.

Overvoltage Protection: V1, V2 & V3 outputs shut down at 125% of nominal, AC input must Recycled to reset.

Temperature Protection: shutdown due to excessive internal temperature 90 to 97°C (base plate) automatic recovery.

Current Share: Available on V1 & V2 only N+1 single wire.

Hot-Swap: Internal O-Ring diode optional.

Remote Sense: V1 & V2 only compensates for voltage drop of up to 0.5V to the load. Outputs are internally sensed if loads are opened.

SIGNALS & COMMAND

Enhibit: Active low, all output shut down.

Power OK: Open collector active low when any of the outputs drop below 10%.

ENVIRONMENTAL SPECIFICATION

Temperature: Operating: -5°C to +50°C (derating linearly to 70 °C with 50% derating).
-40°C to +50°C **optional**.
Storage: -25°C to +85°C.

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Temperature Coefficient: 0 to 70°C ± 0.02%/°C

Cooling: 150W free convection cooling (base plate cooling). 300W,340W peak forced air colling (250lfm, or 15CFM min.)

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.

SAFETY,REGULATORY ,EMI SPECIFICATION

ENI- 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 fot 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: 3/A 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: 1500VAC.
Input to output: 3000VAC.
Output to case: 500 VDC.

Safety Agency Compliance: UL 1950
CSA C22.2 -234, LEVEL 3.
EN-60950,CLASS 1, SELV.
CE - MARK

Leakage current: 1mA

MTBF: 300,000 hours minimum per BELCOR 332,issue 6 spesification @30 30 degrees c.
(Max. junction temperature 110°C ,Capacitors 105°C)

MECHANICAL DIMENTION

Size – 173 x 98 x 35.5(mm) (6.8” x 3.85” x 1.4”)

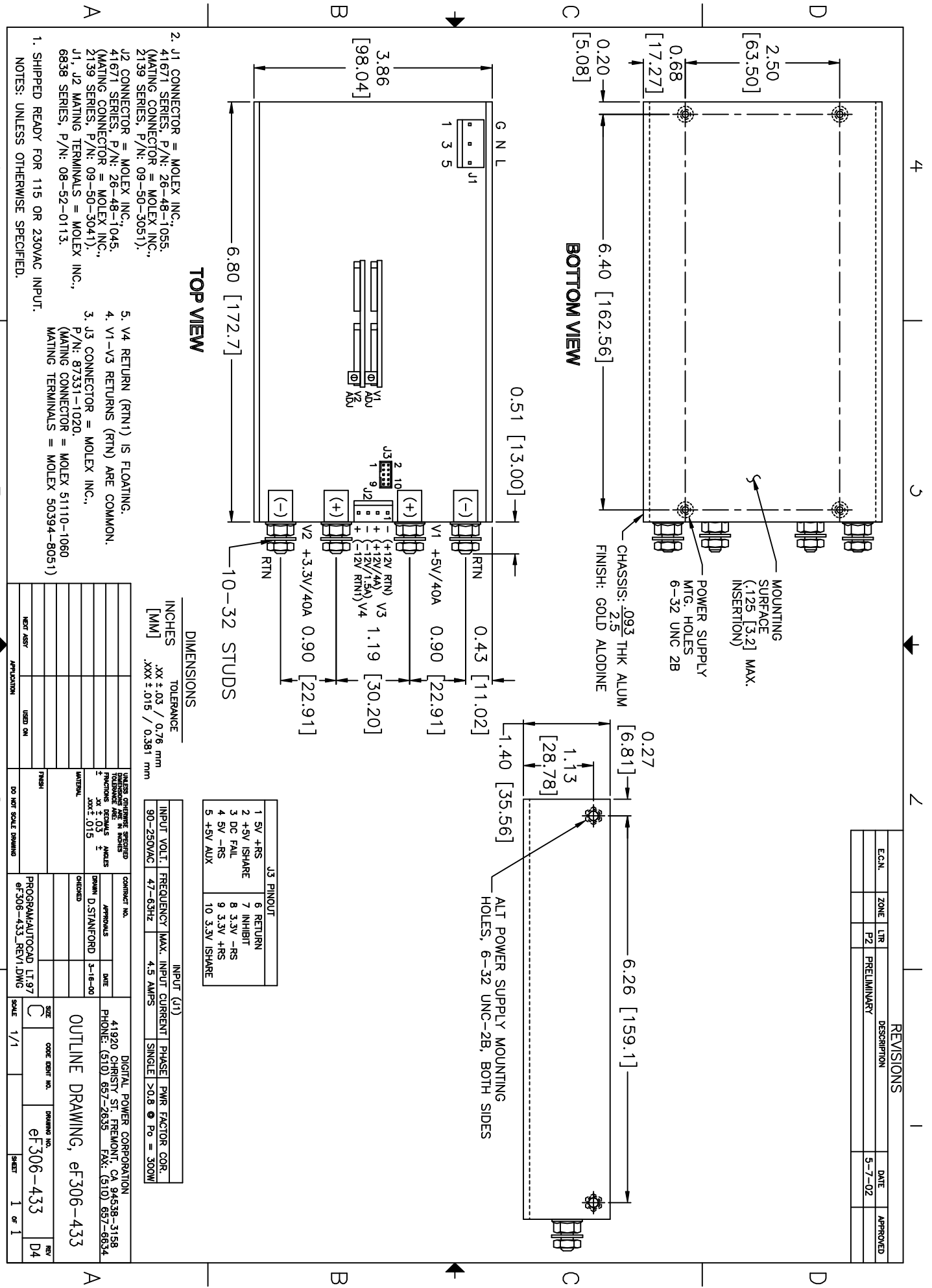
Weight – 850 gr. Max. (31.5 oz)

