

Universal Input Power Factor Corrected 300 Watt Switchers

Features:

- Ultra-small 6.8" x 3.86" x 1.4" size
- 85% typical efficiency
- Active power factor correction (PFC)
- Up to 4 outputs
- +5V Standby
- 48VDC input optional
- Remote sense (V1, V2)
- Single-Wire Forced Current Sharing (V1, V2)
- Optional O-Ring diodes (V1,V2)
- Power OK
- Inhibit
- UL, cUL, TUV, CE



The eF306 series are the industry's smallest open frame switchers that deliver up to 300W continuous or 340W peak from one to four outputs. The supply includes active power factor correction and 90-250Vac universal input, making it ideal for use worldwide.

The very high efficiency and power density results from the use of advanced component and circuit technologies such as synchronous rectification, low profile transformers and SMT components.

Available models

Model Number	Output	Output Voltage	Min ¹	Output Current Ratings		Peak ⁴
				Max ²	Max ³ (I _m)	
eF306-401	V1	+5V	0A	20A	40A	45A
	V2	+12V	0A	6A	12A	15A
	V3	+12V	0A	1.5A	4A	5A
	V4*	-5V	0A	1A	1.5A	2A
eF306-427	V1	+5V	0A	20A	40A	45A
	V2	+5V	0A	15A	30A	35A
	V3	+12V	0A	1.5A	4A	5A
	V4*	-12V	0A	1A	1.5A	2A
eF306-433	V1	+5V	0A	20A	40A	45A
	V2	+3.3V	0A	20A	40A	45A
	V3	+12V	0A	1.5A	4A	5A
	V4*	-12V	0A	1A	1.5A	2A
eF306-487	V1	+2.5V	0A	20A	50A	55A
	V2	+3.3V	0A	20A	40A	45A
	V3	+12V	0A	1.5A	1.5A	2A
	V4*	+5V	0A	1A	3A	3.3A
eF306-489	V1	+1.5V	0A	20A	50A	55A
	V2	+3.3V	0A	20A	40A	45A
	V3	+12V	0A	1.5A	4A	5A
	V4*	-12V	0A	1A	1.5A	2A
eFO306-133	V1	+3.3V	0A	25A	50A	55A
eFO306-112	V1	+12V	0A	14A	29A	34A
eFO306-115	V1	+15V	0A	11A	23A	30A
eFO306-124	V1	+24V	0A	8.3A	14.5A	16A
eFO306-128	V1	+28V	0A	6A	12.5A	14A
eFO306-148	V1	+48V	0A	4.1A	7.2A	8A

* V4- Floating

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1. No minimum load required to maintain stated regulation.
2. Convection cooling.
3. Forced air cooling.
4. Peak output, 30 sec max
5. V1, V2 outputs tied together & I share bus outputs tied together.

Note: Add "O" to series prefix for optional O-Ring diodes, example EFO306-XXX

Input

Input Voltage Range	90-250VAC rated 85-265VAC Max. operation
Input Frequency	47 to 440Hz
Input Operating Current	4.2A rms @ 90Vac, 300W output
Inrush Current	50A max, cold start @ 25°C, 250Vac
Efficiency	82% typ at 115Vac full load, 85% typ at 230Vac full load
Power Factor	0.98 typ at 230Vac full load, 0.99 typ at 115Vac full load
Input protection	Internal Line Fuse IEC type 6.3A 250Vac SLO BLO
Brown Out	75 to 300Vac

Output

Output Power	150W free convection cooling (base plate cooling) 300W forced air cooling (250LFM, or 15CFM min.) 340W peak
+5V Standby	+5V@ 50mA max.
Line Regulation	± 0.1% for Vin (Min) to Vin (Max).
Load Regulation	V1 & V2 ± 0.5% for load change from zero to full load V3 & V4 ± 2% for 10% to 100% of Im on V1 & V2 ± 5% for 0% to 100% of Im on V1 & V2
Ripple and Noise	V1 - 75 mVp-p Max. V2 - 50 mVp-p Max. V3 & V4 - 120mVp-p Max
Output voltage adjustment range	V1& V2 only ± 10%
Initial setp point tolerance	5.1 ± 20mV 3.35 ± 10mV
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/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
Turn-On Sequencing	All outputs same time with priority to the 5V

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Overcurrent Protection	V1 & V2 120 to 130% of Im, constant current limit, automatic recovery V3 & V4 120 to 180% of Im 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 compensate for voltage drops of up to 0.5V. Outputs are internally sensed if loads open

Control

Enhibit	Active low, all outputs shut down
Power OK	Open collector active low when any of the outputs drop below 10%.

Environmental

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
Temperature Coefficient	0 to 70°C ± 0.02%/°C
Cooling	150W free convection cooling (base plate cooling). 300W,340W peak forced air cooling (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
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., TUV CE - MARK
Leakage current	1mA
MTBF	300,000 hours minimum per BELCORE 332, issue 6 specification @ 30 degrees C. (Max. junction temperature 110°C ,Capacitors 105°C)

Mechanical Dimensions

Size	173 x 98 x 35.5(mm) (6.8" x 3.85" x 1.4")
Weight	850 gr. Max. (31.5 oz)

Specifications are typical at 25°C unless otherwise designated



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