



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/Inch³
- * 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						
Main Output Voltage									
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%
Stand-by Output Voltage									
All	+5V	1A	0.6A	100mV	± 3%	± 1%	--	± 5%	--
Fan Output Voltage									
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

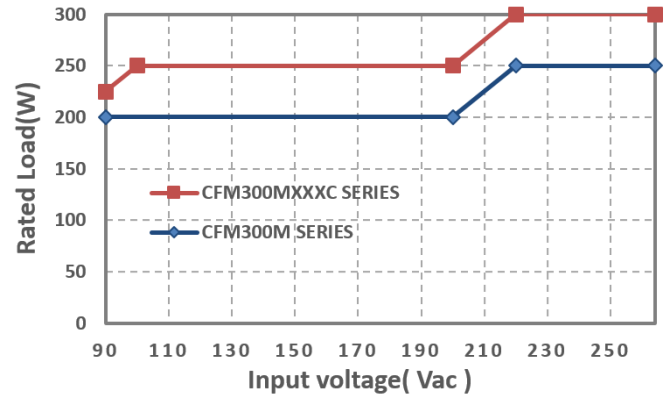
NOTE:

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_{PS-ON}=4.5 mA typical.

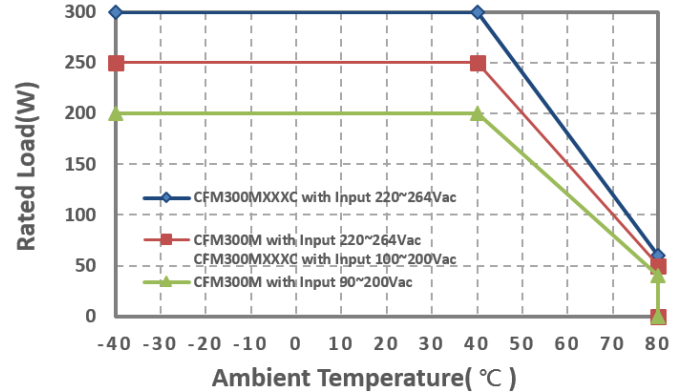
CFM300M Series De-rating Curve

CFM300M Series

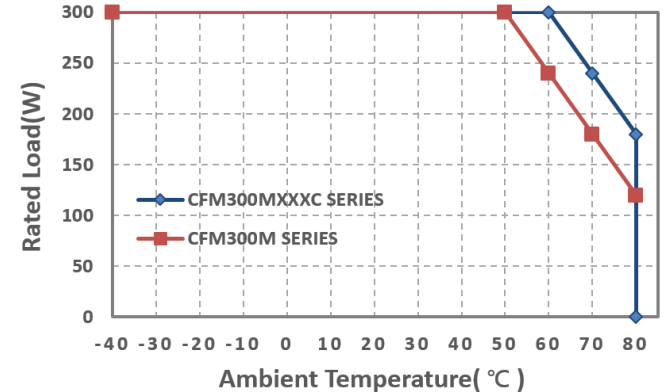
Output Power vs. Input Voltage Natural Convection



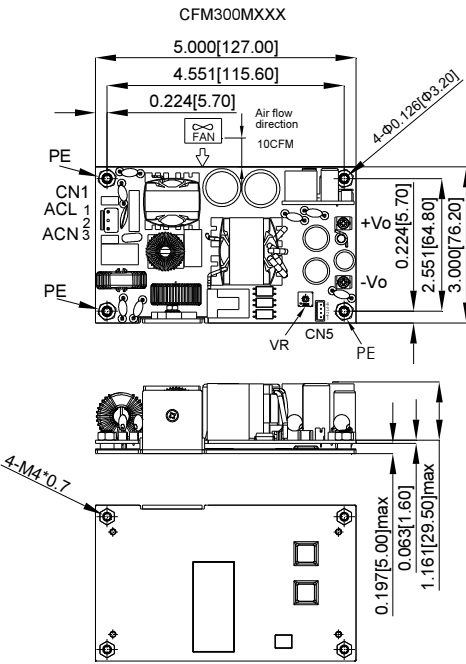
Output Power vs. Ambient Temperature Natural Convection



Output Power vs. Ambient Temperature 10 CFM Air Flow



Mechanical Specification



CN1:
PIN CONNECTION

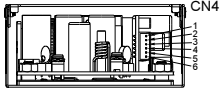
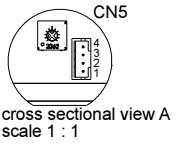
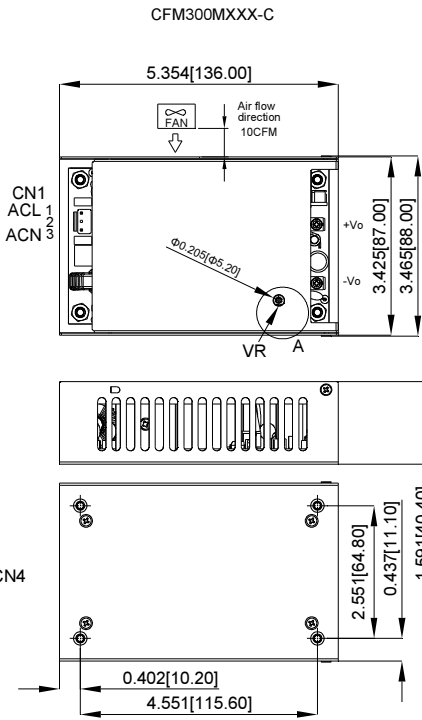
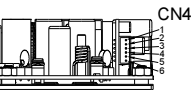
Pin	Function
1	ACL
2	-
3	ACN

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



All Dimensions in Inches[mm]
Tolerance Inches:x.xxx±0.02
Millimeters:x.xx±0.5

Typical at 25 °C, 230Vac and 60% rated load, unless otherwise Specified