Cover – optional.

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REVISIONS			
ECN.	ZONE	LTR	DATE
		P2	5-7-02
PRELIMINARY			APPROVED



TOP VIEW

BOTTOM VIEW

DIMENSIONS

INCHES	TOLERANCE
.XX ± .03 / 0.76 mm	
.XXX ± .015 / 0.381 mm	

INPUT VOLT.	FREQUENCY	MAX. INPUT CURRENT	PHASE	PWR FACTOR COR.
90-250VAC	47-63Hz	4.5 AMPS	SINGLE	>0.8 @ Po = 300W

J3 PINOUT	
1 5V +RS	6 RETURN
2 +5V ISHARE	7 INHIBIT
3 DC FAIL	8 3.3V -RS
4 5V -RS	9 3.3V +RS
5 +5V AUX	10 3.3V ISHARE

- J1 CONNECTOR = MOLEX INC., 41671 SERIES, P/N: 26-48-1055. (MATING CONNECTOR = MOLEX INC., 2139 SERIES, P/N: 09-50-3051).
- J2 CONNECTOR = MOLEX INC., 41671 SERIES, P/N: 26-48-1045. (MATING CONNECTOR = MOLEX INC., 2139 SERIES, P/N: 09-50-3041).
- J3 CONNECTOR = MOLEX INC., P/N: 87331-1020. (MATING CONNECTOR = MOLEX 50394-8051)
- V1-V3 RETURNS (RTN) ARE COMMON.
- V4 RETURN (RTN) IS FLOATING.

- SHIPPED READY FOR 115 OR 230VAC INPUT.
- NOTES: UNLESS OTHERWISE SPECIFIED.

UNLESS OTHERWISE SPECIFIED	CONTRACT NO.	DATE	DRAWING NO.
TOLERANCE AND FINISHES: .XX ± .03 / 0.76 mm			
UNLESS OTHERWISE SPECIFIED: .XXX ± .015			
APPROVALS	APPROVALS	DATE	
DESIGNED BY: [Signature]	DESIGNED BY: [Signature]	DATE: 5-16-00	
CHECKED BY: [Signature]	CHECKED BY: [Signature]		
PROGRAM/AUTOCAD: LT 97	PROGRAM/AUTOCAD: LT 97		
SCALE: 1/1	SCALE: 1/1		
SIZE: C	CODE DEPT NO: eF306-433	DRAWING NO: eF306-433	REV: D4
OUTLINE DRAWING, eF306-433			
DIGITAL POWER CORPORATION			
41920 CHRISTY ST. FREMONT, CA 94538-3158			
PHONE: (510) 657-2535 FAX: (510) 657-6534			