



# CFM300S SERIES

## 300 WATT AC-DC POWER SUPPLY WITH PFC



### Features

- \* Universal Input Range 90 ~ 264Vac
- \* Active PFC Meets EN61000-3-2 Class C&D
- \* High Efficiency up to 94%
- \* High Power Density up to 14.1W/Inch<sup>3</sup>
- \* Meets EN55032 and EN55022 Class B
- \* 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<sub>NOTE6</sub>
- \* 3" x 5" Size



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>									
CFM300S120	+12 V	25A	16.67A	120mV	± 1%	± 0.5%	11.4~12.6	± 1%	92.5%
CFM300S240	+24 V	12.5A	8.34A	150mV	± 1%	± 0.5%	22.8~25.2	± 1%	93.5%
CFM300S360	+36 V	8.34A	5.56A	150mV	± 1%	± 0.5%	34.2~37.8	± 1%	93.5%
CFM300S480	+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

For covered versions add "C" to model number or order part no. For example CFM300S120C

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

## Specifications

### INPUT SPECIFICATIONS:

AC Input Voltage	90~264Vac
Input current	100Vac/4A max., 240Vac/1.8A max.
Frequency	47 to 63Hz
Inrush Current	Cold start@25°C 30A max. @240Vac
Leakage Current	260uA typ., 3.5mA max.

### OUTPUT SPECIFICATIONS:

Isolation	Input to Output = 3000VAC.
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 (note 12) 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	5000m
Cooling	Natural convection for 200W~250w(see derating curve) forced air flow convection(10CFM) for 300W
Switching Frequency	60~80KHz typ. @ Full load
MTBF	MIL-HDBK-217F, GB, 25°C/115VAC 160Khrs. typ.
Dimensions	
Open frame versions	5.000x3.000x1.421 Inches (127.00x76.20x36.1mm)
-C covered versions	5.355x3.425x1.591 Inches (136.00x87.00x40.40mm)
Weight	
Open frame versions	420g (0.925 Pounds)
-C covered versions	550g (1.21 Pounds)

### SAFETY AND EMC:

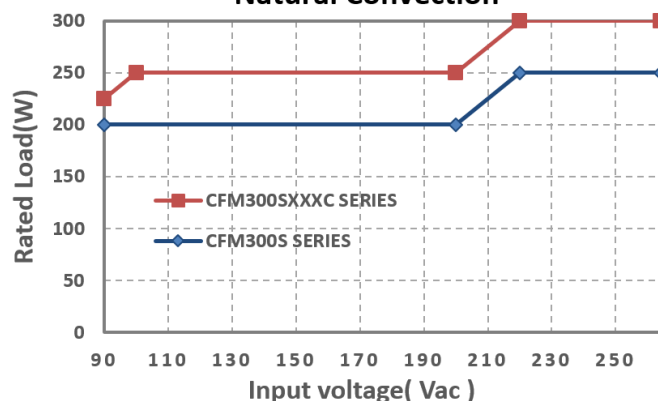
Emission and Immunity	EN55032,EN55024 Class B EN61000-3-2, EN61000-3-3, FCC CFR 47 Part 15 Subpart B IEC61000-2, IEC61000-3, IEC61000-4, IEC61000-5 IEC61000-6, IEC61000-8, IEC61000-11
Safety	Class I, IEC60950-1, EN60950-1, UL60950-1 2 <sup>nd</sup> edition

### NOTE:

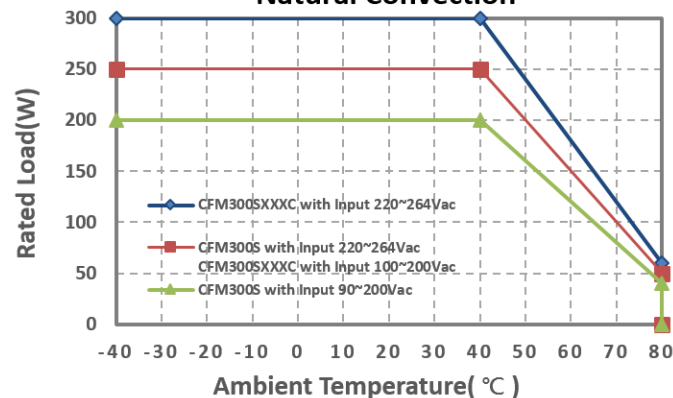
- Add a 0.1uF ceramic capacitor and a 10uF E.L. capacitor to output for ripple & noise measuring @20MHz BW.
- Voltage accuracy is set at 100% rated load and 25°C.Ta.
- Line regulation is measured from High Line to Low Line with rated load.
- Load regulation is measured from Full to 10% load.
- Typical efficiency at 230 VAC and full load at 25°C.
- No load power consumption<0.3W by PS on/off remote control.
- Input connector (CN1) wafer with TAIWAN KING PIN TERMINAL PVHI series and mate with JST housing VHR series or equivalent.
- Optional Input connector (CN1) wafer with LONG CHU P3060 series and mate with MOLEX housing 5195 series or equivalent.
- Output connector CN4 wafer with JST PH series and mate with JST housing PH series or equivalent.
- Output connector CN5 wafer with TAIWAN KING PIN TERMINAL P110I series and mate with JST housing PH series or equivalent.
- 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.
- PS-ON and GND short, I<sub>PS-ON</sub>=4.5 mA typical.

## CFM300S Series De-rating Curve

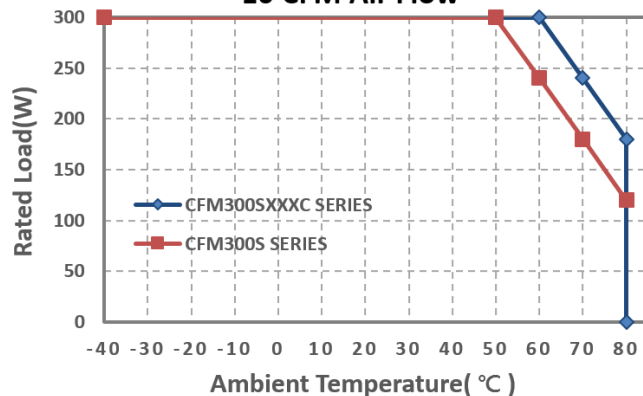
### Output Power vs. Input Voltage Natural Convection



### Output Power vs. Ambient Temperature Natural Convection

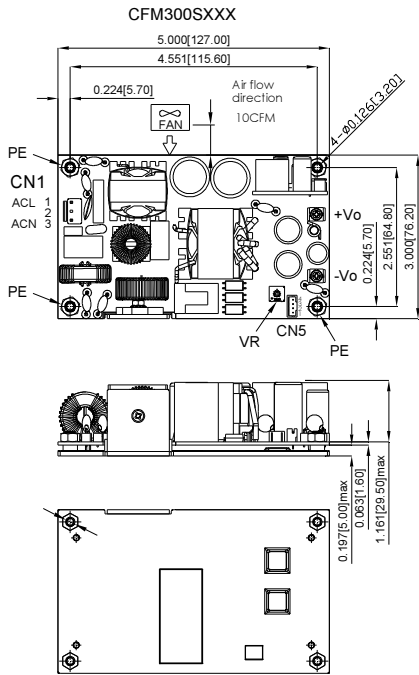


### Output Power vs. Ambient Temperature 10 CFM Air Flow



# Mechanical Specification

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



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

