



# CFM300M SERIES

## 300 WATT AC-DC POWER SUPPLY WITH PFC



### Features

- \* Universal Input Range 90 ~ 264Vac
- \* Active PFC Meets EN61000-3-2
- \* High Efficiency up to 94%
- \* High Power Density up to 14.1W/Inch<sup>3</sup>
- \* Over Temperature Protection
- \* Continuous Short Circuit Protection
- \* Remote Voltage Sense
- \* PS On/Off Remote Control
- \* Power Good & Power Fail Signal
- \* +5V Stand-by Output Power
- \* 12V Fan Output
- \* No Load Power Consumption<0.3W(NOTE6)
- \* 3"x 5" Size
- \* Meets EN55011 Class B
- \* IEC/EN/UL 60601-1 2MOPP Approval
- \* Meets Class I



Model	Output Voltage	Output Current		Ripple & Noise NOTE 1	Voltage Accuracy NOTE 2	Line Regulation NOTE 3	Voltage ADJ. Range	Load Regulation NOTE 4	% EFF. Typ. NOTE 5
		Rated1	Rated2						
<b>Main Output Voltage</b>									
CFM300M120	+12 V	25A	16.67A	120mV	± 1%	± 0.5%	11.4~12.6	± 1%	92.5%
CFM300M240	+24 V	12.5A	8.34A	150mV	± 1%	± 0.5%	22.8~25.2	± 1%	93.5%
CFM300M360	+36 V	8.34A	5.56A	150mV	± 1%	± 0.5%	34.2~37.8	± 1%	93.5%
CFM300M480	+48 V	6.25A	4.17A	150mV	± 1%	± 0.5%	45.6~50.4	± 1%	94.0%
<b>Stand-by Output Voltage</b>									
All	+5V	1A	0.6A	100mV	± 3%	± 1%	--	± 5%	--
<b>Fan Output Voltage</b>									
All	+12V	0.5A		--	--	--	--	--	--

Note:  
 Rated 1: Forced Air Convection  
 Rated 2: Natural Convection

### PART NUMBER

Series	Number of Outputs	Nominal Output Voltage	Type
CFM300	O	XXX	Y (Option)
CFM300	M: Medical	120: 12VDC	None: With Baseplate
		240: 24VDC	C: With Cover
		360: 36VDC	
		480: 48VDC	

Part Number Example:  
**CFM300M120:** With Baseplate, 300W, 12Vdc Output  
**CFM300M120C:** With Case, 300W, 12Vdc Output

## Specifications

### INPUT SPECIFICATIONS:

AC Input Voltage ..... 90~264Vac  
 120~370Vdc  
 Input current ..... 100Vac/4A max., 240Vac/1.8A max.  
 Frequency ..... 47 to 63Hz  
 Inrush Current ..... Cold start@25°C 30A max. @240Vac  
 Leakage Current ..... 180uA typ., 300uA max.

### OUTPUT SPECIFICATIONS:

Isolation ..... Input to Output = 4000VAC  
 Hold-up Time ..... 20ms typ. @115Vac  
 Over Voltage Protection ..... Latch Off  
 Short Circuit Protection ..... Hiccup Mode (Auto Recovery)  
 Temperature Coefficient ..... ±0.05%/°C

