

EASYMOD AF-180D SERIES DC INPUT SWITCHERS

180 watts - 1U High - Single to Quad Output

IF WHAT YOU WANT IS WHAT YOU NEVER GET IN 1U HIGH DC INPUT SWITCHERS, the POWER SOLUTION for up to 180 watts steady state of high reliability, 12, 24 or 48 VDC input power can be found in the AF-180D family of 3.8" x 6.8" x 1.5" HIGH U-Channel mounted EASYMOD switchers. These models are available in a complete range of single to quad output configurations from 1.5 to >48 VDC. All models deliver 180W (200W peak) of highly regulated output power. The entire family has on-board Class B EMI filtering, is CE marked, delivers continuous full power output to 50°C, and is capable of operation up to 70°C.

EASYMOD simply means: IF WHAT YOU SEE IS WHAT YOU DON'T WANT, IT CAN BE EASILY CHANGED. EASYMODS include; extended temperature operating range, isolated outputs, unique output combinations, available EN61000-3-2 compliant AC inputs, low noise versions, unique cables and harnesses and much, much more. All these modifications are available at nominal (if any) additional cost, and normally without any impact on safety agency approvals which reduces both development cost and time to market. An EASYMOD can be performed on supplies for programs requiring as few as 250 units per year.

Call EASYMOD Support on (U.S.) +1-954-346-2442 or (U.K.) +44 (0)1903 768204 or email easymod@unipower-europe.com.



INPUT SPECIFICATION

Input Voltage ⁸	10 - 18, 18 -36 or 36 -72 VDC
Input Current	@ 48VDC 7A
	@ 24VDC 12A
	@ 12VDC 20A
Fuse: On Board10A @ 48VDC; 20A @ 24VDC;
 30A @ 12VDC

OUTPUT SPECIFICATION

Continuous Output Power ⁵	180 Watts
Line Regulation Over Input Range; V1 - V4	0.2%
Load Regulation @ 60% Full Load	
V1 - V2	3%
V3 - V4	5% _{max}
Cross Regulation @ 60% 40% Full Load	
V1: Change in V2 - V4	0.5%
V2 - V4: Change in V1 @75 25% F/L	5% _{max}
Overvoltage Protection V1	130% Vout typ
Overshoot, All Outputs	10% max
Power Limit	Set @120% typ
Response Time ¹	500 µSec
Ripple & Noise ³ @ 20 Mhz Band Width ; Full Load	
All Outputs	1% P-P max
Remote Sense; Single Output only ⁷	250mV compensation
Thermal Protection	Optional
Output Adjustment Range on V1	5% min

FEATURES & OPTIONS

- V1 & V2 REGULATED
- CB REPORT
- 2 - 48 VOLT OUTPUTS AVAILABLE
- UP TO 4 REGULATED OUTPUTS
- UL cUL ; EN 60950 APPROVAL
- 2:1 & WIDER INPUT RANGES
- 40°C START-UP - OPTION
- UL 2601; EN60601 MODELS
- 1U HIGH CHASSIS: 3.8"x5.8"x1.5"

GENERAL SPECIFICATION

Efficiency	75% typ
Switching Frequency	65KHz typ
Susceptibility / Immunity	See Note 2
Operating Temperature Range ³	0 to +70°C
Minimum Start-up Temperature ³	-20°C
Derating from 50-70°C	2.5% /°C
Storage Temperature	-40 to +85°C
Cooling	See Note 5
Relative Humidity; Non-Condensing	5 - 95%
Altitude	10,000 ft
EMI	FCC Class B & VDE Class B
	CISPR 11& 22 EN 55022 Class B
MTBF per MIL 217	> 200,000 hrs
Vibration ⁴ from 10 - 55Hz	1.0G Peak
Safety Agency Approvals:	UL & cUL 60950 & 2601;
EN 60950; EN 60601; CE; CB REPORT

Notes :

1. All outputs return within 1% of nominal for load change from 25-75% lo excursion.
2. Meets EN61000-4-2; -3; -4; -5; -6; -8; -11
3. Ripple & noise may not meet published specifications for 2 min. after start-up below 0°C.
4. Three orthogonal axes @ 1 octave/min. 5 min. dwell @ four major resonances.
5. Rating with 30 CFM air; Rated at 120 watts convection.
6. All specifications typical at nominal line, full load & 25°C, and are subject to change without notice.
7. Option on multiple output configurations.
8. Derate 15% for 24VDC Input; 30% for 12VDC Input.