### GENERAL SPECIFICATIONS:

Operating Temperature .....-40~80°C (See Derating Curve)  
 Storage Temperature ..... -40~85°C  
 Over Temperature Protection ..... Auto Recovery  
 PS-On Signal ..... Power On: PS-On≤2V (note12)  
 Power Off: PS-ON=11-16V, Open Circuit  
 Power Good/Power Fail (PG) ..... 250ms>PG>50ms  
 The TTL goes high with 50ms to 250ms after power set up  
 The TTL goes low at least 5ms before Vo below 90% rated value  
 Humidity ..... 93% RH max. Non-Condensing  
 Altitude ..... 3000m  
 Cooling ..... Natural Convection for 200W~250W (See Derating Curve)  
 Forced Air Convection (10CFM) for 300W  
 Switching Frequency .....60~80KHz typ. @ Full Load  
 MTBF .....MIL-HDBK-217F, GB, 25°C/115VAC ..... 160Khrs.typ.  
 Dimensions  
 With Baseplate Versions ..... 5.000x3.000x1.421 Inches (127.00x76.20x36.1mm)  
 -C Covered Versions ..... 5.355x3.425x1.591 Inches (136.00x87.00x40.40mm)  
 Weight  
 With Baseplate Versions ..... 420g (0.925 Pounds)  
 -C Covered Versions ..... 550g (1.21 Pounds)

### SAFETY AND EMC:

Emission and Immunity .... EN60601-1-2 :2015 ed. 4.0, EN55011 Class B,  
 FCC CFR 47 Part 18, IEC61000-3-2, 3, IEC61000-4-2, 3, 4, 5, 6, 8, 11  
 Safety (Ed. 3.1) ..... Class I, IEC60601-1:2005+A1:2012  
 EN60601-1:2006+A11:2011+A1+A12, UL ANSI/AAMI ES60601-1

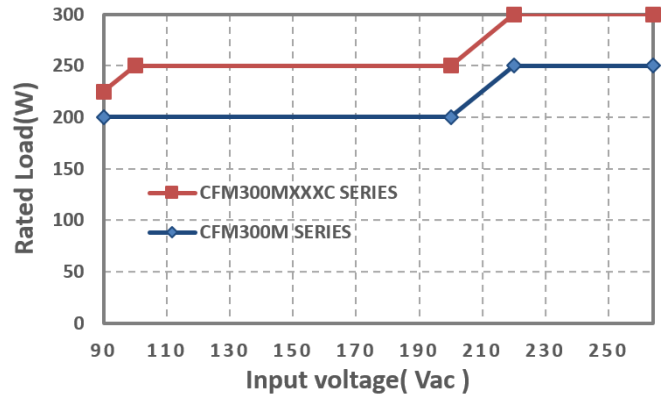
### NOTE:

1. Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for ripple&noise measuring @20MHz BW
2. Voltage accuracy is set at 100% rated load and 25°C.Ta.
3. Line regulation is measured from high line to low line with rated load.
4. Load regulation is measured from full to 10% load.
5. Typical efficiency at 230 VAC and full load at 25°C
6. No load power consumption<0.3W by PS on/off remote control.
7. Input connector (CN1) wafer with TAIWAN KING PIN TERMINAL PVHI series and mate with JST housing VHR series or equivalent.
8. Optional Input connector (CN1) wafer with LONG CHU P3060 series and mate with MOLEX housing 5195 series or equivalent.
9. Output connector CN4 wafer with JST PH series and mate with JST housing PH series or equivalent.
10. Output connector CN5 wafer with TAIWAN KING PIN TERMINAL P110I series and mate with JST housing PH series or equivalent.
11. Output connectors (Vo+ & Vo- with M3 screw) mate with round terminal and round terminal of the max outer diameter is 6.75mm, max inner diameter is 3.9mm.
12. PS-ON and GND short, I<sub>PS-ON</sub>=4.5 mA typical.

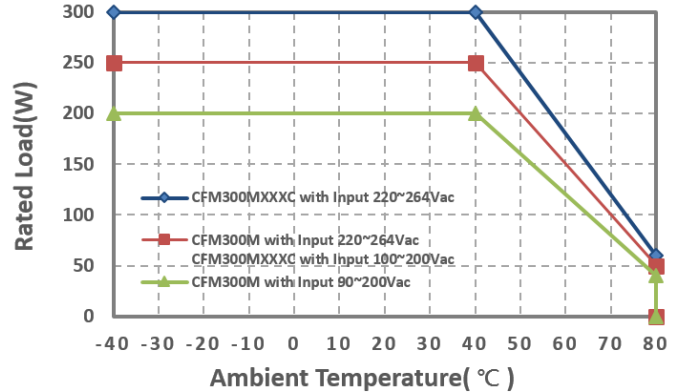
## CFM300M Series De-rating Curve

### CFM300M Series

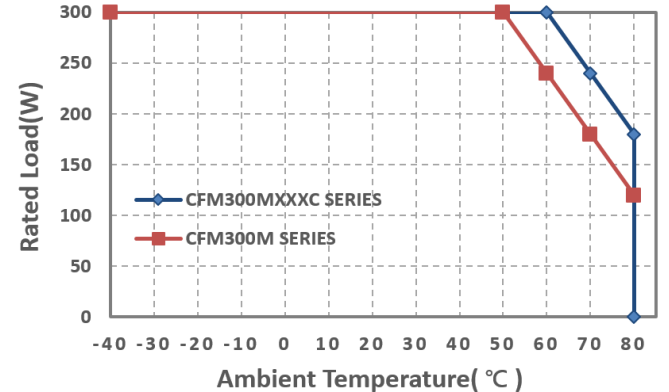
**Output Power vs. Input Voltage**  
**Natural Convection**



**Output Power vs. Ambient Temperature**  
**Natural Convection**

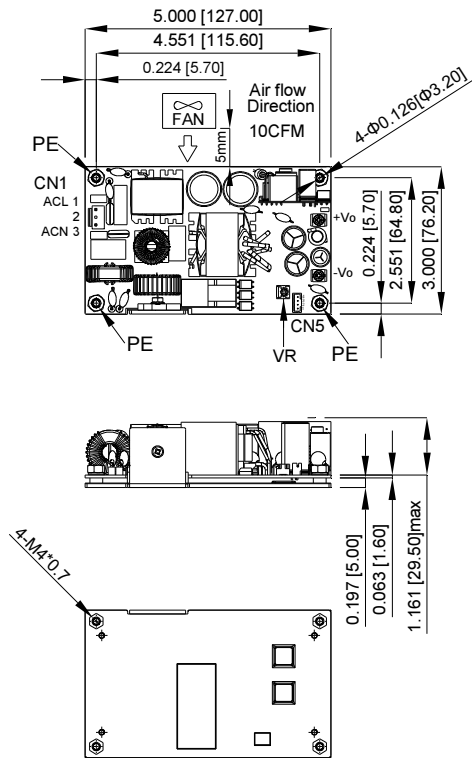


**Output Power vs. Ambient Temperature**  
**10 CFM Air Flow**



# Mechanical Specification

CFM300MXXX



CFM300MXXXC

CN1: PIN CONNECTION

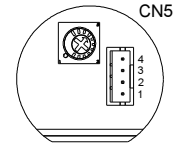
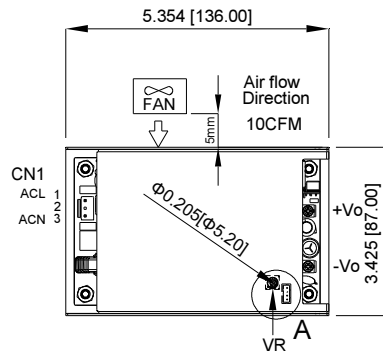
Pin	Function
1	ACL
2	-
3	ACN

CN4: PIN CONNECTION

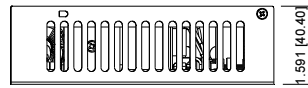
Pin	Function
1	FAN Output-
2	FAN Output+
3	GND
4	+5VSB
5	GND
6	PS-ON

CN5: PIN CONNECTION

Pin	Function
1	GND
2	PG
3	-Sense
4	+Sense



Detail enlargement A  
SCALE 1 : 1



All Dimensions In Inches(mm)  
Tolerance Inches:x,xxx= $\pm$ 0.02  
Millimeters:x,xx= $\pm$ 0.5