EASYMOD is a Sales Mark of Power Solutions Inc.

www.unipowercorp.com or www.powercassette.com

EASYMOD AF-180D FAMILY

AVAILABLE STEADY STATE CURRENT ¹ @ 50°C AMBIENT

MULTIPLE OUTPUT MODELS / OUTPUT CURRENT / AMPS

OUTPUT	DC OUTPUT ¹	MINIMUM	MAXIMUM ³	MAXIMUM ⁴	PEAK ^{4,5}
V1	1.5 to 48 ⁷ V	3 ²	27	36	36
V2	1.5 to 48 ⁸ V	0.2 ²	1.2	2.5	3
V3	1.5 to 48 ⁸ V	0.2 ²	1.2	2.5	3
V4	1.5 to 48 ⁸ V	0.5 ²	5	10	12

SINGLE OUTPUT MODELS (1.5 to 48VDC ^{7,11}) / OUTPUT CURRENT / AMPS

OUTPUT CURRENT	1.5V ~ 3.3V	5V	12V	15V	24V	48V
MINIMUM	0	0	0	0	0	0
MAXIMUM ³	26	26	11	9	5.5	2.75
MAXIMUM ⁴	36	36	15	12	7.5	3.75
PEAK ⁵	41	41	17	14	8.5	4.25

- (1) Full power out on V3-V4 with minimal V1 and V2 loading--Option.
 (2) 10% minimum load for stated regulation on multiple O/P units.
 (3) Convection cooling.
 (4) 30CFM forced air cooling.
 (5) 30 seconds maximum duration.
 (6) Most output combinations from 2 to 48+ Volts possible; up to maximum rated Current / Power...Consult EASYMOD Support.

- (7) Specify 0.1V increments.
 (8) Specific output voltage is current dependent
 (9) Regulation may degrade under some output conditions. Consult EASYMOD Support.
 (10) Consult EASYMOD Support for Model #.
 (11) For outputs >48 Volts, consult EASYMOD Support.
 (12) Cover and custom sheet metal available.

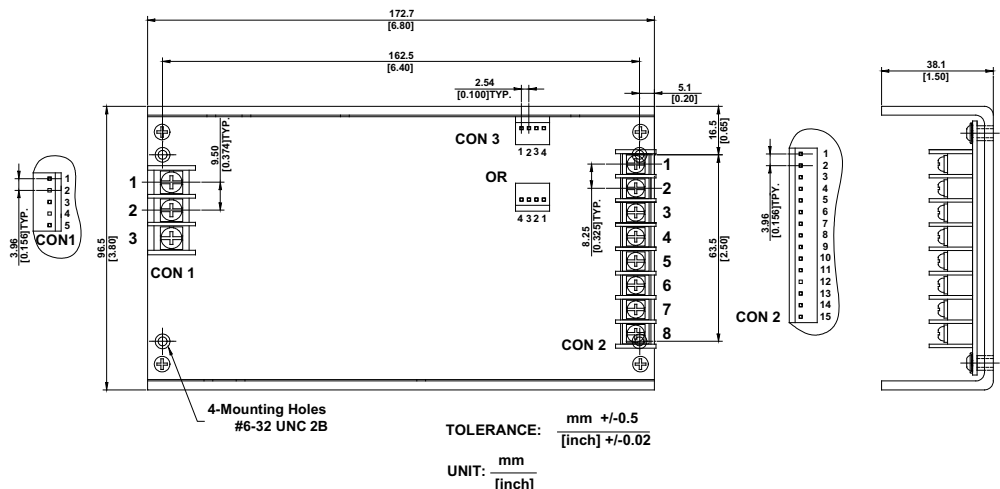
MECHANICAL

CON 1:
Terminal Block, 3-pole,
Pitch 9.5mm

POLE1 GROUND
 POLE2 -V IN
 POLE3 +V IN

CON 2:
Terminal Block, 8-pole,
Pitch 9.5mm

POLE1~2 V1
 POLE3~4 RET
 POLE5 V2
 POLE6 V3
 POLE7 RET
 POLE8 V4



Consult EASYMOD support for optional
Molex Connectors.

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